

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with its author and due acknowledgement must always be made of the use of any material contained in, or derived from, this thesis.

Market organisation and the process of economic development: The case of the partially liberalised cocoa market in Ghana.

Michael Granleese.

A thesis submitted in partial fulfillment of the requirements of Bournemouth University for the degree of Doctor of Philosophy.

September 2009

Bournemouth University

Abstract

Michael Granleese

Market organisation and the process of economic development: The case of the partially liberalised cocoa market in Ghana.

Within the last twenty years the link between market organisation and development has come under increased scrutiny in response to the implementation of World Bank liberalisation policies across many of sub-Saharan Africa's agriculture markets. Under the neoliberal teachings of the Washington Consensus, liberalised markets have replaced systems of government control, with disappointing results. Recognising the challenges created by the universal implementation of liberalisation policies, the attention of development economists, including the World Bank, has now turned to alternative modes of market organisation. In light of this, the following study aims to contribute to the post Washington Consensus understanding of market development through a detailed exploration of the Ghanaian cocoa market as an alternative model for market organisation within sub-Saharan agriculture.

The Ghanaian cocoa market has been selected because, in contrast with its fully liberalised cocoa producing neighbours, Ghana has only undergone partial liberalisation. The Ghanaian Cocoa Board [Cocobod] maintains control over several functions across both the domestic and international dimensions of the Ghanaian cocoa chain. Given the span of the Cocobod's influence along the Ghanaian cocoa chain, it has been necessary to develop a cross disciplinary theoretical framework, using New Institutional Economics for a micro-analysis of the domestic cocoa chain, and Global Value Chain analysis for a macro-analysis of the international cocoa chain.

Building on a critique of the universalism inherent within the Washington Consensus, methodologically this study has attempted to achieve an in-depth understanding of the Ghanaian cocoa market. In line with the ontological approach of critical realism, this has involved the use of semi-structured qualitative interviews, throughout two independent rounds of research in Ghana. Interview data has been systematically organised and interpreted using the approach of template analysis. Based on the construction of six final templates it has been possible to deduce that direct government intervention in the areas of quality control, enforcement and a monopoly over cocoa exports appear to be having a positive impact upon market development in Ghana. Equally, it has been observed that the Cocobod may be failing to leverage the potential of private sector investment, as it struggles to adapt to partial liberalisation. In closing it is recommended that future research into models of partial liberalisation should be pursued based on the results of this study.

Contents

Figures and Tables: 10-11

Acknowledgements: 12

Authors Declaration: 13

List of Abbreviations: 14 - 15

Chapter One – Introduction: 16 - 50

1.1 – Chapter One Introduction: 16-17

1.2 – Market Liberalisation and the Washington Consensus: 17-23

1.3 – The Outcomes of liberalisation: 24-32

1.4 – Partial Liberalisation in Ghana: 32-42

1.5 – Defining Governance: 42-43

1.6 - Research Aims and Objectives: 43-45

1.7 – Research Questions: 45-46

1.8 – Chapter Summary: 46-49

1.9 – Conclusion: 49-50

Chapter Two – New Institutional Economics: 51-81

2.1 – Introduction: 51

2.2 – The Foundations of New Institutional Economics: 52-61

2.3 – Developmental Coordination: 61-67

2.4 – Private Sector Coordination: 67-74

2.5 – The Transition Challenge: 74-80

2.6 – Conclusion: 80-81

Chapter Three – Global Value Chain Analysis: 82-98

3.1 – Introduction: 82

3.2 – The Foundations of Global Value Chain Analysis: 83-84

3.3 – Governance and Power in Global Markets: 85-91

3.4 – Governance and Quality in Global Value Chains: 91-94

3.5 – Governance and the Process of Upgrading: 95-98

3.6 – Conclusion: 98

Chapter Four – Ghana’s Partial Liberalisation Model: 99-132

4.1 – Ghana’s Partial Liberalisation Model: 99

4.2 – The Functions of the Cocobod in the Internal Market: 100-111

4.3 – The Impact of Liberalisation on the Local Buying Market: 111-120

4.4 – The Cocobod and the External Buying Market: 120-131

4.5 – Conclusion: 131-132

Chapter Five – Conceptual Framework: 133-150

5.1 – Introduction: 133-134

5.2 – The Domestic Supply Chain and New Institutional Economics: 134-138

5.3 – The External Market and Global Value Chain Analysis: 138-141

5.4 – Micro-Macro Linkages: 141-143

5.5 – Cross Disciplinary Research: 143-146

5.6 – Visual Conceptual Framework: 146-148

5.7 – Behavioural Assumptions: 148-150

5.8 – Conclusion: 150

Chapter Six – Methodology: 151-192

6.1 – Introduction: 151

6.2 – Ontology and Epistemology: 151-156

6.3 – Research Strategy and Design: 156-160

6.4 – Units of Analysis: 160-164

6.5 – Data Collection: 164-173

6.6 – Data Analysis: Template Analysis: 173-191

6.7 – Conclusion: 191-192

Chapter Seven – Findings: 193-

7.1 – Credibility of Reform: 193-215

7.1.1 – Introduction: 193-195

7.1.2 – The Accountability of Cocobod Subsidiaries: 196-206

7.1.3 – Cocobod Organisational Culture: 207-214

7.1.4 – Conclusion: 214-215

7.2 – Supply Chain Management: 216-239

7.2.1 – Introduction: 216-218

7.2.2 – Speed of Turnover: 219-222

7.2.3 – Infrastructural Limitations: 222-229

7.2.4 – Public Sector Management: 230-238

7.2.5 – Conclusion: 238-239

7.3 – The Relationship between Competition and Quality Enforcement: 240-260

7.3.1 – Introduction: 240-242

7.3.2 – Quality Decline: 243-253

7.3.3 – Quality Control: 253-259

7.3.4 – Conclusion: 259-260

7.4 – Partial Model Transition: 261-282

7.4.1 – Introduction: 261-264

7.4.2 – LBC Constraints: 265-274

7.4.3 – Public Private Partnership: 274-280

2.4.4 – Conclusion: 281-282

7.5 – Government Quality Control and the CMC: 283-303

7.5.1 – Introduction: 283-285

7.5.2 – Reputation: 286-293

7.5.3 – Private Sector Quality: 293-298

7.5.4 – Market Demand: 298-302

7.5.5 – Conclusion: 302-303

7.6 – Governance and Power: 304-335

7.6.1 – Introduction: 304-307

7.6.2 – Processors Supply Priority: 308-319

7.6.3 – Government Governance: 320-329

7.6.4 – Buyer Power: 329-333

2.6.5 – Conclusion: 333-335

Chapter Eight – Conclusions: pp 336-374

8.1 – Introduction: 336-337

8.2 – Response to research question one: 337-340

8.3 – Response to research question two: 340-344

8.4 – Response to research question three: 344-347

8.5 – Response to research question four: 347-350

8.6 – Response to research question five: 351-354

8.7 – Response to research question six: 354-358

8.8 – Response to primary research question: 358-368

8.9 – Research Limitations and future lines of enquiry: 368-372

8.10 – Conclusions: 373-374

Bibliography: pp 375-398

Appendices: pp 399-354

Appendix One – Detailed Cocoa Revenue Breakdown: 399

Appendix Two – The Cocobod System of Quality Control: 400 - 402

Appendix Three – LBC Market Share 1993-2008: 403

Appendix Four – The Process of Template Analysis: 404

Appendix Five – Key Generative Mechanisms: 405-406

Appendix Six – Cocobod Round One Interview Guide: 407-417

Appendix Seven – LBC Round One Interview Guide: 418-428

Appendix Eight – External Buyers Round One Interview Guide: 429 - 437

Appendix Nine – Cocobod Round Two Interview Guide: 438-452

Appendix Ten – LBC Round Two Interview Guide: 453-466

- Appendix Eleven – External Buyers Round Two Interview Guide: 467-477
- Appendix Twelve – District Managers Round Two Interview Guide: 478-482
- Appendix Thirteen – Purchasing Clerk Round Two Interview Guide: 483-485
- Appendix Fourteen – Template Analysis Example: 486-509
- Appendix Fifteen – Cocoa Contacts Email: 510
- Appendix Sixteen – Data Collection Round One: 511-513
- Appendix Seventeen – Data Collection Round Two: 514-516
- Appendix Eighteen – Interview Participants: 517-522
- Appendix Nineteen – Consent Form: 523
- Appendix Twenty – Cocobod Letter of Consent: 524-525
- Appendix Twenty One – Letter of Recommendation: 526-527
- Appendix Twenty Two – Amended Round One Cocobod Interview Guide: 528-533
- Appendix Twenty Three – Coded Interview Section: QCD Accountability: 534-537
- Appendix Twenty Four – Coded Interview Section: The Quota System: 538-540
- Appendix Twenty Five – Coded Interview Section: Supply Chain Infrastructure: 541
- Appendix Twenty Six – Coded Interview Section: Competition and Quality: 542-543
- Appendix Twenty Seven – Coded Interview Section: Interlocking Risk: 544-545
- Appendix Twenty Eight – Coded Interview Section: LBC Input Provision: 546-547
- Appendix Twenty Nine – Coded Interview Section: Quality Control and the CMC: 548-550
- Appendix Thirty – Coded Interview Section: The Incentive to Process in Ghana: 551-552
- Appendix Thirty One – Coded Interview Section: Government Governance: 553-554

Figures and Tables

Chapter One – Introduction

Figure 1.1 – The Liberalised Cocoa Supply Chain: 23

Figure 1.2 – Cocoa Producer Prices as a Percentage of the Export Price 1994/95: 26

Figure 1.3 – Marketing Costs as a Percentage of the Export Price 1995: 30

Figure 1.4 – The Ghanaian Supply Chain Pre-1992: 36

Figure 1.5 – The Ghanaian Supply Chain 2009: 39

Figure 1.6 – Ghanaian Cocoa Production and Producer Prices from 1995/96 to 2006/07: 41

Table 1.1 – Liberalisation Outcomes: 25

Table 1.2 – Real West African Producer Prices: 27

Table 1.3 – Cocoa Exports as a share of Ghanaian Export Revenue: 33

Chapter Two – New Institutional Economics

Figure 2.1 – The Branches of New Institutional Economics: 53

Figure 2.2 – The Low Level Equilibrium Trap: 62

Chapter Four – Ghana’s Partial Liberalisation Model

Figure 4.1 – Forward Contracting and Off Shore Borrowing: 107

Figure 4.2 – LBC Market Share 1996/97: 114

Figure 4.3 – LBC Market Share 2006/07: 115

Table 4.1 – Basic Cocoa Revenue Breakdown: 100

Table 4.2 – West African Cocoa Producer Prices: 106

Table 4.3 – Distribution of FOB: 113

Table 4.4 – CMC Revenue Stream: 121

Table 4.5 – African Processing Growth: 126

Chapter Five – Conceptual Framework

Figure 5.1 – Visual Conceptual Framework: 147

Chapter Six – Methodology

Figure 6.1 – The Iterative Research Process: 159

Figure 6.2 – Units of Analysis: 161

Figure 6.3 – Linear Initial Template: Governance and Power: 178

Figure 6.4 – Hierarchical Initial Template: Governance and Power: 181

Figure 6.5 – Research Questions and the Analytical Process: 182

Figure 6.6 – The Link between Coding and Memoing: 188

Chapter Seven – Findings

Figure 7.1.1 – Final Template: Credibility of Reform: 194

Figure 7.1.2 – Hierarchical Final Template: Credibility of Reform: 195

Figure 7.2.1 – Final Template: Supply Chain Management: 217

Figure 7.2.2 – Hierarchical Final Template: Supply Chain Management: 218

Figure 7.3.1 – Final Template: Competition and Quality: 241

Figure 7.3.2 – Hierarchical Final Template: Competition and Quality: 242

Figure 7.4.1 – Final Template: Partial Model Transition: 263

Figure 7.4.2 – Hierarchical Final Template: Partial Model Transition: 264

Figure 7.5.1 – Final Template: Government Quality Control and the CMC: 284

Figure 7.5.2 – Hierarchical Final Template: Government Quality Control and the CMC: 285

Figure 7.6.1 – Final Template: Governance and Power: 306

Figure 7.6.2 – Hierarchical Final Template: Governance and Power: 307

Appendices

Figure A-1 – The Process of Template Analysis: 404

Table A-1 – Detailed Cocoa Revenue Breakdown: 399

Table A-2 – LBC Market Share 1993-2008: 403

Acknowledgements

I would like to thank my PhD supervisors, Professor Philip Hardwick and Professor Allan Webster, for their support and guidance throughout this study. In particular Professor Hardwick has been a constant source of expertise, assistance and reassurance throughout my three years writing this thesis. Indeed, having the opportunity to work alongside and get to know Professor Hardwick has been one of the most enjoyable experiences associated with this study.

Thanks must also be given to Bournemouth University for the generous financial support which has been given to me throughout this study. As one of the fortunate recipients of a Bournemouth University Scholarship, I have been able to concentrate exclusively on my studies without the pressure of work commitments or financial stress. Indeed, Bournemouth has literally gone the extra mile in my case, paying for two rounds of research in Africa, thus facilitating the rich data collection which has taken place.

Whilst it is not possible to thank everyone at the individual level, it is necessary to acknowledge the kind spiritedness of the people of Ghana and the support which they have been willing to bestow on me throughout this project. Equally, the many participants I have interviewed from other countries around the world have shown me nothing but respect and generosity and therefore my thanks must be extended to them also.

Finally, I would like to thank my family and my fiancée Chloe. Independent study can be a challenging and isolating experience and without the generous love and support I have received throughout this study it would not have reached the stage that it has. In particular my fiancée Chloe has been a constant source of support and encouragement throughout some particularly difficult times. The fact that I have been able to complete this thesis is testament to the truly wonderful person that she is.

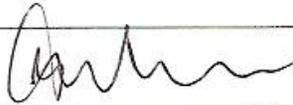
| | |
|---|--|
|  | RESEARCH DEGREE RD13: DECLARATION |
|---|--|

Notes: All candidates must submit a declaration with their thesis. A copy should be submitted to your Supervisor and one copy to the Research Administrator.

| | | | | | | |
|------------------------------------|--|-----------------------------|---|-----------------------------|---|-----------------------------|
| 1. Research Student Details | | | | | | |
| Student's Full Name | MR MICHAEL GRANLEESE | | | | | |
| Student's ID Number | 4129462 | | | | | |
| School | <input checked="" type="checkbox"/> BS | <input type="checkbox"/> CS | <input type="checkbox"/> DEC | <input type="checkbox"/> MS | <input type="checkbox"/> SHCS | <input type="checkbox"/> SM |
| Award thesis is submitted for | <input type="checkbox"/> MPhil | | <input checked="" type="checkbox"/> PhD | | <input type="checkbox"/> DBA <input type="checkbox"/> DProf | |

| | | |
|--|---|-------------------------------------|
| 2. Research Student's Declaration | | |
| Statement of any advanced studies undertaken in connection with the programme of research. | | |
| Concurrent registration for two or more academic awards (tick one) | I declare that while registered as a candidate for the University's research award, I have not been a registered candidate or enrolled as a student for an award of any other academic or professional institution. | <input checked="" type="checkbox"/> |
| | I declare that while registered as a candidate for the University's research award, I was, with the University's specific permission, a registered candidate/enrolled student for the following award: (name of award) <i>Doctor of Philosophy</i> at: (name of institution) <i>Bournemouth University</i> | <input checked="" type="checkbox"/> |
| Material submitted for another award (tick one) | I declare that no material contained in the thesis has been used in any other submission for an academic award. | <input checked="" type="checkbox"/> |
| | I declare that the following material contained in the thesis formed a part of a submission for the award of (state award and awarding body and list the material): | <input type="checkbox"/> |

| | |
|---|--------------------------|
| 3. Research Supervisor's Declaration | |
| I/We declare that I/we have read the above named Research Student's completed thesis and support its submission. | <input type="checkbox"/> |
| I/We declare that I/we have read the above named Research Student's completed thesis and do not support its submission. | <input type="checkbox"/> |
| I/We declare that I/we have not read the above named Research Student's completed thesis and do not support its submission. | <input type="checkbox"/> |

| | | |
|-------------------------------|---|----------------|
| 4. Signatures | | |
| Signature of Research Student |  | Date: 23/10/09 |
| Signature of First Supervisor | | Date: |

Abbreviations

ADM – Archer Daniels Midland

BOG – Bank of Ghana

CMC – The Ghana Cocoa Marketing Company

COCOBOD – The Ghana Cocoa Board

CODAPEC - Cocoa National Disease and Pest Control Committee

COPAL – The Cocoa Producers Alliance

CPC – The Cocoa Processing Company

CRIG – The Cocoa Research Institute of Ghana

CSD – The Cocoa Services Division

DFID – Department for International Development

EU – European Union

FCC – Federation of Cocoa Commerce

FFA – Free Fatty Acids

FOB – Free on Board Price

GDP – Gross Domestic Product

GNI – Gross National Income

GVC – Global Value Chain Analysis

ICCO – The International Cocoa Organisation

IFPRI – International Food Research Policy Institute

IMF – The International Monetary Fund

LBC – License Buying Company

LICOBAG – The Licence Buyers Association of Ghana

LIFFE - London International Financial Futures and and Options Exchange

MOFA – Ministry of Agriculture

MOFEP – Ministry of Finance and Economic Planning

NIE – New Institutional Economics

ODI – Overseas Development Institute

PBC – The Produce Buying Company

QCD – The Quality Control Division

SSNIT – The Social Security and National Insurance Trust

TCE – Transaction Cost Economics

UNCTAD – The United Nations Conference on Trade and Development

Chapter 1 – Introduction

1.1 – Introduction

Cocoa is a perennial tree crop, which can only be grown in tropical climatic conditions. Global cocoa production is dominated by the West African Region countries of Ghana, the Ivory Coast, Cameroon and Nigeria. In the 2007/08 cocoa season, these countries accounted for 71.8% of global production [3,384,000 tonnes], with the Ivory Coast as the world's leading producer, commanding 37% of production, and Ghana the 2nd largest producer commanding 21% [ICCO¹, 2008]. The significance of cocoa to West African development can be seen by the fact that in 2005 cocoa was West Africa's number one agricultural export accounting for \$2500 million in trade revenue with the number two export, cotton, only accounting for \$779 million [UNCTAD, 2008, p33].

Within the last twenty years, all West African cocoa markets have undergone significant change and restructuring. Change has focused on models of market organisation, with the World Bank's model for liberalised markets being prescribed as a replacement for the government run systems favoured by West Africa's colonial governments. Whilst the basic model for change has been largely uniform across countries, each nation's experience of change has been hugely different. Not only has the liberalisation model been implemented at different times and speeds, and with different levels of government commitment, but the basic starting position and conditions surrounding liberalisation within each market have differed greatly. Resultantly, both the extent and the outcomes of liberalisation have been hugely varied, leading to increased academic attention surrounding the link between models of market organisation and the process of market development.

Amongst the markets that have undergone change within West Africa, the experience of Ghana has been unique. Refusing to fully implement the World Bank's doctrine for

¹ ICCO stands for International Cocoa Organisation. The ICCO is a non-governmental institution with the responsibility to monitor aspects of the global cocoa market including, cocoa prices and cocoa stocks.

complete liberalisation, the Ghanaian market has adopted a partially liberalised system of market control. Whilst debates still surround the performance of this system, investigation into some of the many unique aspects of the Ghanaian cocoa market undoubtedly has the potential to further enhance understanding of the link between market organisation and development. As such, the Ghanaian cocoa market will form the focus for analysis within this study.

This chapter will begin with a description of the market liberalisation experience throughout West African cocoa markets. Following a brief discussion of the outcomes of liberalisation, the Ghanaian cocoa market will be introduced as an alternative model of market organisation. It will then be possible to outline the research aims and objectives, and the research questions for this study. Finally the chapter will conclude with a brief summary of the seven remaining chapters in this thesis.

1.2 – Market Liberalisation and the Washington Consensus

Market liberalisation in the West African cocoa chain has been the subject of many recent studies [Gilbert, 1997; Varangis and Schreiber, 2001; Fold, 2002; Losch, 2002; Dorin, 2003; Gilbert and Varangis, 2003; Tollens and Gilbert, 2003; Kaplinsky, 2004; ul Haque, 2004; Wilcox and Abbott, 2004; Laven, 2005; Teal et al, 2006; Zeitland, 2006].

Prior to the IMF and World Bank's structural re-adjustment and market liberalisation programmes, beginning in the late 1980's, the cocoa markets of West Africa were largely government controlled. Depending on the legacy of each country's former colonial power, there were slight variations in the extent of government control in the market [Akiyama et al, 2001]. The cocoa markets of Ghana and Nigeria, both former British colonies, were controlled by a parastatal² marketing board with monopoly control over internal and

² A parastatal is a company owned or controlled wholly or partly by the government.

external crop marketing³. The board controlled and executed all aspects of the domestic chain, from initial purchasing through to export. Quality control and the fixing of producer prices were also functions of the board. Prices for the season were determined prior to the beginning of the crop year and generally remained fixed throughout the season [Sept-Aug]. Resulting from the large number of functions the marketing boards performed in the supply chain, extremely high operating costs were common-place [Akiyama et al, 2001].

In the former French colonies of the Ivory Coast and Cameroon, the government regulated all aspects of the internal and external marketing through the use of a stabilisation fund, also known as a 'Caisse'⁴ [Akiyama et al, 2001]. Whilst the government did not physically handle the crop, through the Caisse they were able to maintain control over the supply chain. The Caisse controlled the licensing of, as well as fixing the margins paid to, private sector buyers and exporters. Varangis and Schreiber [2001] find that adherence to this schedule was mandatory. The government also intervened by setting producer prices, stabilising export market prices where necessary, and enforcing quality control [Varangis and Schreiber, 2001].

Both systems of control were justified based on the following benefits:

- Quality assurance, and the potential to establish and maintain national reputations for quality on the basis of a single and mandatory system of quality control [Gibbon and Ponte, 2005, p 97]
- The capacity to earn commercial premiums through the sale of quality cocoa and the security of forward sales [Gibbon and Ponte, 2005, p 97].
- Price stabilisation through seasonal and inter-seasonal minimum producer prices. Stabilisation of prices was achieved both through forward sales of cocoa giving

³ Internal crop marketing refers to all aspects of the domestic supply chain. External crop marketing refers to the sale of cocoa either to local processors or international buyers.

⁴ Examples of the Caisse system include the Caistab in the Ivory Coast, and the Office National de Commercialisation des Produits de Base [ONCPB] in Cameroon.

projection of future income, and also a stabilisation fund that provided a financial buffer against market price movements.

- Extension services to farmers, such as subsidised input purchases [Gilbert and Varangis, 2003].
- Cheap and effective export tax gathering [Gibbon and Ponte, 2005, p 97]

In the 1980s and 1990's, however, mounting pressure from the World Bank and the EU signalled the beginning of the end for West African government marketing institutions [Akiyama et al, 2001]. This trend was not limited to cocoa markets, with market liberalisation being encouraged across almost all developing country markets in which the World Bank held influence. Market liberalisation is closely associated with an ideological shift towards open market economics within the policy institutions of Washington DC. This approach became widely known as the 'Washington consensus' following Williamson's [1990] paper outlining ten policy options for Latin American development⁵. Williamson's [1990] recommendations included tax reform, trade liberalisation, privatisation, deregulation, and prudent monetary and fiscal policies.

The original motivation for a change of thinking in this area resulted from both a period of extended stagflation⁶ in the UK and USA, and the failure of import substitution policies in Latin American development [Waeyenberge, 2006]. In response to the economic downturn, Keynesian welfare economics [Keynes, 1936], which had been prominent in the post-war years, began to be discredited and in its place greater support⁷ was offered for the neoclassical economics of Friedman [1962] and Hayek [1944]. Policy changes promoted under the Washington consensus were based on neoclassical economic theory [Kydd and

⁵ The World Bank and IMF are generally considered the main forces behind the Washington consensus. However, as observed by Williamson [2000] the policy options outlined in the original Washington consensus paper [Williamson, 1990] were based on the shared beliefs of the majority of influential political and economic institutions in Washington at the time. Hence the term 'Washington consensus'.

⁶ Stagflation is considered one of Friedman's strongest arguments against the approach of Keynes. Friedman developed the term stagflation when arguing that the inverse relationship between unemployment and inflation did not hold in all circumstances.

⁷ In particular the political leaders Thatcher and Reagan are associated with the open market approach of Friedman and Hayek.

Dorward 2003], using ‘models that postulate maximizing agents⁸ who interact through a complete set of perfectly competitive markets’ [Hoff and Stiglitz, 2001, pg 444]. Based on these neoclassical teachings, neoliberal economists believed that investment and long-term growth would be achieved as long as relative prices were right and the private sector given freedom to operate. Under such conditions it was believed that private sector dynamism and strong market forces would dominate the institutional and social obstacles that are faced throughout the process of development.

The first significant documentation of this approach in relation to African market development can be seen in Berg [1981]. Under the neoliberal approach, modernisation and transition were no longer considered the primary measures of development, and instead development was to be judged by quantifiable measures such as per capita income and productivity. Contrary to the support offered for the government in the Keynesian approach, neoliberalists encouraged a reduction in government intervention based on the inefficiency of government action and the risk of political rent-seeking [Waeyenberge, 2006]. In this light, the following arguments were made against the role of the government in West African cocoa markets:

- Poor management and continually falling cocoa prices from the peak in 1977, caused many stabilisation funds to become insolvent [Gilbert, 1997; Varangis and Schreiber, 2001].
- Opaque, mismanaged accounting reduced the fiscal credibility of marketing board budgets [Gilbert, 1997].
- Accusations of rent seeking behaviour were commonplace as marketing/stabilisation agencies absorbed a significant amount of cocoa export earnings [Bates, 1986; Akiyama et al, 2001].
- Cocoa marketing costs in Africa exceeded those in other Cocoa producing nations, which operated through free markets [Varangis and Schreiber, 2001].

⁸ In support of the neoliberal approach for market development, Agenor and Monteil [1996] argue that economic agents in developing countries behave with the same perfect rationality as economic agents in developed countries.

- Exorbitant marketing costs put downward pressure on farm incomes [Gilbert and Varangis, 2003]
- West African governments were accused of crowding out the private sector and stifling entrepreneurial activities in rural areas [Varangis and Schreiber, 2001].

In order to encourage the implementation of market liberalisation policies, IMF and World Bank loans became conditional upon developing country governments fulfilling the policy changes laid out in the World Bank and IMF's structural adjustment policies [SAP's]. Under these policies government intervention was typically reduced to the provision of public goods. Within the orthodox economic literature public goods are described as services which the private sector will not provide as they are both non-excludable and non-rivalrous [Samuelson, 1954].

Proponents of the Washington Consensus predicted that cocoa market liberalisation would achieve the following:

- Increase in the producer's share of the FOB⁹ price received in the export of cocoa, primarily through a reduction in export taxes imposed by parastatals [Gilbert and Varangis, 2003].
- Alignment of the incentives in production and marketing with world prices, in the expectation that this would improve efficiency in the supply chain and increase production¹⁰ [Gilbert and Varangis, 2003].
- Promoting the development of modern agribusiness industries, through increased private sector involvement and local entrepreneurship [Varangis and Schreiber, 2001]

⁹ Free on board price [FOB] is the market value of goods at the point of uniform evaluation. Simply put the FOB is the price received for the cocoa beans themselves.

¹⁰ To some extent this is a contradiction, as increasing production and thus supply of cocoa would lower world market prices. As such, this is often cited as a criticism of the reform agenda [Gilbert and Varangis, 2003].

1.2.1 - The Process of Market Liberalisation

The first West African country to liberalise was Nigeria in 1986, where the hasty removal of government controls created chaos in the cocoa market [Varangis and Schreiber, 2001]. In a bid to rapidly accumulate capital, inexperienced cocoa farmers offloaded as much cocoa as they could, thus flooding the market with low quality cocoa. Resultantly, they eliminated the quality premium which Nigerian Cocoa previously commanded [Gilbert, 1997]. Recent market reports and market price indicators suggest that the level of control along the domestic supply chain remains low and that the Nigerian cocoa market has failed to recover from the poor implementation of liberalisation policies¹¹.

Second to liberalise was Cameroon between 1989 and 1995, where reform efforts imposed by the EU dismantled the marketing authority of the ONCPB¹² over a series of years [Akiyama et al, 2001]. To some extent the gradual pace of reform in Cameroon appears to have alleviated many of the difficulties experienced in Nigeria. Nevertheless, quality decline and market capture by large multinationals have emerged as negative features of change [Varangis and Schreiber, 2001]. Quality decline in particular has been highlighted as a disappointment given the high premium that Cameroonian cocoa formerly commanded on the market.

Reform in the Ivory Coast took place throughout the 1990's. However, complete liberalisation and removal of Caistab's control over pricing did not take place until 1999. The final stages of reform in the Ivory Coast were brought about through significant pressure from the World Bank, indicating the Ivorian authorities' reluctance to reduce their control of the market [Losch, 2002]. In recent years, government mismanagement of cocoa revenues has also been a cause of perpetual civil unrest amongst the nation's cocoa

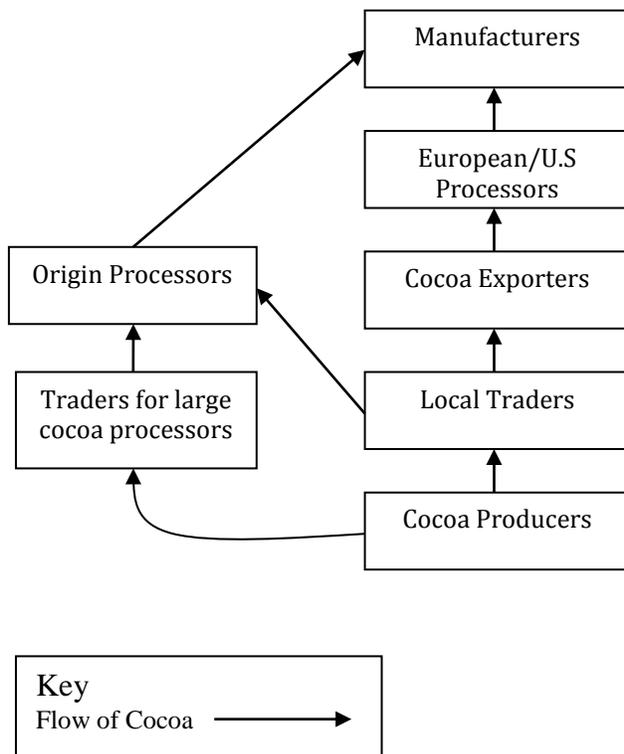
¹¹ Oredein, O. [2007]. 'SW Nigeria Graded Cocoa Prices at NGN 175,000-180,000/Ton'. This price equated to \$1,1384 – 1,423 per tonne. At the same time good quality cocoa would have been trading at around \$2000 per tonne.

¹² Office National de Commercialisation des Produits de Base.

farmers¹³. Rapid quality decline has also been a feature of liberalisation in the Ivory Coast [Laven, 2005]. As a result of these problems the Ivorian government has recently ordered a total overhaul of the cocoa marketing system¹⁴.

Resulting from market liberalisation across these markets, the structure of their supply chain is now largely the same, as demonstrated by figure 1.1. Figure 1.1 shows the basic flow of cocoa along the supply chain from the first stage of cocoa production, through to the final stages of manufacturing and retail.

Figure 1.1 – The Liberalised Supply Chain



Source – Author

¹³ Lewis, D [2008] 'Analysis - Ivory Coast Cocoa Sector Faces Season in Turmoil', <http://www.reuters.com/article/GCA-Agflation/idUSLC25967020080912>.

¹⁴ Reuters, March 3rd, [2009a] - 'Ivory Coast Sets 3-month Target for New Cocoa Reform Body' <http://www.flex-news-food.com/pages/22376/Cocoa/Ivory-Coast/ivory-coast-sets-month-target-new-cocoa-reform-body.html>

With the exception of Ghana, price stabilisation arrangements and monopolistic export marketing have been removed. This led to increased competition in the local trading, exporting, and origin processing segments of the cocoa chain [Losch, 2002; Varangis and Schreiber 2001]. As demonstrated by figure 1.1, cocoa producers can now choose to sell their product either to a local independent trader, or a trader working for a large processing company. The price of cocoa within these markets is now based on the world cocoa price, as determined by the prevailing market fundamentals on the terminal market.

1.3 - The Outcomes of Liberalisation

The individuality of each country's reform process, coupled with the unique national environments in which reform was carried out, has meant that the results of liberalisation are widely varied. As such, there have been arguments both for and against the outcomes of liberalisation [World Bank, 2005]. In recent years, however, there is a growing acceptance that whilst liberalisation has yielded certain benefits, the overall performance of sub-Saharan agricultural markets post liberalisation has been disappointing. Kydd and Dorward [2004], provide a critical analysis of the empirical evidence on sub-Saharan agricultural liberalisation. Using figures from 1979-1998 the authors highlight both the negative per capita growth rate in agriculture and significant decline in fertiliser use, as indicators that liberalisation policies have been unsuccessful in African agriculture. On the basis of this evidence, they find that 'there is little empirical evidence of liberalisation supporting rapid and widespread pro-poor growth in poor rural areas, but there is evidence of some successful government intervention' [Kydd and Dorward, 2004, p 957].

The failure of liberalisation policies to achieve the results expected can also be seen in recent literature at the policy level. In terms of overall economic performance, UNCTAD [2008] finds that the results of export market liberalisation in sub-Saharan Africa have been disappointing. In particular the value of exports within overall GDP has not improved significantly and in many Sub-Saharan countries the balance of trade has worsened due to increased imports after the removal of tariff barriers. Within recent World Bank literature

there is also an increased acceptance that the government may have a positive role to play in the market [World Bank, 2008]. Table 1.1 shows the disappointing impact of market liberalisation in Africa, as represented by key development indicators of export growth and the rate of private sector investment.

Table 1.1 – Liberalisation Outcomes

| Development Indicator | Before Liberalisation | After Liberalisation ¹⁵ |
|--------------------------|-----------------------|------------------------------------|
| Imports ¹⁶ | 31.0% | 34.0% |
| Exports ¹⁷ | 23.2% | 25.7% |
| Trade Balance | -6.6% | -7.7% |
| Investment ¹⁸ | 17.30% | 19.37% |

Source Figures: UNCTAD [2008]

Within the literature on the West African cocoa chain the main debates surrounding the outcome of liberalisations can be organised in terms of price and cocoa supply, market power, quality, supply chain efficiency, and missing markets.

1.3.1 - Price and Cocoa Supply

Varangis and Schreiber [2001] find that producers in the liberalised markets of Cameroon and Nigeria received a higher share of the export price, compared with those in the pre-

¹⁵ The measure used to define liberalisation here is the Sachs and Warner [1995] measure of liberalisation, which is measured mainly by the absence of tariffs below 40%, the absence of government monopoly on exports, and market exchange rate premium of 20% or more.

¹⁶ Imports are measured as ratio of import value to GDP.

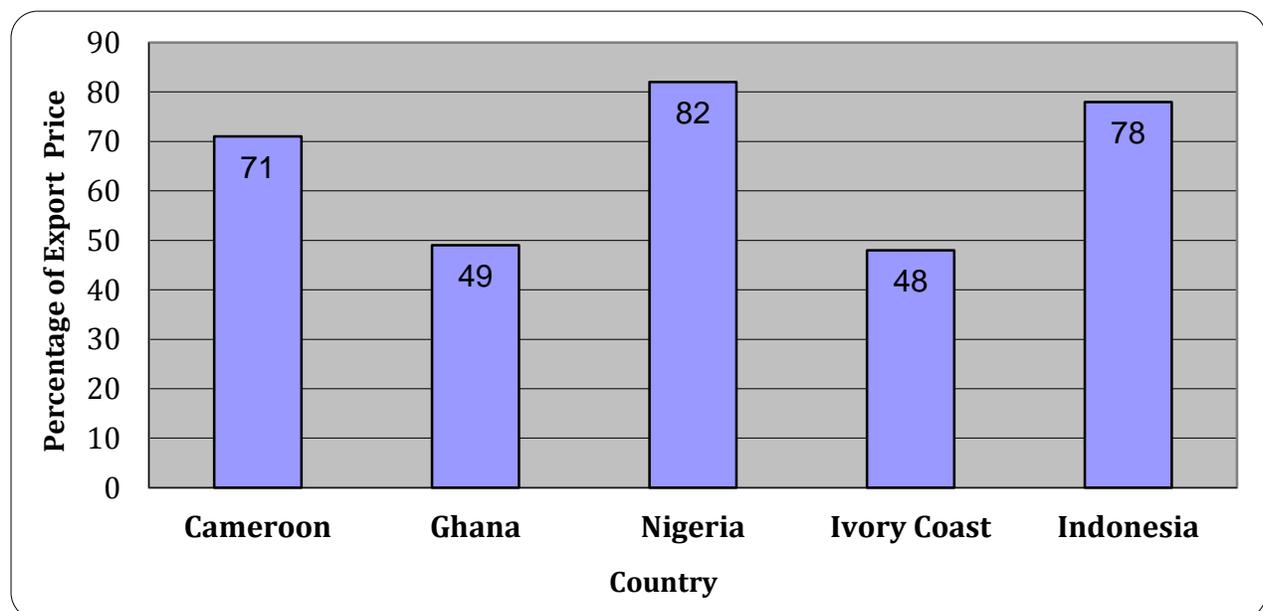
¹⁷ Exports are measured as the ratio of Export value to GDP.

¹⁸ Investment is measured as the ratio of physical capital investment to GDP. It is estimated that Africa needs to increase its investment to GDP ratio to 34% [around the same as East Asia], if it is going to achieve the millennium development goals set for it by the UN [UNCTAD, 2008, p70]

liberalisation markets of the Ivory Coast and Ghana. Studies by McIntire and Varangis [1999], Gilbert and Varangis [2003], Teal and Vigneri [2004], Zeitland [2006¹⁹] have also identified the same trend in liberalised West African cocoa markets.

This trend is demonstrated in figure 1.2.

Figure 1.2 – Cocoa Producer Price as a Percentage of the Export Price for 1994/95



Source - Adapted from Varangis and Schreiber [2001, p43]

However, Gilbert and Varangis [2003] observe that whilst producers are receiving a higher share of the export price, in many cases this price has declined from the pre-liberalisation era²⁰. As such, though producers in the fully liberalised markets were receiving a higher

¹⁹ Teal, Vigneri and Zeitland, all members of the Oxford centre for the study of African economies [CSAE], carried out studies on the agricultural supply response to liberalisation in Ghanaian Cocoa.

²⁰ Price declines have come about as a result of both declining quality, and also 'adding up' problem, which represents the uncontrolled increase in global production [supply] that results from the increased producer incentives within liberalised markets [Gilbert and Varangis, 2003].

share of the export price, producers in government controlled markets were not necessarily worse off; as though their percentage share of the export price was lower, the export prices being achieved in government controlled markets was higher [Gilbert and Varangis, 2003].

Indeed, as can be seen from table 1.2, in terms of income security farmers in the fully liberalised market of Nigeria have suffered from declining prices in recent years, compared with the price received at the beginning of the liberalisation process.

Table 1.2 – Real West African Producer Prices

| Cocoa Season | ICCO Daily Price [US\$/tonne] | Producer Prices in constant terms: 1995/96 = 100 | | |
|--------------|-------------------------------|--|-------------|---------|
| | | Ghana | Ivory Coast | Nigeria |
| 1995/96 | 1438 | 100 | 100 | 100 |
| 1996/97 | 1556 | 111 | 104 | 103 |
| 1997/98 | 1711 | 130 | 123 | 103 |
| 1998/99 | 1298 | 143 | 161 | 94 |
| 1999/00 | 919 | 121 | 90 | 61 |
| 2000/01 | 990 | 137 | 100 | 64 |
| 2001/02 | 1580 | 152 | 166 | 74 |
| 2002/03 | 1873 | 228 | 175 | 69 |
| 2003/04 | 1534 | 210 | 89 | 62 |
| 2004/05 | 1571 | 183 | 79 | 59 |
| 2005/06 | 1557 | 164 | 80 | 59 |
| 2006/07 | 1854 | 151 | 87 | 59 |

Source Figures - ICCO [2008]

Traditionally world cocoa prices have been determined by the interaction of supply and demand, as seen by the relatively robust relationship that exists between cocoa price and

the stock-to-processing²¹ ratio from 1961 to 1990 [ul Haque, 2004]. The ICCO [2005] have found that given the extended period of low prices cocoa farmers have begun to revise their short-run decision to invest in cocoa farming. This has resulted in a global cocoa supply deficit²² of 301,000 tonnes in 2006/07²³ and 88,000 tonnes in 2007/08²⁴. As such, whilst production increases were witnessed in the period immediately following market liberalisation, at the current time the cocoa market is characterised by a prolonged period of supply deficit.

1.3.2 - Market Power

The prevailing trends of geographic and corporate concentration experienced in recent years have come to define the activities of firms involved in the processing, manufacturing and branding of cocoa [Fold, 2002]. Concentration has enabled large cocoa processors to command significant purchasing power when bargaining with upstream suppliers. In light of this several authors have observed that within the cocoa chain the power of downstream sectors may directly translate into price pressure at the producer end of the chain [Gibbon and Ponte, 2005; Kaplinsky, 2004; Wilcox and Abbot, 2004; Dorin, 2005].

Removal of government marketing boards has meant that control of the cocoa chain is now solely the function of downstream actors, with the exception of Ghana where the Cocobod still maintains a large degree of control. Ul-Haque [2004] notes that 90% of all export activity from the Ivory Coast is controlled by multinational corporations based in Europe and North America. In a similar light, Fold [2001] observes that to date one of most significant changes resulting from market restructuring, has been the penetration of transnational capital in the West African export trade. At the current time both of these trends are of particular interest in Ghana given the recent surge of foreign investment into the Ghanaian cocoa processing industry.

²¹ Stocks represent the global supply of raw cocoa and processing represents cocoa demand.

²² A cocoa supply deficit means that the annual figure for grinding as driven by demand, is greater than the annual level of raw cocoa production.

²³ Brough, D, and Nicholson, M [2008] 'Cocoa prices at over 20-year high <http://www.iht.com/bin/printfriendly.php?id=13804450>.

²⁴ ICCO, March 3rd [2009] Latest Quarterly Bulletin of Cocoa Statistics, <http://www.icco.org/about/press2.aspx?Id=nve11543>

1.3.3 - Quality

As observed earlier, market liberalisation has been associated with quality deterioration across the West African cocoa crop. Within the literature, it is regularly found that the frantic and highly competitive buying practices of local traders do not enable the production of good quality cocoa [Shepherd and Farolfi, 1999; Varangis and Schreiber, 2001; Fold, 2001, 2002; Losch, 2002]. Furthermore, it is found that the private sector have been unwilling, or unable, to take on the government's role in quality control [Fold, 2001; Losch, 2002].

Resultantly, the price premium previously commanded by cocoa from the Ivory Coast, Cameroon, and Nigeria has been eroded [Shepherd and Onumah 1997, Losch, 2002]. In light of this, the value of Ghana's reputation for quality is consistently portrayed as one of the main barriers to complete liberalisation in the Ghanaian market [Laven, 2007]. To a large extent this appears justified by figures showing that between March 19th 2008 and May 28th 2008, one tonne of Ghana main grade cocoa was being traded at a premium of \$110-140 above main grade cocoa from the Ivory Coast and \$140-160 above Nigerian main grade cocoa²⁵.

Nevertheless, Fold [2002] and Losch [2002] find that large cocoa processors have developed a preference for low cost, low quality cocoa in line with the scale economies that can be realised by sourcing cocoa in this way. As such, there remains some debate surrounding the level of long-term market support for the Cocobod's role in quality control.

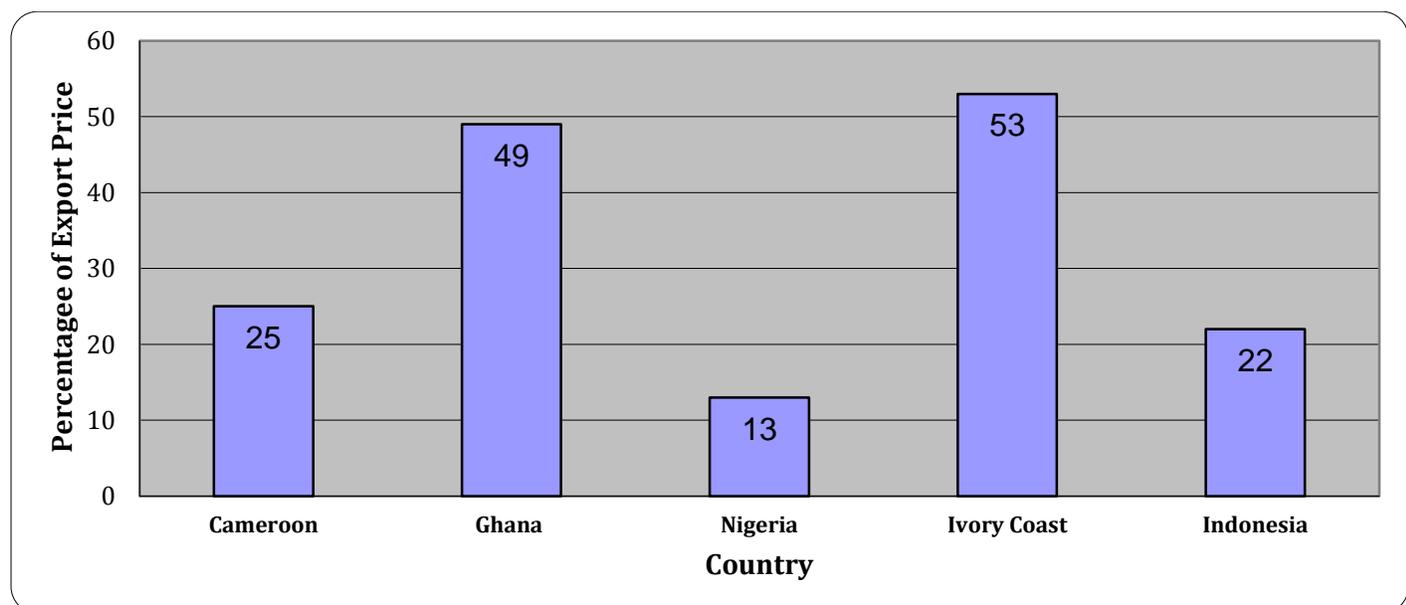
1.3.4 - Supply Chain Efficiency and Missing Markets

As observed earlier, increasing the efficiency of the supply chain was one of the primary arguments for market liberalisation. Varangis and Schreiber [2001] find that marketing margins before liberalisation were unacceptably high as government institutions had no

²⁵ The Cocoa Merchants Association publish standard market prices for cocoa on a daily basis - <http://www.cocoamerchants.com/dailyspotprice/index.asp>

incentive to be efficient. However, with the advent of liberalisation, West African governments have reduced taxes and abolished the costs associated with the operation of marketing boards and stabilisation funds. As indicated by table 1.3, in 1995 the marketing costs for the liberalised markets of Cameroon, Nigeria and Indonesia were much lower than those in Ghana and the Ivory Coast²⁶.

Figure 1.3 – Marketing Cost and Tax as Percentage of Cocoa Export Price 1995



Source - Adapted from Varangis and Schreiber [2001]

The above figures for the decline in marketing costs may, however, be misleading, as this improvement has not been brought about by efficiency gains alone. Following liberalisation the government has retracted from the provision of public goods such as input subsidies, farmer credit and quality control. In response to this it was assumed that the private sector would fill the void left by government, thus allowing farmers to continue receiving the services previously provided by the government.

²⁶ In 1995 the Ivory Coast was still considered a government controlled market.

However, the private sector's failure to engage in the markets for these services has been one of the defining features of market liberalisation within sub-Saharan Africa [Shepherd and Farolfi, 1999; Kherallah et al, 2000; Kydd and Dorward, 2004; Poulton et al, 2006]. The prevalence of missing markets in services such as farmers inputs, farmer credit and quality control, have made a significant contribution to the negative perception of liberalisation policies. As such, the efficiency gains associated with government retrenchment and private sector engagement appear to come at the cost of missing markets. Indeed, UNCTAD [2008, p38] find that whilst the removal of public goods such as input subsidies and agricultural research, may have led to improved fiscal discipline, the constraints that farmers now face in this area have meant that in many cases the supply response post liberalisation has been disappointing.

1.3.5 - Evaluation

Whilst arguments can be made both for and against certain aspects of market liberalisation, the results in the sections above clearly show that different models of market organisation can have very different effects on market performance. Despite the relative homogeneity of basic cocoa production across West Africa, in recent years there have been significant variations in the performance of West African producers in the areas of production growth, export market price, and farmer remuneration. In particular the partially liberalised Ghanaian cocoa market appears to have outperformed all of its fully liberalised West African neighbours. In light of this, it appears that market organisation matters and as such, policy in this area has the potential to have a significant effect on market development.

Responding to the problems associated with Washington Consensus policies, a new development agenda has arisen in the post-structural adjustment era [Stiglitz, 1998, 1999; Hoff and Stiglitz, 2001; World Bank, 2005]. This new agenda²⁷ questions the purely market-centred approach of neoliberalist policies, recognising that in certain situations the

²⁷ The post Washington consensus agenda.

government has a key role to play in market development, and also that each nation's development policies must be tailored to the specific environment in which they are to be implemented.

Focusing on the role of government, the work of Dorward et al [1998, 2005a] has been highly influential throughout this study. Recognition of the governments's role in market development has also entered the policy arena, as seen by the World Development Report's for 1997 and 2008 [World Bank, 1997, 2008]. Indeed, UNCTAD [2008] find that whilst liberalisation has generally achieved disappointing results across African export markets, in countries such as Ghana where agricultural exports have been a success, government intervention has played a key role. Equally, it must be recognised that partial liberalisation appears to have had a positive impact on the Ghanaian market. Within the Ghanaian market it appears that the benefits of government control have been balanced alongside private sector dynamism, with the effect of improved market performance. In light of this, the Ghanaian market appears to represent a pertinent example of the type of market model advocated in recent development economics literature.

1.4 - Partial Liberalisation in Ghana²⁸

In contrast to the liberalised cocoa markets described earlier, the system of market organisation in Ghana remains predominantly government controlled through the operation of the Ghana Cocoa Board [Cocobod]. The hasty policy making, economic mismanagement and market failures which beguiled the neoliberal policy doctrine of the 1980's and 1990's have been largely avoided in Ghana, with a process of partial market reform and institutional rationalisation being preferred to the wholesale changes witnessed elsewhere. Institutional control, through the Cocobod, continues to shape every aspect of the Ghanaian cocoa market and over time the role of the Cocobod has gained

²⁸ It is important to note that the word partial is used as a descriptive term to describe the model of market of market organisation in the Ghanaian cocoa market where liberalisation has deliberately reached a partial stage of reform and the roles of government and the private sector have been specifically allocated. This use of the term partial must be differentiated from the partial liberalisation critique, used to describe the uncommitted way in which certain African governments have implemented their liberalisation policies [Jayne et al, 2002; Kherallah et al, 2000].

relative approval from domestic stakeholders, bi-lateral donors, academics and private sector investors [LMC²⁹, 1996; Shepherd and Onumah, 1997; Teal et al, 2006; Fold, 2008].

Despite beginning a process of partial reform in 1992, the Cocobod remains one of Ghana's largest and most important bureaucracies. The Cocobod's turnover for 2007 was \$1200 million³⁰, up from \$1100 million in 2006 and \$888 million in 2005 [Cocobod, 2006]. The significance of cocoa to Ghanaian foreign earnings can be seen in table 1.3 where cocoa accounts for a consistently high share of Ghana's total export revenues.

Table 1.3 – Cocoa exports as share of Ghanaian export revenue.

| Year | 1990 | 1995 | 1999 | 2003 | 2005 | 2007 |
|--------------------|------|------|------|------|------|------|
| Cocoa Export Share | 40% | 46% | 27% | 39% | 36% | 32% |

Source figures - Tiffen et al, [2002]; ICCO, [2008], Economic Intelligence Unit, [2008].

Only the Ivory Coast is as reliant as Ghana on cocoa for export revenue, where cocoa contributed 39% to total export revenues in 1999 and 42% in 2003 [ICCO, 2008]. The importance of cocoa revenue to all aspects of development in Ghana is evident through the fact that in 1995 tax on cocoa exports constituted 28% of total government revenue [Shepherd and Onumah, 1997, p27]. Cocoa is estimated to employ 3.2 million of Ghana's nineteen million population [ICCO, 1999].

1.4.1 - The History of Cocoa in Ghana

The Cocobod³¹ was set up in 1947 with the duty to secure the most favourable arrangements for the purchase grading and selling of Ghana's cocoa for the benefit and prosperity of Ghanaian cocoa farmers [Arhin et al, 1985]. However, despite high expectations that Nkrumah's 1957 election claims that social welfare would lead to

²⁹ LMC international is an independent business and economics consultancy for the global agri-business sector. The 1996 LMC report on the prospect of cocoa market liberalisation in Ghana was commissioned by the Ghanaian government and the World Bank.

³⁰ Reuters [2008a] 'Tariff's undermine Ghana's cocoa sales to china and India.' <http://www.flex-news-food.com/console/PageViewer.aspx?page=16016&str=>

³¹ Originally known as the Gold Coast Marketing Board [Arhin et al, 1985].

improved farmer conditions, the CPP government is associated with extremely high farmer taxation and the use of cocoa revenues for urban development projects [Bates, 1981].

The relative neglect of cocoa farmers continued throughout the 1960's, 70's and 80's [Bates, 1981; Arhin et al, 1985; Rimmer, 1992]. In response, cocoa farmers expressed their political voice through the formation of the NLM³² political party. Violent clashes between cocoa farmers and Nkrumah's CPP³³ government were also common [Bates, 1981]. During this time the Cocobod became highly politicised and the capacity for farmers to gain support was often dependent on their political leanings³⁴ [Arhin et al, 1985; Bates, 1981; Herbst, 1993].

Rimmer [1992] finds that far from its original purpose of farmer welfare, the Cocobod 'became a byword for inefficiency and the centre of a web of patronage' [p204]. Bates [1981] observes that Cocobod expenses as a share of total cocoa revenue rose from 7.4% in the 1950's to 17% in the late 1960's. By 1980 the Cocobod was the largest and most wasteful of Ghana's 235 public sector bureaucracies [Herbst, 1993].

In response to high marketing costs, cocoa prices were exceptionally low, resulting in a decline in cocoa production from a high of 557,000 tonnes in 1964/65 to a low of 158,000 in 1983/84 [Shepherd and Onumah, 1997, p5]. Resultantly, Ghana's share of global cocoa production fell from a No.1 position of 37% in the early 1960's to about 12% in the early 1990's [Shepherd and Onumah, 1997]. Shepherd and Onumah [1997] observe a sharp decline in real producer prices in Ghana between 1975 and 1985, at the same time as some of the most favourable prices on the world market. As a result of the economic mismanagement and catastrophic economic decline that took place from 1950-1985, Ghana earned the nickname of the vampire state [Frimpong-Ansah, 1992; Austin, 1998].

³² The National Liberation Movement.

³³ The Convention Peoples Party.

³⁴ Bates [1981] notes that it was a policy of the Cocoa Purchasing Company to only grant a farmer a loan if they were a declared member of the CPP governments United Ghana Framers Council.

1.4.2 - Market Reform

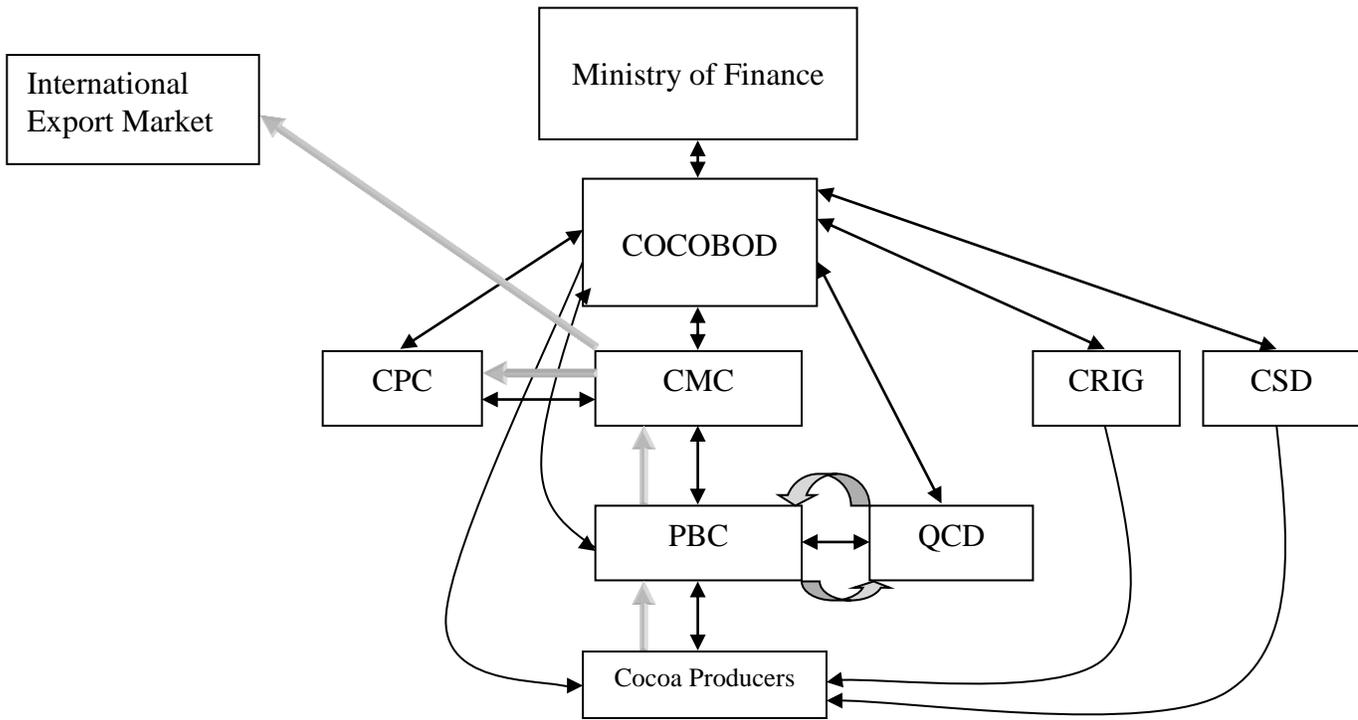
Prior to market reform in 1992, the Cocobod continued to have monopoly control over internal purchasing through the Produce Buying Company [PBC], as well as monopoly control over external sales through the Cocoa Marketing Company [CMC]. Indeed, as can be seen from figure 1.4 on the next page the Cocobod had complete control over all aspects of the Ghanaian supply chain before 1992 reforms.

Figure 1.4 also shows the important roles played by the Cocobod's other subsidiaries. The Quality Control Division [QCD] had the responsibility for the grading and sealing of all cocoa in Ghana. Training and development services [extension³⁵] for farmers and the provision of farmers' inputs³⁶ were provided by the Cocoa Services Division [CSD]. The Cocobod also had its own research centre known as the Cocoa Research Institute of Ghana [CRIG]. The Cocoa Processing Company [CPC] was also a subsidiary of the Cocobod, producing a variety of semi-finished cocoa products.

³⁵ Extension services typically transfer the best practices developed by the Cocoa Research Institute of Ghana [CRIG] to the farmer level.

³⁶ Inputs such as pesticides or fertilisers were provided by the government either through a subsidy or as a free public good.

Figure 1.4 – The Ghanaian Supply Chain pre-1992.



KEY

Denotes a one way relationship 

Denotes a two way relationship 

Denotes the movement of cocoa along the supply chain 

Source: Author

Under the auspices of the World Bank's Structural Adjustment Programme the Ghanaian cocoa industry began the process of partial liberalisation in the 1992/93 cocoa season³⁷ [Shepherd and Onumah, 1997].

The main reforms to date include:

- Cocobod staff numbers reduced from over 120,000 in the early 1980's to around 11,000 by the mid 1990's³⁸ [LMC, 1996, p A-66; Varangis and Schreiber, 2001, p61]. At the current time Cocobod employs less than 5,600 staff³⁹.
- The introduction of License Buying Companies⁴⁰ [LBCs] in 1992 to compete with the PBC in the domestic marketing of Cocoa. In 2008 there were twenty active LBC's involved in internal purchasing⁴¹.
- The removal of all subsidies on farmers' inputs in 1996/97 [Teal and Vigneri, 2004]. In recent years; however, the Cocobod have gone back on their commitment in this area.
- The privatisation of the PBC in 2000. The Government is still amongst the PBC's major shareholders owning 39.35% of its shares in 2005 [Laven, 2005]. The majority shareholder is the SSNIT⁴², owning approximately 51% of the company's shares.
- Rationalisation of quality control operations from five quality checks along the cocoa chain to the current system of three main checks.
- The termination of the cocoa services division and the transfer of cocoa extension services to the Ministry of Agriculture in Sept 2000.
- Cocobod has fulfilled its obligation to increase the farmers share of the FOB price to 60%+ by 2000 and 70%+ by 2004/05, under the structural adjustment framework put forward by donors [LMC, 1996; Laven, 2007].

³⁷ The cocoa season typically runs from September to August.

³⁸ In 1992 it was estimated that the headquarters of Cocobod employed 32,000 people, however several of these were 'ghost' workers [LMC, 1996]. Therefore, the scale of retrenchment may not be as impressive as it seems.

³⁹ This figure was obtained during a round one interview with a Cocobod official.

⁴⁰ Private sector cocoa buyers.

⁴¹ This was established during field work in 2008.

⁴² The Social Security and National Insurance Trust (SSNIT) is a statutory public Trust charged with the administration of Ghana's National Pension Scheme [www.ssnit.com].

- The privatisation of the Cocoa Processing Company in 2004/05. Similar to the PBC, the Ghanaian government remains one of the major shareholders in the CPC and the chief executive of the Cocobod sits on its board.

As can be seen from figure 1.5 on the next page, Ghana has stopped short of the complete liberalisation witnessed elsewhere in West Africa. Government institutions remain heavily embedded in several aspects of the supply chain. In comparison with fully liberalised markets where the private sector have total control of all stages of the chain from local purchasing to overseas shipment, within Ghana the private sector have to work in unison with the institutional structure of the Cocobod.

Cocobod's export marketing subsidiary, the CMC, remains in monopoly control over the sale of Ghanaian cocoa. This means that all cocoa purchased from farmers by the LBC's has to be delivered to the CMC for external sales. The important role played by the CMC was seen as one of the main reasons why Ghana should stop short of total liberalisation [LMC, 1996]. Before cocoa is taken over by the CMC it has to be certified by the QCD and therefore LBC's have to ensure that they buy good quality cocoa from farmers. The QCD remains a subsidiary of the Cocobod and is the only organisation licensed to certify cocoa in Ghana.

Through the CMC, around 60-75% of Ghana's cocoa is sold to export market buyers on the basis of forward contracts⁴³ [LMC, 1996; Varangis and Schreiber, 2001]. Forward contracting involves fixing the price⁴⁴ and quality parameters of a cocoa contract several months in advance of the cocoa harvest. The CMC may forward contract up to two years in advance of harvest, however; sales are generally made around 6-12 months in advance [LMC, 1996; Rottger, 2000; Varangis and Schreiber, 2001]. The majority of the remaining 25-40% of the cocoa is sold to local processors on the basis of pre arranged bean supply agreements⁴⁵. By selling forward the CMC is able to estimate an average export price [FOB price] that they will achieve for the season. On the basis of this future income prediction the Producer Price Review Committee⁴⁶ is able to fix the prices paid to farmers⁴⁷ and the margin paid to buyers before the beginning of the season.

In recent years the price paid to cocoa farmers has increased steadily in line with the Ghanaian government's commitment to international donors under structural reform. Significant increases in production [Vigneri and Santos, 2007] and the maintenance of high levels of quality [Laven, 2007] are also heralded as further indicators of good performance. The Cocobod's nation-wide pest and disease control programme, associated with increased production has also been observed as a success [Teal et al, 2006].

Figure 1.6, on the next page, demonstrates Ghana's positive producer price and production performance in recent seasons.

⁴³ The alternative to a physical cocoa contract is a futures contract where the price of cocoa may fluctuate in line with global price movements until a delivery date is fixed.

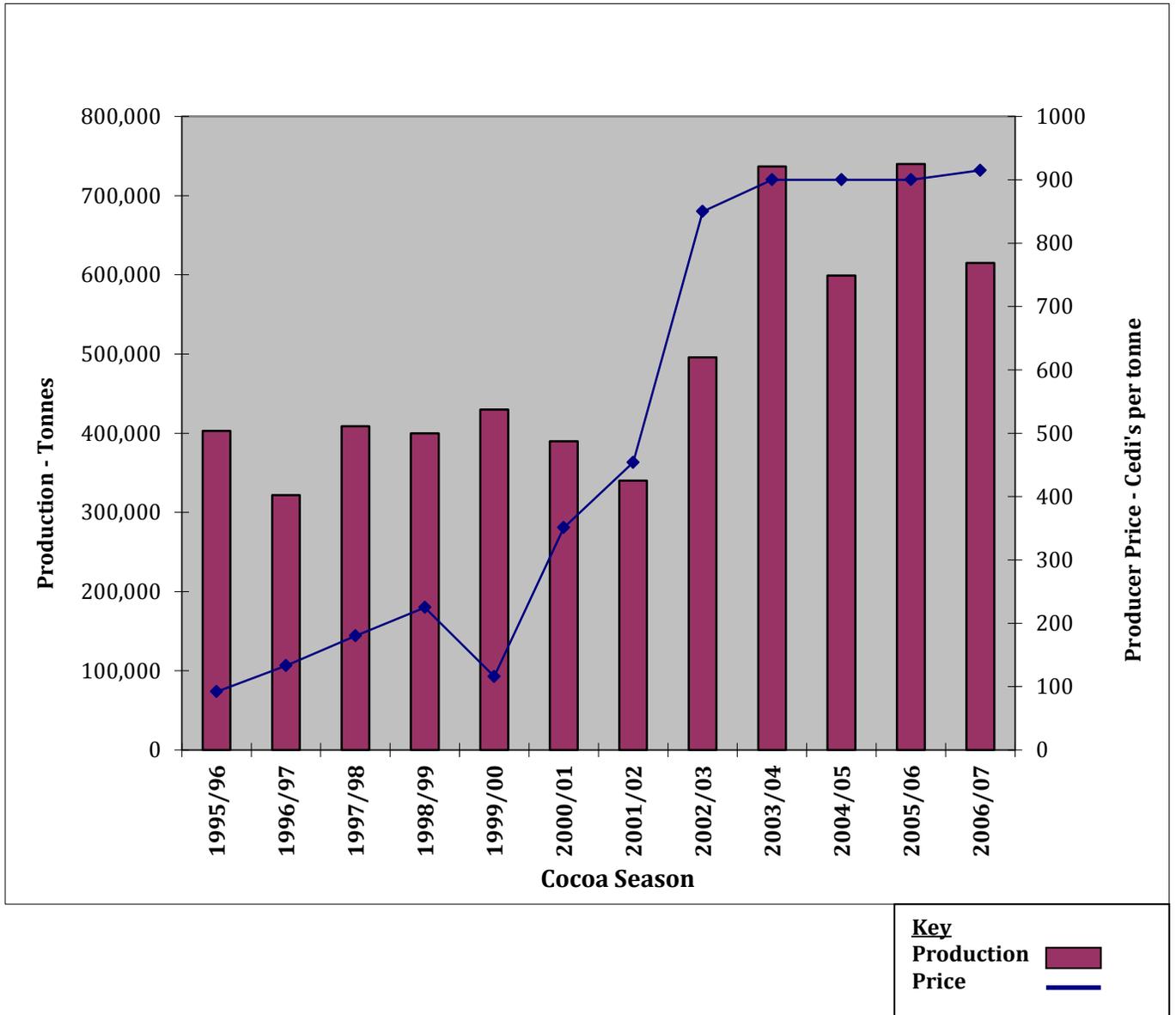
⁴⁴ The price of forward sales are based on futures prices at the London terminal market, where futures prices are quoted at least one and half years ahead [LMC, 1996, p A-86]

⁴⁵ The exact details of the formula the CMC use to calculate the price and quantity of cocoa sold to local processors is largely unknown and has led to disputes over price in the past [LMC, 1996; Rottger, 2000]

⁴⁶ The PPRC consists of the marketing board [Cocobod], government officials, representatives of private cocoa buyers, the national cocoa farmers' organisations, haulers and transporters [Rottger, 2000].

⁴⁷ The committee takes into account expected export prices during the coming year, the operating costs of Cocobod and its subsidiaries, the explicit tax, and farmers' production costs [Vangaris and Schreiber 2001].

Figure 1.6 – Ghana Cocoa Production and Producer Prices 1995/96 - 2006/07



Source Figures – Vigneri and Santos [2007] and ICCO [2008]

Despite the Cocobod's positive performance in recent years, Fold [2002] and Laven [2005] report that LBC's feel there is room for further reform in the domestic market. Indeed, reports by Herbst [1992], Shepherd and Onumah [1996], and Shepherd and Farolfi [1999] are equally critically of the Cocobod's limited reform effort. In light of this, it appears necessary to further explore the partial model in order to appreciate, which aspects of the model have helped to achieve Ghana's good performance, and whether certain aspects of the model are in need of further reform.

Within the domestic market it will be necessary to examine the specific functions of the Cocobod, such as quality control, warehousing, enforcement, and input distribution. Not only do these functions have a huge bearing on the performance of the domestic supply chain, but they also directly impact on the daily operations of the LBC's. As such, it will be interesting to explore these functions from the perspective of LBC's, in order to understand both how they affect market performance, and how they affect the incentive for private sector actors to invest in the market. Indeed, an examination of the potential for private sector dynamism in Ghana will be particularly important to our understanding of the partial model.

Equally, it is important to examine the impact of the Cocobod's continued monopoly over cocoa exports. In recent years there has been profound restructuring in the northern end of the cocoa chain, raising questions over the impact that this will have over the Ghanaian market. In particular it will be necessary to explore both how the Cocobod's traditional system of cocoa exporting can meet the demands of modern cocoa processors, and how the recent surge of investment into the Ghanaian processing industry will affect the Cocobod's model of supply chain control.

1.5 - Defining Governance

Liberalisation has led to a significant change in the governance of West African cocoa markets. Before moving on to discuss how these changes have impacted upon market performance it is necessary to define the term governance, which will be used throughout this study. Governance is a widely used term within academic and policy discussions and

can have varying interpretations dependent on the context in which it is being used. Broadly speaking governance can be understood as the act of governing and though the term can be applied to the actions of government, it must not be thought of as being only related to government. Governance is much broader and may occur both within and between all levels of society including governments, businesses and all types of societal organisations.

For the purpose of this study, the overall concept of governance can be defined as; the use of institutions, power and influence to coordinate and control the actions of organisations and individuals within society and the economy. From this relatively broad understanding it is necessary to refine the concept of governance in order to align the term with the specific theoretical perspectives with which it will be used in this study. Within the microanalysis of this study, using new institutional economics [NIE], the term governance will only be used in reference to institutions that can apply governance over the Cocobod, which itself operates as an institution of the government. In this context governance can be understood as the institutions or rules that regulate the actions of the government and organisations empowered by the government [Kaufmann, 2004; ODI, 2006]. Within the macro analysis, using global value chain analysis [GVC], governance will be discussed in detail and can be understood as ‘the authority and power relationships that determine how financial, material and human resources are allocated and flow within the chain’ [Gereffi, 1994, p 97]. Both the NIE and GVC definitions of governance are consistent with the overall definition outlined above; however, the aspects of governance which are highlighted within these particular theories are different. As such, it is necessary to remain aware of the nuances that exist within each theories approach to governance.

1.6 - Research Aims, and Objectives

In light of the above findings demonstrating the potential impact which market organisation can have on commodity market performance the following aims will be pursued in this study.

Primary aim:

To carry out a detailed exploration of the partially liberalised model⁴⁸ of market organisation in the Ghanaian cocoa market, in an attempt to contribute towards the post-Washington consensus perspective on market development in African agriculture.

Primary aim objectives:

1. To critically evaluate the functions of the Cocobod at both the domestic and international levels of Ghanaian cocoa chain. Whilst it appears that the Cocobod is currently achieving a high level of performance, critical evaluation will take place in order to further our understanding of the strengths and weaknesses associated with the Cocobod system.
2. To achieve an understanding of the implications of having the government and the private sector working closely together in the partial model. In particular it will be necessary to evaluate the capacity of the private sector to fully engage in a market dominated by government institutions and regulation.
3. To build an analytical framework that incorporates key themes from the theoretical traditions of New Institutional Economics and Global Value Chain Analysis. This will involve a critical analysis of the literature on these theoretical perspectives, with particular emphasis on the strands of theory related to the process of economic development. Building on this framework, research findings will aim to contribute towards the understanding of market organisation within these particular theories.
4. To develop a methodology capable of exploring the real experiences of participants within the Ghanaian cocoa market. Within the research design the objective is to achieve a

⁴⁸ Please note that the term 'partial model' is not an established theoretical term. However, the term partial model will be used in reference to the system of market organisation used in Ghana throughout this thesis. Furthermore, the term partial model will be used in reference to any other national market in which the government plays a highly influential role alongside that of the private sector. As research into partially or semi liberalised markets of market organisation grows a new terminology to describe this phenomenon may emerge. However, please do not differentiate between the term partial model used in this study and any different terminology that may be used to describe a similar model in any other study.

methodological approach that balances structure alongside the openness required for exploratory qualitative research. Consistent with the goals of critical realism, the analytical process will aim to uncover the causal mechanisms at work within the Ghanaian cocoa chain.

Secondary aim:

To assess the future reform options facing the Ghanaian cocoa market.

Secondary aim objectives:

1. To make recommendations for change within the domestic cocoa market based on both the strengths and weaknesses of the Cocobod model and also the opportunities to further maximise the potential of the private sector within the domestic supply chain.
2. To evaluate the opportunities and threats facing the Cocobod in the external market, and make recommendations as appropriate.

1.7 - Research Questions

Primary Research Question

What can the Ghanaian cocoa market as a model of partial liberalisation teach us about the post Washington consensus understanding of market organisation and development?

Secondary Research Questions

In order to help answer the primary question, six secondary research questions have been developed.

Within the domestic market aspects of the Ghanaian supply chain, which will make up the bulk of the research, the following questions will be addressed:

1. How does the private sector perceive the credibility of the Cocobod's role in the market, and what actions have the Cocobod taken to improve their credibility in this area?
2. Based on a critical examination of the Cocobod's various functions in the domestic supply chain, in which areas is the Cocobod's role most important to market performance?
3. Based on both the transaction risks and incentives presented within the model of partial liberalisation, what level of engagement can be witnessed from the LBC's in the development of the domestic supply chain?
4. In light of both the performance of the Cocobod and the opportunities that exist in the private sector, what functions of the Cocobod could be transferred to the private sector?

At the external market level, analysis will focus on the Cocobod's role as the link between the national market and the external buying market.

5. To what extent is the Cocobod able to compete on the global cocoa market using the traditional model of monopolised cocoa exporting?
6. How are increased investments from large multinational corporations and the subsequent increase in origin processing capacity in Ghana likely to impact upon the Cocobod's governance of the Ghanaian supply chain?

1.8 – Chapter Summary

1.8.1 – Chapter Two – New Institutional Economics

Chapter two forms the first of the three literature chapters in this study. The focus of this chapter is New Institutional Economics [NIE], and more specifically the branches of the NIE that discuss the process of market development within the developing world. Throughout this chapter Dorward et al's [2005a] model of developmental coordination will be developed as a framework through which to assess the roles of the Cocobod and private sector buyers in the domestic supply chain.

1.8.2 – Chapter Three – Global Value Chain Analysis

Throughout chapter three Global Value Chain Analysis [GVC] will be discussed as a framework through which to assess the Cocobod's competitiveness as a form of governance in the global cocoa chain. In particular, this chapter will focus on the importance of power and quality in determining the governance structure of the supply chain. The GVC phenomenon of functional upgrading will also be explored in light of the recent surge of industrial investment into the Ghanaian processing industry.

1.8.3 – Chapter Four – Ghana's Partial Liberalisation Model

Chapter four will involve a detailed discussion of the literature relating to both the domestic and international aspects of the Ghanaian supply chain. The literature in this chapter will be cocoa market specific and where possible concepts from the fields of NIE and GVC will be applied to the Ghanaian cocoa market, thus highlighting specific areas to be explored in the research. Throughout this chapter every effort will be made to use recent literature and market reports to ensure that the current situation in the Ghanaian cocoa market is appropriately understood prior to the research analysis.

1.8.4 - Chapter Five – Conceptual Framework

Chapter five will describe the theoretical framework to be used throughout the study. The theoretical framework has been designed around the structure of the partial model, where the functions of the Cocobod take effect at both the domestic and international level of the Ghanaian cocoa chain. In light of this a cross disciplinary approach has been designed to carry out both a microanalysis of the domestic cocoa market, and a macro-analysis of the Cocobod's link with the global cocoa market. New Institutional Economics will inform the microanalysis, whilst Global Value Chain analysis will form the basis of the macro-analysis. The chapter will conclude by attempting to resolve some of the tensions that arise in the process of cross-disciplinary research.

1.8.5 – Chapter Six – Methodology

As discussed in the research aims and objectives, the methodology for this study is of great importance in light of the methodological failures of recent development policies. The methodology chapter will begin with a discussion of critical realism [Bhaskar, 1975] as the ontological basis for the study. The central ontological argument of critical realism is that a reality exists, but it is both complex and deep and therefore cannot be reduced to our surface interpretation based on immediate experiences. As such, critical realist researchers attempt to uncover ‘real’ or ‘deep’ causal mechanisms at work within the phenomenon being examined. This is achieved through a process of iterative abstraction, known as retroduction.

Critical realism relies on the use of qualitative data, and therefore, the research design will focus on developing a strategy to collect and analyse in-depth qualitative data. Based on the approach of critical realism, potential causal mechanisms are identified within the literature, which in turn inform the development of interview guides. Interview guides will be used to carry out two rounds of in-depth semi-structured interviews during two separate field trips to Ghana⁴⁹. There are three core units of analysis to be interviewed including, Cocobod officials, LBC’s, and cocoa processors. Alongside the core units of analysis there will also be a number of key informant interviews.

Both rounds of interviews will be coded and analysed using the approach of template analysis [King, 2004]. Template analysis is a flexible technique used to thematically organise and analyse qualitative data. The process begins with the development of an initial template where themes are identified either a priori in the literature, or within the initial analysis of the data itself. Themes are organised hierarchically within the template, based on both their link with research questions and the richness of the data in this area. Once the initial template has been created qualitative data is coded and organised to help further the understanding of the data. Coding and theoretical development is an ongoing

⁴⁹ Round one of research in Ghana took place August and September 2007, and round two took place between April and May 2008.

and iterative process where templates are re-organised and interviews re-coded throughout the analytical process. Research findings are then presented in relation to a final template of themes, which address the research phenomenon.

1.8.6 – Chapter Seven – Research Findings

Throughout chapter seven research findings will be presented in relation to the final templates developed throughout the analysis. The key themes on which templates are based will be linked to the research questions stated above. Where possible theoretical insights will be developed based on any links between research findings and the literature identified in chapters three, four, and five.

1.8.7 – Chapter Eight – Conclusions

The concluding chapter will focus on the extent to which the research project has fulfilled the studies aims and objectives. This chapter will include individual responses to the research questions, where the primary research question in particular will be explored in detail. In order to answer the primary research question there will be a discussion of the study's theoretical framework and the study's contribution to knowledge will be addressed. Towards the end of this chapter it will be necessary to highlight the studies limitations and make recommendations for future research.

1.9 – Conclusion

In light of the experiences described in the early sections of this chapter, it appears that West African cocoa markets have suffered greatly in recent years due to both the flawed policy making of international development authorities and the poor policy implementation of government leaders. Recognising the problems associated with complete market liberalisation, the following study puts forward the case of the Ghanaian cocoa market as an alternative model for market development. As discussed throughout

this chapter the Ghanaian cocoa market has undergone partial liberalisation, leading to a positive market performance in recent years. In light of this a number of aims, objectives, and questions have been put forward linking the subsequent analysis of the Ghanaian cocoa market to the theoretical understanding of market organisation. Following the chapter structure outlined above, the seven remaining chapters will now attempt to systematically put in place the necessary building blocks required to achieve these goals.

Chapter Two – New Institutional Economics

2.1 - Introduction

New institutional economics will be used in a micro-analysis of the partial model of liberalisation used in the Ghanaian cocoa market. In particular the framework of developmental coordination presented by Dorward et al [2005a] will help to examine the evolving relationship between the government institution of the Cocobod and private sector buyers. In recent years, research using the NIE framework has expanded significantly in response to increased attention surrounding the role of institutions in market development [North, 2005]. Indeed, recent research strongly suggests that institutional quality can have a significant effect on a country's growth performance [Rodrik et al, 2002; Jutting, 2003; Shirley, 2005; Pande and Udry, 2006]. In light of this, this chapter will attempt to further explore the field of NIE where particular attention will be given to the application of the NIE in the developing country environment. The early sections of this chapter will outline the foundations of the NIE approach, whilst the later sections will focus on aspects of the NIE that have the potential to enrich our understanding of the Ghanaian cocoa market.

2.1.1 - Definition

Whilst there is no universally accepted definition for an 'institution' [Jutting, 2003], for the purpose of the micro-analysis in this study institutions are defined as:

'Formal⁵⁰ or informal⁵¹ rules of conduct that facilitate coordination or govern relationships between individuals or groups' [Kherallah and Kirsten, 2002].

⁵⁰ Formal institutions include; laws, organisations, political systems, contracts and markets.

⁵¹ Informal institutions include; norms, traditions, customs and religions.

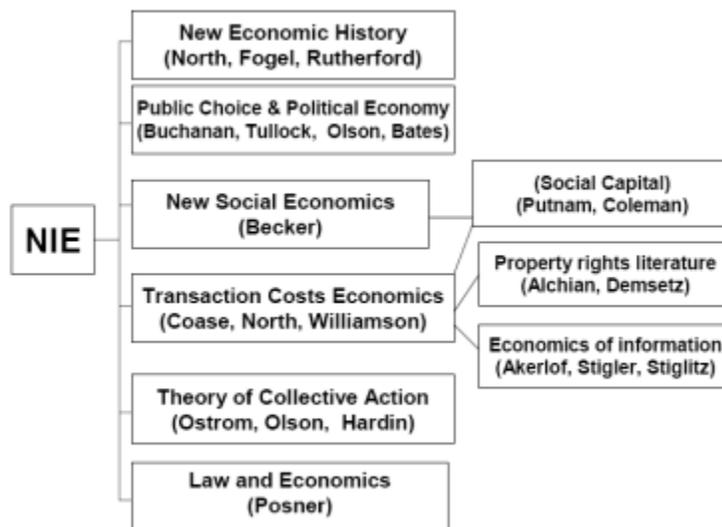
2.2 - The Foundations of New Institutional Economics

Ronald Coase's articles, 'The Nature of the Firm' [1937] and 'The Problem of Social Cost' [1960], are widely credited as the first examples of the economic approach that has come to be known as New Institutional Economics [NIE]. Coase's fundamental observation was that the neoclassical assumption of zero transaction costs does not hold in real world transactions, and that we operate in an environment of positive transaction costs. Transaction costs include the costs of information, monitoring, coordination and negotiation. Under the neoclassical assumption of zero transaction costs, institutions did not matter; however, in Coase's world of positive transaction costs, institutions do matter and they are crucial determinants of market efficiency through the impact they have on the nature of contracts.

Coase's conception of positive transaction costs is based upon a rejection of the instrumental rationality assumption, which underpins orthodox economic analysis. Based on this modification the NIE attempts to extend neoclassical theory and in doing so explore a range of issues outside the boundaries of traditional economic analysis [North, 1993]. The role of the institution is considered fundamental to economic analysis through its impact on the costs of transacting, and thus the subsequent performance and development trajectory of the economy. The purpose of the NIE is therefore to explain the development of institutions over time, and to evaluate their impact on economic performance, efficiency and distribution [Nabli and Nugent, 1989].

However, beyond this basic objective the NIE is a large and diverse field of study. Figure 2.1 on the next page outlines the various branches of the NIE. Within this broad categorisation, North [1990] and Williamson [1975, 1985] stand out as the major contributions to the NIE's development as a field of research.

Figure 2.1 – The Branches of NIE



Source – Kherallah and Kirsten [2002, p114]

2.2.1 - The New Institutional Economics of Williamson

Through his seminal works, *Markets and Hierarchies* [1975], and *The Economic Institutions of Capitalism* [1985], Williamson is credited with developing transaction cost economics. Transaction cost economics is the study of how trading partners guard against the risks associated with economic exchange. Such risks arise because both the bounded rationality of agents [Simon, 1955] and the incomplete nature of information result in an exchange situation where contracts are complex and unavoidably incomplete. Economizing is the central goal of Williamson's approach, where achieving the lowest possible transaction cost situation entails the search for efficient institutional solutions to variable contracting problems [Williamson, 1985].

The level of transaction cost faced by each trading party will vary depending on the conditions of the exchange, including: the frequency of the transaction, the level of asset specificity and the perceived degree of uncertainty about the future or trading partner [Williamson, 1975]. Williamson finds that asset specificity in particular is the most

important of these factors [Williamson, 1985]. Specific assets⁵² are defined as: 'durable investments that are undertaken in support of particular transactions' [Williamson, 1985, pg 55]. Parties that invest in relationship-specific investments expose themselves to the potential risks of rent extraction and hold-up⁵³ from the other trading party or regulator.

Williamson also introduces the behavioural assumption of opportunism, which represents 'strategic efforts to gain local advantage at the expense of the larger group' [Williamson 1999, p 311]. More specifically opportunism manifests itself through adverse selection, moral hazard, shirking, sub-goal pursuit and other forms of strategic self-interested behaviour [Williamson, 1985]. As such, opportunism⁵⁴ is another reason why comprehensive contracting is infeasible [Williamson, 1981, p 544]. Indeed, when contract complexity, the level asset specificity, and information asymmetry are all high then threat of opportunism is also very great.

Based on the above conditions of exchange and using a deductive logic closely associated with orthodox economic reasoning, Williamson develops a framework of potential organisational forms that a firm can adopt to economize on transaction costs. Organisational forms range from the market at one end, to integration/hierarchy at the other. Within this deterministic framework the goal of economic organisation is to use different organisational forms, which differ in their costs and competencies, to carry out transactions, which differ in their attributes [Williamson, 1991, p 79]. Firms will typically use the market to transact when transaction costs are very low, whilst the decision to integrate is motivated by extremely high transaction costs, such as high asset specificity and high information asymmetry.

⁵² Williamson [1981] defines three types of asset specificity: site specificity, physical asset specificity and human asset specificity.

⁵³ Hold up refers to a situation where one party involved in the contract withdraws active cooperation to back up demands [Williamson, 1985].

⁵⁴ Fafchamp's [1996] study of contractual conditions in Ghana displays how the high incidence of information asymmetry and opportunistic behaviour can act as a barrier to exchange.

Many of the concepts initially developed in Williamson's work have acted as the foundation behind the development of several approaches in the NIE⁵⁵, some of which are fundamental to the theories explored later in this chapter⁵⁶. As such, the value of Williamson's conceptual arguments cannot be disputed. Williamson is, however, criticised by heterodox economists for his orthodox assumption that market forces work to bring about an efficient sort between transactions and organisational forms, based on the principle of transaction cost economizing [Richter, 2001; Shelanski and Klein, 1995]. As such, Williamson's transaction cost economics is charged with some of the explanatory deficiencies associated with deductive economic reasoning [Pratten, 1997]. In particular Williamson's efficiency logic based on the strength of market forces appears least applicable to the developing country context where the rate of market failure and the problems defining property rights are much higher. In light of this, North [1990] presents a less deterministic mode of explanation, more suitable to the task of institutional analysis within the developing country environment.

2.2.2 - The New Institutional Economics of North and New Institutionalism

The work of North [1990] is central to the understanding of the institution in this study. Focusing on North's 1990 book 'Institutions, institutional change and economic performance', it is possible to see how North's version of the NIE offers a more sociologically enriched understanding of the institution [Groenewegen et al, 1995; Richter 2001; Nee and Swedberg, 2005; Groenewegen, 2006]. Post 1981⁵⁷, North replaced his efficient institution hypothesis with a less deterministic perspective, where the concepts of power, societal networks, incomplete information and societal influence have been used to critique neoclassical theory [Groenewegen, 1995, pg 472].

⁵⁵ Williamson's arguments have also made a contribution to the development of GVC models of governance [Gereffi et al, 2005].

⁵⁶ Williamson's framework has offered valuable insight into the developing country context through his recognition of the risks presented by transacting in 'thin' markets⁵⁶ [Dorward and Kydd, 2004]. In the case of thin markets where the risks or costs of transacting are high, Williamson encourages the application of 'non-standard' contractual forms, which are used to coordinate transactions in the developing world.

⁵⁷ 'In structure and change in economic history [North, 1981] I abandoned the efficiency view of institutions' [North, 1990, pg 7].

North finds that information is incomplete and the motivation of agents is difficult to decipher⁵⁸. As such, transacting is costly and, 'the major role of institutions in society is to reduce uncertainty by establishing a stable structure to human interaction' [North 1990, p 6]. Institutions perform this role through the development of both informal and formal rules to govern transactions, as well as the required mechanisms of enforcement to ensure compliance. In doing so, institutions significantly affect the costs of transacting and the resultant economic performance of an economy. Where transaction costs are lowered individuals are more likely to invest and engage in complex contracts, leading to economic development. However, this is not necessarily an efficient solution and North entertains the possibility of long-term institutional inefficiency in his analysis.

In North's earlier work [North and Thomas, 1973] relative price changes were seen as the main source of institutional change. However, in more recent research North deviates from a purely transaction cost argument and finds that institutional change is a more complicated process. Change is influenced by a number of factors over time, including, the formal rules, informal constraints, and the methods of enforcement operating in a society [North, 1990, p 6].

The work of North can be related to the field of new institutionalism, which is also known as neo-institutionalism. Similar to new institutional economics, new institutionalism does not embody a single unified body of thought, but rather it is made up of three different strands of research including; sociological institutionalism, historical institutionalism and rational choice institutionalism [Hall and Taylor, 1996]. Focusing on sociological institutionalism and historical institutionalism it is possible to see how new institutional economics could be enriched by these perspectives⁵⁹, by broadening the consideration of how institutions interact with society and how historical and social pressures can determine the nature of institutional change.

⁵⁸ North [1990] adopts Herbert Simon's [1955] conception of bounded rationality to describe the behaviour of agents in his analysis

⁵⁹ Rational choice institutionalism will not be discussed because it is more closely associated with North's pre-1990 work and the work of Williamson [1975, 1985].

Sociological institutionalism was pioneered by the work of Meyer and Rowan [1977], who found that organisational structures were not shaped solely by technical demands and resource dependencies, but also by institutional effects such educational and professional knowledge, public opinions and the rule of law. The level of analysis within sociological institutionalism is the organisational field, within which a large number of organisations operate through cooperative and competitive exchanges [Powell, 2007]. As noted by Powell [2007], within early sociological institutionalist research organisations were considered to be deeply embedded in the social and political environment, with institutions creating a level of social stability and routine that led to isomorphism within the organisational field. However, more recent research has highlighted the possibility of differences and fragmentation within the organisational field [Powell and DiMaggio, 1991]. Work in this area observes how the impact of agency within organisations can lead to a diverse range of internal influences and different responses to institutional pressures.

Historical institutionalism can be closely linked with the work of North [1990] through the concept of path dependency, which acts as one of the central pillars of research within this field. Hall and Taylor [2006] note that historical institutionalist's sought better explanations for the distinctive nature of national political outcomes and the inequalities that mark these outcomes. In light of this, power asymmetries and path dependency have been explored as two interdependent factors affecting the nature of development within the political economy. Path dependency asserts that the process of development and change is mediated by the contextual features of a given situation inherited from the past [Hall and Taylor, 2006]. Indeed, due to their persistence over time, institutions have a particularly significant effect in linking aspects of the past with future change and development [Collier and Collier, 1991; Pierson, 1996; Thelen, 1999]. As noted by Thelen [1999, p386];

'Organisations may come and go but emergent institutional forms will be 'isomorphic' with existing ones as political actors extract causal designations from the world around them and these cause-and-effect understandings inform their approaches to new problems.'

In a similar light, North emphasises how the imbedded cultural constraints of a society and their association with historical institutional development, as well as the bargaining strength of those in power, create a 'path dependency' in future institutional change [North, 1990]. North uses path dependency to show how institutional change may not be economically efficient. This may impact negatively on economic development where the power of those embedded within the system can allow a weak institution to be sustained for many years. Equally, path dependency may have positive implications where the close fit that an institution has formed with the informal norms of a society may be one of the main factors in its success [Shirley, 2005]. Indeed, the concept of path dependency is likely to be important within this study, where the Cocobod's economic, social and cultural ties with the Ghanaian cocoa market have been developed for many years.

The work of North has also been foremost in the behavioural assumptions adopted within this study. Based on a critique of the rational choice framework, North [1993a] further distances himself from the approach of orthodox economics. North recognises the importance of social influences such as a common cultural heritage in shaping the mental models and belief structure of the individual. Over time, North's work has 'gradually moved from a predominantly deductive explanatory approach to one that is more clearly characterised by a back and forth movement between empirically established relationships and explanatory models' [Groenewegen et al, 1995, pg 472]. In doing so, North has developed behavioural concepts that place explanatory primacy over the tractability of rational choice assumptions.

In assessment of the developing world North observes that given the prevalence of market failures, the complexity of the environment and the nature of incentives faced by political and economic entrepreneurs, the possibility of institutional inefficiencies are all the more likely, compared with the western world [North, 1990, p 9]. Indeed, in the developing world, where powerful interest groups often have greater effect in influencing institutional change, there is no guarantee that change will take on a pro-development form [Dorward et al, 2005, p 4]. It is therefore in reference to the developing world that North finds the

neoclassical framework to be of least use in explaining the range of institutional forms [Hirsh and Lounsbury, 1996, p877].

2.2.3 - The Developing Country Environment

Bardhan [1989] observes that the developing country environment is highly suitable for institutional analysis because the transaction costs, market failures and missing markets, which necessitate the role of the institution, are all commonplace in developing countries. Closely related to this, Kherallah and Kirsten [2002] provide strong support for the adoption of NIE as a framework for analysing the barriers to exchange within the developing country environment. Barriers to exchange are a pertinent issue, and as noted in North [1993, 2000, 2005] and Shirley [2005], high transaction costs have a negative effect on trade, investment, specialisation, and productivity within developing countries. In recognition of these problems the Ghanaian PRSP [The World Bank, 2003, p 32] describes how structural rigidities and high transaction costs in agriculture act as a constraint to economic development in rural Ghana.

In many ways the developing country environment represents an extreme case of the conditions that lead to contractual incompleteness in Williamson's NIE approach. Market and environmental conditions create extreme information asymmetries and uncertainty in exchange. Indeed, based on these conditions the behavioural assumption of opportunism is a major threat. Resulting from these conditions, private sector actors face significant risks when transacting in this environment, leading to market failures and missing markets. Markets that are typically missing include those for rural credit [Hoff et al, 1993] and farm inputs⁶⁰ [Poulton, et al 1998].

⁶⁰ Farm inputs include pesticides, fungicides and fertilisers.

Building on the concepts of moral hazard [opportunism], information asymmetry⁶¹ and missing markets, Stiglitz [1989a], Bardhan [1989], and Hoff et al [1993] have developed an approach which focuses on the emergence of specific market and non-market institutions, used to overcome market failures and encourage exchange within the rural environment. Further literature in this area includes studies examining, interlocking transactions [Poulton, et al, 1998], social capital [Lyon, 2000] and farmer cooperatives [Braverman et al, 1991; Sykuta and Cook, 2001].

Fafchamps [1996] study of contract enforcement in Ghana adopts an NIE approach to display how the high incidence of information asymmetry and the failings of formal institutions for contract enforcement act as barriers to exchange in the Ghanaian trading environment. In relation to formal institutions, Fafchamps highlights that the threat of court action as a method of contract enforcement is seldom credible, because trading parties are aware that they are both time-consuming and costly to employ. As such, contractual obligations are generally enforced through informal mechanisms such as trust and the desire to maintain beneficial trading relations. These findings reinforce North's earlier contention that the informal institutional environment plays an important role in developing economies.

2.2.4 - New Institutional Economics and the Role of government

Generally speaking, writers in the NIE recommend a limited but strong government. Limited by the boundaries of a minimal policy package capable of achieving market stability and secure property rights, but strong in the sense that it is able to constrain itself from interfering with private sector led growth [Bardhan and Udry, 1999, p 222]. However, as observed by Kherallah and Kirsten [2002] questions surrounding the role of government in NIE should not be reduced to policy templates, and instead it is necessary to ask, 'what is the role of government in cutting down on transaction costs and decreasing

⁶¹ Information asymmetry is central to the analysis of rural markets. Developed by Akerloff [1970] and Stiglitz [1985], information asymmetry means that market information is not costless and all actors in the market do not have equal access to information.

the riskiness of market exchange?’ [Kherallah and Kirsten, 2002, p 127]. Therefore, in reference to the developing country environment it may be necessary to have a more flexible view of the government’s role in response to the depth of market failures that constrain the process of development in these markets. In light of this, the approach of ‘developmental coordination’ will now be considered in some depth, due to its willingness to adapt the traditional NIE framework towards the needs of the developing country environment.

2.3 - Developmental Coordination

The approach of ‘developmental coordination’ [Dorward et al, 2005a] offers an alternative new institutionalist view on the role of the government in the process of market development⁶². The foundations of the developmental coordination approach are based on a critical assessment of neoliberalist market policies in Sub-Saharan Africa and also the success of government intervention in other developing country markets. Whilst it is accepted that the neoclassical theory underpinning liberal market policy may have certain benefits in an environment of with better information, more sophisticated institutions and more effective regulation, in the case of rural Africa orthodox theory offers an inadequate response to development challenges.

The Green Revolution⁶³ [Dorward et al, 2004] and the growth of the Asian Tigers [Dorward et al, 2005] are highlighted as examples of successful government led intervention. Dorward et al [2004] find that the case of the Green Revolution suggests that active government intervention is necessary to stimulate market activity at critical stages of agricultural market development [p1]. Whilst not directly related to agriculture the experience of the East Asian Tigers⁶⁴, is widely observed as an example of the government resolving the coordination failures that inhibit market growth in developing countries

⁶² This approach is developed in a series of papers including Dorward et al [2004], Kydd and Dorward [2004], Dorward et al [2005a, 2005b], and Poulton et al [2006].

⁶³ The Green Revolution refers to the agriculture-based development that took place throughout India, South America and South East Asia post 1945.

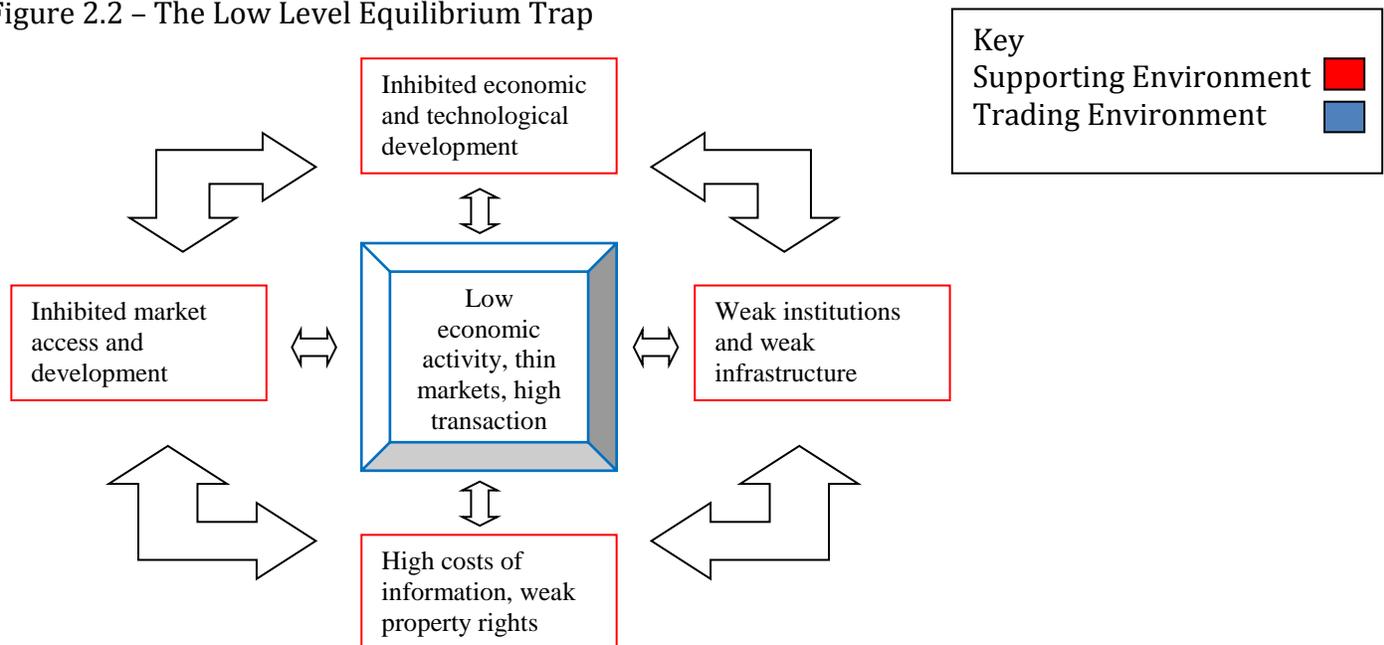
⁶⁴ This is also referred to as the East Asian Growth miracle.

[Dorward et al, 2005; Bardhan and Udry, 1999; Wade, 1990]. Interestingly, however, Bardhan and Udry [1999] warn that the administrative difficulties of such aggregate coordination may be much too intricate for the institutional capacity of many African governments [p 226].

2.3.1 - Transaction Risk and Coordination Failure

Dorward and Kydd [2004] identify transaction risk, as a particularly damaging type of investment risk in the rural environment, which undermines ‘the very process of exchange and specialisation necessary for economic growth’ [p 959]. Transaction risk is at the centre of a ‘mutually self-sustaining cycle of underdevelopment’, known as a ‘low level equilibrium’ [Kydd and Dorward, 2004; Rosentein-Rodan, 1943; Hoff, 2000]. As can be seen from figure 2.2, the unattractive trading environment [blue], helps to sustain the low level of economic development [red], which in turn sustains the unattractive trading environment. As such, the market becomes trapped in a self-sustaining cycle of underdevelopment.

Figure 2.2 – The Low Level Equilibrium Trap



Source: adapted from Dorward et al [2003]

The concept of a poverty cycle caused by coordination failures was first seen in Rosenstein-Rodan's [1943] 'big push' theory. Rosenstein-Rodan argued that it does not pay for a firm to make an investment in a market, where the surrounding market participants are not willing to make the investments required to develop other areas of the market. Therefore, a 'big push' or series of simultaneous investments is required to lift the market out of its stage of underdevelopment. Similarly, Kydd and Dorward [2004, p960] argue that the depth and persistence of coordination failure within a low-level equilibrium prevents the standard transaction cost economics solution of negotiation and institutional innovations by private actors.

2.3.2 - Overcoming Coordination Failure

The approach of developmental coordination argues that in markets where there are extensive coordination failures it will be necessary for the government to take an active role in encouraging market development. Indeed, the level of support for government intervention is greater than that suggested in the orthodox NIE understanding. Where appropriate the government must extend its role beyond the provision of public goods, through a range of coordinative activities including more active intervention in private goods markets [Dorward et al, 2005]. As such, the Cocobod's functions of providing buyer credit, input subsidies, pesticides as a public good, warehousing, and price stabilisation are broadly conducive with the developmental coordination model.

Poulton et al [2004] contend that development in rural African commodity markets requires a balance of competition and coordination. Coordination is defined as:

'Effort or measures designed to make players within a market system act in a common or complementary way or toward a common goal. This may also require effort or measures designed to prevent players from pursuing contrary paths or goals. Coordination may be undertaken by private agents acting collectively or may be orchestrated by state agents defining the boundaries within which private agents can act' [Poulton et al, 2004, p 521].

Coordination can either occur vertically between actors in different segments of the supply chain, or horizontally between actors in the same segment of the supply chain. The term horizontal coordination has also been used to describe the role of Africa's former government marketing boards. Where administered by the government, horizontal coordination takes place either where the government puts in place constraints that force the private sector to act towards a common goal, or where the government uses their collective organisational capacity to provide public and private goods themselves.

As noted by Poulton et al [2004], the concept of balance between competition and coordination is very important and by no means do the authors promote an interventionist government under all circumstances. The type and level of government intervention must be closely linked with the prevailing conditions in the market and therefore a critical assessment of interventionist policy is required [Dorward et al, 2005].

Kydd and Dorward [2004] consider two mechanisms through which the government can overcome the risk of coordination failure and place a market on a positive development path. The first mechanism is named *coordination*, and the first stage of this process involves the identification of the critical missing links in a supply chain that are leading to coordination failure. This is a deliberative process that requires a careful analysis of supply chain functions, leading to strategic investment in problematic areas [Kydd and Dorward, 2004, p 964].

Coordination can take a variety of forms including:

- Local or endogenous coordination, which evolves slowly between private actors at the local level.
- Externally assisted 'soft' coordination, such as government or NGO support for the development of farmer groups.

- Hard coordination, 'where some strong central coordinating body with a mandate from the government ensures investments across the supply chain with highly credible coordinated commitments' [Kydd and Dorward, 2004, p 964].

Several functions of the Cocobod may be viewed as 'hard' coordination, and indeed, Kydd and Dorward directly associate the parastatal system with this coordination type. Earlier it was noted that coordination failures constrain agricultural intensification by simultaneously depressing investments across the same set of mutually dependent investors. However, where the government is active it is able to make the simultaneous investments required to kick start markets. Direct intervention by the government is recommended at the early stages of development when market failures such as information asymmetries, thin markets and insecure property rights, create a situation where risks are too high for private sector investment. Commenting in the parastatal system Kydd and Dorward [2004, p 952] find that:

'State intervention offered a means of addressing all these problems: it could provide a coordination mechanism across trading, infrastructural, research and extension investments and activities; it could access official finance sources; it could coordinate with farmers; it could both reduce and take on investment risk in ways that the private sector could not'.

The authors of the 'developmental coordination' approach do not refute that Africa's former government parastatals⁶⁵ have had a very mixed record of success [Dorward et al, 1998, Kydd et al, 2001]. They do, however, find that parastatals demonstrated a certain degree of success in overcoming the coordination failures, which are pervasive within many of the now fully liberalised African agriculture markets. For example, the government was able to avoid the market failures that have now led to missing markets for farmers' inputs and credit within many liberalised markets [Shepherd and Farolfi, 1999; Kherallah et al, 2000; Poulton et al, 2006]. Furthermore, Dorward et al [1998a] and

⁶⁵ As noted in chapter one the majority of government parastatals were dismantled during the World Bank's structural adjustment programs throughout the 1980's & 90's.

Shepherd and Farolfi [1999] find that parastatals also had an advantage in quality control. Operating as the monopoly seller the government has the capacity to provide such services as public goods, without suffering the risk of free-riding witnessed in the private sector.

Dorward et al [2005] find that criticisms⁶⁶ of the parastatal system, 'should not mask the institutional challenges that they were originally set up to address' [p 13]. Furthermore, it can also be argued that such criticisms are reflective of the macro institutional environment and not the micro institutional arrangements, which the parastatals used to some success in achieving coordination throughout the local market [Dorward et al, 2005]. As such, we are encouraged to view parastatals as an investment in specific institutional arrangements, providing 'a particular institutional fix, to a specific set of linkage problems' [Dorward et al, 2005, p13].

In light of this, Kydd and Dorward [2004] argue that where a parastatal is able to strategically focus on the areas in which assistance is needed most, it can be a powerful mechanism in helping to place agricultural markets on a positive development path. Indeed, in the case of the Ghanaian Cocobod, which has undergone restructuring and rationalisation in recent years, it will be interesting to observe the performance of a strategically focused parastatal. In its current form the only functions of the Cocobod that might be considered 'hard' coordination are the provision of pesticides as a public good, quality control and the Cocobod's monopoly control over warehousing. Therefore, an analysis of the Cocobod's performance in these areas, alongside a consideration of whether these functions could be provided more effectively by the private sector, will be key to our understanding of the need for 'hard' coordination in the Ghanaian case.

The second mechanism identified by Kydd and Dorward [2004] through which the government can kick-start market development, is lowering the threshold for private sector investment in the supply chain. There are two suggested ways through which to lower the investment threshold: by lowering the costs of transacting, and by raising the

⁶⁶ Please refer to chapter one for a detailed discussion surrounding the criticisms of the parastatal system.

expected returns of investment [Kydd and Dorward, 2004, p 964]. The process of lowering the investment threshold is undertaken at a more advanced stage of market development, where based on the institutional development achieved through 'hard' coordination, the risk of coordination failure has been reduced.

At this stage, the government plays a more supportive role through investment in communications and market infrastructure, encouraging the development of farmer or trader associations, price interventions, input subsidies, technical research, and farmer extension [Kydd and Dorward, 2004, pg 967]. Under this classification, the Cocobod are engaged in threshold shifting through the function of price stabilisation, the provision of fertilisers on subsidy to farmers, agricultural research, and the provision low interest credit to buyers.

Lowering the investment threshold should also lead to the development of endogenous or 'local' coordination mechanisms within the private sector. Local coordination mechanisms include farmer organisations [co-ops], buyers associations, and, interlocked transactions between traders and farmers. During this phase of market development the government is no longer the only agent with a mandate to promote coordination and the private sector must begin to take responsibility in this area.

2.4 – Private Sector Coordination

The concept of private sector coordination is specifically highlighted as a key process within the developmental coordination framework. In light of this, the following three subsections will examine the type of coordinative mechanisms that develop within the private sector, their capacity to contribute to the process of market development, and the conditions under which they are developed and sustained. It is important to observe that the literature used in this section is not exclusively linked with the work of Dorward, Kydd and Poulton. Instead the model of developmental coordination has been used as a

framework for investigation from which other areas of NIE literature have been identified where appropriate.

2.4.1 - Interlocking Investments

Earlier it was observed that the lack of private sector engagement in the markets for farmer inputs, such as pesticides and fertilisers, has been highlighted as one of the major failures resulting from market liberalisation. Cash strapped farmers, with very little access to credit, do not have the resources to purchase inputs within liberalised markets [Poulton, 2006; Hoff et al, 1993; Kherallah et al, 2000; Poulton et al, 2006]. Theoretically, however, buyers may have an incentive to provide such services in order to enhance farmer production levels, compete for market share, and build capacity at the farmer level. Indeed, Poulton et al [1998, p 6] found evidence that ‘where opportunities for profit making exist, private sector actors will innovate to overcome failures in important markets, including those for seasonal credit and inputs’.

The provision of farm inputs on credit is one such investment that a buyer may choose to make in a farmer. In NIE terms this may be viewed as an asset specific investments being made in the farmer. As such, whilst the buyer has the potential to gain from the investment, the buyer also faces a big transaction risk in the form of farmer default [opportunism]. In response buyers may use interlocking arrangements as a form of hybrid contract structure to overcome the risk of opportunism in the developing country environment [Dorward and Kydd, 1994].

Interlocking is defined as the ‘provision of seasonal inputs on credit using the borrower’s expected harvest of the crop in question as a collateral substitute to guarantee loan repayment’ [Poulton et al, 1998, p88]. The farmer is therefore able to afford the input, given that the repayment schedule of the loan is tied to the crop harvest. Poulton et al [1998] promote interlocking arrangements as the best way to overcome the market failures of information asymmetry and insecure property rights, when contracting in the rural environment. Similarly chapters eight and nine of Hoff et al [1993] also support

interlocking, finding that it goes a long way to reducing the information asymmetry and enforcement problems between a borrower and a lender. By reducing the risk of default, buyers are able to use interlocked transactions as a mechanism through which to compete for farmer loyalty. Indeed, Dorward et al [1998] find that the incentive to develop interlocked input and output transactions is based on the traders' desire to increase market share.

However, as witnessed in Ghana [Shepherd and Onumah, 1997], along with many other liberalised African markets [Poulton et al, 1998], interlocking arrangements have often led to opportunistic behaviour from producers. This occurs where producers receive an output guaranteed loan from one buyer and choose to 'strategically default' [Poulton et al, 1998] on the loan by selling the contingent produce to another buyer. By doing so the farmer avoids repayment of the output linked loan.

For a number of reasons the problem of strategic default has been particularly damaging in sub-Saharan Africa [Poulton et al, 1998 pg 91-92]. Firstly, it is found that because many Africa farmers own their land, they face a less immediate need for credit to pay land rent and therefore the threat of losing out on a future credit opportunity is not a major incentive for repayment. Secondly, due to weak infrastructure in rural Africa traders face a significant challenge in monitoring the actions of farmers⁶⁷. Thirdly, it is found that farmers in Africa have developed a cultural attitude that any loan or input given to them is a gift from the government. This attitude has been developed based on years of government handouts. Dorward et al [1998] also highlight this problem, adding that politicians who have done much to create this mindset need to take a lead role in changing farmers' attitudes towards repayment. These three factors have together created a very negative attitude towards repayment, and as a result inputs are now sold on a cash only basis [Poulton et al, 1998]. However, cash payments for inputs are often beyond the immediate financial resources of the sub-Saharan farmer.

⁶⁷ Rottger [2000, p 12] describes the problems faced by traders as a result of poor transport infrastructure in growing areas.

Nevertheless, Hoff et al [1993] and Poulton et al [1998] find that due to the relationship the trader has with the farmer, traders are recommended as a viable channel through which to distribute inputs to farmers. Coulter et al [1999] suggest that traders can use good communication and monitoring, incentives for repayment, punishment, and lending to groups as ways to reduce the risk of default. Indeed, in terms of communication and monitoring traders are in the optimal position to carry out these functions. As such, despite the risk of default, it might be suggested that traders are in the best position to take over the responsibility from the government in the area of farmer inputs. In light of this, the potential for LBC's to take on this role in Ghana will be investigated in this study.

2.4.2 - Social Capital

North [1990] finds that informal institutions are particularly important in providing structure to uncertain exchange conditions in the developing world. This may be particularly true in Ghana, where Fafchamps [1996] finds that due to the lack of infrastructure for formal contract enforcement, alternative 'informal' mechanisms are required to improve security in the process of exchange [Fafchamps, 1996]. Closely related to this, Lyon [2000] also observes the importance of social capital within the Ghanaian trading environment.

Social capital is defined as the norms and networks that facilitate coordination between trading parties [Putman, 1993; Ostrom, 1999]. Building on this it is possible to consider trust and reputation as aspects of social capital that can build up between trading partners [Lyon, 2000]. Trust can have a positive effect in trading relationships, lowering transaction costs through facilitating cooperation and coordination, and reducing the need to screen and monitor trade partners [Putnam, 1993; Lyon, 2000].

Within the context of rural Ghana, the most commonly reported reason for trusting someone is the establishment of a long term 'personal' trading relation [Lyon 2000]. Closely related to this, Fafchamps [1996] finds that within the Ghanaian trading environment the business relation between two parties is often the best form of collateral.

Indeed, Laven [2005] finds that the second most popular reason why a farmer would choose to sell to a particular LBC in Ghana is the social relation which the farmer has with the buyer.

2.4.3 - Collective Action

Poulton et al [2004] find that collective action amongst buyers helps to facilitate private sector engagement in the market. Whilst the provision of public goods is traditionally the role of the government, in the absence of the government this responsibility may be undertaken by the private sector, especially where the private sector has the potential to benefit⁶⁸ [Poulton et al, 2004, p 522]. This is known as a 'Coasian solution', where the potential beneficiaries of a public good may pull their resources together in order to collectively reap the benefit of the service provided [Coase, 1960].

Larsen [2002] shows how collective action between private sector actors has been used to enable the private sector to maintain coordination in the Zimbabwean cotton market. Despite the liberalisation of Zimbabwean cotton in the early 1990's very few changes have emerged in the market, as the private sector has taken up the traditional functions of the parastatal. In light of this, the capacity of LBC's in Ghana to work collectively may to some extent determine the appropriate level of government intervention in the market.

In addition to the provision of public goods a group of individuals may choose to work collectively in order to influence institutional change. Indeed, Olson's [1965] original theory of collective action was developed to show why certain interest groups are more influential over government policy compared with other groups. Group size is considered the main variable affecting the capacity for collective action, with larger groups finding it more difficult to coordinate their actions. Olson also found that the effectiveness of collective action is determined by group heterogeneity and the existence of a common goal.

⁶⁸ Larsen [2002] shows how buyers working together in the Zimbabwean cotton market have been able to deliver inputs to farmers. This has resulted in increased production and a reliable flow of high quality cotton for buyers.

2.4.4 - The Buyers' Association (collective action)

In relation to African commodity markets, Poulton et al [2004], find that buyers may establish a 'collective organisation', such as a buyers' association to help overcome collective action problems. Hall and Soskice [2001, p 10-11] classify the buyer association as an institution that facilitates collective action, by encouraging the relevant stakeholders to engage in collective discussion and reach a common agreement. Buyers' associations are referred to as institutions that facilitate 'deliberation', reducing the uncertainty actors have about each other and allowing them to make credible commitments to each other [Hall and Soskice, 2001, p 10].

The buyers' association can also be used to reduce the risk of opportunistic behaviour from farmers [Poulton et al, 1998; Coulter et al, 1999]. Ostrom [2000] observes that the existence of opportunistic players is especially likely where full and accurate information about all the players is not known. However, where the participants of a buyers' association exchange information about opportunistic actors this can build an awareness of untrustworthy actors and therefore lead to more effective sanction [Hall and Sokice, 2001]. For example, if a particular farmer engages in an opportunistic act such as non-repayment of a loan, then by creating an awareness of that farmer within the network, the mechanism for sanction is more effective because all buyers will then know to avoid that particular farmer⁶⁹. Closely related to this, Poulton et al [2004] find that collective agreements established between buyers in the Zimbabwean cotton market have led to a reduction in opportunistic behaviour throughout the market [Poulton et al, 2004].

Whilst buyer networks may be effective in solving market coordination problems, they may suffer from internal coordination problems [Ostrom, 2000]. In challenging the logic of collective action, Olson [1965] contended that because the benefits of collective action are shared within a group the rational agent has an incentive to free ride on the efforts of others. As such, the free-rider problem can pose a significant barrier to collective action in

⁶⁹ Grief's [1993] study of the communication networks used by the Jewish Maghribi traders is a regularly used example of such sanctioning behaviour.

both: the provision of public goods, where funding contributions from all members of the private sector are necessary; and lobbying for institutional change where the bargaining power is at its greatest when all members are active. Where the size of the group is large, Olson found that the incentive for free riding increased, thus making collective action more difficult. Olson's theory is commonly used as the basis for why public goods need to be provided coercively under the government, and why certain groups are more effective at achieving institutional change than others.

2.4.5 - Market Concentration

Building on Olson's logic of group size, Poulton et al [2004] observe the practice of 'relational coordination' between buyers in the highly concentrated Zimbabwean cotton market. This form of coordination is characterised by informal agreements enforced by consensus or private action and it 'may be the most effective option for many cash crop systems in Africa' [Poulton et al, 2004, p 523]. Given the small number of buyers in the network, information is easily exchanged and agreements can be credibly enforced. Network activity between a small number of sophisticated firms reduces the transaction risk of rent seeking, opportunism and free riding from rival buyers. Based on the establishment of competitive agreements and the exchange of information between buyers, the threat of farmer opportunism can be greatly reduced, thus enabling asset-specific investments in farmers.

These findings are supported by Larsen's [2002] study of the Zimbabwean cotton market, where buyers providing interlocking arrangements with farmers were able to avoid strategic default due to a concentrated market structure. Within this market repayment rates of 98% were achieved based on a strong network of competitive agreements and information sharing between buyers. However, Poulton [2006] finds that in recent years market entry has increased leading to higher levels of strategic default. Resultantly there has been a reduction in the number of inputs made available to farmers. Similar findings are also found for the Zambian cotton market [Poulton, 2006]. In light of these findings it

appears that in certain circumstances it may be necessary to sacrifice a certain degree of competition in order to achieve coordination between buyers and farmers at the local level.

2.5 - The Transition Challenge

Similar to the section on private sector coordination above the literature in this section does not deal exclusively with the work of Dorward, Kydd and Poulton. Again, the model of developmental coordination has been used as a framework for investigation from which other areas of NIE literature have been identified where appropriate.

Kydd and Dorward [2004] predict the transfer from hard government coordination to soft private sector coordination is likely to be a difficult process. Nevertheless, based on the understanding of the developmental coordination model, once the foundations for development have been laid through constructive government intervention, transition towards private sector control will be required to enable further market development. Dorward et al [2005, p23] find that, 'successful state intervention is difficult, demands challenging conditions, and is often achieved for only short periods before the dynamics of change make it ineffective'. Building on this, Poulton et al [2006, p249] find that the 'role of the state depends on the evolving structure of the market'. As such, the transition of responsibility from the government to private sector should evolve based on both a regular examination of the government's performance within its various functional responsibilities, and the level of investment opportunity for the private sector.

Within the transitory process the role of the government remains one of the key factors affecting market performance. To some extent this was touched upon earlier where it was noted that the government can take explicit action to reduce the investment threshold and encourage local level coordination within the private sector. Alongside this, the government has another very important role to play, where the credibility of the government's actions in the market is likely to have a significant effect on private sector engagement. In light of this, issues surrounding credibility of government action will be

observed throughout the following sections. With reference to the partial model in Ghana, this literature is of interest not only in regard to the possibility of greater private sector engagement in the coming years, but it can also be used to assess the credibility of the Cocobod's role within the current market.

2.5.1 - Government Commitment to Reform

Within the Ghanaian cocoa market it is expected that the level of private sector engagement will depend heavily on both the perceived credibility of government action and the government's commitment to future reform. Indeed, this is likely to be particularly apparent in the Ghanaian case where the functions of the government have such a significant bearing on the operations of the private sector. Given the history of economic mismanagement within African governments, factors such as unilateral policy decisions, biased distribution of resources, discrimination in enforcement, and the threat of policy reversal are likely to play a significant role in the private sector's decision making process.

Herbst [1993] and Shepherd and Onumah [1996] observe a history of private sector mistrust of the Ghanaian government. This is based upon past governments resorting to punitive measures such as market raids and the imposition of sudden controls. Indeed, as observed in chapter one, Ghana earned the nickname of the 'vampire state', based on the extent of the economic mismanagement that took place from 1950-1985 [Frimpong-Ansah, 1992; Austin, 1998]. In the case of Brazil, Stone et al [1996] highlight the negative impact of government intervention on private sector investment. Government corruption and the failure of the formal institutions to act with credibility have created high transaction costs and the threat of rent extraction has created reluctance within the private sector towards investment.

Kherallah et al [2000] and Jayne et al [2002] find that where the government cannot credibly commit to withdrawal from interventionist policies, this will have a stifling effect on private sector engagement in market development. On this basis it is argued that the relative failure of market liberalisation policies under the Washington consensus was

caused by the government's failure to fully implement liberalisation policies. Indeed, Jayne et al [2002] find that it is within cash crop markets, such as cocoa, where governments have been most reluctant to fully liberalise. This reluctance is based on the strategic importance of cash crops in the generation of export revenues and subsequent national development budgets⁷⁰.

Kherallah et al [2000] highlight several indicators of incomplete reform that can be compared with the partial liberalisation model of the Cocobod. These include the government's role in price stabilisation and the continued involvement of the government buying company⁷¹ in a liberalised buying market. Signs of policy reversal such as the government re-entering the liberalised market for inputs, may also be likened to the Cocobod. Indeed, Jayne et al [2002] highlight the cocoa market in Ghana as an example of a strategic industry that has suffered from a laboured reform process.

Jayne et al [2002] find that governments have used the argument of social inclusion in an attempt to justify their role in the market. In this way governments have been 'ostensibly adhering to the principle of market reform but taking the stance that the market is unable to perform certain social functions, therefore requiring some continued government intervention' [Jayne et al, 2002, p 1975]. Modern African governments have been reluctant to retreat from the social contract made with citizens by post-independence government regimes. Jayne et al [2002] and Kherallah et al [2000] find that where governments display this lack of commitment in policy implementation the resulting climate of uncertainty and mistrust has a stifling effect on private investment.

2.5.2 - Organisational Behaviour within Government Bureaucracies

In recent years the understanding of organisational behaviour within government bureaucracies has been greatly enhanced by the work of Tirole [1994], and Dixit [2002].

⁷⁰ Jayne et al [2002] highlight the cocoa industry in Ghana as an industry of strategic importance.

⁷¹ The Produce Buying Company [PBC], formerly a government owned buying company, still competes in the local buying market. Though the PBC has been privatised, the Ghanaian government is the majority shareholder.

To a large extent this builds upon Wilson's [1989] work on government bureaucracies as well as Williamson's [1975, 1985] work on the organisational structure of private sector firms. It is argued that in comparison with the high powered incentives used to motivate private sector workers, civil servants face low powered incentives⁷², making public sector agencies vulnerable to negative organisational behaviour such as moral hazard, adverse selection and low effort.

Tirole [1994] and Dixit [2002] cite three main reasons for why civil servants face low powered incentives. Firstly, due to the multiplicity of tasks facing a civil servant it is often difficult to directly measure each worker's performance at an individual level. Resultantly, high powered incentive contracts linking pay to performance cannot be used. Secondly, there is no benchmark against which to compare the performance of each public agency, as there is no competition in the market for public services. Moreover, monopolies do not face any competitive threat and as such civil servants are not motivated by the high powered incentive of market survival. Finally, the CEO or owner of a private sector firm will often set targets based on their individual vision for the company. However, due to the multiplicity of principles within the civil service there is no single driving force, and so there may be no clear goal or direction for the agency.

Within the public sector, Dixit [2002] considers moral hazard to be the worst and most pervasive of the behavioural problems associated with low powered incentives. Moral hazard may occur where the exact nature of an agent's actions cannot be determined by the principle. This arises due to information asymmetry between the principle and the agent, where the principle cannot monitor the agent, and the exact nature of the agent's actions cannot be inferred from the outcome. As such, the agent has some freedom to act in his or her self-interest, without the principle having the information required to punish the agent. This may result in some form of corruption [Bardhan and Udry, 1999], most typically

⁷² Low powered incentives mean that the agent receives a small fraction of his or her marginal product [Tirole, 1994, p6].

where civil servants are 'captured'⁷³ by interest groups within the private sector [Tirole, 1994].

Tirole [1994, p 14] observes that 'the scope for capture stems from the government officials' discretionary power, which in turn results from the superiority of their information relative to that of their political principles'. The extent of information asymmetry between the principle and the agent is, therefore, key in determining the potential for opportunistic behaviour. Closely related to this, Bardhan and Udry [1999, p 231] find that this problem may be particularly acute in Africa where typically weak and fragmented governments have an inability to stop remote government agencies setting up independent corruption rackets. As such, the extent of rent seeking behaviour from civil servants is likely to be an area of great interest within the partial model.

The most typical response to such problems is the introduction of competition under the assumption that high powered incentives will help to remove many of the behavioural problems associated with public sector bureaucracies [Dixit, 2002]. However, Dixit [2002] warns against reckless privatisation and finds that in many recent examples privatisation has not yielded the results expected. One of the main drawbacks of high powered incentives is that once such a strong motivation is provided in one particular area, many of the other non-incentivised functions of an organisation will be disregarded. In light of this, Dixit [2002] finds that whilst privatisation may lead to improved efficiency it may also lead to a reduction in less measureable areas such as quality and safety. As such, it will be necessary to pay close attention to service quality when attempting to determine the appropriate division of functions between the government and the private sector in the partial model.

⁷³ The private sector may use financial bribes, gifts, and future job opportunities as ways to capture the political agent.

2.5.3 – Governance

In recent years the performance of national governments has become widely regarded as one of the key issues affecting the rate of development within lower income economies [Kaufmann, 2004; ODI, 2006]. For developing economies in particular the focus of this problem has been the reduction of corruption, which is closely related with government bureaucracies, as indicated the previous section [3.5.2]. In order to rectify this problem it may be necessary to establish institutions that can apply governance over the actions of the government. Within this context governance is defined as ‘the nature of rules that regulate the public realm – the space where the government and economic and societal actors interact to make decisions’ [ODI, 2006].

The solution to this problem may lie in increasing the internal accountability⁷⁴ of government departments through the development of an institution with the capacity to monitor and arbitrate over government actions [The World Bank, 2002, Ch 5]. North and Weingast [1989, p 808] find that, ‘the development of free markets must be accompanied by some credible restrictions on the state’s ability to manipulate economic rules to the advantage of itself’. Recognising the challenges that exist in this area North [1990] finds that biased enforcement is a major problem resulting from government intervention in the market. Indeed, the risk of government bias in the enforcement of sanctions and contracts is a problem that North associates most significantly with the developing world. Levy and Spiller [1994], however, find that regulatory credibility can be developed in the unpropitious environments of the developing world. As such, it will necessary to observe whether the Ghanaian government have put in place the necessary institutions to ensure fair regulation of private sector actions within the partial model.

Governance may also be enhanced through the establishment of institutions that encourage external accountability [Kaufmann, 2004]. External accountability can be achieved through enabling greater voice and feedback from key stakeholders that are located outside the civil

⁷⁴ Accountability is used as measure of affective governance in Kaufmann et al [2009] and Hyden et al [2004].

service [Kaufman, 2004]. This is consistent with the findings of Hyden et al [2004], who find that the participation of market stakeholders in government decisions is a key indicator of good governance. In light of this, it will be interesting to examine the level of external voice granted to LBC's within the Ghanaian cocoa market.

Despite the support that has been shown for the developmental coordination framework throughout this chapter, it must be noted that based on its encouragement for a greater level of government intervention in the market, there is a relative lack of attention given to the credibility of government actions. In recent years the credibility of government actions has been a key issue of debate within academic and policy discussions focusing on economic development. As such, it might be expected that any approach advocating a more active role for the government would discuss the potential institutions that may need to be put in place to help monitor and regulate the actions of the government. To some extent, Poulton et al [2006, p266] touch upon this issue when they note that 'given that overcoming market-coordination problems will require a more active role for the state...increased attention must also be paid to governance issues'. However, beyond this basic discussion there has been little discussion of this issue until Kydd [2009], which provides deeper insight into the need for governance institutions and greater accountability to help encourage the government to undertake credible actions.

2.6 - Conclusion

Throughout this chapter, NIE was highlighted as the theoretical framework on which the analysis of Ghana's domestic cocoa market will be based. At the foundational level, insights from the work of Williamson [1975, 1985] and North [1990] have been central in developing an understanding of NIE research. Building on these foundations, Dorward, Kydd, and Poulton have created the framework of developmental coordination. Focusing specifically on the roles of the government and private sector in the process of market development, this framework is considered highly applicable for use as a guide in analysis of the partially liberalised Ghanaian cocoa market.

Based on this framework it has been possible to identify a number of specific theoretical issues that need to be considered in the development of interview guides for this study. Indeed, by integrating the theoretical insights from this chapter into the subsequent analysis of the Ghanaian market, it will be possible to maintain a link between research findings and the understanding of domestic market development within the NIE. Leading up to this, chapter four of this study will include a focused literature analysis of the domestic Ghanaian supply chain. Through this process it will be possible to relate the above literature on the NIE to the specific processes at work within the domestic market. In turn this will help enable the focused microanalysis of market processes as advocated by scholars working within the NIE [Jutting, 2003; Shirley, 2005; Pande and Udry, 2006].

Chapter Three – Global Value Chain Analysis

3.1 – Introduction

Global Value Chain analysis will be used to explore the macro dimensions of the cocoa chain, and more specifically how changes in this area are likely to impact upon the Cocobod's governance of the Ghanaian supply chain. Gereffi [1994, 1995, 1999] is widely credited with developing the original theoretical approach of GVC analysis, which tackles the questions of who controls global trade and industry, how they do so and with what consequences for producers in developing countries. In recent years these questions have gained increased importance based on the direct links that now exist between developing country markets and multinational corporations in response to the affects of globalisation and market liberalisation [Gibbon and Ponte, 2005; Daviron and Gibbon, 2002]. Indeed, as discussed in chapter one, multinational cocoa processors are beginning play an increasingly important role in the Ghanaian cocoa chain.

Chapter three will open with a discussion of the foundations of global value chain analysis. The chapter will then discuss the GVC's treatment of power, quality and industrial development [functional upgrading]. The objective of this chapter is to develop a foundational understanding of these issues before moving on to discuss their significance within the Ghanaian cocoa market during chapter four.

3.2 - The Foundations of Global Value Chain Analysis

The GVC approach⁷⁵ was originally developed in the early 1990s in response to the globalisation of industry. Globalisation has involved the detailed disaggregation in the stages of production and consumption across international boundaries. Building on Hopkins and Wallerstein's [1986] 'World Systems Theory', GVC analysis uses the concept of a commodity chain to explain the series of stages linking together geographically dispersed activities. Gereffi observes how economic globalisation has been accompanied by new dynamic forms of organisation that require a structure of densely networked firms to achieve coordination [Gereffi et al, 1994, p 1]. Each specific process along the chain is defined as a segment or 'node' and vertical coordination throughout the chain is achieved by linking the individual segments of a chain through inter-organisational networks [Gereffi et al, 1994].

Control is analyzed through the concept of governance, which represents the functional integration and coordination of internationally dispersed activities, carried out by chain actors [Gereffi, 1994, p 96]. Within Gereffi's original understanding governance is directed through a group of 'leading firms', which use their power in the chain to determine the inter-firm division of labour amongst chain participants. In more recent years, however, various attempts have been made to expand upon and adjust Gereffi's original framework, as noted by Gibbon et al [2008]. Most notably, several authors, including Gereffi himself, have developed an understanding of governance as; efforts designed to improve coordination along the value chain [Sturgeon, 2001, 2002; Gereffi et al, 2005]. Based on this understanding, powerful actors in the chain do not simply use governance to outsource lower value functions to less powerful actors, but within certain industries the division of labour along the value chain is determined by the specialist skills that exist within different

⁷⁵ 'Global Value Chain' analysis first appeared in the literature under the title of the 'Global Commodity Chain'. Essentially the term 'value chain' has emerged to replace the commodity chain concept as the approach has been applied to wider variety of products, some of which lack the specific characteristics of a commodity [Gibbon and Ponte, 2005]. Therefore, throughout this thesis, the Global Value Chain analysis or the abbreviation GVC, will be used to represent insights from both the original commodity chain analysis and its modern representation, the value chain.

segments. Throughout the GVC sections of this study, both understandings of governance as power and coordination will be used to examine the relationship between the Cocobod external cocoa buyers.

Based on the work of Gereffi [1994, 1999] it is possible to identify three main dimensions common across value chains:

1. The input-output structure: a set of products and services linked together in a sequence of interlinked value-adding economic activities.
2. The geographical coverage of value chains.
3. The governance structure or power relations determining the nature of coordination within the chain and the distribution of gains from participation.

The earliest significant application of the GVC approach was on the East Asian garment industry [Gereffi, 1994, 1999; Smith, 1996]. Other studies in the area of industrial commodities include Sturgeon's [2000, 2001, 2002] work on the electronics industry. Dolan, Humphrey and Harris-Pascals [1999] study horticultural supply chains in Kenya is seen as one of the most significant applications of the GVC framework to agricultural commodities. Indeed, subsequent papers on Kenyan horticulture by Dolan and Humphrey [2000], McCulloch and Ota [2002], and Humphrey [2004] help to show the significance of this work.

The GVC has also gained popularity as a framework for the study of tropical commodities, where studies by Fold [2001, 2002] and Losch [2002] on cocoa, Ponte [2002] and Larsen [2002] on cotton, and, Talbot [2002], and Daviron [2002] on the history of tropical exports have all been highly influential in the understanding of governance developed in this study. Key throughout studies on both agricultural and industrial commodities in the GVC has been the growing importance of powerful multinational corporations in shaping the development trajectory of national markets.

3.3 - Governance and Power in Global Markets

Gereffi [1994] identifies power as the dominant factor influencing the mode of governance adopted in a commodity chain. The GVC's motivation for focusing on power is based on both the lack of understanding in this area, and the growing importance of multinational firms in global supply chains [Gereffi, 2001]. Gibbon and Ponte [2005] define lead firms as those with the capacity to shape all aspects of the supply chain, including who does what, at what price, to which specifications and on the basis of which delivery schedule [p81]. Governance is therefore understood as the patterns of authority and power relations which structure the parameters under which actors operate [Humphrey and Schmitz, 2001, p 4]. As lead firms develop new organisational capabilities, governance patterns will be adjusted to accommodate any subsequent changes in lead firms' strategic priorities [Gereffi, 2001]. As such, governance patterns will periodically change in order to ensure the supply chain operates in line with the requirements of the lead firms.

Originally focusing on the manufacturing sector Gereffi [1994] observed two ideal types of governance based on the location of power within the chain. Using the concept of a powerful 'chain driver' or 'lead firm', chains are classified as being either 'buyer', or 'producer' driven, based on the location of power within the chain. Both classifications of governance demonstrate that power within the chain is closely linked with the location of greatest value added and distribution of gains from trading [Kaplinsky, 2000].

Producer-driven chains are typically found in technology-focused sectors where production is capital intensive, such as, computers, aircraft or automobiles. Within producer-driven chains power is located in the 'upstream' segments of the chain⁷⁶. Gibbon [2001, p 349] observes how power is developed within the 'producer' segment based on the possession of capital and proprietary know-how, which present high barriers to entry. Profits are achieved through technological proprietorship and innovation. Coordination is

⁷⁶ Within the 'chain' concept, producers are always situated upstream, and functions move logically downstream, so that processing, manufacturing and retailing are considered downstream functions.

directed from large corporations that undertake the biggest capital input in the production process, and the nature of coordination is reflective of the strategic needs to protect intellectual property and achieve large-scale production. Producer-driven chains are increasingly structured so that activities with lower value are outsourced to upstream suppliers, usually located within developing countries [Raikes et al, 2000]

Buyer-driven chains are most commonly found in labour-intensive industries with low barriers to entry in production. 'Buyer driven-ness' expresses the notion that a lead buyer, or group of leading buyers within a specific segment, exercise control over the chain, even without direct ownership of enterprises throughout the chain. Within buyer-driven chains, power can be located within any of the downstream chain functions including retailing, manufacturing, processing, and trading. Lead firms within buyer-driven chains have been able to transform traditional trade linkages into decentralised production networks, enabling them to capitalise on the efficiency gains in production presented by globalisation [Gereffi et al, 1994].

The typical characteristics of a buyer-driven chain are the importance of marketing, branding and merchandising in downstream segments of the chain, which present high barriers to entry for resource poor upstream suppliers typically located in developing countries [Kaplinsky, 2000]. Gibbon [2001] notes that through control of the higher value functions such as branding and merchandising, downstream actors coordinate the chain through sub-contracting lower value functions to a highly competitive network of suppliers, located in developing countries.

3.3.1 - Beyond the Producer-Driven/Buyer-Driven Dichotomy

In recent years the original producer/buyer-driven dichotomy has been advanced in several studies carried out in both agricultural and industrial supply chains. The main insight from a range of studies in this area⁷⁷ is that whilst the concept of buyer 'driven-ness'

⁷⁷ Sturgeon [2000] in electronics; Fold [2001, 2002] in cocoa.

is prevalent across many supply chains, in practice every chain has its own distinct governance structure. Results from studies show each chain displays significantly different degrees of driven-ness, different ways in which driven-ness is manifested, and even differences in the number of drivers.

Equally it is important to recognise that governance structures evolve over time, and thus in any particular time period new governance structures co-exist and interact with earlier forms of governance [Gereffi, 2001]. Therefore, whilst ideal types of governance have been identified in the literature, in many ways such typologies are designed to be reflective of dominant trends across industries, rather than the dynamism of economic actors and the heterogeneity of organisational arrangements that exist in practice. This understanding will be particularly important for the following study of the Ghanaian cocoa chain, where both the Cocobod and powerful multinationals represent two lead actors co-existing within the same supply chain.

Humphrey and Schmitz [2000] further advanced the understanding of governance in buyer-driven chains by asking the question of what determines the 'mode' of governance pursued by powerful buyers in global value chains⁷⁸? [p15]. Similar to Williamson's [1998] organisational forms covered in chapter two, Humphrey and Schmitz identify four different governance options, ranging from 'arm's length' market relations to 'hierarchy'. The writers find that buyers choose closer linkages with suppliers, such as hierarchical forms of governance when there is a high requirement for product definition⁷⁹, and when buyers face a high risk of loss from supplier failure⁸⁰. Indeed, Humphrey and Schmitz [2000, p17] find supply risk to be the 'key determinant' of governance. Supply risk is a common feature of agro-food chains originating in the developing world where the unstable market environments and heterogeneous production conditions, have forced buyers to focus on improved coordination as a mechanism to reduce risk [Hobbs and Young, 2001].

⁷⁸ The modes of governance considered are market relations, network relations, quasi hierarchy and hierarchy.

⁷⁹ 'Product definition involves the process of interpreting market demands, creating product concepts and translating these into designs and drawings' [Humphrey and Schmitz 2000, pg 15].

⁸⁰ Humphrey and Schmitz [2000, p 17] acknowledge that the factors influencing governance, which they have identified, can be put in the language of transaction costs.

Coupled with this, Humphrey and Schmitz [2001] find that there has been an increased importance placed on non-price competition in recent years. Non-price factors such as quality, reliability of supply, and the health and safety of products have increased the degree of risk faced by buyers sourcing from developing countries. In response, leading buyers would therefore be expected to pursue modes of governance that facilitate closer coordination with suppliers [Humphrey and Schmitz, 2000, 2001; Gereffi et al, 2005]. In light of this, the notion of supply risk and its relation to governance will be investigated within the analysis for this study.

Building on Gereffi's framework of buyer driven-ness, Gibbon [2001] contends that different modes of governance will emerge depending on both the characteristics of the commodity being traded, and changes in the economic and political conditions through which the chain operates. Interestingly Gibbon [2001] categorises the cocoa chain as 'trader driven', where lead agents would be expected to prioritise price and efficiency of operations over the quality of product sourced. Based on Humphrey and Schmitz's [2000, 2001] above model of governance lead buyers in the cocoa chain would therefore be expected to use looser forms of governance, such as market transactions. This governance structure is selected based on the low importance which Gibbon places on product definition and the level of supply risk within the cocoa chain. If, however, lead buyers had a higher quality requirement, then, coupled with the supply risks that can result from market disorganisation within developing country markets, buyers would be expected to pursue tighter modes of governance. In light of this, it is possible that the mode of governance adopted by lead buyers in the cocoa chain may vary between different producer countries based on their assessment of both quality needs and supply risk.

Extending the above argument, Gereffi et al [2005] develop five typologies of governance that chain actors can use to organise different transactions. Adopting a more micro level approach to GVC, by focusing on each transaction at the individual level, Gereffi et al's [2005] understanding of governance appears to share some similarities with Williamson's [1985] framework for economic organisation, discussed in chapter two. In a similar vein to

Williamson's framework, Gereffi et al's five typologies of governance range from the market at one end, used to govern simple transactions, to hierarchy at the other end, used to govern more complex transactions. Though, the authors attempt to extend the somewhat limited buyer/producer driven dichotomy is laudable based on what it is trying to achieve, it may be argued that by focusing on the micro-level and thus reducing governance to something highly similar to transaction cost economics, Gereffi et al [2005] fail to make a telling advancement on Gereffi's [1994] original GVC framework. Indeed, as noted by Gibbon et al [2008], once you begin to focus on governance at a micro level within GVC you begin to discard the main advantage of conceptualising economic relations in terms of chains at the macro level. In a similar light, Bair [2008] is critical of Gereffi et al's [2005] micro-level framework and its proximity to transaction cost economics, finding that it demonstrates a movement away from the macro sociological traditions in which GVC is rooted.

Despite the above criticisms, Gereffi et al [2005] highlight an important lesson, where they note that modes of governance are extremely dynamic and variable depending on 'the details of how interactions between value chain actors are managed and how technologies are applied' [p 96]. Furthermore, they broaden the traditional GVC conception of governance by acknowledging that national level rules and institutions affect the governance arrangements of an industry and thus must be considered in analysis. In a similar light, Neilson and Pritchard's [2009] study of the Indian tea and coffee chains attempts to broaden the GVC understanding of governance by examining the importance of local institutions in shaping the governance and change within value chains. Though the Indian tea and coffee chains may be understood as buyer driven, Neilson and Pritchard find that lead buyers do not operate in a vacuum, but in markets with embedded suppliers, consumers and institutions that are influenced by economic, political and social circumstances at the national level.

Indeed, it is interesting to observe the relative scarcity of GVC studies that recognise the potential role of the government in the market. Though, the vast majority of studies in the GVC have focused on markets that have undergone a relatively comprehensive process of

market liberalisation, it should not be assumed that national based institutions have no effect on governance. In light of this, it appears that one of greatest failings of GVC literature to date is the scarcity of research that takes account of the various national institutions affecting different segments of the supply chain. Indeed, the role of national governments in supply chain governance, which is of great importance within this study, has received very little attention within past literature. The absence of government from GVC analysis is criticised by Raikes et al [2000, p 399] who find that ‘the issue of regulation is not adequately incorporated into its [GVC] framework’. Further, they find that in many instances privatisation has not seen the complete removal of regulation, but rather a shift in the type of regulation, which market actors now have to consider. This criticism is echoed by Gibbon and Ponte [2005] who find that GVC analysis has been flawed in its blindness to external regulatory conditions, noting that ‘lead firms do not operate in an institutional and regulatory vacuum’ [pp 84-85]. Based on this an analysis of the broader institutional framework in which lead firms operate is highlighted as a key priority for future GVC research [p85].

Observing both the dynamism and context specificity of governance arrangements is crucial to the way we observe governance structures in practice, as in reality governance structures are constantly being influenced by a variety of economic, political and social factors. In this light, it is not the intention of this research to predict large shifts in governance, or categorise emergent governance arrangements, but rather to observe the factors influencing the changing nature of governance throughout the Ghana cocoa chain. In doing so it may be possible to make a contribution to our understanding of the way chain actors attempt to shape the different governance arrangements in order to fulfil their sourcing objectives.

3.3.2 - Buyer Driven-ness in Tropical Commodity Chains

The importance of vertical coordination and the emergence of ‘buyer driven-ness’ in commodity trading has risen markedly in recent years, as the breakdown of international commodity agreements, coupled with market liberalisation, has resulted in the virtual

termination of government support at the national level [Daviron and Gibbon, 2002]. Government supports, traditionally used to control the variables of price and quality, have been removed placing increased importance on vertical coordination from private sector actors. Daviron and Gibbon [2002] observe how, in the case of tropical agro-commodity trading, 'market liberalisation and buyer driven-ness have had a symbiotic relationship' [p 138]. As such, studies of tropical commodity chains have typically focused on the emergence of buyer-driven governance structures in response to the economic restructuring taking place in developing country markets.

Alongside the process of market liberalisation, Daviron and Gibbon [2002] and Gibbon and Ponte [2005] highlight corporate concentration and the outsourcing of lower value added activities, as key factors leading to buyer driven-ness in commodity chains. Indeed, as observed in chapter one, the trends of outsourcing and concentration have been extremely influential in shaping the modes of governance and coordination witnessed in the cocoa chain. Whilst these trends may have taken place regardless of market liberalisation, the impact that they have had on producer countries has been catalysed by the removal of marketing boards and the resultant freedom that the private sector now has in these markets. Therefore, in markets where the process of liberalisation has not been completed, such as the cocoa industry in Ghana, it will be interesting to see how the emergence of lead buyers has affected the market. Indeed, an awareness of the government alongside leading buyers in chain governance raises questions over both: how emergent forms of governance and coordination challenge the government's traditional role in the market; and how the dynamics of power between different groups of lead actors will affect the development trajectory of the Ghanaian market.

3.4 - Governance and Quality in Global Value Chains

Within the GVC, quality issues are key to understanding the way in which lead firms exercise governance [Gibbon and Ponte, 2005, p22]. Indeed, whilst quality issues are not commonly considered in economic analysis of the supply chain, GVC analysis offers a

valuable framework to explore this important topic. Daviron and Gibbon [2002] find that achieving the required quality is a major priority for any governance structure and, as such, power in governance is exercised to achieve coordination at the level at which quality is defined. In this light, achieving the required level of quality can be seen as one of the main functions of coordination within the supply chain. As such, quality is an important factor within the strands of GVC which consider coordination to be the main component of supply chain governance [Gereffi et al, 2005].

Within liberalised markets the removal of government institutions as the traditional arbitrator of quality has placed the governance of quality in the hands of lead buyers in the chain [Daviron and Gibbon, 2002]. Resultantly, quality security is now a challenge faced by the vertical coordination mechanisms of lead buyers. In response to this, Daviron and Gibbon [2002] observe that new definitions of quality and the modes of arbitrating it have emerged within global commodity chain. However, within Ghana, the traditional methods of quality signalling are still firmly in place. As such, before going on to consider some of the new forms of quality differentiation, it is first necessary to discuss the traditional role of national reputations in supply chain coordination.

3.4.1 - Quality Standards and National Reputation

Daviron [2002] observes how the emergence of quality standards post WWII was a key development affecting coordination between agents along the supply chain. Quality standards play a key role in reducing the level of information asymmetry between parties to an exchange [Kindelberger, 1983]. Indeed, within the cocoa industry quality standards have played a key role in increasing the level of confidence in cocoa exchange, thus enabling the development of a cocoa futures market [Daviron, 2002].

In some respects national reputations for quality play a similar role to that of quality standards, based on the information that they convey to the market about a product. Daviron [2002] observes how reference to national origin became the essential component of the qualification system for tropical commodities [p171]. As reputations are built up

over time they come to embody unequivocal information about the product being traded. Reputations can act as an indication of quality and reliability, informing global buyers of the product attributes, thus reducing the risk of sourcing from that origin and affecting the nature of vertical coordination employed by the buyer. Daviron and Gibbon [2002, p140-141], and Gibbon [2005, p25] observe how reputations enable commodity buyers to differentiate basic commodities based on their origin.

Based on their role in conveying information to the market and improving coordination between parties to an exchange, national reputations may also be considered as a public good [Kindelberger, 1983; Daviron and Gibbon, 2002; Tollens and Gilbert, 2003]. Indeed, Fold [2001] classifies Ghana's reputation for quality cocoa as a public good. Reputations for quality can facilitate the achievement of price premiums, not only by signaling quality, but also by enabling forward sales⁸¹. Forward sales attract a price premium, based on the supply security they offer the buyer. Gibbon and Ponte [2005] observe that obtaining price premiums through forward sales is one of the advantages of the marketing board system. However, the buyer is only likely to enter into such an agreement where the seller has an established reputation. As such, the Cocobod reputation for quality takes effect, both in terms of the way in which buyers coordinate with the Cocobod, and also the premiums obtained from Ghanaian cocoa exports. In light of this, the following study will need to investigate both the benefits accruable to Ghana based on their reputation for quality cocoa, and also, the Cocobod's role in protecting the reputation of Ghanaian cocoa.

3.4.2 – New Definitions of Quality

Gereffi et al [1994], Daviron and Gibbon [2002] and Humphrey [2004] all observe the growing importance of product differentiation as a factor affecting the governance exercised by lead agents in global commodity chains. Daviron and Gibbon [2002] highlight how new definitions of quality have emerged in response to both consumer demand for production information and the breakdown of traditional quality control mechanisms. In

⁸¹ Forward sales were explained in chapter one.

addition, Humphrey [2004] observes the factor of an increasingly complex regulatory environment related to food safety.

Reardon et al [2001] identified private grades and standards for product quality as an emerging mode of governance in modern agricultural supply chains. The importance of private grades and standards in agro-food chains have emerged both in response to the disorganisation of local sourcing resulting from liberalisation and also the mainstream emergence of markets for credence goods⁸². Reardon et al [2001] find that the role of grades and standards have moved from being a signal of basic quality in homogenous commodity markets, to being sophisticated tools used to achieve product differentiation in line with consumer demand for credence goods. In order to achieve credence good qualification tight vertical coordination is needed resulting in a closer link between producers and buyers.

Similar positions are adopted in studies by Henson and Reardon [2005], Ponte and Gibbon [2005], and Hatanaka et al [2005], where again the growing importance of process standards related to agricultural production are emphasised. Indeed, research examining the importance of private grades and standards continues to grow, with an increased emphasis on the inability of some small producers to access these high value chains [Reardon et al, 2009]. Interestingly, however, Fold [2008, p 116] notes that product differentiation is not traditionally considered to be an issue of great importance in the cocoa chain. As such, it will be interesting to observe if product differentiation has become a factor affecting governance in the Ghanaian cocoa chain and how this has shaped the forms of governance adopted. Equally, it will be necessary to observe whether private sector buyers are still prepared to use the Cocobod's traditional methods of signaling quality as a form of supply chain coordination, given the modern forms of quality coordination that have emerged post market liberalisation.

⁸² Credence goods are products with quality and safety aspects where the consumers main concern is not the product experience but rather an awareness of the processes that have led to the goods production [Reardon et al, 2001].

3.5 - Governance and the Process of Upgrading

Upgrading refers to the opportunity for developing country producers to make better products, more efficiently, with a higher level of skills and resources [Gibbon and Ponte, 2005]. The process is facilitated by the linkages that exist between international buyers and developing country markets, where studies in the GVC have demonstrated how buyers transmit information and resources to the upstream level enabling development opportunities. Gereffi [1994] argues that developing country producers need to participate in global commodity chains and where possible gain access to the chains lead agents, in order to facilitate upgrading. Upgrading opportunities have increased in recent years in line with the trend of outsourcing, where downstream firms have transferred lower value, non-core competence functions to upstream segments of the chain [Daviron and Gibbon, 2002].

Upgrading is traditionally associated with tighter forms of governance, such as hierarchy or quasi-hierarchy [Humphrey and Schmitz, 2000], where lead buyers form close linkages with their preferred suppliers. Tighter forms of governance are associated with value chains in which lead buyers face high supply risk and demand specific product requirements [Humphrey and Schmitz, 2000]. Humphrey and Schmitz [2000, pg 3-4] identify three different types of upgrading that have taken place:

Process upgrading: firms can upgrade processes – transforming inputs into outputs more efficiently by re-organising production or introducing superior technology.

Product upgrading: firms can upgrade by moving into higher value product lines. Product upgrading can also involve producing the same product to a higher quality standard, at an increased volume and reliability.

Functional upgrading: describes the process through which supply chain actors move from low value activities, such as farming, to higher value activities such as agricultural

processing. Fold [2000] finds that functional upgrading can act as a catalyst for agro-industrialisation⁸³ in the developing world. In light of the recent influx of investment into the Ghanaian processing industry from the world's largest cocoa processors, functional upgrading will form the focus of upgrading analysis in this study.

3.5.1 - The Challenge of Functional Upgrading and the Role of Government

Schmitz and Knorringa [2000] find that whilst buyers are often willing to support a supplier in the improvement of basic production processes, producers cannot expect to receive assistance in the realm of functional upgrading. By providing assistance that would help producers develop the competence to make a functional shift up the value chain, buyers would effectively be creating additional competition for themselves and, as such, power in governance is used to entrench producers in low value-added segments of the chain [Raikes et al, 2000, Humphrey and Schmitz, 2000]. Therefore, whilst buyers are willing provide assistance in areas from which they gain benefit, such as product and process upgrading, there are strict barriers on upgrading at the functional level.

Gibbon [2001] finds that the opportunities for upgrading will depend on which segment of the chain is 'driving'. In analysis of traditional primary commodity chains such as cocoa, coffee, cashew nuts, cotton, and fish, Gibbon [2001] finds that international traders⁸⁴ have emerged as the lead agents in these chains. Within these particular chains there are a limited number of opportunities for functional upgrading, as trader-driven chains do not display the tendency for lower profit functions to be outsourced upstream to producer segments [p 352]. Furthermore, only scattered evidence exists for product and process upgrading. Gibbon stresses that traders investing in suppliers is rare, even where long-term relations have developed. This is reflective of the loose and indirect governance

⁸³ Agro-industrialisation is defined as the structural transformation of a particular national agricultural branch away from a dependency on crop cultivation towards more advanced processing segments [Fold, 2000, p264].

⁸⁴ It was noted earlier that the traditional 'trader' function is no longer as powerful in the global cocoa chain. In its place there is now an oligopoly of processing firms. Therefore, Gibbon's insight into trader driven chains can be closely associated with modern day processor driven chains.

which characterises trader driven chains, where traders do not attempt to exercise much control over the supply function [p 352].

Gibbon [2001] argues that in order to capitalise on the upgrading options available in trader driven chains government action is required. In this light, Gibbon recognises the value of the role played by government parastatals such as the Cocobod. Closely related to this, Gereffi [1995] finds that national governments have the capacity to transform the traditional export base of the economy and move towards the more advanced stages of the chain. Within the developing country environment government support is of primary importance, as functional upgrading requires a level of capital investment that is far beyond the reach of most local entrepreneurs. In light of the level of capital investment required for industrial development, governments can encourage functional upgrading through attracting foreign direct investment from multinational enterprises. Whilst this may not represent the direct domestic industry development envisaged in the traditional form of functional upgrading, recent studies on international trade have demonstrated the positive developmental benefits of such investment [Dunning and Lundan, 2008]. Indeed, though such investment may not represent traditional functional upgrading of domestic industry, the positive spillover effects of foreign investment may contribute to long development of the national economy [Dunning and Lundan, 2008].

In this light, Fold [2000] finds that the government has played an important role in domesticating the knowledge brought in by foreign direct investment in oil seed chain of Malaysia and soya bean chain of Brazil. More broadly, Fold suggests that governments should encourage agro-industrialisation, as it 'increases value-added in the commodity chain, enhances technological and organisational know-how, stimulates capacity in supplier- and buyer-linked industries and diversifies exports' [Fold 2000, p264]. Fold does, however, warn that functional upgrading is not encouraged under all circumstances, and as such, the government's industrial policy must be tailored towards both the structure of the commodity chain in which they are operating and the physical properties of the crop.

Closely related to this, Cramer [1999] stresses that policies must be carefully matched with the characteristics of the sector in which they are implemented. There may be certain commodity chains where government upgrading is not encouraged either due to extreme competition in the processing segment of the chain, or indeed, superior market demand for the crop in its basic raw format. As such, the following study will need to assess the appropriateness of the Ghanaian government's upgrading strategy in reference to the above requirements.

3.6 - Conclusion

Throughout this chapter global value chain analysis has been explored as a powerful framework for analysing the link between multinational corporations and developing country markets. Global commodity markets have undergone extreme change since the late 1980's, and in response to this GVC scholars have developed a number of important concepts that can be employed throughout this study. In particular the GVC's insights into the areas of governance, power, quality, and functional upgrading will be of direct use in reference to the Ghanaian cocoa chain. Although the Ghanaian cocoa market is not fully liberalised, changes within the external cocoa market are beginning to play an increasing role in shaping the Cocobod's governance of the Ghanaian supply chain. In light of this, chapter four will attempt to explore recent changes in the international cocoa market more deeply, leading to an improved understanding of how the GVC framework will be applied throughout the macro analysis.

Chapter Four – Ghana’s Partial Liberalisation Model

4.1 – Introduction

In chapter one it was observed that, unlike other West African cocoa producers, Ghana has resisted the external pressure for total market liberalisation. Resulting from a series of targeted market reforms the Ghanaian cocoa sector has adopted a model of partial liberalisation. The Cocobod, which operates as an institution of the Ghanaian government, continues to be heavily involved in several aspects of the local supply chain, interacting very closely with the local buyers on a daily basis. This has led to a unique market structure in the Ghanaian internal purchasing market, raising some interesting questions about the appropriate role of the Cocobod and the private sector in the domestic supply chain. In the external market the Cocobod continues to enjoy monopoly control over cocoa sales. Again this is a unique situation and raises important questions with regards to the capacity for the traditional system of the Cocobod to compete in the rapidly evolving and highly competitive global cocoa market.

Sections 4.2 and 4.3 of this chapter will focus on the micro level operations of both the Cocobod and the LBC’s, where it will be possible to draw insight from the new institutional economics literature observed in chapter two. Sections 4.5 and 4.6 will focus on the role of the Cocobod in cocoa supply and the ability of the Cocobod to legitimise itself to external buyers in the cocoa export market. At this level, it will be possible to draw insight from the literature on global value chain analysis presented in chapter three.

4.2 – The Functions of the Cocobod in the Internal Market

4.2.1 - The Extent of Reform

During chapter one it was observed that in the mid 1990's Ghana had amongst the highest marketing costs and taxation levels of any global cocoa producer. However, as can be seen from table 4.1, reform has reduced both the level of government tax and the marketing costs associated with the Cocobod.

Table 4.1 - Basic Cocoa Revenue Breakdown

| Cocoa Season | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 |
|---------------------------------------|---------|---------|---------|---------|---------|---------|---------|
| Producer Price | 56.0% | 60.0% | 62.0% | 64.0% | 66.0% | 68.0% | 70.0% |
| Marketing/Cocobod⁸⁵ | 18.2% | 16.5% | 16.2% | 15.9% | 15.6% | 15.3% | 15.0% |
| Government Tax | 25.8% | 23.5% | 21.8% | 20.1% | 18.4% | 16.7% | 15.0% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Source: figures from The Cocoa Sector Development Strategy [MOFEP, 1999].

Nevertheless, Shepherd and Onumah [1997] and Laven [2005] find that whilst certain improvements have been made, in reality the level of rationalisation within the Cocobod has been relatively small and it continues to control several aspects of both internal and external marketing. Indeed, LMC [1996] report that change has been a difficult process, bringing in a period of political and economic uncertainty. Within the cocoa sector this is most clearly exemplified by strike action and protests from Cocobod employees in response to the proposed retrenchment plans [LMC, 1996]. To some extent the slow pace

⁸⁵ Appendix one expands further on the component parts of the field marked 'Marketing/Cocobod'.

of reform is confirmed by the more detailed data in appendix one, where it can be seen that Cocobod expenses⁸⁶ as a share of the FOB price have not improved in recent years. In fact the figure of 16% of the FOB in 2006/07 is larger than that in 1999/00 [15.6%], and 2004/05 [13%]. Supporting these findings, Laven [2005, 2007] suggests that at the current time there are several opportunities for improvement in the Cocobod system.

Equally, it is important to recognise the role that Cocobod investment has played in the strong performance of the Ghanaian cocoa market in recent years. UNCTAD [2008] support the positive role of the Cocobod in Ghana, and find that due to the under-capitalisation of agricultural and the structural constraints facing farmers in Africa, government investment is needed to lift farmers out of the cycle of poverty. Indeed, similar to the model of developmental coordination, UNCTAD [2008] find that successful liberalisation requires government support to help farmers overcome supply constraints and encourage market development.

In light of the above arguments both for and against Cocobod intervention, it is necessary to examine the literature focusing on the specific aspects of the Cocobod system in order to gain a deeper understanding of its role in the market.

4.2.2 - Quality Control

As noted in chapter three, under the former marketing board system countries gained reputations for the production of low or high quality goods. Good reputations led to price premiums for national governments and within the commodity chain literature reputations are considered to be public goods [Tollens and Gilbert, 2003; Daviron and Gibbon, 2002]. In light of this, governments have an incentive to maintain quality. The same argument cannot, however, be made for the private sector, because working as individuals they are not able to internalise the costs resulting from quality decline. Where this is the case,

⁸⁶ Cocobod expenses include the categories: Finance Costs, Other, Administration, and Export Handling.

there is an incentive for private sector actors to free ride on the effort made by others to maintain quality. This is considered one of the main reasons why the private sector has not been able to uphold quality standards following market liberalisation [Tollens and Gilbert⁸⁷, 2003]. Acting as the monopoly seller, governments do not face the threat of free riding as they will be directly accountable for any costs resulting from a decline in the nation's reputation.

In light of this, Fold [2001] argued that market liberalisation in Ghana would lead to quality decline. Fold [2001] suggests that under a free market system the costs of maintaining the quality control system would not be cost efficient for the private sector, and therefore, Ghana's system of quality control can only be maintained under the Cocobod's monopoly of exports. Recognising similar problems associated with privatisation, Hart et al [1997], and Bardhan and Udry, [1999] find that where the private sector does not face enough incentive to replicate the government's performance in an area of national importance⁸⁸, then the case for public provision of these goods is stronger.

The role of government in quality control is also supported by Ponte [2002]. Based on his examination of quality decline in African coffee exports following liberalisation, Ponte concludes that 'preserving quality and reputation is more difficult, if not impossible, in deregulated markets' [p 270]. As such, Ponte finds that there are 'good arguments against liberalisation...where high quality is the main insertion of an origin in a global commodity chain' [p270].

Quality control in Ghana⁸⁹ begins at the farmer level and it is found that 80% of cocoa quality is dependent on farmers adopting the correct pre-harvest growing practices, and post-harvest drying and fermentation [MOFEP, 1999, p57; BOG, 2003, p10]. In light of this,

⁸⁷ It should however be noted that although Tollens and Gilbert [2003] acknowledge this argument as the one which is generally held within the 'public good' literature, they do not support it themselves. Indeed, they argue that the private sector will produce an efficient level of quality in the absence of government intervention.

⁸⁸ Wilson [1989] describes such functions as 'sovereign' tasks, given their importance to the government.

⁸⁹ For a full description of the stages of quality control in Ghana please see Appendix two.

the Bank of Ghana⁹⁰ [2003, p10] finds that it is crucial that farmers are penalised immediately by LBC's when attempting to sell cocoa that is not up to Cocobod standards. Indeed, if LBC's deliver cocoa to the CMC below grade two standard then they will be fined 50% of their margin [Shepherd and Onumah, 1997; Laven, 2007].

As such, the buyer has a responsibility to check cocoa purchased from farmers, making sure to remove all defect cocoa beans and check the beans are thoroughly dried. The buyer is also required to categorise beans according to size⁹¹ and place them in sacks at a weight of 64kg⁹². However, the LBC check is not an 'official' quality check and based on recent studies by MOFEP [1999], BOG [2003], and Laven [2007] there appears to be some confusion surrounding the buyer's exact role in quality. In light of this, further research in this area is required to help understand how private buyers have been integrated into the Cocobod's system of quality control.

Official quality checking and grading of cocoa in Ghana is carried out by the Quality Control Division of the Cocobod [QCD]. The first of the QCD's three quality checks is carried out at the district warehouses, where LBC's store cocoa once it has been purchased from the farmers. Once cocoa is graded and approved at the district level, the LBC's then transport beans to one of the Cocobod's three takeover points at Kaase, Takoradi and Tema. At this point the QCD carry out a second quality check. Once accepted at this level, LBC's no longer have responsibility for the cocoa. In conjunction with the CMC, the cocoa is then checked a third time prior to shipment. In order to be shipped Ghana grade one cocoa has to meet a standard of no more than 3% of defects, whilst the rest of West Africa grade one cocoa is

⁹⁰ The Bank of Ghana will be referred to as BOG throughout the rest of this study.

⁹¹ Cocoa beans are priced and graded according to the level of bean defects and also the size of the beans. As such, beans have to be sorted into different size categories by the LBC's. Bean sizes are arranged according to bean count whereby per 100-120 beans per 100g of cocoa are considered light crop beans and are of lesser value, while 80-100 beans per 100g are considered main crop and are of higher value. All cocoa beans shipped from Ghana are graded according to the contractual conditions set out by the Federation of Cocoa Commerce [FCC].

⁹² This was established during field work in 2007.

graded to 5% defects⁹³. As a result, the CMC rarely fails to meet the quality standards fixed in their contracts with overseas buyers [Varangis and Schreiber, 2001].

4.2.2.1 - The Benefits of Quality

As observed in chapter one, the risk of declining quality resulting from liberalisation was one of the main reasons why Ghana did not fully liberalise their cocoa market [Shepherd and Onumah, 1997; BOG, 2003; Laven, 2007]. Indeed, the maintenance of quality enables Ghana to achieve a price premium over other origins available on the international market [LMC 1996, Varangis and Schreiber, 2001; BOG, 2003].

Premium figures for cocoa are indicated by any value paid above the standard cocoa contract prices quoted by the London and New York futures exchanges. Tollens and Gilbert [2003] find that the lowest premium figure for Ghanaian cocoa of £10 per tonne was recorded in 1997, whilst the highest figure of £110 per tonne was achieved in 2001 [p30]. Recent figures quoted include \$60-80 in 2003/04 [GAIN⁹⁴, 2005] and \$150 in 2007 [Benjamin, 2007⁹⁵]. Even at the early stages of market liberalisation the impact of quality decline in West African origins, can be seen by the fact that during 1996 Ghana was being traded at a premium of £50 a tonne, whilst the Ivory Coast was trading at a discount of £10 and Nigeria was trading at a discount of up to £40 per tonne [Shepherd and Onumah, 1997].

4.2.2.2 - The Cost of Quality

In the early stages of market reform both the LMC [1996] and Shepherd and Onumah [1997] reported that due to cost implications of the QCD system, significant steps were

⁹³ The Federation of Cocoa Commerce [FCC] has two main grades for beans from West Africa – Good Fermented Beans – no more than 5% mould, 5% slate, 1.5% foreign matter, and Fair Fermented – no more than 10% mould, 10% slate, 1.5% foreign matter.

⁹⁴ GAIN stands for Global Agriculture Information Network.

⁹⁵ Benjamin, C [2007] 'Is 50% cocoa processing a reasonable goal for Ghana?' http://www.thestatesmanonline.com/pages/news_detail.php?newsid=2548§ion=9

being taken towards the commercialisation of the QCD. The Cocoa sector development strategy [MOFEP, 1999] also acknowledges the need to make efficiency improvements in the QCD, where the potential involvement of LBC's in quality control is seen as a possible solution [MOFEP, 1999, pp 69-70].

The BOG [2003] acknowledges complaints from LBC's over the inefficiency of the QCD. Consistent with this Fold [2002] indicates that buyers⁹⁶ in Ghana find the quality control system inefficient and costly, and therefore, 'movement towards a more flexible and less rigid system seems inevitable' [p 232]. Laven [2007] raises concerns over the financial efficiency of the QCD, which is largely unknown due to the lack of transparency from the Cocobod in this area. In light of the above concerns, it will be interesting to observe any recent QCD efforts towards improvement, or indeed, whether there is the potential for the private sector to provide a more efficient service in this area.

4.2.3 - Forward Contracting and Price Stabilisation

In chapter one it was observed that forward contracting enables the Cocobod to fix a minimum price buyers have to pay farmers for their cocoa. The price farmers receive is fixed at the start of the season as a percentage of the projected average FOB price⁹⁷. This percentage has increased from 56% in 1998/99, to around 70% from 2004/05 to the current period⁹⁸ [Laven, 2005].

As can be seen from table 4.2 on the next page, farmers in Ghana have benefited from a stable income, whilst their counterparts in the liberalised markets of the Ivory Coast and Nigeria have suffered from severe fluctuations and declining prices in recent years.

⁹⁶ In recent years LBC's have also raised complaints surrounding the need for three official checks within the system - African Echo News [2006] - 'Rising Output Costs Strains in Ghana's cocoa industry', <http://africanecho.co.uk/africanechonews20-sept14.html>.

⁹⁷ The CMC projects an average FOB price for the season based on the prices they have obtained for cocoa contracts sold forward. By selling 6-12 months forward the CMC is thus able to accurately predict their future income stream and thus fix prices for the season in line with this projection.

⁹⁸ In chapter one it was observed that the Cocobod was obligated to increase the farmers' share of the FOB to 60%+ by 2000 and 70%+ by 2004/05, under the structural adjustment framework put forward by donors.

Table 4.2 – West African Cocoa Producer Prices

| Cocoa Season | ICCO Daily Price [US\$/tonne] | Ghana Producer Price [cedis ⁹⁹ /tonne] | Producer Prices in constant terms 1995/96 = 100 | | |
|--------------|-------------------------------|---|---|-------------|---------|
| | | | Ghana | Ivory Coast | Nigeria |
| 1995/96 | 1438 | 92 | 100 | 100 | 100 |
| 1996/97 | 1556 | 133 | 111 | 104 | 103 |
| 1997/98 | 1711 | 180 | 130 | 123 | 103 |
| 1998/99 | 1298 | 225 | 143 | 161 | 94 |
| 1999/00 | 919 | 226 | 121 | 90 | 61 |
| 2000/01 | 990 | 351 | 137 | 100 | 64 |
| 2001/02 | 1580 | 454 | 152 | 166 | 74 |
| 2002/03 | 1873 | 850 | 228 | 175 | 69 |
| 2003/04 | 1534 | 900 | 210 | 89 | 62 |
| 2004/05 | 1571 | 900 | 183 | 79 | 59 |
| 2005/06 | 1557 | 900 | 164 | 80 | 59 |
| 2006/07 | 1854 | 915 | 151 | 87 | 59 |

Source: figures from ICCO [2008]

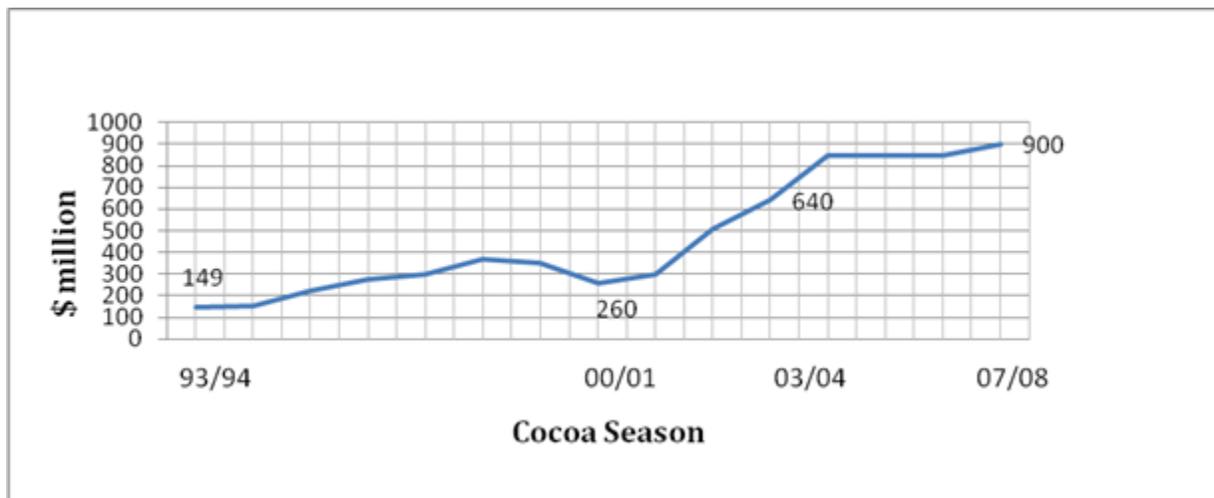
4.2.4 - Forward Contracting and Offshore Borrowing

Given that forward contracts represent a virtual guarantee of future income, the Cocobod is able to use these contracts as collateral for offshore borrowing. This is necessary to help the Cocobod achieve their annual loan agreement from a syndication of foreign banks. The loan is used primarily to provide LBC's with seed funding [credit] to facilitate the

⁹⁹ After the re-denomination of the Ghana Cedi in 2007 the Cedi is now tied to the US dollar and therefore 1 Cedi = 1 \$ [approximately].

purchasing of cocoa. Figure 4.1 shows how this loan has increased steadily from \$149 million to \$900 million in 2007/08.

Figure 4.1 – Cocobod Offshore Borrowing



Source: figures from Tiffen et al [2002], BOG [2003], GAIN [2005] and Kpodo [2008a¹⁰⁰]

Whilst the increasing size of the loan is primarily an indication of Ghana's growing crop size, the improved interest rate charged on the loan and the enthusiasm with which lenders patronise this facility¹⁰¹, offer some indication of the Cocobod's good reputation for contract fulfilment [Monnier, 2006].

4.2.5 - Seed-funding

Seed-funding represents credit provided by the Cocobod to the LBC's for use in the purchasing of cocoa from farmers. The syndicated loan described above is used primarily for this purpose. Since 1998 the Cocobod has provided seed-funding to LBC's at interest rates below the average banking level [Tiffen et al, 2002; BOG, 2003]. In 2000 the Cocobod

¹⁰⁰ Kpodo, K [2008a] 'Ghana see's 650,000 tonnes for 2008/09 crop, and signs new loan' - <http://africa.reuters.com/country/CI/news/usnL3523501.html>

¹⁰¹ The popularity of this facility in 2006 is indicated by the 47% over-subscription that it received from lenders [Monnier, 2006].

was providing loans at an interest rate of 30%, plus 3-5% bank charges¹⁰², compared to 39-55% charged by commercial banks [Tiffen et al, 2002, p23]. However, seed-funding can only be used for cocoa purchasing and thus LBC's must seek other forms of finance to fulfil their working capital requirements.

Studies of agricultural reform throughout sub-Saharan Africa have concluded that the rate of private sector entry into local purchasing markets is significantly affected by the level of financial sector development [Shepherd and Farolfi, 1999]. Indeed, it is possible that without the Cocobod's seed-funding LBC's would struggle to finance their purchases. Access to credit is not only restricted by the low collateral base of LBC's, but also the limited capacity of the Ghanaian banking sector¹⁰³ [Shepherd and Onumah, 1997; BOG, 2003]. As such, only two banks had supplied LBC's with finance by 1997 [Shepherd and Onumah 1997, p 58]. In light of these constraints, the BOG [2003] contends that within a liberalised market domestic companies will struggle to compete with multinationals based on their superior credit ratings and access to low cost finance.

4.2.6 - The Provision of Farmer Inputs

Farmer inputs, such as, pesticides used to tackle pest and disease, and, fertilisers used to increase soil productivity and sustainability, are very important in cocoa production. To give an example of the impact which pests can have, it is estimated that 25-30% of Ghana's crop is badly affected by Capsids¹⁰⁴ and that if left untreated for three years they could reduce yields by as much as 75% [Flood et al, 2004, p42]. The impact of both pest and disease and poor fertiliser application is indicated by the relatively low productivity Ghana achieves compared with other major producers. Figures reported for Ghana show an average annual yield of around 300-400 Kg per hectare [Norde and Duursen, 2003; Teal

¹⁰² In order to gain seed-funding LBC's have to first gain guarantees from banks as a form of collateral. The LBC will normally be charged in the region of 3-5% of the amount being borrowed for this guarantee. Without a bank guarantee LBC's cannot access seed-fund.

¹⁰³ In the 1994/95 season, the finance required for internal cocoa purchases [69%] and LBC operating expenses [16.7%] totalled 75.7% of the total credit available in the Ghanaian banking system [BOG, 2003].

¹⁰⁴ Capsids are only one of the three main pests and diseases that attack cocoa crops in West Africa. The others include swollen shoot diseases and black pod.

and Vigneri, 2004], compared with the Ivory Coast's 590 Kg/ha [Norde and Duursen, 2003] and Indonesia's almost 1000 Kg/ha [Teal and Vigneri, 2004].

4.2.6.1 - Missing Markets and Government Intervention

Based on World Bank structural adjustment policies all Cocobod subsidies in the area of farmer inputs were to be removed by 1996/97¹⁰⁵ [Teal and Vigneri, 2004]. The objective of this was to encourage market growth and efficiency through private sector input provision. However, as has been the case for many African markets that have gone through the process of structural adjustment [Kherallah et al, 2000], the private sector input providers in Ghana have either been unwilling or unable to fill the void left by the Cocobod in this area [MOFEP, 1999; Laven, 2005, 2007]. Similar to arguments presented earlier [Poulton et al, 1998; Kherallah et al, 2000], the farmer's lack of access to credit in Ghana is cited as one of the fundamental reasons behind the lack of private sector input provision [MOFEP, 1999; Tiffen et al, 2002; Laven, 2005].

Responding to the missing market for farmer pesticides the Cocobod set up the Cocoa National Disease and Pest Control Committee [CODEPAC] in 2001. This programme provides these inputs for free and cocoa farms are sprayed either with insecticides to treat Capsids, or with fungicides to treat Blackpod disease. The positive impact of the CODEPAC program on Ghana's output in recent years is noted in several recent studies including Laven [2005], Teal et al, [2006], and Vigneri and Santos [2007].

However, the cost of the CODEPAC programme is significant. Indeed, being provided as a public good the cost of this programme is a direct drain on cocoa revenues. During the 2005/06 season the government spent 9.7 million¹⁰⁶ Ghana cedis on mass spraying¹⁰⁷. By

¹⁰⁵ The restructuring of input delivery to farmers was under the CRP – Cocoa Rehabilitation Programme

¹⁰⁶ My Joy Online News [2006] 'Government Spends 97 billion on mass spraying'.
<http://www.myjoyonline.com/tools/print/printnews.asp?contentid=115>

¹⁰⁷ As can be seen from table A-1 on page 399 the 2005/06 expenditure on additional expenses such as mass spraying, fertilisers, research, quality control, road building, and warehouse improvements was 51 million cedis and therefore mass spraying is almost 20% of the cost in this broad area. Based on figures quoted for 2007/08 the percentage of additional expenses allotted to mass spraying will expand significantly.

2007/08 the programme had expanded to such an extent that Cocobod was quoted as saying they would spend at least \$90 million on the mass-spraying programme [Kpodo, 2007a¹⁰⁸].

The Cocobod have also intervened in the market for fertilisers, where a market report¹⁰⁹ from 2006 indicates that farmer default has been a major problem. During 2003/04 the Cocobod distributed 31.5 million cedis worth of fertilisers on loan to farmers, off which only 2.7 million cedis was collected. As such, it would appear that the risk of farmer default, as highlighted in chapter two, is a major problem in Ghana. In light of this, the Cocobod have developed a new program for fertiliser distribution in the 2007/08 season where inputs will be sold to groups of farmers at a subsidy of 50% on a cash only basis [Ryan, 2007a¹¹⁰].

Crawford et al [2006] suggest a number of stringent conditions that have to be adhered to in order for government input programmes to be successful. However, in practice very few government programmes adhere to such guidelines, thus leaving subsidy programs open to criticism [Kherallah et al, 2000; Crawford et al, 2006; Poulton et al, 2007]. In particular subsidy programmes are criticised for their short-term outlook and the negative effect that they have on private sector input market development [Jayne et al, 2003]. Political leaders do not have the patience required for long-term market development, instead taking urgent and short-term action to increase supply [Crawford et al, 2006; Gregory and Bumb, 2006]. Based on these studies it appears that government intervention is restricting the process of transition from public to private sector input provision. In light of this, it will be interesting to investigate the long term objectives of the Cocobod's input programmes and whether any actions have been taken to encourage the development of a sustainable private sector input market.

¹⁰⁸ Kwasi Kpodo [2007a] 'Ghana Bullish for 2007/08 Crop'. <http://africa.reuters.com/nbc/GH/>.

¹⁰⁹ My Joy Online News [2006] 'Government Spends 97 billion on mass spraying'.
<http://www.myjoyonline.com/tools/print/printnews.asp?contentid=115>

¹¹⁰ Ryan [2007a], 'Ghana to ease fertiliser bill for cocoa growers'. <http://africa.reuters.com/nbc/GH/>.

4.2.7 - Warehousing

The Cocobod remains in total control of the handling and storage of cocoa delivered to the takeover centres by the LBC's. It is difficult to obtain an accurate breakdown of the total storage capacity available to the Cocobod at the ports due to seasonal variations in rented warehouses. Figures presented by Rottger [2000], show that the Cocobod has a mixture of owned and rented warehouse space at each takeover centre amounting to a total of 218,000 tonnes [124,000 tonnes at Tema, 36,000 tonnes at Takoradi, and 58,000 at Kasse]. Recent figures quoted in the Ghanaian media before the commencement of the 2007/08 season reported a total storage capacity of 350,000 tonnes for the Cocobod [Kpodo, 2007b]¹¹¹. Whilst past studies have shown relatively limited interest in this area, Kydd and Dorward [2004] find that the development of supply chain infrastructure has a significant effect on the level of private sector engagement in the market. In light of this, the Cocobod's role in takeover and storage will be investigated in this study.

4.3 - The Impact of Liberalisation in the Local Buying Market

4.3.1 - Past Experience of Liberalisation in the Local Buying Market

Throughout the history of the Ghanaian cocoa market various changes in the ruling party and their associated economic policies have led to changes in the structure of the local buying market for cocoa. Indeed, reform in 1992 represented the third time that the local buying market has been liberalised after a period of government controlled buying. Recognition of past fluctuations in this area helps to demonstrate the risk of policy reversal faced by the current crop of private buyers in Ghana.

During the early 1940's the first set of private sector buyers to operate in the Ghanaian cocoa market were forced out in response to claims of farmer manipulation [Arhin et al, 1985; Austin 1998]. This led to the establishment of United Ghana Farmers' Council as a

¹¹¹ Kpodo [2007b] 'Ghana moves to cut cocoa shipment delays at ports', <http://africa.reuters.com/nbc/GH/>.

government buying company. The UGFC was largely seen as a repository of patronage [Rimmer, 1992], and its inefficiencies are evident through its marketing costs of £33 per tonne, as compared to the £18 per tonne recorded by private buyers [Beckman, 1976]. The second major period of private sector buying resulted from the 1966 election of the Busia government. However, in 1977 the government once again forced private buyers out of the market and the government controlled Produce Buying Company [PBC] became the monopsony buyer of cocoa [Rimmer, 1992]. Similar to previous government supported buyers the PBC became a highly inefficient and overstuffed organisation [Rimmer, 1992].

4.3.2 - Market Entry Post 1992

In 1992 the PBC's monopsony over internal purchases was ended and private buyers were licensed to compete in the internal purchasing of cocoa in Ghana. Nyateng [1995] observes that Cocobod strictly enforces the financial and managerial requirements needed to gain a licence, and resultantly many smaller operators have been denied access to the internal purchasing market¹¹². Buyers receive a fixed margin on each tonne of cocoa¹¹³ delivered to the CMC as payment from the Cocobod. Similar to the system of farmer pricing the buyer's margin is fixed as a percentage of the projected FOB price at the start of each season.

As seen from both appendix one and table 4.3, the LBC's share of the FOB has been coming down in recent years. This has created very tight operating margins [Laven, 2005]. Varangis and Schreiber [2001] and the LMC [1996], find that due to high start up costs and low margins only one LBC had made a profit by 1999. In recent years the margin has declined from 11% in 2001/02, to 8.93% in 2002/03 [Laven, 2005], once again leaving LBC's struggling for survival [Fold, 2002, 2008]. In light of this, Zeitlin [2006] observes a high bankruptcy rate among purchasing companies in Ghana.

¹¹² LBC's should not be thought of as small under-resourced African businesses. As observed by Nyateng [1995] the Cocobod strictly enforces the financial and managerial entry requirements. Based on field work in 2007 and 2008 it appeared that on average the LBC's interviewed would have around 15-20 office staff, and some of the larger LBC's can have up to 4,000 staff in the field, including their purchasing clerks.

¹¹³ As noted earlier in the section on quality control, payment is dependent on the cocoa meeting the QCD's strict quality criteria.

Table 4.3 – Distribution of FOB

| Crop Year | | |
|---|----------------|----------------|
| FOB Breakdown | 2001/02 | 2002/03 |
| Producer Price | 67.00% | 68.11% |
| Buyers Margin | 11.00% | 8.93% |
| Domestic Transport | 3.00% | 2.26% |
| Disinfestations Costs | 0.22% | 0.67% |
| Crop Finance Costs | 3.50% | 2.30% |
| Quality Inspection¹¹⁴ | 0.02% | - |
| Cocobod | 2.50% | - |
| Government Tax | 10.9% | 16.44% |
| Total | 100% | 100% |

Source: figures from Laven [2005¹¹⁵]

In light of the prevailing conditions in the market, Fold [2008] questions whether it is possible for an LBC to achieve a satisfactory return on capital in the cocoa market based on the Cocobod's system of FOB sharing. Nevertheless, Zeitlin [2006] finds that despite seemingly unattractive market conditions there has been a remarkable rate of entry into the Ghanaian internal market¹¹⁶.

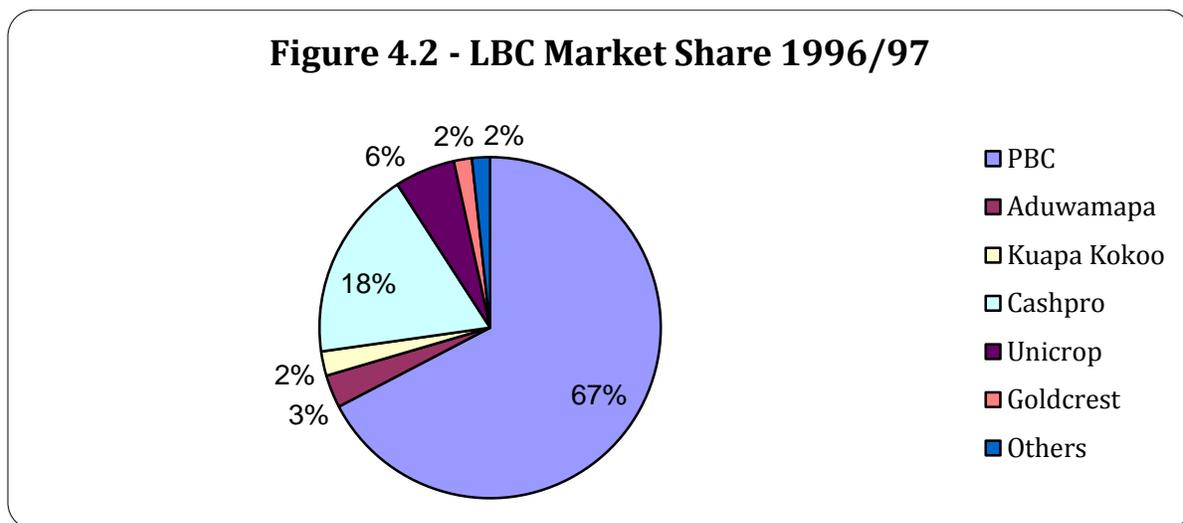
As can be seen from figure 4.2 on the next page, initial market growth was slow and by 1996/97 Cashpro¹¹⁷ was the PBC's only real competitor.

¹¹⁴ The lack of clarity surrounding this figure is indicative of the challenge faced in attempting to gain accurate cost figures of the Cocobod. There is no cost breakdown in the annual reports and accounts published by Cocobod. Rottger [2000, p12] presents figures showing the cost of quality inspection to be 0.92% of the FOB price for 1999.

¹¹⁵ Laven [2005] identifies the source of the figures in Table 2 as confidential.

¹¹⁶ Please refer to the detailed breakdown of market share in appendix three.

¹¹⁷ Whilst several companies have come and gone during the history of the internal buying market post 1992, the most notable casualty is that of Cashpro, which was the PBC's main competitor up until 2000/01 season. Cashpro ceased trading in 2001/02 amid claims of financial corruption.



Source: figures from Rottger [2000]

However, by 2000 the market had grown to over 20 companies [Rottger, 2000; Laven, 2005]. Currently there are 26 registered LBC's, of which around 19 are actively buying cocoa¹¹⁸ [Cocobod Source, 2008]. Vigneri and Santos [2007] find that there is fierce competition between buyers in the internal market. Indeed, the steady decline in the PBC's market-share from 80% in 1996/97 [Shepherd and Onumah 1997], to 35% in 2004/05 [Laven, 2005] and then 31% in 2007/08¹¹⁹, offers further indication of increased competition in the market.

The figure of nineteen active LBC's may be misleading. As can be seen from both figure 4.3 and appendix three, the top companies continue to dominate the market. For the last four seasons, the same nine companies¹²⁰ have controlled 85-90%+ of local buying demonstrating the challenge of breaking into this market¹²¹. The one exception to this is

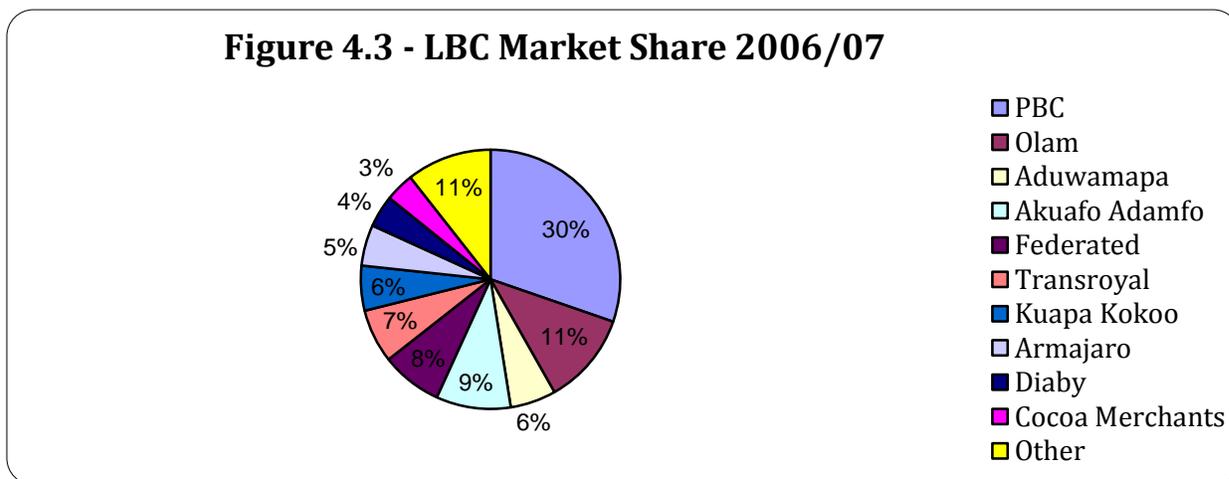
¹¹⁸ Please refer to the detailed breakdown of market share in appendix three.

¹¹⁹ Daily Graphic [2008] 'Ghana Must Reduce Stake in PBC'. <http://www.modernghana.com/news/157278/1/ghana-must-reduce-stake-in-pbc.html>

¹²⁰ Interestingly, at least three of these companies, Federated, Transroyal and Cocoa Merchants, are represented by the senior directors of Global Haulage¹²⁰ at board level [Rottger, 2000].

¹²¹ The companies classified as 'Other' include; Dio Jean, Royal Commodities, Sompaa Cocoa, Sunshine Commodities, Fereday Commodities, Sika Aba Buyers, West Africa Exchange Commodities and Chartwell Ventures. All companies within this classification had a market share of between 0.1-1.5% in 2006/07.

the case of Diaby, which has managed to establish a good market share in a relatively small number of seasons.



Source: documents obtained from Cocobod during 2008 fieldwork.

4.3.3 - Service Provision

Studies by Varangis and Schreiber [2001], Laven [2005], Zeitlin [2006], Teal et al [2006], and Vigneri and Santos [2007] display evidence that since the move to partial liberalisation, competition in the LBC market has led to increased service provision for farmers. Indeed, in the districts where buyers compete for market share most vigorously there is a noticeable improvement in farmer production, based on the incentives buyers provide to win sales [Zeitlin, 2006; Vigneri and Santos, 2007]. Vigneri and Santos [2007] find that the provision of credit to purchase inputs is the second most common incentive used by buyers to incentivise farmers. Reporting similar results, Zeitlin [2006] observes that buyers interlock such arrangements with farmers' output, thus making them captive to a particular LBC.

The positive impact of service provision on farmer output is presented as evidence in support of structural policies that encourage market entry, thus increasing competition between LBC's [Teal et al, 2006; Vigneri and Santos, 2007]. To some extent, these recommendations conflict with the findings in chapter two where it was found that buyers operating under a concentrated market structure are able offer more services to farmers due to the reduced risk they face in terms of strategic default and farmer loyalty [Larsen, 2002; Poulton et al, 2004¹²²; Poulton, 2006].

However, it must be observed that despite the positive results reported above, the services made available by LBC's are only reaching a relatively small proportion of farmers [Tiffen et al, 2002; Laven, 2005]. Laven [2005] finds that in 2003, more than 65% of farmers interviewed claimed they did not receive any benefits from LBC's and that in 2005 this figure had increased to almost 88% [Laven, 2005, 2007]. In light of this, the following research will attempt to investigate both the extent to which such services are provided by buyers, and also the market conditions under which buyers are most incentivised to provide farmer services.

4.3.4 - Quality Decline

Earlier in the section on quality control it was noted that market liberalisation is closely associated with quality decline. One of the most commonly cited reasons for this is the introduction of competition, where buyers have been competing through speed of turnover and market share instead of quality and price. Indeed, Vigneri and Santos [2007] and Laven [2005] observe that buyers in Ghana have been competing through a strategy of increasing market share. Similarly, Fold [2008] observes that as a result of fixed margins buyer revenue is dependent on their ability to increase speed and volume.

¹²² It should also be observed that Poulton et al [2004] find that market concentration can lead to improved performance in cases where there is not a strong government to control the private sector. Therefore, in Ghana where there is a strong government it may be possible to achieve coordination between private sector actors without the need for market concentration. To some extent this will be dependent on the role of the Cocobod and whether it helps to facilitate the conditions necessary for coordination.

Fold [2002] notes that the inexperience of new market entrants in Ghana has created a rush to buy cocoa with little reference to quality. Working on a flat commission basis¹²³ the only way for LBC's to increase their income is by purchasing a higher volume of cocoa. As such, buyers have been sacrificing quality in order to obtain higher volumes [Laven, 2007]. In light of this, Fold [2002, 2008] contends that the introduction of private buyers may lead to a decline in Ghanaian quality.

The impact of current buying practices in Ghana can be seen most clearly through the purple bean¹²⁴ problem that affected Ghana in the 2004/05 season. Purple beans result from farmers not fermenting cocoa for long enough post harvest. Fermentation is required for Ghanaian cocoa to develop the specific taste profile that contributes towards the premium. In light of the trends observed above, competitive buying practices were blamed for the higher incidence of purple beans in 2004/05 [Laven, 2007]. The direct impact of purple beans can be seen from the decline in the Ghana premium during 2004/05 from \$80 to \$20 [GAIN, 2005; Laven, 2007]. In response to this, the Cocobod announced a 50% reduction in the payment for any bag of cocoa containing more than 25%¹²⁵ purple beans, creating serious disarray in the market [Laven, 2007].

Buyer competition has been associated with quality decline in several other commodity markets [Shepherd and Farolfi, 1999]. Varangis and Schreiber [2001, pg 50-51] observe quality decline in Cameroonian cocoa where, 'farmers paid less attention to drying and fermentation in order to take the opportunity to sell quickly to local buyers'. Further they find, 'it has been suggested that even buyers who would like to buy high quality cocoa bid for low quality beans for fear of losing out to a competitor'. As such, it would appear that even where buyers do wish to maintain quality, the intensity of competition at the local level may constrain this possibility.

¹²³ LBC's are paid the same margin for the delivery of grade one and grade two cocoa.

¹²⁴ Purple beans are beans of inferior quality, where the purple colour is associated with insufficient fermentation [Laven, 2005].

¹²⁵ My own field work indicates that the initial response of the Cocobod was to place this 50% penalty on any bag of cocoa containing more than 5% purple beans.

In the case of the Ivory Coast, Losch [2002] confirms the quality risk resulting from liberalised internal buying. Losch finds that buyers rush for the product in order to increase both turnover speed and market share. This has resulted in a downward trend in quality, where the proportion of top quality grade 1 beans exported produced in the Ivory Coast has dropped from 70% to 50%, between 1997 and 2000 [Losch, 2002, p222]. In light of this, it will be interesting to investigate the potential for a private sector quality control system in Ghana, where many of the same market dynamics have the potential to take effect.

Gibbon [2005] highlights the erosion of quality standards in African cotton and coffee under liberal market conditions because of the buyer's inability to reject a farmer's produce. This is caused by their fear that any rejected produce will be purchased by a rival buyer. Poulton [2006] describes this problem as a local level coordination failure, where international buyers who wish to purchase good quality are unable to do so because local buyers who favour volume will overpay in order to establish market share creating a competitive market for low quality cocoa. Poulton [2006] finds that within a concentrated market this problem can be overcome through collective action leading to the maintenance of quality. Indeed, in absence of a concentrated market structure, Poulton finds that it is extremely difficult to implement a model of quality control in a highly competitive market.

4.3.5 - Supply Chain Efficiency

The LMC [1996], Shepherd and Onumah [1997] and Varangis and Schreiber [2001] all observe that a by-product of liberalisation in Ghana is the increased speed with which cocoa is being transported from growing areas to the takeover centres. Rottger [2000, pg 12-13] notes that 'LBC's do not intend to lock up cocoa beans in the bush, but target speedy secondary evacuation to the takeover points of the CMC in the ports'. LBC's prioritise speed of turnover because, as touched upon above, their profitability is dependent on the efficiency of their capital turnover [Shepherd and Onumah, 1997; Losch, 2002; Fold, 2002].

In Ghana, however, the capacity of the Cocobod warehousing system has not responded to buyers increased speed of turnover, and resultantly, congestion along the supply chain has become a major problem [LMC, 1996; Varangis and Schreiber, 2001]. Indeed, recognising this problem the LMC [1996] recommended that the Cocobod transfer responsibility for warehousing to the private sector. Nevertheless, the Cocobod has remained in monopoly control over the storage and takeover of cocoa, and therefore, congestion has become a contentious issue between private buyers and the regulator. This was evident in a recent market report where the president of the Licensed Buyer's Association [LICOBAG] was quoted as saying that delays at the ports have made it almost impossible for LBC's to break even in recent seasons¹²⁶. In light of these problems, it will be necessary to investigate both how the Cocobod's role in cocoa takeover has impacted upon LBC development, and also the potential opportunities for future change in this area.

4.3.6 - Collective Action

The License Buyer's Association of Ghana was established in 2002. To date there has been no in-depth research on its role in the market. However, as can be seen from the high profile media outbursts of LICOBAG during recent market seasons¹²⁷, collective action amongst LBC's appears to be playing an increasingly important role. Indeed, Fold [2002] contends that in coming seasons LBC's are likely to become powerful actors in the Ghanaian cocoa chain with the capacity to influence change. Therefore, in light of the knowledge gap in this area and also the importance of collective action in NIE, it will be necessary to explore the role of LICOBAG within this study.

4.3.7 - Internal Market Conclusion

From the sections above it can be seen that the role of the Cocobod in the market has led to a level of control and public good provision in Ghana that has not seen in liberalised cocoa

¹²⁶ African Echo News [2006] 'Rising Output Costs Strain Ghana's Cocoa Industry', <http://africanecho.co.uk/africanenews20-sept14.html>

¹²⁷ African Echo News [2006] 'Rising Output Costs Strain Ghana's Cocoa Industry', <http://africanecho.co.uk/africanenews20-sept14.html>

markets. Equally, it must be recognised that government control may have restricted the level of private sector engagement in the market and as a result the level of benefit achieved through partial liberalisation may have been constrained. If the internal market is to develop in line with the developmental coordination model observed earlier [Kydd and Dorward, 2004], then the environment for private sector investment will need to improve. In light of this, it will be necessary to investigate both the factors affecting private sector engagement in the market, and also the potential for the Cocobod to improve market conditions for LBC's. The Cocobod's ability to do this without sacrificing the degree of market coordination that has been the cornerstone of their good performance in recent years, will offer further insight into the strength of the partial model as a form of market organisation.

4.4 – The Cocobod and the External Buying Market

4.4.1 - The Role of the CMC

The external marketing of Ghanaian cocoa has been the responsibility of the CMC since 1947. The role of the CMC affects not only Ghana's bargaining power as a monopoly seller, but also the nature of coordination along the Ghanaian cocoa chain. The CMC's main operations are the selling and shipping of Ghanaian cocoa to overseas clients and domestic processors. Ghana main crop cocoa¹²⁸, which traditionally accounts for about 75-80% of the season's total production, is sold to a variety of registered buyers¹²⁹ on the basis of forward contracts¹³⁰. The remaining 20-25% of Ghana's crop, known as the light crop¹³¹, is

¹²⁸ Main crop beans are traditionally produced during the months September to May, and have a bean count of 80-100 beans per 100 grams of cocoa. Beans of a larger size receive a premium on the export market due to additional fat content and reduced waste when processing.

¹²⁹ Buyers have to be registered with the Federation of Cocoa Commerce in London [FCC] and they generally include a variety of cocoa traders, cocoa processors and chocolate manufacturers.

¹³⁰ Forward contracts were explained in section 1.4.2 in chapter one.

¹³¹ Light crop beans are beans of smaller size to main crop beans. They have a bean count of 100-120 cocoa beans per 100g of cocoa. Light crop beans are traditionally produced towards the end of the cocoa season [during the mid-crop months, May-August] when the weather is less conducive to good cocoa production. However, given that weather is changeable and cocoa is an agronomic crop, light crop beans may also come during the early months of the season [the main crop months, September-May].

distributed to Ghana's local processing industry on a pro-rata basis, as agreed in the supply agreements signed between local processors and the Cocobod. However, sales to international buyers have always been the CMC's priority, as seen through sources of cocoa revenue in table 4.4.

Table 4.4 – CMC Revenue Stream

| Cocoa Season | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| International Sales [Cedis] | 221,020,000 | 275,816,100 | 590,887,300 | 901,493,900 | 809,934,700 | 969,108,100 | 942,186,947 |
| Local Sales [Cedis] | 39,944,600 | 51,679,000 | 137,675,000 | 90,705,900 | 78,567,800 | 131,583,600 | 133,813,420 |

Source – Figures achieved from the Cocobod during field work [2008]

The CMC's monopoly over cocoa exports was due to end in 2000, with LBC's being allowed to export 30% of their purchases [Laven, 2007]. However, despite the Cocobod issuing provisional licences to several LBC's, the CMC remain the monopoly seller of Ghana's cocoa [Laven, 2007]. Laven [2005] reports that the Cocobod do not believe LBC's have the capabilities required to take over the specialist role of the CMC.

Furthermore, it would appear that there are some additional advantages for the Cocobod when operating through the CMC. LMC¹³² [1996] find that one of the main reasons why Ghana should not rush into external market liberalisation is the countervailing power and administrative economies of scale the CMC has in negotiations with buyers. LMC [1996] also report that the CMC operate a professional and fair service for all buyers. Varangis and Schreiber [2001] observe that the CMC has established a reputation for quality produce

¹³² The LMC report [1996] is highly influential with regards to the CMC's continued role in the market. The report was commissioned on behalf of the Ghanaian government and the World Bank to assess the future liberalisation opportunities for the Ghanaian cocoa market.

and reliable service in a market where defaults on contracts are common. This reputation is built upon over 30 years without defaulting on a contract and an international triple 'A' credit rating [Shepherd and Onumah, 1997]. As discussed earlier, Fold [2001] considers Ghana's reputation for quality and reliability as public good¹³³, and their position as a monopoly seller is necessary to avoid free riding on this reputation. Furthermore, the CMC's reputation for reliability enables buyers to deal with them on the basis of forward sales, in turn creating the benefits of price stabilization, offshore loans¹³⁴, and additional price premiums [LMC, 1996; Gibbon and Ponte, 2005]

4.4.2 - The Quality Requirements of External Cocoa Buyers

In recent years quality decline across cocoa markets has been closely associated with the structural adjustments that took place in the intermediary stages of the chain post market liberalisation [Fold, 2001, 2002]. Firstly, the use of modern bulk transport and storage systems reduce the ability to separate bean quality prior to transportation. Resultantly processors are not willing to pay a premium for shipments of average quality beans [Fold, 2001]. Secondly, processing technology has been developed to reduce the effect of low quality beans and maintain the flavour characteristic of the cocoa product [LMC, 1996¹³⁵; Fold, 2002; Daviron, 2002].

It must, however, be acknowledged that there are still advantages to buying good quality beans and that a certain amount of quality is still required in processing. Indeed, as observed earlier, the market is still willing to pay a premium for Ghanaian beans. LMC [1996], Fold [2001] and Tollens and Gilbert [2003] highlight the following reasons why the market will pay a premium for beans of a higher quality.

¹³³ This can be closely linked with the literature in chapter three where it was observed that the role of the government in quality control may be considered a public good [Gibbon, 2005; Ponte, 2002].

¹³⁴ Given that these two facilities are directly related to forward sales, we must consider them as advantages of the CMC. The BOG [2003] contend that financing cocoa purchases in the absence of the CMC would put a severe strain on the domestic banking sector.

¹³⁵ The LMC report [1996, p29] observed how improvements in processing technology, designed to take advantage of the large supply of low quality beans on the market, had inadvertently led to reduced demand for Ghanaian cocoa and a decline in the Ghanaian premium.

- Batches of homogenous beans are less expensive to process.
- Large beans with a high fat content produce a large quantity of butter.
- Well fermented beans have a superior flavour and lower level of free fatty acids¹³⁶.

The main source of demand for Ghanaian beans comes from Europe due to the higher standard of chocolate quality demanded in the European market. As such, 59% of Ghana's cocoa beans were exported to the European Union in 2005/06, with the next largest market being Asia¹³⁷ with 23% [Cocobod, 2006]. The importance of Ghanaian quality can also be seen by the fact that Ghanaian beans are stored and transported separately¹³⁸, allowing them to be blended with poor quality in the processing stage [Gilbert, 1997; Gibbon and Ponte, 2005]. Further cost savings are reaped due to Ghana's reputation as a high quality producer, reducing the transaction costs faced in negotiating contracts and verifying bean quality prior to shipment [LMC, 1996; Varangis and Schreiber, 2001; BOG, 2003]. However, Ghana is now the only major cocoa origin where national reputation remains an important factor [Fold, 2002; Losch, 2002; Daviron, 2002]. As such, the demand for quality from Ghana may not be reflective of demand across the rest of the market.

Tollens and Gilbert [2003] find that quality decline in Cameroon post-liberalisation should be viewed as an efficient market response to changing demand from external buyers. In this light, they argue that there is 'no role for government in either undertaking or requiring quality certification' [p 340]. This argument is based on their contention that when required cocoa quality can be improved post-farmgate by the local buyer. In adopting this position Tollens and Gilbert, accept that they are going against the 'generally held' position that quality controls are most efficiently imposed at the farmer level.

¹³⁶ Free fatty acids have always been seen as an unattractive quality in cocoa beans; however, in recent years even greater significance has been placed in this area as a result of EU legislation.

¹³⁷ Asia and particularly Japan also demand a higher quality of chocolate.

¹³⁸ Beans from other West African origins would be bulked together as fair average quality [Fold, 2001; Tollens and Gilbert, 2003].

Nevertheless, Tollens and Gilbert argue that where required demand will lead to quality, regardless of the effect that local market buying conditions have on supply¹³⁹.

In other studies, however, it is possible to observe a greater interplay between demand and supply factors in the production of quality. For example, whilst Fold [2002], Losch [2002], and Varangis and Schreiber [2001] all acknowledge the changing nature of quality demanded from external buyers, they also recognise how the dynamics of highly competitive buying at the local level have impacted on quality. Poulton [2006] finds that under conditions where it is difficult to improve the quality of a commodity after purchase from the farmer, market demand for quality may not lead to the supply of quality. This was the case in the Zimbabwean and Tanzanian cotton markets where, despite strong demand for quality from lead buyers, market liberalisation led to quality decline.

In reference to the challenge of achieving quality in liberalised markets, Ponte [2002] finds that external buyers in the Kenyan coffee market were prepared to accept the inefficiencies of a government-run auction system in order to preserve Kenyan quality. As such, it appears that external buyers' level of support for government intervention may be based on their quality sourcing objectives. To some extent, this may be related to the theoretical position stated in chapter three, where it was noted that certain writers within GVC consider governance structures to be determined by the coordination needs of the chain actors [Sturgeon, 2001, 2002; Gereffi et al, 2005; Gibbon et al, 2008]. On this basis, it appears that external coffee buyers were prepared to support the Kenyan coffee marketing board based on the coordination it offered them in terms of quality sourcing. In light of this, it will be necessary to investigate how the quality requirements of external buyers in the global cocoa market impacts on their support for the Cocobod's governance in Ghana.

¹³⁹ In reference to the conceptual framework for this study, Tollens and Gilbert are arguing that the demand effects of the macro environment will dominate the micro level supply effects taking place at the local buying level.

4.4.3 - Power in the Global Cocoa Chain

The work of Fold [2001, 2002, 2008] acts as an important reference for understanding the impact of power in the global cocoa industry. Fold has observed how changes in the industrial foundations of the cocoa sector have driven changes in the forms of vertical coordination throughout the chain. Specifically, Fold [2001, 2002] and Gilbert [1997] find that the outsourcing of processing operations from chocolate manufacturers to processing firms has enabled cocoa processors to become significant power brokers in the global cocoa chain. Alongside the trend in outsourcing, major consolidation has taken place between the dominant trading and processing firms, creating an extremely powerful oligopoly of firms occupying the intermediate stages of the chain. Indeed, this has created a significant concentration of power amongst the actors directly linked to developing country markets [Gibbon and Ponte, 2005].

Strong economies of scale are highlighted as the main driver behind the process of consolidation witnessed in recent years [Fold, 2001, 2002; Losch, 2002; Talbot, 2002; Tollens and Gilbert, 2003]. Losch [2002] observes how the dominant trading companies of the time, Cargill and Archer-Daniels-Midland [ADM], were motivated to vertically integrate into the processing segment in order to use their size to reap the available economies of scale in trading, transport, storage and processing. As such, Cargill and ADM have moved from being primarily commodity trading companies, to becoming the dominant processing companies in the cocoa chain. Resulting from their wide range of capabilities large processing firms have been able to force many of the smaller specialist cocoa traders out of the market [Talbot, 2002; Fold, 2002; Dorin, 2003]. As such, large processors in fully liberalised markets have been able to remove the risk of using cocoa traders, and in several cases processors have been able to vertically integrate to the farmer level. In turn, this has greatly enhanced their control of the supply chain.

Consolidation took place through a series of mergers and acquisitions throughout the 1990's. In the mid 1980's 70% of grinding was controlled by the top ten grinders, however, by the late 1990's the worlds three largest grinding firms ADM, Cargill, and Barry Callebaut

controlled about 50% of global grinding activity¹⁴⁰ [Fold, 2001]. In recent years Gibbon and Ponte [2005] report a Cr3 ratio of 70% in the cocoa processing industry, showing the dominance of these companies. Recent processing figures in 2006/07 show 500,000 tonnes for ADM, 440,000 tonnes for Barry Callebaut, and 500,000 tonnes for Cargill [ICCO, 2008].

4.4.4 - Origin Processing and Supply Control

Closely related to the processes of market liberalisation and supply chain consolidation is the growth of cocoa processing within West Africa. The development of cocoa processing facilities in producing countries is classed as functional upgrading in GVC literature. Traditionally cocoa processing has taken place in the cocoa consumer countries of Western Europe or North America, close to both the corporate head quarters of the large processors and the main markets for chocolate retail. Indeed, all of the world's largest cocoa processors centre their operations around the Zaanstreek port in Amsterdam, where proximity to the major chocolate manufacturers allows for 'just-in-time' supply systems [Fold, 2002]. However, as can be seen from table 4.5, in recent years Africa's share of global cocoa grinding has increased after a period of stagnation in the 1980's and early 1990's.

Table 4.5 – African Processing Growth

| Year | 1987/88 | 1994/95 | 2003/04 | 2007/08 |
|---------------|---------|---------|---------|---------|
| African Total | 175,000 | 220,000 | 464,000 | 569,100 |
| World Share | 8.8% | 8.7% | 14.3% | 15.3% |

Source: Figures from LMC [1996], ICCO [2008].

The Ghanaian PRSP has highlighted the process of agro-industrialisation, as key to helping Ghana reach its target of middle-income status by 2020 [The World Bank, 2003]. Within

¹⁴⁰ In the late 1990's total global grinding was about 2,400,000 tonnes, of which the main three grinders accounted for 1,150,000 tonnes [Fold 2002].

the Ghanaian cocoa sector, progress in this area has been slow up until very recently. Between 2003 and 2006 the value derived from processed products as a share of total value from cocoa exports remained stagnant at 10% [ICCO, 2008]¹⁴¹. In recent years, however, this has changed in line with the government's stated intention to process 350,000 tonnes [50%] of Ghanaian cocoa at origin by 2008. Prior to the 2005/06 season the Ghanaian processing industry contained only three active processors. However, as can be seen below, recent seasons have witnessed both the expansion of current processors and the arrival of several new processing firms¹⁴²:

- Incumbent Firms
 - CPC have increased processing from 35,000-65,000 tonnes.
 - Barry Callebaut expanded their capacity to 60,000 tonnes.
 - Wamco has no plans expand its 75,000 tonne capacity.
- Recent Investors
 - Afrotropic set up in 2005/06 with an initial capacity of 14,000 tonnes, and now have plans to expand to 45,000 tonnes.
 - Cargill made an initial \$70 million¹⁴³ investment in a plant with the capacity to process 65,000 tonnes, and the ability to expand to 120,000 tonnes.
 - BD Associates were in negotiations in 2007 to set up a 15,000-20,000 tonne plant.
 - ADM have set up a factory in Kumasi¹⁴⁴ with an initial capacity of 30,000 tonnes.

¹⁴¹ In comparison with Ghana the Ivory Coast has experienced much greater growth throughout the 1990's and early 21st century. Since 1997 the value of processed products as a share of total cocoa exports in the Ivory Coast has gone up from 13% in 1997 to 29% at the beginning of 2006 [ICCO, 2008].

¹⁴² The figures used in the following list have been compiled from two articles on the Flex News website; [1] Flex News [2007a] 'Ghana's Afrotropic Eyes Expansion', <http://www.flex-news-food.com/pages/8642/Cocoa/Ghana/ghanas-afrotropic-eyes-cocoa-expansion.html>. [2] Flex News [2007b] 'Ghana to boost processing capacity by 100,000 tonnes', <http://www.flex-news-food.com/pages/12191/Cocoa/Ghana/ghana-boost-cocoa-processing-100000-tons.html>.

¹⁴³ Recent reports have stated that due to the weakening US dollar in 2007/08 the Cargill plant has cost \$100 million: Kpodo, 2008c, 'Cargill Ghana Cocoa Plant Aims for Nov Start', <http://africa.reuters.com/commodities/news/usnLS48796.html>

¹⁴⁴ Despite being inland Kumasi is also an Export Processing Zone [EPZ].

Large-scale investment in grinding facilities at origin has been witnessed previously in the Ivory Coast during the early 1990's [Losch, 2002]. The growth of origin processing in the Ivory Coast can be closely related to the advent of market liberalisation. Processing firms were able to make investments in the knowledge that they could supply their factories with cocoa beans sourced directly from local traders. In light of this, Losch [2002] observes that greater access to Ivorian beans was one of two main reasons why processors invested in the Ivory Coast. By forming alliances with local buyers, processing companies were able to stop competitors achieving a dominant position, as well as reducing their competitor's access to the cheapest beans [Losch, 2002¹⁴⁵].

Closely related to this, Fold [2002, p234] observes that 'market access is absolutely vital to the grinding segment'. By maintaining control over cocoa supply processors are able to regulate the price they pay for cocoa on the market, whilst also ensuring they have enough supply to fulfill contracts with downstream clients. In light of such supply concerns, Fold [2001, p418] finds that, 'establishing primary processing facilities seems to be highly dependent on the strategic considerations of the transnational primary processors'.

The second main reason why grinders invested in the Ivory Coast was to reduce the coordination cost of sourcing beans on the terminal market post market liberalisation [Losch, 2002]. As observed earlier, market liberalisation has resulted in the breakdown of horizontal coordination within the Ivory Coast. In turn, this created increased risks surrounding quality and the credibility of cocoa contracts. As noted during chapter three, Humphrey and Schmitz [2001] suggest that in cases where supply risk is greatest lead firms will choose closer forms of governance. Therefore, in response to the level of

¹⁴⁵ The close comparison between Losch's argument for vertical integration and NIE should be observed. Within NIE, it is argued that vertical integration will take place in order to reduce the transaction costs associated with using the market. In the case of the Ivory Coast, processors have vertically integrated in order to bring the procurement of beans in-house and removed the transaction cost of using the terminal market. Losch's approach may be associated with the French Fileire approach, which blends commodity chain analysis with transaction cost economics [Raikes et al, 2000].

transaction risk they faced when sourcing beans from the Ivory Coast using the market, processors made the decision to vertically integrate [Losch, 2002].

Recognition of both of these factors will be crucial in understanding both the reasons behind the recent surge of processing investment into Ghana, and how the supply requirements of lead buyers may impact upon the governance of the Ghanaian cocoa chain in the coming years.

4.4.5 - Origin Processing and National Development

Governments within cocoa producing countries traditionally encourage the development of processing facilities for three main reasons [Fold, 2001, 2002; Losch, 2002]. Firstly, the ability to attract multimillion dollar investments from the processing sector will undoubtedly stimulate the rate of industrial development. Secondly, it represents an opportunity for local entrepreneurs to learn from multinational corporations. Thirdly, 'origin processing' theoretically represents a viable opportunity to transform a low value raw commodity into a value-added¹⁴⁶ product prior to export [Fry, 1995; Dand, 1999].

However, despite the above arguments, recent literature on origin processing in cocoa is notably sceptical about the actual benefits accruable to both the producer country and the processors themselves. Talbot [2002] and Fold [2002] observe that the existence of strong economies scale within the cocoa processing industry creates a significant entry barrier for domestic entrepreneurs. Resultantly, it is often capital rich multinationals that have the greatest presence in African cocoa processing [Talbot, 2002]. Indeed, Losch [2002] observes that the large multinational processors in the Ivory Coast have been able to use their financial power to undercut several of the smaller domestic processors, thus enabling them to capture the market.

¹⁴⁶ Value can be added to the raw cocoa bean by processing it into cocoa liquor, cocoa butter and cocoa cake. Cocoa liquor is gained after the first stage of processing, where one tonne of cocoa beans will yield 800 kilos of liquor¹⁴⁶ [LMC, 1996, p14]. Cocoa butter and cake require a second stage of processing, where cocoa liquor is pressed, resulting in a split of 50% butter, and 50% cake¹⁴⁶ [Losch, 2002, p209].

Fold [2000] finds that origin processing is most successful in cases where the government has been able to 'domesticate' the technological and organisational knowledge brought in by advanced multinationals. In the case of cocoa, however, Fold [2001] and Wilcox, Abbot and Muir [2003] observe very little labour input in the processing stage thus limiting the potential for human capital development. As such, government intervention may be required to encourage knowledge acquisition from multinational investments.

Fold [2001] observes that African governments may have to concede some incentives in order to attract investment in processing. This is based on the number of disadvantages origin processors face in comparison with their counterparts in North America and Europe. Firstly, cocoa liquor produced at origin has to be solidified before transportation¹⁴⁷, and then re-melted by downstream users [Fold, 2001]. Secondly, processors are only capable of producing a limited range of products at origin based on their access to one type of bean i.e. Ghanaian beans [Fold 2001]. Thirdly, the quality premium commanded by raw Ghanaian beans is diminished when they are transformed into processed goods, such as cocoa butter and cake [Fold, 2001; Benjamin, 2007]. Resultantly, processors at origin have come to rely on the use of lower quality, cheaper cocoa beans [Fold, 2002; Losch, 2002].

In light of these factors, LMC [1996] and Benjamin [2007] debate whether origin processing is beneficial for Ghana. This argument is based primarily on the premium obtained when selling the raw Ghanaian bean on the international market. Indeed, LMC [1996] find Ghana to be the least well placed of all cocoa producing nations in terms of bean suitability for origin processing. Indeed, it appears that processors do not wish to use Ghana's premium priced beans when processing at origin [Benjamin, 2007, Ryan, 2007].

¹⁴⁷ The LMC report [1996] notes that in Europe and North America liquor is transported in 25-30 tonne heated tanks and therefore does not need to be solidified. When transporting liquor in bulk from origin this option is normally too costly.

To date in Ghana processors have been able to avoid this scenario based on the 20% discount that the Cocobod has offered origin processors on light crop beans¹⁴⁸ [Benjamin, 2007]. Light crop beans are beans of good quality, though due to their smaller size¹⁴⁹ the Cocobod do not want to market them alongside their larger premium quality beans. However, as Ghana nears its target of 350,000¹⁵⁰ tonnes of local processing, there is an increased risk of a light crop deficit in Ghana¹⁵¹. As such, a situation may arise where the local processors are not having their supply requirements fulfilled by the Cocobod. Given that all three of the world's most powerful cocoa processors are now located in Ghana, it will be interesting to investigate how this problem may affect the Cocobod's governance of the Ghanaian cocoa market.

4.5 – Conclusion

Throughout this chapter the emphasis has been on creating a firm understanding of the Ghanaian cocoa chain. Given the partial nature of reform in Ghana, the organisation of the cocoa market appears to be relatively complex. However, with deeper exploration, the unique aspects of the Ghanaian market can be used to create a clear structure for research. Based on the level of interaction between government institutions and various dynamic groups of private sector actors, the partial model is constantly being challenged to evolve and adapt. In turn this has created a number of interesting scenarios to be addressed in research. Equally, the various institutional supports of the Cocobod system command research attention, based on the good performance of the Ghanaian cocoa market in recent

¹⁴⁸ As noted earlier, light crop beans are beans of smaller size to main crop beans. They are traditionally produced towards the end of the cocoa season [during the mid-crop months, May-August] when the weather is less conducive to good cocoa production. However, given that weather is changeable and cocoa is an agronomic crop, light crop beans may also come during the early months of the season [during the main crop months, September-May].

¹⁴⁹ Light crop beans are beans with a bean count of 100-120 cocoa beans per tonne of cocoa. Main crop beans have a bean count of 80-100 beans per tonne of cocoa. As seen earlier in section [cocoa quality] beans of a larger size receive a premium of the export market due to additional fat content and reduced waste when processing.

¹⁵⁰ Benjamin [2007] reports that light crop normally amounts to 150,000 tonnes per year.

¹⁵¹ Ryan, O [2007b] 'Ghana cocoa grinders fear bean supply crunch'. <http://www.reuters.com/article/companyNewsAndPR/idUSL2136654120070821>

years. Therefore, as can be seen from the several research prompts highlighted throughout this chapter, the Ghanaian cocoa market is clearly a phenomenon rich in research potential.

Chapter 5 - Conceptual Framework

5.1 - Introduction

During chapter one it was observed that liberalisation within sub-Saharan Africa has led to a number of market problems. Indeed, through recognition of the market failures resulting from liberalisation, there is now a greater willingness to accept that sub-Saharan governments may have a positive role to play in the process of market development [World Bank, 1997; 2008]. In light of this, the partially liberalised Ghanaian cocoa market has been highlighted as a highly applicable case through which to build understanding on the possible roles for government in market development. Building on this, chapter five will outline a conceptual framework suitable for an analysis of the partial liberalisation model in the Ghanaian cocoa market.

As indicated by the research questions in chapter one, the following study will involve an analysis of the Cocobod's role as both the regulator of the domestic supply chain, and a supplier of cocoa on the external market¹⁵². This is consistent with the common observation that the globalisation of trade and investment increasingly shapes the process of national development throughout the developing world. Indeed, whilst cocoa is a major source of economic development at the national level, the vast majority of chocolate made with Ghanaian cocoa beans is consumed outside of Ghana. As such, cocoa is considered an export commodity. In light of this, a cross-disciplinary theoretical framework has been developed, enabling a fuller analysis of the different mechanisms at work throughout the national and international levels of the market. New institutional economics will be used primarily in analysis of the domestic level of the Ghanaian cocoa chain, and global value chain analysis will be used to study the international dimension of the cocoa chain¹⁵³.

¹⁵² The external market includes all the CMC's customers for cocoa sales. Cocoa processors fall into this category.

¹⁵³ In terms of the Ghanaian cocoa chain diagram developed in chapter one, the domestic level can be considered the Cocobod's role in all domestic marketing operations up to the point where cocoa becomes the property of the CMC. The international dimension involves the CMC's role in the sale of cocoa on the external cocoa market, and all other aspects of the external market such as cocoa trading, processing, manufacturing and retail.

This chapter will attempt to outline the foundations of this approach. The opening sections will describe the particular aspects of new institutional economics and global value chain analysis that will be applied in the analysis of the Ghanaian cocoa chain. The middle sections of the chapter will offer a justification for why it is necessary to use a cross-disciplinary approach, as well as providing a diagrammatic version of the conceptual framework. Finally, the chapter will conclude by attempting to resolve some of the tensions that may arise as a result of the conceptual framework designed for this study.

5.2 - The Domestic Supply Chain and New Institutional Economics

Based on the understanding of NIE, institutions are crucial in the process of market development as they affect the way in which transactions are negotiated, coordinated and executed [North, 1990]. Within NIE, institutions can be analysed at the level of either the micro institutional arrangements, or the broader macro institutional environment [Davis and North, 1971]. Under this analogy we can define the Cocobod as the most influential institution within the institutional environment of the Ghanaian cocoa chain. The mechanisms through which the Cocobod takes effect on the daily operations of the market, such as quality control, are defined as the institutional arrangements of the Cocobod.

Williamson¹⁵⁴ offers an efficiency-based rationale for understanding organisational forms in the NIE, where different transactions are aligned with a particular organisational form to achieve a transaction cost economizing result [Williamson 1985]. However, whilst the notion of a 'transaction cost'¹⁵⁵ is crucial to our understanding of the domestic supply chain, the efficiency rationale of Williamson's framework is not considered suitable for this study, where both the theoretical and methodological framework is orientated towards the specific requirements of the developing country environment. Indeed, Williamson's failure

¹⁵⁴ Williamson is a key figure in the New Institutional Economics. His 1975 book 'Markets and Hierarchies' introduced the term New Institutional Economics and his 1985 book 'The Economic Institutions of Capitalism' was key to the development of Transaction Cost Economics [TCE].

¹⁵⁵ The origins of the term transaction cost come from the work of Coase [1937]. However it was not until the work of Williamson [1975] that transaction costs became widely recognised within the economic literature. Broadly speaking transaction costs are the costs encountered through economic exchange.

to account for the impact of sociological factors, such as, historical and cultural dependencies, in shaping organisational forms must be considered one of the greatest challenges to the explanatory power of transaction cost economics.

Therefore, adopting a less deterministic understanding of the institution, based on the work of North¹⁵⁶, institutions are still charged with the task of reducing transaction costs, but inefficiency is recognised as a possible characteristic of institutional change. Institutional change results from changes in the economic and social incentives facing individuals, differential bargaining power, and the notion of path dependency in the process of change [North, 1990]. Employing North's understanding within the analysis of the domestic supply chain leads to the consideration of a broader range of social, cultural, and historical factors, which typically impact upon the process of institutional change in the developing country setting.

Within NIE institutions are charged with the task of minimizing the transaction costs faced in economic exchange. In order to achieve this, institutions should help enable coordination between different actors and functions within the market. In recent years, the work of Dorward, Kydd and Poulton [1998a, 2005a, 2006]¹⁵⁷ has built on this concept describing the market failures that have resulted from liberalisation as a series of coordination failures. Coordination failures occur most typically at the early stages of development where market actors are unable to coordinate the complementary investments that are required to raise the market out of low level equilibrium. Within this study, coordination failures will be explored when looking at the effectiveness of vertical and horizontal coordination between supply chain actors. Both vertical and horizontal coordination can be used to overcome the transaction costs facing market actors and encourage exchange within the market [Poulton and Lyne, 2009].

¹⁵⁶ North is also a key figure in the NIE. North's conceptualisation of the institution adopts a less efficiency based rational than Williamsons. North's 1990 book 'Institutions, Institutional Change and Economic Performance', forms the foundation to the understanding of the institution employed in this study.

¹⁵⁷ These three papers represent the papers which Dorward, Kydd, and Poulton have all worked on together. There are a number of other papers involving any one of these three writers that can be associated with the developmental coordination approach. Please see the bibliography for further references.

The development coordination approach builds on past research describing the high level of information asymmetry [Akerlof 1970; Stiglitz 1985], opportunism, and market failure that exist in the developing country environment [Hoff et al, 1993; Bardhan, 1989]. Given that market forces are less effective, greater emphasis is placed on capacity of institutions to intervene in the market to help solve coordination problems [North, 1990] and avoid 'coordination failure' [Kydd and Dorward, 2004].

The work of Dorward, Kydd and Poulton [1998a, 2005a, 2006], represents an ideal basis from which build a theoretical framework to analyse the domestic supply chain. Dorward et al [2005a] developed the term 'developmental coordination¹⁵⁸' to describe the important role that government institutions can play in helping sub-Saharan markets overcome the 'coordination failures' witnessed in recent years. Prior to market liberalisation governments provided 'horizontal coordination' within the market through the provision of public and private goods throughout various aspects of the national supply chain. Accepting the challenges that have arisen post liberalisation, Dorward et al [2005b] find that similar interventions may still be required from the government. Kydd and Dorward [2004] classify intervention from the government in public and private goods markets in the early stages of development as 'hard' coordination. In light of this, the role of the Cocobod in hard coordination will be explored throughout the analysis.

Alongside this, Kydd and Dorward [2004] also outline alternative roles that can be taken by the private sector in the process of market development. Once coordination within the market improves and the level of transaction costs faced by the private sector is reduced, profitable investment opportunities should arise. One of the primary ways in which the private sector can reduce transaction costs and increase investment is through the use of soft coordination mechanisms, such as, interlocking transactions and collective action in

¹⁵⁸ It should be noted that the term 'developmental coordination' is only directly referred to as a model for development in Dorward et al [2005a]. Nevertheless, the same developmental coordination concepts from Dorward et al [2005a] are developed in all papers by Dorward Kydd and Poulton referenced throughout this study. As such, the term developmental coordination will be used throughout this study to describe the model for market development that is developed throughout a series of papers by Dorward, Kydd and Poulton.

the sanctioning of opportunistic players. In light of this, the presence of soft coordination mechanisms will be explored in the analysis.

Increased market reform and private sector engagement throughout the course of market development are considered fundamental aspects of Kydd and Dorward's [2004] model. Whilst complete government withdrawal from the market is not considered the ultimate goal in all situations, successful market development requires some degree of government withdrawal in order to enable private sector growth. In order to facilitate this process institutional change may be required in the Cocobod, and as such, the capacity of the Cocobod to change and adapt to the partially liberalised system of market organisation will be an important line of enquiry throughout this study.

The balance between government intervention and private sector engagement is a key topic within the developmental coordination framework, as illuminated by Poulton et al [2004], where it is found that a balance of competition and coordination may be the best organisational model for sustained development within sub-Saharan markets. As such, the capacity of the Cocobod to promote an environment which balances the benefits of government intervention alongside the dynamism of private sector competition will be examined within the analysis for this study. Closely related to the issue of creating a positive environment for private sector investment is the issue of government credibility and the quality of the governments performance in market regulation. As discussed in chapter two the issue of governance over governmental actions has become an increasingly important topic of academic and policy debate in recent years, as a result of the corruption that has negatively affected market development in recent years. In light of this, the credibility of the Cocobod as a market regulator and the potential role of supporting institutions designed to provide governance over Cocobod actions will also be explored throughout the analysis.

As can be seen from the above discussion, the conceptual framework for the micro analysis of the Ghanaian cocoa market has been guided by the approach of developmental coordination framework, as developed by Dorward, Kydd and Poulton [1998a, 2005a,

2006]. In essence these authors have developed an ideal type of partial liberalisation model, outlining the appropriate roles for the government and private sector across different stages of market development. Dorward et al [2005a] do, however, offer a note of caution adding that government intervention may not be recommended under all circumstances, and that successful government intervention is difficult to achieve. Indeed, whilst Ghana is performing comparatively well compared to their liberalised West African neighbours, insights from the model of developmental coordination may help to illuminate aspects of the partial model that are in need of change and improvement. Equally, the performance of the Cocobod in Ghana may also help to build on the understanding of market organisation presented within the developmental coordination model. As observed in chapter one, models of partial liberalisation are relatively unique, and therefore, the level of academic understanding in this area is still limited.

The platform presented by the work of Dorward, Kydd and Poulton has also been selected in light of the increased attention which these authors have recently received within influential policy papers. As can be seen in the references section, papers on the developmental coordination model have been presented to the World Bank [Dorward et al, 2006], DFID [Dorward and Kydd, 2006], IFPRI [Poulton et al, 2007], and the African Commission [Poulton et al, 2004]. Indeed, within the World Development Report [2008] references are made to the positive role the government can take in overcoming the coordination problems facing African markets. In light of this, the conceptual framework proposed for the analysis of the domestic cocoa chain in Ghana is in keeping with current trends in both the policy and academic arenas.

5.3 - The External Market and Global Value Chain Analysis

Global value chain analysis [GVC] examines the relationship between supply chain governance and market development. Within GVC there are two different understandings of governance. At the micro level GVC highlights the different 'modes' of governance, which are used at the level of the individual trading relationship [Humphrey and Schmitz, 2000].

At the macro level GVC analysis has explored ‘dominant typologies’ of governance, which have an impact in shaping the organisational arrangements across the entire supply chain [Gereffi, 1994]. It is at this macro level, where GVC analysis offers the greatest insight through its focus on the location of power, and how the influence of power within one segment can determine the organisation of the entire supply chain. Indeed, as noted by Bair [2008], the GVC framework was built on macro level foundations, and therefore, it is most powerful as a tool for analysis when exploring processes within the of the broader value chain.

Gereffi¹⁵⁹, the pioneer of GVC analysis defines governance as ‘the authority and power relationships that determine how financial, material and human resources are allocated and flow within the chain’ [Gereffi, 1994, p 97]. As such, the governance structures that exist within a chain are not the result of the efficiency rationale of individual actors, but rather they reflect the organisational arrangements of the chain’s dominant actors. Gereffi’s insight has influenced the framework developed in this study through its understanding of how economic actors use power to set the ‘parameters under which others in the chain must operate’ [Humphrey and Schmitz, 2002]. Crucially the GVC’s focus on the power of external buyers allows us to expand our analysis of market development beyond the boundaries of the national institutional environment, by acknowledging the impact of global corporations in shaping the development trajectory of African commodity markets.

Indeed, whilst the Cocobod is currently considered the dominant form of governance within the Ghanaian market, the potential for change must also be considered. Changes in the political, technological and economic landscape of the supply chain promote the emergence of new organisational capacities, market opportunities and economic incentives, all of which may influence changes in governance. As such, governance is considered a contested terrain. In order to understand the capacity of a governance structure to compete and legitimise itself overtime, it is necessary to examine its ability to

¹⁵⁹ Gereffi and Korzeniewicz [1994] ‘Commodity Chains and Global Capitalism’ is widely recognised as introducing the approach of Global Commodity Chain analysis which has since developed into Global Value Chain analysis.

adapt to such changes and satisfy the demands of the stakeholders within the chain. In light of this, the potential impact of recent investments by powerful multinational processors on governance in the Ghanaian supply chain will be explored within the analysis.

As noted in chapter three, the ability to maintain vertical coordination between independent units of the chain is considered one of the key measures of an effective governance structure. Mighell and Jones [1963], acknowledged as pioneers in this area, through their study of vertical coordination in agriculture, define coordinative mechanisms as ‘the set of institutions and arrangements that are used to accomplish harmonisation of adjacent stages of a commodity system’ [p1]. Therefore, the degree of harmonisation between actors in the market is a reflection of the coordination achieved by the governance structure in place. Mighell and Jones [1963] find that different methods of vertical coordination are adopted based on the need to reduce risk, uncertainty, and cost, improve market position, gain bargaining power and obtain financing.

In recent years, vertical coordination has gained increased importance as a function of governance within the supply chain [Gereffi, 1999a, Daviron and Gibbon 2002]. In cases where liberalisation has reduced the government’s coordinative role within commodity supply chains, it has been necessary to develop alternative methods of vertical coordination [Daviron and Gibbon, 2002]. Resultantly, there are now a number of alternative forms of vertical coordination practiced within the cocoa supply chain. To some extent these modern forms of coordination may be considered as competition for the traditional form of coordination adopted in the Ghanaian market.

In this light, GVC analysis offers insight into emergent and often competing methods of vertical coordination, particularly in the realm of quality control [Ponte 2002, Ponte and Gibbon 2005]. Quality is traditionally one of the key aspects defining the governance structure used within a supply chain. Indeed, as observed in chapter four, quality has been a highly contentious issue in the cocoa chain in recent years with new systems of supply chain governance appearing to define the level of quality produced within West African

markets. The emergence of new definitions and modes of arbitration in quality have raised important questions about the government's traditional role in this area [Daviron and Gibbon 2002]. In this light, Fold [2002] suggests that there may be some tension between the Cocobod's traditional role in quality control and the emergent forms discussed in the GVC. As such, the relationship between the governance objectives of cocoa buyers and the quality produced within Ghana will play an important role in our understanding of governance along the Ghanaian supply chain.

5.4 – Micro-Macro Linkages

Past studies of commodity market development have tended to focus on either the macro or micro level of the market. To some extent this is understandable as certain theoretical frameworks are more suited to different types of analysis. For example, the NIE framework is traditionally used for micro level analysis [Kherallah and Kirsten, 2002], whereas the GVC's strength lies within macro level analysis [Raikes et al, 2000]. However, whilst studies employing this approach have been able to offer key insight into individual aspects of market development, it can also be argued that within the study of global supply chains this singular approach may have some serious limitations. When focusing exclusively on either a micro or macro framework it may not be possible to explore the significant linkages that now exist between the national and international levels of the global economy.

In the case of cash crops, such as cocoa, where the vast majority of the product is traded and consumed outside of the producer country, the relationship between the international and domestic market is crucially important. Indeed, Raikes et al [2000] observe that the relationship between change in market structure at the national level and the opportunities and threats for developing country markets presented by changes in international markets has rarely been examined. Therefore, recognising the apparent disparity of research in this area, the conceptual framework for this study adopts a micro-macro approach.

The micro analysis will examine the roles of the Cocobod and private sector buyers at the national level of the Ghanaian cocoa chain, whilst the macro-analysis will focus on the relationship between changes in the external cocoa market and role of the Cocobod. These theoretical boundaries are set as a guide to help achieve focus within the analysis of the domestic and international dimensions of the chain. This does not mean that, where appropriate, macro issues cannot be considered in the domestic supply chain, and likewise micro issues in the external market. Indeed, as observed earlier in this chapter, NIE and GVC both have branches which stray beyond their respective strengths in micro and macro level analysis. Nevertheless, movement outside of the stipulated theoretical framework will not occur with great regularity throughout this study in order to maintain analytical focus on the micro level processes identified in NIE, and likewise, the macro level processes identified within GVC.

The micro-macro approach adopted in this study is considered fundamental to the analysis of the Cocobod, given that it's levels of performance within the external and domestic markets are inextricably linked. To a large extent, this is exemplified by the importance of cocoa quality within the Ghanaian market. Cocoa quality, although determined by micro level processes in the domestic cocoa chain, is judged at the macro level based on the quality conventions of global cocoa buyers. Without the approval of the international market the Cocobod would not be able to generate the revenue and stability required to carry out their role within the domestic market. However, it can also be argued that without the Cocobod's role in the domestic market they would not be able to produce the cocoa required to meet the quality demands of external buyers. As such, the Cocobod's role in coordinating quality control at the micro level, and the level of vertical coordination they achieve with external buyers at the macro level are deeply interdependent.

Recent research employing micro-macro analysis of commodity markets includes studies by Larsen [2002], Losch [2002], Fold [2002, 2008], and Ponte [2002]. Common across the majority of these studies is the use of the commodity chain framework¹⁶⁰, which 'permits us

¹⁶⁰ The commodity chain analogy is developed in Gereffi and Korzeniewicz [1994] – ref chapter three.

to more adequately forge micro-macro links between processes that are generally assumed to be discretely contained within global, national and local units of analysis' [Gereffi et al, 1994, p 2]. The GVC conceptualises global production and supply chains as 'networks' of inter-firm linkages. Micro-macro linkages in the study of agricultural organisation are also recognised within the NIE literature [Menard and Valceschini, 2005]. In particular it is observed that key challenges facing policy makers at the micro level of a cash crop market, such as quality and producer price, are defined by macro level changes within global supply chains [Shepherd and Farolfi, 1999; Poulton et al, 2006].

Larsen [2004] adopts a GVC-NIE framework in her PhD study of the global cotton chain. Larsen contends that using this approach leads to a 'deeper understanding of economic restructuring', through recognition of the interplay between developments at both the national and international levels [p2]. Studies that focus exclusively on the global level 'ignore local differentiation processes' [p2]. Conversely, when studies focus only on the national level they often downplay larger international processes that impact on socio-economic changes at the national level. Similarly, Poulton et al [2006] find that failure to recognise both the domestic and international dimensions of the supply chain leads to 'catch-all', or panacea type policies, which reflect neither the specific demand conditions of the external market, nor the specific coordination failures constraining development at the local level [p 249].

5.5 – Cross-Disciplinary Research

Jeffrey [2003, p539] notes that cross-disciplinary approaches are increasingly used within policy research because, 'real-world problems do not come in disciplinary shaped boxes'. In this light, cross-disciplinary research, employing insights from both the NIE and GVC, is considered necessary to address the unique market structure of the Ghanaian cocoa market. Within the domain of cross-disciplinary research, there is a large degree of variation in approach, based on the level of integration the researcher attempts to achieve between the theories used [Rossini and Porter, 1984]. On this basis, the cross-disciplinary

approach used in this study can be considered moderate, where each theory will be employed independently to address a different set of issues and no attempt will be made towards a unified theoretical position. Whilst it may be possible to develop complementarities between the two theories throughout the course of research, this is not one of the study's main objectives. At their primary level of application within this study, the NIE and GVC are to be employed as separate tools of analysis, used predominantly in analysis of separate segments of the chain. In doing so, both theories will offer independent insight into the partial model of market organisation.

Hulme and Toye [2006] argue that the 'ideologies of disciplinary rivalries' act as an unnecessary constraint to progress in disciplined and innovative research into developing country markets [p 1102]. Indeed, Olsen [2006] finds that 'some new institutionalist and most political economy authors agree that the role of the government can be probed for positive synergies' [p 1145]. As such, the unique structure of the Ghanaian cocoa market may be considered a phenomenon appropriate for the use of a cross-disciplinary approach.

As observed in chapter three, Gereffi et al's [2005] paper on GVC governance has a relatively strong degree of cross-over with the NIE approach of Williamson [1985]. In a similar light, Nee and Swedberg [2005] observe that the fields of NIE and new economic sociology¹⁶¹ are far from being inimical. In particular they note that 'economic sociologists have been attracted by the attempts by North to resurrect the concept of the institution and improve upon it in the spirit of the NIE' [p 792]. This highlights the potential for a cross-over in learning between the economic sociology of GVC and the approach of NIE, especially given that the work of North [1990] is used as the foundation for understanding NIE in this study. Indeed, NIE and NES share a common objective in the study of social structures and institutions [Richter 2001].

In this light, it is interesting to observe the work of Neilson and Pritchard [2009], who discuss the new institutionalist work of North [1990], when working within a GVC

¹⁶¹ Gereffi's GVC is considered to be in the field of new economic sociology [Nee and Swedberg, 2005].

framework. The authors do this in an attempt to elevate the understanding of institutions within GVC analysis. Neilson and Pritchard argue that the traditional GVC framework focusing on the concept of governance and the power of lead buyers in shaping governance structures fails to acknowledge the impact of locally based rules and norms in shaping the outcome of value chain restructuring and change. In doing so, the authors suggest that a deeper appreciation of institutions, akin to that which takes place within NIE, could help to enrich the GVC framework.

Whilst it is uncommon, direct cross-over between the research communities of GVC and NIE can be seen in a few recent studies addressing the problem of African rural economic development. Larsen [2004] adopts a dual theoretical approach using NIE and GVC in analysis of the post-liberalisation markets for cotton in Zimbabwe and Tanzania. Poulton et al [2004¹⁶²] carry out a cross-country analysis of market liberalisation in Ghana, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe. However, although these studies adopt aspects of both the NIE and GVC within their theoretical frameworks, there is no discussion of the tensions that may exist between the two approaches. Within Larsen's PhD study in particular, this lack of detail is a disappointing oversight and leads to confusion as to the exact focus of her theoretical framework, how the theoretical framework will shape her data analysis, and the overall goals of the study in building on this framework. Furthermore, it may be argued that this lack of clarity greatly reduces the studies benefit as a framework for cross disciplinary research.

In light of the above discussion, is interesting to observe the French 'filier¹⁶³' approach, which explicitly employs transaction cost economics within the study of commodity chains [Raikes et al, 2000; Daviron, 2002; Losch, 2002; Menard and Valceschini, 2005]. Closely related to the following study of the Cocabod, Raikes et al [2000] observe that the filiere approach was used throughout the late 20th century in analysis of government intervention in Francophone Africa's primary commodity markets. To some extent this may influenced Losch [2002], who examines liberalisation within the Ivory Coast's cocoa sector, using

¹⁶³ The Filiere approach can be related to the field of GVC analysis [Raikes et al, 2000].

elements of transaction cost economics [NIE], within a predominantly GVC framework. This framework is used to understand the implications of private sector engagement in a formerly government controlled cocoa market, thus offering valuable insight into the study of cocoa market liberalisation. Indeed, Losch's [2002] study examines a period of transition in the Ivory Coast with some similarities to the current situation in Ghana, thus further strengthening its position as a highly applicable reference for this study.

5.6 - Visual Conceptual Framework

Figure 5.1 on the next page provides a visual demonstration of the conceptual framework for this study. An explanation and key are presented on page 148.

Figure 5.1 – Visual Conceptual Framework

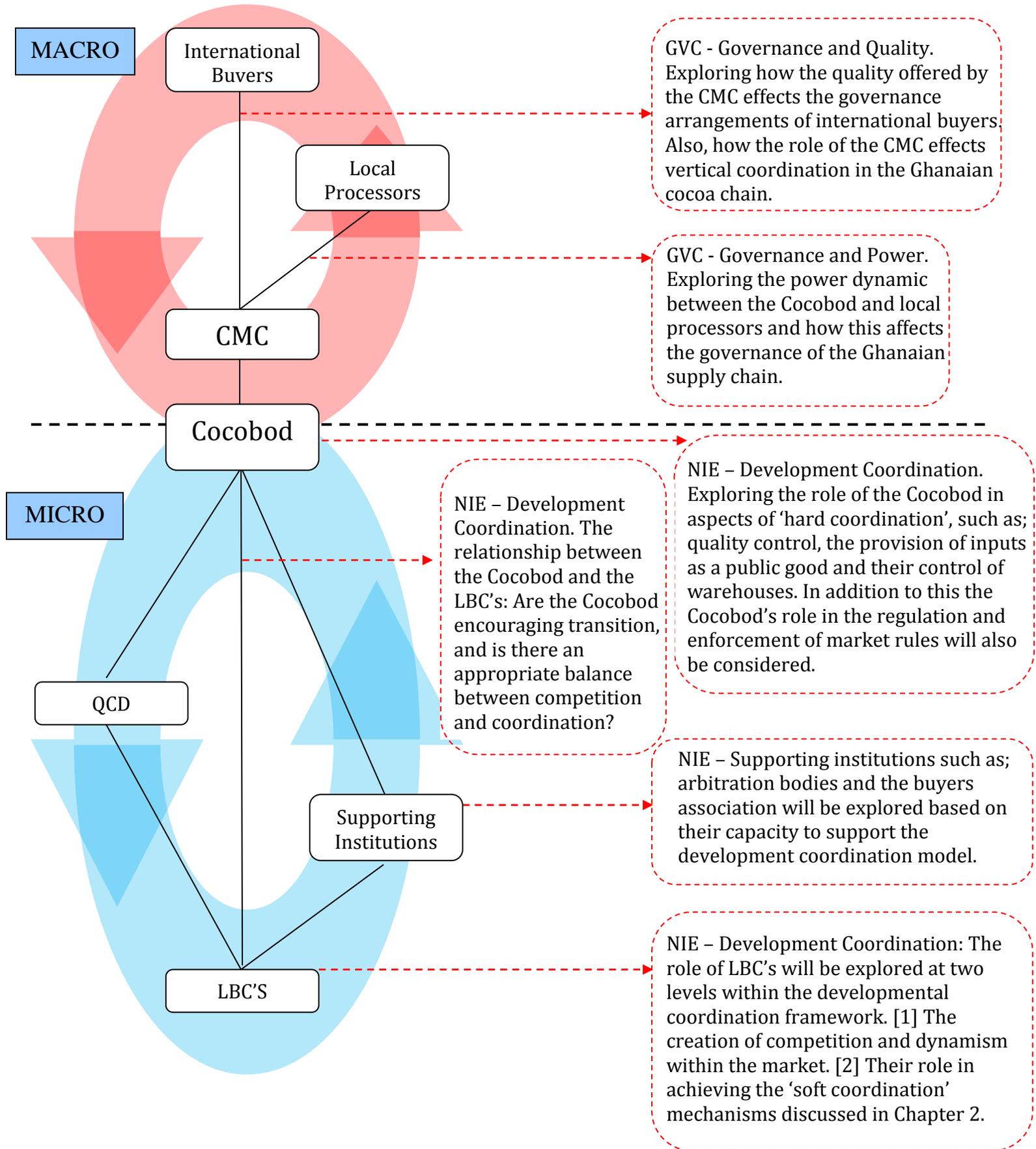
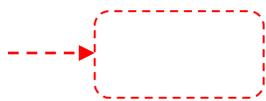


Diagram Key

—— Black connector lines show how different stakeholders in the Ghanaian supply chain are linked. These are the key relationships that will be explored within the analysis.



Red connector arrows with text boxes demonstrate how different segments and the relationships between different segments in the Ghanaian cocoa chain will be targeted in the analysis to build on the core aspects of the conceptual framework.



Blue circular arrows demonstrate the concept of institutional change that will be explored within the micro analysis of the domestic supply chain.



Red circular arrows demonstrate the concept of competing supply chain governance systems, which will be explored in the macro analysis.

5.7 - Behavioural Assumptions

It is important to outline the behavioural assumptions being adopted in this study not only to facilitate the exchange of ideas between the NIE and GVC, but also to clearly define the foundations upon which the research will be based.

Research within the NIE traditionally adopts Simon's [1955] concept of 'bounded rationality' to describe the individual. Simon contends that 'if we accept the proposition that both the knowledge and the computational power of the decision maker are severely limited, then we must distinguish between the real world and the actor's perception of it and reasoning about it' [Simon 1986, pg 210-211]. Building on this, Furubotn and Richter [1997] highlight that the neoclassical economic assumptions of individual rationality and

zero transaction costs are strongly rejected in the NIE. Indeed, North contends that ‘a modification of these [rational choice] assumptions is essential to further progress in the social sciences’ [North, 1990, p 17]. This statement is particularly true within the developing world where market failures, incomplete information and inefficient institutions encourage a revision of the rationality assumption held within orthodox economics¹⁶⁴.

Within the NIE, subjectivity and incomplete processing of information play a critical role in individual decision-making [North, 1990]. Agents are considered to be partially rational, thus leaving open the possibility of socially constructed influences such as cultural heritage, social ties and reputation in the decision-making process. Individuals make decisions based on subjective mental models, constructed through the intergenerational transfer of knowledge, norms and culture as well as the individual’s direct experience [North, 2005]. As such, there is regular interplay between the agent and his/her surrounding economic, political and social institutions. Resultantly, North finds that ‘individuals from different backgrounds will interpret the same evidence differently; they may, in consequence, make different choices’ [North, 2005, p 23].

Richter [2001] asserts that integration between the approaches of economics and economic sociology can be made by relaxing the neoclassical economic assumption of individual rationality. In light of this, it may be contended the socially enriched behavioural assumptions adopted within the less deterministic strands of the NIE used in this study are also applicable to GVC analysis. GVC analysis considers individuals to be ‘embedded’ in networks of economic and social relationships [Granovetter, 1985]. As such, the GVC understanding of the individual is not inimical to the environmentally influenced individual described in the work of North [1993a, 2005]. In light of this, the same behavioural assumptions will be employed throughout both the NIE and GVC sections of this study. Indeed, in many respects the economic sociology of GVC will help to enrich

¹⁶⁴ The behavioural assumption of perfect rationality adopted within orthodox economic thinking is fundamental to the economists’ goals of economic modelling and positivist testing. Within the developed world, where market forces signal with greater clarity and economic agents have access to more information, such rational choice assumptions will have greater applicability than in the case of the developing world.

our understanding of the individual, thus help to avoid the problems associated with neoliberal development policies based on the position of individual rationality.

5.8 – Conclusion

The conceptual framework for this study has been designed around two main concerns. Firstly, it has been necessary to design a framework suitable for the analysis of the unique model of market organisation used in the Ghanaian cocoa market. Secondly, the theoretical approaches used within this study need to be suitable for analysis of a developing country market, operating within a rapidly evolving global supply chain. In particular, the choice of theoretical approaches used in this study was based on the theories' capacity to understand the challenges of the economic activity within the developing country environment. Given the specificities of these requirements it was necessary to develop a cross-disciplinary theoretical approach using both new institutional economics and global value chain analysis.

However, as observed above, the adoption of this framework does not necessarily add to the complexity of the research process. Indeed, in many ways the clear separation that exists between the theories based on their different levels of analysis will help to give focus to the research process. As such, the cross-disciplinary framework has been developed with the objective of pragmatism, as opposed to the goal of theory unification. Nevertheless, there are complementarities between the theories, which will be of greatest use when looking at aspects of the market which take effect at both the micro and macro levels. Cocoa quality is one such example of this. Chapter six will now outline the methodology developed for this study.

Chapter Six - Methodology

6.1 - Introduction

During chapter one it was observed that the poor performance of the Washington Consensus was partly caused by its failure to account for the specificities of the environment in which it was implemented. In recognition of this, the methodology for this study has been formed around the specific needs of phenomenon being addressed. As described in chapter one, this involves a purely qualitative methodology, where semi-structured interviews are used to explore the lived experiences of key stakeholders within the Ghanaian cocoa market. This is based on the belief that qualitative research enables the researcher to gain a deeper insight into the participants' experiences, whilst also appreciating the specific context and intricacies of the environment being researched. In order to objectivise the process of data collection and analysis within this qualitative approach, it has been necessary to develop a highly structured and rigorous methodological approach, which will be explained throughout this chapter. Descriptive examples and conceptual models will be used throughout the chapter to help justify the methodological choices that have been made, and illustrate the processes that have been undertaken.

6.2 - Ontology and Epistemology

6.2.1 - Critical Realism

Critical realism is the philosophical approach to science adopted in this study. The approach was pioneered by the work of Bhaskar [1975, 1986], and has recently been actively linked to the field of economics, most notably in the work of Lawson [1997, 2003]. The central ontological argument of critical realism is that a reality exists; however, it is

both complex and deep, and therefore, it cannot be reduced to our surface interpretation of it based on immediate experiences. Critical realists conceive of the world as being layered, observing a distinction between the empirical world of experience, and the real world of underlying causal powers, also known as generative mechanisms [Walters and Young, 2001]. Events that take place at the level of the actual cannot be explained solely on the basis of empirical evidence or event regularity, but rather they have resulted from the underlying processes that operate at the level of the real.

Bhaskar [1975] argues that social reality is an open and evolving system comprised of intentional individual agents, who, though being constrained and influenced by the social structures surrounding them, are capable of shaping the structures in which they are embedded. As such, there is an ongoing interaction between structure and agency. Given the open and transitive nature of social reality experiment is rendered impossible, and thus, purely empirical explanations are not adequate for theoretical constructions of this complex reality [Lawson, 2003]. The objective of the critical realist in carrying out economic research is therefore to develop ways of uncovering the causal structures and generative mechanisms, which govern the flux of events in an essentially open world [Lawson, 2003].

There are notable similarities between the critical realist conception of the individual and that characterised in the institutional economics of Commons [Lawson, 1996]. In particular the interaction between agency and structure is representative of the mutual understanding that the two approaches share. Indeed, critical realists have also observed strong similarities between their own ontological position and those adopted by prominent academics within various heterodox economic traditions, such as Post-Keynesian economics and institutional economics [Lawson, 2003, 2006; Davidsen, 2005]. Indeed, based on Lawson's [2006] assessment of heterodox economics, it may be suggested that the strands of NIE and GVC developed in this study are not inimical to heterodox approaches, thus rendering them suitable for a critical realism methodology.

In association with heterodox economic traditions critical realism has also been highly critical of the ontological stance adopted in orthodox¹⁶⁵, or 'deductive' economics. Arguments against the ontological basis behind orthodox economics have been led by Lawson [1997, 2003]. These arguments are built upon what critical realists believe to be the 'epistemic fallacy' [Bhaskar, 1975] occurring within orthodox economics, through which questions of being [ontology] have been reduced to questions of knowing [epistemology]. Whilst critical realists search for generative mechanisms operating at the 'real' or deep level of an 'open' social reality, deductive economists highlight event regularity as their mode of explanation [Lawson, 2003, pg 5]. It is argued that the deductive method based on event regularity is only applicable in analysis of 'closed' systems, and not the open social reality envisaged by critical realists.

Critical realists have also been active in their critique of neoliberalist economic policies within the developing world [Jones, 2001; Morgan, 2003; Dow and Dow, 2005]. Critical realists argue that the influence of orthodox economic thinking has led to the proliferation of flawed generalisations based on the principle of universality [Lawson, 2003]. As a result, 'the issue of policy credibility, which would seem to lend itself to context specific analysis, has instead been addressed with externally designed policy rules' [Dow and Dow, 2005, pg 1131]. In light of this, one of critical realisms strongest attributes is its objective to achieve a deeper understanding of the context in which causal structures operate. Indeed, context is fundamental to the approach of critical realism based on the belief that the outcome produced by a particular causal mechanism is highly dependent on the context in which it is situated [Sayer, 1992; Pawson and Tilley, 1997].

Building on the problems associated with the Washington consensus, the methodology for this study is focused on achieving a deeper understanding of the partial model. Both the institution of the Cocobod and the developing country environment are unique systems, for which the deductive approach of orthodox economics appears to be ill-suited. The cocoa market in Ghana is widely influenced by a variety of social, political, historical and

¹⁶⁵ This may be likened to the neo-classical economics that informed the Washington Consensus.

economic factors. As such, it appears that critical realism may represent the ideal ontological grounding from which to investigate the partial model. Indeed, critical realisms belief in a complex social reality and commitment to a context specific understanding, present a suitable platform from which to build knowledge of this progressive economic phenomenon.

6.2.2 - Critical Realist Methodology

The methodological approach employed in this study has attempted to work within the guidance of a critical realist ontology; however, at the epistemological level the value of empirical evidence has not been completely refuted. This is considered a moderate interpretation of the epistemological beliefs espoused within critical realism. There is an acceptance that knowledge claims must come about through a give and take between both abstract theorising and concrete evidence about the phenomenon being examined.

Using evidence in this way has helped to preserve the relevance of research findings for audiences within both the academic community and those working at a policy level. Indeed, whilst there is active debate within critical realist literature on the best way to treat empirical evidence [Walters and Young, 2001; Downward et al, 2002], this study has attempted to employ empirical evidence where appropriate in qualification of the generative mechanisms established through the process of abstraction. This approach builds upon Davidsen's [2005] attempt towards a critical realist inspired economics in which systematic ontological reflection will become an integral part of the scientific process¹⁶⁶.

Methodologically critical realism is operationalised through the process of 'retroduction'. Bhaskar [1986, p11] describes retroduction as the process by which an argument 'moves from a description of some phenomenon to a description of something which produces it or

¹⁶⁶ Davidsen himself draws direct inspiration from Cruikshank [2003], and refers to Lawson's work on critical realism in economics throughout. However, it must be acknowledged that Davidsen does not support several of Lawson's criticisms of mainstream economics.

is a condition for it'. As such, retroduction can be seen as the central logic of inference associated with a critical realist epistemology [Downward et al, 2002]. Retroduction is an iterative process, which begins with a critique of prior theory developed around the phenomena being studied. From this critique, it is possible to identify potential generative mechanisms that may help to explain the phenomenon in question. The existence of such mechanisms in practice must then be ascertained through the collection of data on the concrete phenomena. Throughout data collection, Yeung [1997] observes that it is essential to use interactive interviews, enabling a deeper level of investigation than that offered by quantitative methods.

After data collection the process of iterative abstraction is used to 'obtain knowledge of the real structures or mechanisms which give rise to, or govern the flux of the real phenomena' [Lawson, 1989, pg 69]. This is the most well known method used by critical realists to discover and conceptualise generative mechanisms [Yeung, 1997]. Despite the emphasis placed on abstract theorising into deeper causal powers, empirical evidence can play an important role in critical realist research [Downward et al, 2002]. Reference to appropriate empirical evidence is required throughout the iterative process of retroduction, in order to bolster any claims to knowledge and ensure that research output maintains a link with the concrete phenomena being examined. However, regularities are not treated as explanation, but instead they are seen as 'demi-regs¹⁶⁷' [Lawson, 1997], or partial event regularities, which are used to help identify generative mechanisms.

The process of retroduction relies on continuous data collection, where fresh input is used to revise or reaffirm generative mechanisms identified in the initial abstraction. As such, the process moves in an iterative fashion until the point at which the alleged generative mechanisms are robust and powerful enough to explain the phenomenon. This process is considered highly appropriate for analysis of the ever changing Ghanaian cocoa market. Both at the domestic and international levels, commodity markets are in a constant state of flux creating a high number of emerging issues which, in their immediacy, may appear to

¹⁶⁷ Demi-reg's indicate the occasional, but less than universal, actualisation of a generative mechanism [Lawson, 1997].

define the market at any one period of time. Indeed, examples of market shocks, media hype, industry speculation, and one off instances have emerged within data collection. In this light, Miles and Huberman [1994] warn about the risk of generalising from non-representative events when carrying out causal analysis. As such, the level of critical reflection required throughout the retroductive process has helped the analysis go beyond the surface level of immediate observations.

Investigating the phenomenon of the partial model itself has also required commitment to a deeper level of understanding. Given that there is limited past research on partial models on which to assess the research findings, the process of retroduction has been necessary to critically assess the strength and validity of generative mechanisms identified throughout the study. Indeed, the level of critique inherent within the process of retroduction may help to establish the credibility within research findings required to transfer the lessons of the partial model to commodity markets elsewhere in sub-Saharan Africa.

6.3 - Research Strategy and Design

6.3.1 - Research Strategy

The research strategy for this thesis is based on the 'case-study' methodology, developed by Yin [1984] and Stake [2000]. Case-study research involves the investigation of a few cases, or often just one case, in considerable depth [Gomm and Hammersley, 2000]. Based on Yin [1984] the case study may be defined as an investigation that a] explores a contemporary phenomenon in a real life situation, b] where the boundaries between the phenomenon and its relations cannot be clearly defined, and c] where it is possible to use different sources of information. In light of this, the decision to adopt a case-study approach was based upon the belief that in-depth investigation is required in order to understand the partial model in Ghana.

The case study approach is closely related to the critical realist research perspective, based on the 'deep' level of understanding that can be achieved through focused investigation. Guba and Lincoln [2000], Perry [1998], Christie et al [2000], and, Healy and Perry [2000] closely associate critical realism with case-study style research. Gomm and Hammersely [2000] find that qualitative data is paramount within the case study approach, where based on the depth of findings achievable it may be possible to clearly identify important causal relationships. Similarly, Christie et al [2000] contend that 'case-study research aims to locate generative mechanisms that assist in determining inferences about real life experiences' [pg, 17].

6.3.2 – Research Design

The approach of template analysis [King, 1998, 2004] has been central in designing the methodology employed throughout this study. As demonstrated by the fifteen stages in appendix four the approach of template analysis has presented a clear structure for the research from the stage of developing interview guides, through to the final presentation of research findings. Indeed, whilst the template approach may be viewed primarily as a tool for data analysis, insights from template analysis have helped to maintain a consistent and structured approach throughout the process of data collection and analysis, thus helping to create a strong audit trail in the research process.

Within this study one of the main goals of the template approach is inductive theory building. Eisenhardt [1989], and Miles and Huberman [1994] find that the development of theory from a case-study is an iterative process. Both the research questions and the researchers understanding of the phenomenon evolve throughout the course of research based on a continuous process of data collection and analysis, until the point where sound contributions to theory can be made [Kerssens-van Drongelen, 2001]. Indeed, closely related with the goals of this study King¹⁶⁸ [2004] finds that the template approach can be

¹⁶⁸ King [2004] references Miles and Huberman [1994] when making this point.

used for 'research which is concerned with discovering underlying causes of human action' [p 21].

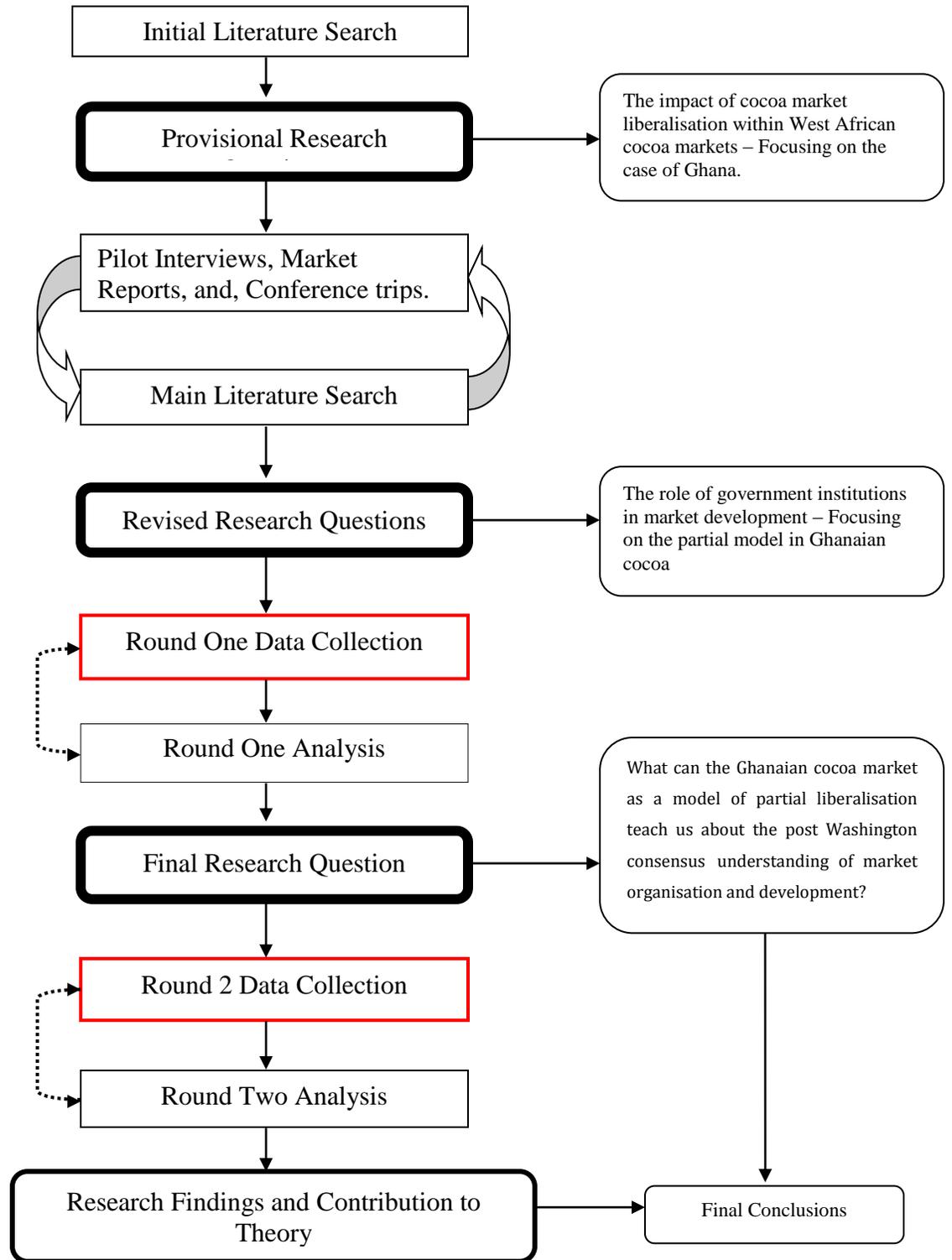
Appendix four demonstrates how template analysis has provided a clear structure for the iterative process of theory building. More specifically figure 6.1 on the next page shows how the iterative process adopted during the course of research has enabled a re-evaluation of research questions over time, leading to a clearer focus on the most insightful aspects of the partial model.

6.3.3 External Validity

Yin [1984] finds that when adopting the case-study approach careful consideration must be given to external validity, internal validity and construct validity. External validity in particular needs to be given thorough consideration in light of the common criticism that is targeted at the case study approach in this area [Flyvbjerg, 2006]. Indeed, when adopting a single case approach, as used in this study, there is an even greater need to be aware of the external validity of findings. In light of this, Yin [1984] and Healy and Perry [2000] find that theoretical relationships are the key to enhancing the external validity of a single case study.

Whilst the goal of case-study research is inductive theory building, past theory will also play a key role throughout this study. Although there is only a small amount of literature on partial models per se, as demonstrated by chapters two, three, and four there are many other valuable theoretical sources from which insight into the partial model can be garnered. Indeed, as observed in the introductory chapter, this study will attempt to build upon aspects of NIE and GVC in light of the partial model in Ghana. Again this can be closely related with the approach of critical realism, where the purpose of research is to identify generative mechanisms within past literature and then build upon these mechanisms through research and analysis.

Figure 6.1 – The Iterative Research Process



Source: Author [inspired by Kerssens-van Drongelen, 2001]

Focusing on the theoretical gains that can be made through case study research, Yin [1984], finds that, through the process of ‘analytic generalisation’, the investigator may attempt to generalise a particular set of results to the broader theory underpinning the research questions [Yin, 1984, p 39]. Similarly, Bryman, [1988] and Silverman, [2005] both find that external validity can be enhanced through the use of a theoretically defined case. Therefore, by framing the analysis of the partial model in theoretical concepts that have been used previously in the study of commodity markets, every effort has been made to increase the external validity of this study.

Less than twenty years ago the parastatal marketing board system, as currently used in Ghana, was the norm across West African cocoa producing countries. Indeed, as seen in chapter one, since the marketing boards were abolished in all producing countries apart from Ghana, the Ghanaian cocoa market has outperformed other cocoa producing nations in West Africa. Given that cocoa itself is a relatively homogenous crop across producing countries, similar to many other agricultural commodities, it is assumed that market organisation is one of the main factors enabling Ghana to outperform their competitors in recent years. Therefore, exploring the potential of a seemingly well functioning parastatal can undoubtedly offer valuable insight beyond the boundaries of Ghanaian cocoa.

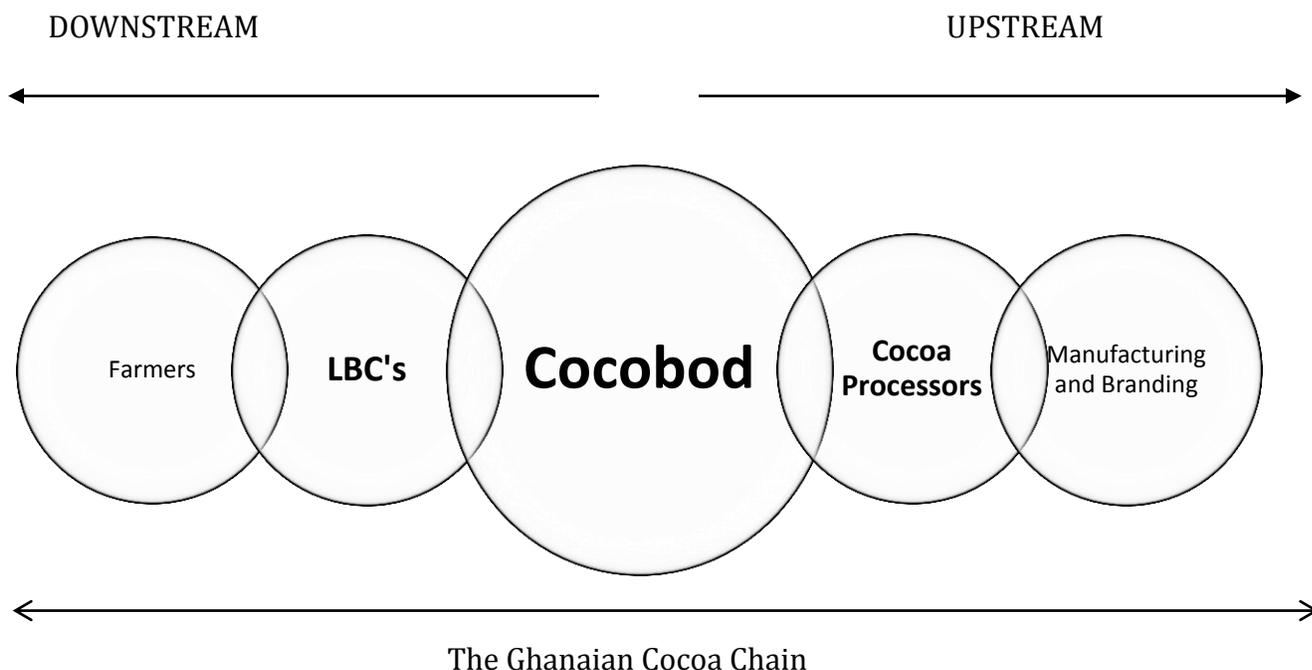
6.4 - Units of Analysis

Three main units of analysis have been selected for the following study: members of the Cocobod¹⁶⁹, local buyers [LBC’s], and cocoa processors. The Cocobod has been selected as a unit of analysis based on its central role within the partial model. In many respects the role of the Cocobod appears to be fundamental to Ghana’s recent cocoa market success and therefore the Cocobod will remain at the centre of analysis throughout the study. However, in order to fully understand the performance of the partial model it is necessary to also consider the role of other key stakeholders working alongside the Cocobod. In light of this, both the LBC’ and cocoa processors must also be considered in analysis. Indeed, as seen from the figure 6.2 on the next page, both the LBC’s and cocoa processors have direct

¹⁶⁹ This includes members of Cocobod subsidiaries, such as the QCD and CMC.

linkages with the Cocobod and are therefore in the ideal position to comment on the Cocobod's role within the partial model.

Figure 6.2 – Units of Analysis



Source: Author

The two groups of actors directly connected to the Cocobod have been targeted in order to highlight the nature of the linkages/coordination along the supply chain. Sayer and Morgan [1985] find that examining groups of actors who are directly linked can lead causal explanations in research. As observed in chapter five the notion coordination is embedded within the theories employed at both the micro and macro levels in this study. It is also felt that the nature of the relationship between the Cocobod and the two sets of private sector buyers will be central in our understanding of the partial model. Indeed, this may be considered one of the most unique and challenging aspects of the model. This is particularly true for the Cocobod – LBC relationship, where there is an extremely high level of interdependence between the operations of these two groups of actors.

Within the segment of local buying companies, the target sample includes the managing directors of the top ten LBC's in the market. Whilst there are nineteen active LBC's in the market, the top nine/ten have controlled over ninety percent of the market for the last four seasons. As such, it is felt that not only will these LBC's be the most experienced but that given their size they are also likely to be the most influential. The position of managing director has been targeted because it is felt that the MD will have both the greatest experience in the market, and more importantly the most experience of dealing with the Cocobod.

Throughout the upstream segments of the Ghanaian cocoa chain there are a range of stakeholders that have direct links with the Cocobod through the purchase of cocoa from the CMC. These stakeholders include, cocoa traders, cocoa processors, and, chocolate manufacturers. Within this group of stakeholders, cocoa processors with factories in Ghana [local processors] have been targeted as a core unit of analysis for three main reasons. Firstly, the rapid growth of local processing in Ghana has been the most significant change in the CMC's customer base in recent years. As such, local processors are now amongst the most influential actors in the international dimension¹⁷⁰ of the Ghanaian supply chain. Secondly, operating within Ghana, local processors are likely to have the closest level of interaction with the Cocobod and therefore the most direct experience of the partial model. Thirdly, the three largest multinational processing firms in the world have factories in Ghana. As such, these particular processors will be in a strong position to comment on the performance of the CMC not only for local processing, but also for export buying as well. In order to bolster our understanding of the Cocobod's role in the export market¹⁷¹ several key informants¹⁷² with experience in this area have also been targeted, including: cocoa traders, chocolate manufacturers, and, international cocoa bodies¹⁷³.

¹⁷⁰ During chapter five it was explained that the international dimension of the Ghanaian cocoa chain involves all aspects beyond and including the CMC's sale of cocoa to external buyers.

¹⁷¹ It is important to differentiate between the Cocobod's role in the export market and their role in supplying local factories.

¹⁷² Key informants are not considered one of the core units of analysis.

¹⁷³ Please see appendix eighteen where these particular key informants have been highlighted with an EB after their name.

Key informant interviews have also been carried out with a variety of other cocoa market stakeholders. These interviews can be used to offer an alternative perspective on the partial model, and where appropriate they may be used to support the findings from the core units of analysis. Key informants can come from a wide range of sectors provided that they are in a position to offer insight relative to this study. Given the neutrality of their position in relation to the core units of analysis, key informants are likely to offer an unbiased perspective.

Yin [1984] finds that the use of alternative data sources and key informant interviews can help to enhance the internal validity of case study research. Building on this the large amount valuable data emerging on a regular basis through cocoa market reports¹⁷⁴ has also been used to improve the level of validity within the final research output. Market reports can be used to keep up to date with the regular changes taking place within cocoa markets, including pricing and production statistics, as well as political, economic and social issues within producer countries.

Within the initial research strategy the farmers segment was not targeted. This was based on both time and resource constraints, as well as the nature of their functional relationship with the Cocobod. Though farmers are very important stakeholders, they do not deal directly with the Cocobod at any stage along the domestic supply chain, and therefore, it was assumed that their level of knowledge in relation to the research questions may be limited. As discussed throughout chapters two, three, four and five, the concept of coordination and the trading relationships between actors is very important within the conceptual framework for this study. Given that the Cocobod is the central unit of analysis within the study, it was decided that focusing on the two groups of actors directly connected to them would be the most effective strategy for achieving an understanding of the partial model. Furthermore, the relationship between farmers and LBC's has been the subject of a number of recent studies including Laven [2005], Zeitlin [2006], and, Vigneri and Santos [2007]. Therefore, by focusing on buyers not only has it been possible to explore the previously unexplored relationship between the private sector and the

¹⁷⁴ Congoo News is a very good source for market reports on the cocoa industry: www.congoo.com.

Cocobod, but equally it helped to remove the risk of duplication with other recent studies. Despite the above arguments against the use of farmers as a unit of analysis, a pilot farmer study was carried out during round one of research to assess the validity of prior assumptions made with regards to the farmers role in the study. This involved four twenty minute interviews with individual farmers in the Suhum district of the Eastern Region. Overall, farmers proved to have relatively little knowledge of the Cocobod's functions beyond price setting and the spraying of farms with free pesticides. Though farmers undoubtedly have knowledge and experiences that would be valuable for understanding the partial model, it did not appear that sufficient knowledge could be acquired within the time and resource constraints faced. Farmers appeared to be more suited to survey style research methods, with a large sample and mostly closed questions, as opposed to the in-depth interviews being used in this study. In light of this, it was decided that farmer interviews would not be pursued any further.

6.5 - Data Collection

As described in chapter one, the bulk of the data collection for this study has taken place during two separate rounds of interviews in Ghana. It was imperative that the majority of data was collected in Ghana itself given the importance of context in development research. Where appropriate interviews have also taken place in the UK¹⁷⁵, however, it is assumed that respondents located in Ghana have fuller experience of the partial model from which to draw upon. Indeed, as described in chapter five, the behavioural assumptions for this study describe an individual who interacts with and is affected by the institutions and structures within their immediate environment.

Two rounds of data collection have taken place in order to enable the iterative research process described earlier. Using the two rounds of data collection it was planned that round one could proceed in a more exploratory fashion investigating a broader array of issues, including both, those identified prior to research, and also, issues emerging within

¹⁷⁵ There are a large number of people in the UK have close links with the Ghanaian cocoa market because a significant amount of Ghanaian cocoa is traded through the LIFFE futures exchange in London. For example, Armajaro and Olam, both of which have LBC's in Ghana, also have offices in London.

the research process. Analysis of round one data has then been used to create a greater awareness of the key issues related to the pre-defined research questions. Resultantly, in round two it was possible to proceed with a more focused interview guide, developing a deeper understanding of the key issues identified in round one. Round two interviews did, however, remain semi-structured thus allowing new issues to emerge where appropriate.

6.5.1 - Round One Interview Guides

Semi-structured interviews have been selected as the primary method of data collection for this study. In light of the criticisms levied at the positivist approach of the Washington consensus, it is felt that qualitative data represents the best method through which to investigate and understand the partial model in Ghana. Interview data has given voice to the lived experiences of participants in the partial model¹⁷⁶, enabling analysis to get to the level of the 'real' based on the underlying trends within participants' experiences of the market.

Miles and Huberman [1994, p 147] find that qualitative analysis is a powerful tool to assess causality. In order to uncover the causal relations that exist within the partial model, a significant number of questions were structured around the relationships between different groups of actors. Interview guides have been designed to uncover both sides of a particular aspect of the relationship between two groups of actors. As such, many of the same topics are covered in the interview guides for Cocobod and the LBC's, and likewise, for the Cocobod and external buyers.

King, [2004a] finds that interview guides do not represent a formal schedule of questions to be asked word-for-word in a set order. Rather the interview guide contains a number of topics and probes that can be used to elicit additional detail from respondents, in cases where the initial response appears inadequate. Topics within the interview guides for round one were developed based on five main criteria.

- The research questions.

¹⁷⁶ The national language in Ghana is English and therefore language problems were not experienced.

- The identification of themes within the theory/literature.
- The examination of causal relationships between market actors, building on the theoretical concept of coordination.
- Understanding the functional role of each of the three units of analysis.
- Pilot interviews, discussions with academics and market reports.

As can be seen from appendix four outlining the process of template analysis, themes identified within the literature become embedded in the topics of the interview guide. King [2004] describes the process of developing an interview guide based on a realist perspective, where the guide is given structure through the prior identification of generative mechanisms or theoretical problems that are to be explored in the research.

Prior to the development of round one interview guides, three pilot stakeholder interviews, three academic interviews, and one conference trip were carried out¹⁷⁷. As a result of these studies it was possible to establish a more focused and up-to-date understanding of the situation in the Ghanaian cocoa market, leading to greater accuracy in the framing of round one questions. Appendix five shows an example of the key generative mechanisms that were identified prior to round one research for the Cocobod interview guide¹⁷⁸.

King [2004a] finds that qualitative research must attempt to see the research topic from the perspective of the interviewee. The interviewer must impose a relatively low degree of structure with a tendency towards open questions. As such, the semi-structured interview guide has relied mainly on open-ended questions, giving the respondent the freedom to explore whatever they feel are the most important aspects of the partial model. Whilst the literature review, pilot interviews, and market reports all help to develop a moderate understanding of the Ghanaian market prior to stage one of data collection, it is still very important that enough freedom is given to the respondent in order to allow any new issues to emerge.

¹⁷⁷ Please see appendix eighteen for more details on these respondents.

¹⁷⁸ In order to make the connection between the generative mechanisms highlighted in appendix five and the actual interview guide, please refer to appendix six where the round one interview guide for the Cocobod can be found.

As can be seen from appendices 6-8¹⁷⁹ structured interview guides for round one of data collection were developed for each of the three main units of analysis. Key informant interview guides were developed on an individual basis, using questions structured around both the topics of the study and also the respondents' specific area of expertise.

6.5.2 - Round One Data Collection

Round one of research took place between August and September 2007¹⁸⁰. Throughout the first ten months of my PhD in the UK a significant amount of time and energy was spent trying to make contacts¹⁸¹ with people in the cocoa industry. However, despite significant effort very little progress was made establishing contacts prior to round one of data collection¹⁸². Nevertheless, interview guides were prepared in full, and an ideal sample frame was set, including: The top ten LBC's, three local processors, a member of the Cocobod, a member of the QCD, a member of the CMC, and at least two key informants.

I was primarily located in Ghana's capital city, Accra. This location was selected based on the access it would allow me to a wide variety of stakeholders in the cocoa industry. Accra presents a dense network of interconnected cocoa stakeholders including, the Cocobod headquarters, all local processor offices, around 50% of the top ten LBC's, and various research bodies/charities. For the remaining 50% of the top ten LBC's it was necessary to travel to Kumasi in the Ashanti region.

Establishing contacts at the Cocobod was a very challenging process due to their strict rules on following the chain of command. Indeed, several members of the Cocobod were only willing to speak with me once their boss had given them permission to do so¹⁸³. Within a

¹⁷⁹ In appendix six the interview guide for the Cocobod is flexible to adjust to the various functions and subsidiaries of the Cocobod. For example when interviewing participants from the QCD the sections on quality were used extensively; however, when interviewing a respondent from the CMC the sections of the Cocobod's links with external buyers formed the focus of the interview.

¹⁸⁰ Please see appendix sixteen for a full schedule of round one field work.

¹⁸¹ Please see appendix fifteen for an example of the email that was sent to all potential private sector participants.

¹⁸² In recent years stakeholders in the cocoa industry have become very reluctant to speak with researchers due to some high profile industry problems such as child labour on cocoa farms and anti-competitive selling practices.

¹⁸³ Please see appendix twenty, for an example of the type of letter that was needed for Cocobod staff to grant an interview.

large bureaucracy this was a very time consuming and frustrating process, especially given that all members of the Cocobod are well educated civil servants and should therefore be able to make their own decisions in such instances.

With regard to the two buyer segments a large number of contacts were established throughout the research process using the snowballing method. This proved to be highly successful as once a participant felt that they could trust you they were happy to give the contact information for one of their peers at another company. As more firm contacts were developed the number of interview participants I was able to assemble increased rapidly and after the first week my interview schedule was highly intensive averaging around 1.5 interviews per day¹⁸⁴. Indeed, as can be seen from appendix eighteen, which gives a detailed description of all interviewees, there were thirty three participants in round one data collection¹⁸⁵. With the exception of purchasing clerk interviews¹⁸⁶, all interviews carried out in round one lasted between one and two hours, with the average duration being one hour and twenty seven minutes.

As recommended by King [2004a], every effort was made to overcome any respondent concerns at the beginning of the interview in order to establish a relaxed and trusting environment. Sociability is a characteristic that I have regularly experienced on all prior trips to Ghana¹⁸⁷, and therefore using my experiences of interacting with Ghanaians on a social level, I was able to establish a good rapport with the vast majority of respondents. All respondents were presented with a business card, a letter of recommendation from my supervisor¹⁸⁸, a declaration of confidentiality and consent¹⁸⁹, and a brief guide of the topics that would be covered in the interview¹⁹⁰. Interview guides were also structured in such a way that the more sensitive issues were not raised until later in the interview process.

¹⁸⁴ Please see appendix sixteen for a full schedule of round one field work.

¹⁸⁵ This does not include the pilot study with farmers that took place in the Suhum district.

¹⁸⁶ Interviews at this level lasted around thirty minutes on average.

¹⁸⁷ Prior to this PhD I had lived and worked in Ghana for eleven months.

¹⁸⁸ Please see appendix twenty one.

¹⁸⁹ Please see appendix nineteen.

¹⁹⁰ Please see appendices 6-8 where the first page of the interview guide is the topic guide that was given to the appropriate participants.

Where possible interviews were recorded, however, given the sensitive nature of information several participants did not wish to be recorded. Nevertheless sixteen of the thirty three participants in round one agreed to have the interview recorded, proving hugely important to the depth of information available for analysis. The remaining seventeen interviews were annotated by hand. Whilst the annotation of interviews by hand was undoubtedly a challenge, every effort was made to capture as much of the interview as possible. To do so participants were occasionally asked to wait while the fullness of a quotation was noted. Furthermore, immediately after all interviews of this nature, several hours were spent updating interview notes while the memories of the interview were still fresh in my mind.

Throughout all stages of data collection, observation also played a key role in providing background material to the interview itself. It was crucially important to take note of the wide variety of environments in which interviews took place, helping to give some additional insight into the participants working life. Observation was particularly important for all interviews carried out with participants in the Cocobod segment, given the research interest into the organisational culture and work ethic of large parastatal organisations¹⁹¹.

The phrasing of questions within interviews was also crucial to the research process. Based on the objective of uncovering deep underlying mechanisms it was necessary to not only ask 'how' and 'why' questions, but also ask 'why not' and 'what if' questions, while constantly searching for a fuller explanation of the respondent's argument or perspective. The topic or question highlighted in the interview guide is only designed to act as a starting point for the exploration of that particular issue. Depending on the participants response to the question, further probes were used to delve deeper into the issue, regularly asking for examples of real life situations to further qualify the participants account. In this light, Kvale [1983, p176] notes that qualitative interview questions must focus on specific

¹⁹¹ In this regard observation was also very important with reference to the CPC and the PBC, both of which were fully owned subsidiaries of the Cocobod in the recent past.

situations and action sequences in the world of the interviewee, whilst attempting to avoid abstractions and general opinions.

Whilst it is necessary to probe for explanations from interviewees, it is also very important that the respondent does not feel pushed in any one particular direction. For example King [2004a] finds that the interviewer must not ask leading questions, which use phrases such as, 'So you think that....is the case?'. In light of this, leading questions were only used when either, the respondent had already revealed their basic position on the issue being discussed, or, an additional level of probing was required to encourage the respondent to go deeper. In most cases this technique was not required and the greater majority of respondents¹⁹² were willing to talk candidly about all topics on the interview guide. Nevertheless, it remained important to keep notes on my level of involvement within each interview in order to enhance the level of reflexivity within research findings.

Given the exploratory nature of round one research, fresh insight into each topic of analysis was gained throughout the entirety of round one. New insights would emerge on a daily basis and in response regular amendments were made to interview guides¹⁹³. Amendments were made for two main reasons, firstly, to re-focus existing questions where required, and secondly, to add additional topics of interest which had not been considered prior to round one of research. This flexibility enabled key emergent themes to be given the required level of attention throughout round one.

6.5.3 – Round Two Interview Guides

The main objective of round two was to critically assess the key themes identified within round one. Whilst interviews remained semi-structured, allowing the flexibility for any major new issues in the market to emerge, there was a much clearer understanding of the issues to be covered within the interview. The greater level of focus within round two

¹⁹² King [2004a, p 18] offers some suggestions on how to deal with uncommunicative respondents. King also offers valuable advice on how to deal with high-status interviewees which was very important particularly during interviews with senior level members of the Cocobod [King, 2004a, p19].

¹⁹³ Please see appendix twenty two for an example of a round one interview guide that has been amended during the course of field work.

research is evident in the interview guides themselves, as seen in appendices 9-11. For example the LBC interview guide in round one¹⁹⁴ used theoretical insight from the literature to explore the partial model in quite general terms. Aspects such as the functions of the Cocobod, the relationship between the Cocobod and LBC's and the nature of competition in the LBC market were explored with relatively little knowledge of the detailed processes taking place in these areas. However, questions within the LBC interview guide for round two¹⁹⁵ were much more specific looking at aspects such as; the credibility of the quality control division, the Cocobod's management of the takeover centres, the level of organisational risk faced by LBC's, and the potential for LBC's to take on more responsibility in the area of input delivery.

To some extent the motivation for this approach was based on the process of 'theoretical sampling', used predominantly within grounded theory. Glaser [1978] defines theoretical sampling as, 'the process of data collection for generating theory whereby the analyst jointly collects, codes and analyses his data and decides which data to collect next and where to find them in order to develop his theory as it emerges' [p 36]. Indeed, the process of refining theoretical ideas and then proceeding to gather more data in order to test the validity of research findings is considered a key part of the iterative research process. As such, having nine months between the two stages of data collection, there was enough time to fully assess the key themes for round two interview guides based on the analysis of round one data.

Again interview guides were developed for the three main units of analysis as displayed in appendices 9-11. Recognising the importance of LBC district managers and purchasing clerks from round one analysis, separate interview guides were also developed for these groups of actors prior to round two of data collection, as seen in appendices twelve and thirteen. These actors may be considered as sub-groups of the LBC unit of analysis and to a large extent this is reflected in the interview guides which simply adapt the topics from LBC interview guides based on the experiences of actors at the rural level. Following the

¹⁹⁴ Please see appendix seven.

¹⁹⁵ Please see appendix eight.

same method as round one, interview guides for key informants were developed on an individual basis using both the topics employed within the core interview guides and the respondent's areas of expertise as a guide to questioning.

6.5.4 - Round Two Data Collection

The months of August and September¹⁹⁶, when round one research took place, are quiet months for the cocoa market. In light of this round two of data collection took place at a much busier stage of the cocoa season between April and May, 2008. This was done in order to see how people's opinions of the market may vary depending on the prevailing situation in the market, as well as gain firsthand experience of the supply chain capacity problems that occur during busy periods of the season.

Key informant interviews in round two represented a good opportunity to test the validity of some of my research findings from round one. Respondents in this segment were able to offer non-biased insight into some of the aspects that I had identified within round one research. Indeed, given their years of experience in the market key informants were often useful in helping to provide a degree of grounding for some of the theoretical propositions and ideas that had been developed based on round one data.

The basic target sample for round two of research was the same as round one. Indeed, where possible every effort was made to interview the same participants as round one. This was done for a number of reasons including, a] to clear up any ambiguous information from round one interviews, b] to re-visit key issues and check whether the same opinions are still intact, and c] to assess how the respondents' perception has changed over time. Given that April and May are busy months of the cocoa season I was very fortunate to carry out repeat interviews with eighteen of the participants from round one.

While in the UK between rounds one and two of research every effort was made to stay in touch with research participants in order to build up a rapport and familiarity prior to round two interviews. Resultantly a strong level of trust was evident in round two

¹⁹⁶ Please see appendix seventeen for a full diary of the field work carried out in round two.

interviews, making it possible to explore the more sensitive issues in the market. Furthermore, based on my own improved understanding of the market in round two, there was a more natural flow of conversation within interviews, leading to a greater level of depth in the information achieved within the interviews.

Within round two I was also able to use the trust that had been established with research participants to access a greater number of people at senior levels within my main units of analysis. Compared with round one, the sample frame in round two included two more LBC managing directors, one more local processing managing director, the deputy chief executive of the Cocobod, the deputy director of research in the Cocobod, the national coordinator of the CODEPAC input program [Cocobod], and a principle trader within the CMC. The deputy chief executive of the Cocobod is a good example of an interview which took around sixteen months of highly focused networking to achieve.

As can be seen from appendix eighteen there were thirty six interview participants in round two. Again interviews ranged between one and two hours and the average interview time was one hour and thirty five minutes¹⁹⁷. During round two it was possible to record eighteen of the thirty eight interviews carried out. The remaining nineteen interviews were annotated by hand, using the same techniques that were successfully employed in round one.

6.6 - Data Analysis: Template Analysis

Template analysis is a flexible technique used to thematically organise and analyse qualitative data [King, 2004]. Having been developed by King [1998, 2004] in the late 1990's, template analysis is a modern development within qualitative analysis and as such there is a relatively little literature in this area. Nevertheless, template analysis shares many similarities with other approaches such as 'code-book analysis' and 'thematic coding' and therefore it is possible to use some additional sources for guidance [Crabtree and

¹⁹⁷This does not include the six purchasing clerk interviews which average around thirty minutes per interview.

Miller, 1999; Miles and Huberman, 1994]. Indeed, King himself states that template style approaches are widely employed across various types of qualitative research [King, 1998, p18].

To some extent template analysis may also be seen to share some similarities with the approach of grounded theory. Both approaches are inductive, iterative, and, use codes to organize and analyse large amounts of qualitative data. Nevertheless, there are some key differences between the approaches, which have led to template analysis being selected for this study. In reference to grounded theory King notes that 'template analysis may be preferred by those who are not inimical to the assumptions of grounded theory, but find it too prescriptive in that it specifies procedures for data gathering that *must*¹⁹⁸ be followed' [King, 2004, p 257]. In contrast to grounded theory King finds that, 'template analysis is, on the whole a more flexible technique with fewer specified procedures, permitting the researcher to tailor it to match their own requirements' [King, 2004, p 257].

The level of flexibility afforded within the template approach allows the analytical process to evolve and adjust throughout the course of the study. Whilst grounded theory encourages the researcher to identify a 'core' variable at a relatively early stage, within template analysis there is the freedom to re-classify the importance and presentation of themes overtime. This is considered a major advantage in light of the relatively explorative nature of the partial model study. Equally, template analysis allows the researcher to develop a style of presentation best suited to answering the research questions within the study. Whether this involves focusing on one core theme or several key themes, once again, there is the freedom to make such decisions over the course of research.

However, whilst template analysis' strengths are found in its pragmatism and adaptability, at the current time it is relatively underdeveloped in terms of guidelines for application. King [2004] himself finds that it is the researchers own prerogative to tailor the loose framework of template analysis towards the needs of their research project. Therefore,

¹⁹⁸ King [2004] places the word 'must' in italics based on Straus and Corbin [1990], where it is stated that, 'Procedures must be followed in doing research...it is only by practicing procedures through continued research that one gains sufficient understanding of how they work, and the skill and experience that enables one to continue using the techniques with success' [Straus and Corbin, 1990, p26].

despite the above critique of grounded theory, there may be certain areas where template analysis can learn from this approach. Indeed, King [2004] observes that template analysis and grounded theory are not inimical within their approach, thus opening the door to the possibility of one approach learning from the other. In light of this, insights from grounded theory have been employed within the process of refining codes/themes, the theoretical sampling carried out prior to round two research, and the process of memoing.

6.6.1 - Coding

Template analysis, like grounded theory, uses codes to organise and interpret qualitative data. King [2004] states that 'put simply, a code is a label attached to a section of text to index it as relating to a thematic issue in the data which the researcher has identified as important to his or her interpretation' [p257]. As such, each code is directly related to a theme in the template. Depending on the researchers style the code may be a number representing a theme, or it may simply be an abbreviation of a theme. Codes enable the researcher to transform a seemingly unmanageable amount of rich qualitative data into clearly identifiable themes related to the research question. Closely related to this Crabtree and Miller [1999] describe the development of a 'code manual', or 'template', as a means of organizing text within the larger interpretative process.

King [2004] notes that codes can be simple and descriptive, or deep and interpretative. Typically each template will contain a variety of both, depending on both the phenomenon being examined and the researcher's style of presentation. Within each template, codes are organized hierarchically, where a grouping of lower order codes are clustered together under a higher order code. Lower order codes are essentially used to more specifically define higher order codes, deepening the analysis of the text. Whilst the researcher may choose as many levels of coding as desired King [2004] recommends between two and four levels.

As the researcher reads through the text codes are applied where appropriate to sections that relate to a particular theme. Within template analysis parallel coding is allowed, where the researcher is able to classify the same segment of text with two or more codes if

required [King, 2004]. Crabtree and Miller [1999, p167] find that through coding, 'the template process reduces the amount of data being considered at any one time and brings together related pieces of text earlier in the process, which can facilitate making connections'. By providing structure template analysis also helps to reduce the fabricating, discounting and misinterpreting of evidence, which can unconsciously take place in the interpretation process [Crabtree and Miller, 1999]. Miles and Huberman [1994], also support the template approach, as a means of displaying an objective interpretation of complex social phenomena.

6.6.2 - Data Interpretation: Developing the templates

Based on the approach of critical realism the interpretation of data from interviews begins with the assumption that participant responses give us direct access to their lived experiences. This does not mean that responses directly reflect reality, but rather it is necessary to explore the underlying trends within participant experiences in order to understand the generative mechanisms at work within the phenomenon being studied. Data interpretation has therefore proceeded with the initial objective of appreciating respondent's experiences at the individual level, later advancing to the stage of exploring the underlying trends and linkages between respondent's experiences.

The approach of template analysis itself does not specify any particular process for the interpretation of data. Observing this problem, King finds that, 'a strategy must be developed which fits the aims and content of the particular study' [King, 2004, p266]. In light of this, the interpretative strategy for this study was designed with two main concerns: firstly, the exploratory nature of the early stages of data collection, and secondly, the study's aim of presenting a focused response to research questions. As such, interpretation began by using a mechanism to organise and interpret a broad array of exploratory, themes, data and conceptual ideas, and overtime it channelled this broad amount of data and ideas into a clearly defined understanding of each theme within the final template. This process occurred in two distinct phases: firstly, the selection and categorization of codes into templates, which was accompanied by the process of memoing, and secondly, the chunking of related sections of text and data immersion.

6.6.2.1 - Selection and Categorization¹⁹⁹

Beginning with the initial stages of coding, the process of selecting and hierarchically organising concepts into themes was a key aspect of the analysis within this study. Not only does the presentation of themes within the template demonstrate what themes are present within the data, but the hierarchical structure helps to show both the varying importance and relationship between themes in the data. As such, the template acts as the cornerstone upon which the various elements of data analysis are based, and each stage of template development represents a key stage in the journey towards the final research findings.

There were three main factors affecting both the selection of key themes, and the organisation of lower order themes within the template for each of the key themes.

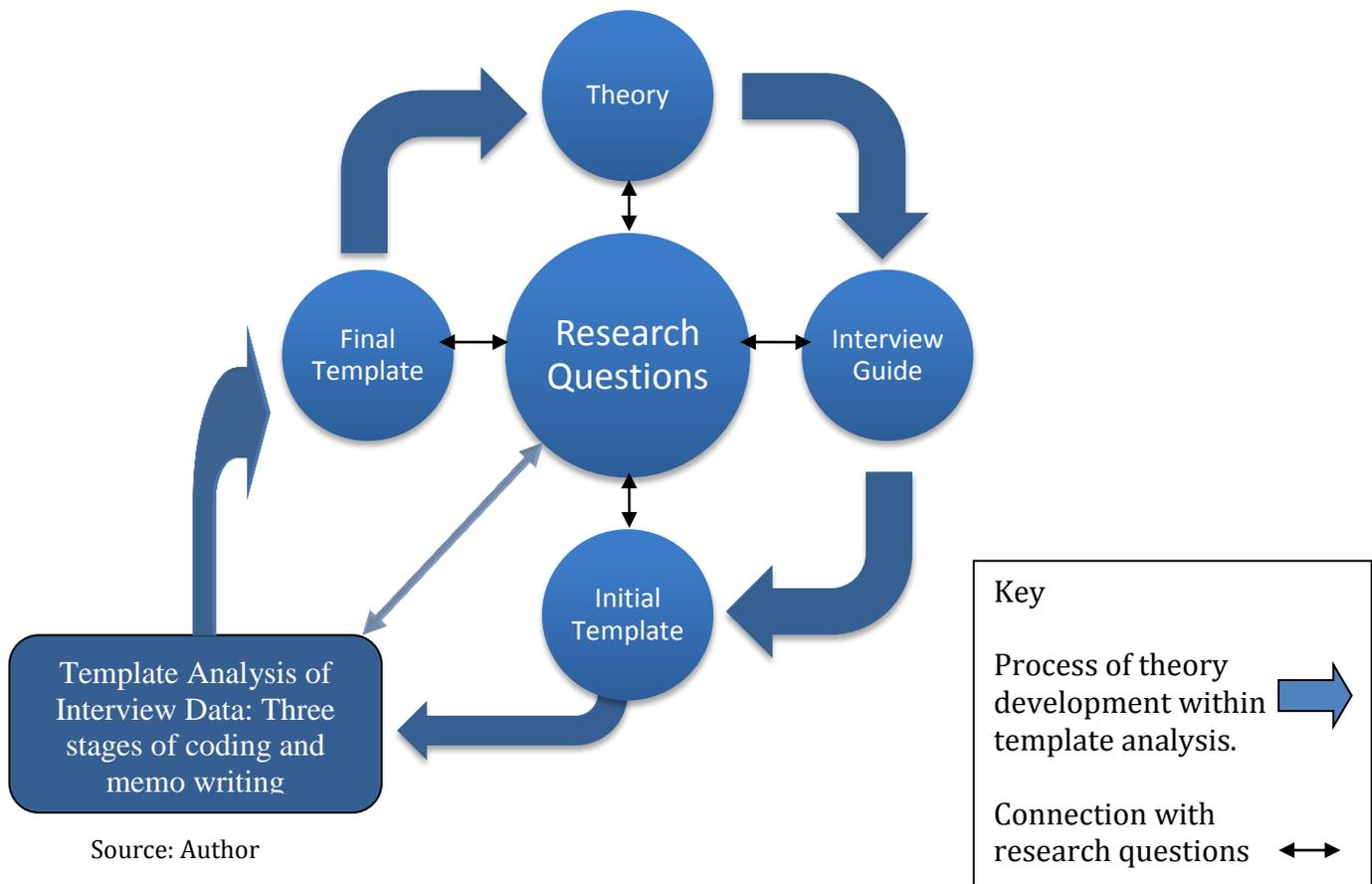
Firstly, themes were ordered based on how they relate with the research questions for the study. Research questions provided a solid bench mark against which all themes, both a priori and emergent, could be measured. This has resulted in a style of presentation for the research findings that is both clear and relevant in its connection with the research questions for the study. The central importance of the research questions within the methodology of this study is conceptually demonstrated in figure 6.3 on the next page.

Secondly, themes were organised based the richness of the data related to each theme. The richness of data was considered in equal measure to the link each theme had with the research questions. Data richness was determined by a number of factors including; the level of explanation given by each respondent, the quality of examples related to the explanation, whether the issue emerged without prompting within the respondent's narrative, the level of emphasis placed on the issue by the respondent, and the respondents level of expertise in the area on which they are commenting.

¹⁹⁹ For a full demonstration of the process of coding and template re-organisation please refer to appendices number four and fourteen.

Thirdly, and least importantly themes were selected based on the regularity with which they occurred in the data. This does not signal a content analysis type approach, but rather this technique is used to simply help draw attention to key generative mechanisms, as supported in the earlier section on critical realism²⁰⁰.

Figure 6.3 – Research Questions and the Analytical Process



Source: Author

King [2004] notes that the re-organisation of templates will occur throughout the template analysis process. Template analysis enables the flexibility for themes to be inserted, deleted and re-classified at any stage leading up to the presentation of the final template. Indeed,

²⁰⁰ Within the section on critical realism the identification of 'demi-regs' was observed as a process within the critical realists methodology.

Crabtree and Miller suggest, 'it is important to keep in mind that codes can and usually should be flexible and open' [1999, p168]. Not only should the codes themselves be open to change, but the researcher must also stay open to the possibility of new themes emerging [King, 2004].

For the presentation of findings within this study it was decided that a number of key themes would be identified based on the research questions. Each key theme would then form the heading for a template of themes made up of primary themes, secondary themes and sub-level themes²⁰¹. Due to the hierarchical organisation of the template primary themes are developed to describe the key theme, secondary themes are developed to describe primary themes, and sub-level themes are developed to describe secondary themes. It should be noted that the final organisation of themes within the templates is not decided until the final stages of coding and analysis.

The first stage of template analysis begins with the development of the initial template. Themes within the initial template are typically based on a priori themes identified within the literature and pilot studies. Indeed, King [2004] finds that when you have a well structured interview guide with clear and detailed topics developed from the literature, the initial template will be much more complete. King also notes that a high level of a priori themes within the interview guide is typical within critical realist research. To some extent the identification of a priori themes can therefore be likened to the identification of generative mechanisms during the critique of literature that takes place in critical realism. Indeed, the iterative process of redefining themes and templates overtime, as demonstrated in appendices four and fourteen, may also be likened to the process of iterative abstraction associated with critical realism.

Within this study the themes in the initial template have been taken from the interview guides used in round one of research. As discussed earlier, in relation to the development of interview guides for round one, the questions within the interview guides were based on a) their connection with the research questions, b) themes within the theory/literature,

²⁰¹ Please refer to figures 6.3 and 6.4 for an example of the thematic structure.

and c] coordination/linkages between supply chain actors. In light of this, the themes extracted from the interview guides and used to construct the initial template were also selected based on these criteria. The role of these three parameters in shaping the content and structure of the themes within the initial templates can be seen from figure 6.4 on the next page, where the explanation down the right hand side helps to show the origin of the themes within the initial template for the key theme 'Governance and Power'.

Figure 6.4 [p 181] shows the classic linear style of template presentation as used in King [2004]. The linear style of template incorporates a simple structure that can be used to display a relatively large amount of information. This is particularly useful when there are a large number of themes in a template. In contrast to this, the more complex diagrammatic style template²⁰² shown in figure 6.5 [p 182] is not able to display a large amount of themes; however, its design enables the reader to clearly visualise the structure of the themes within the template.

²⁰² The hierarchical template has been developed by the author for the purpose of this study.

Figure 6.4 – Initial Template: Governance and Power

Theme Emergence

- Logic of Vertical Integration
 - Control supply Risk
 - Market control
 - Processing incentives
- Local Processor Supply Needs
 - Bean Quality
 - Bean Efficiency
 - Local processing supply deficit
- Government governance
 - Benefit of functional upgrading
 - Credibility of government action
 - Communication
- Power
 - Buyer Power
 - Cocobod power
 - Power struggle

Chapter 4 – Losch [2002] and Fold [2002] explore the issue of why large processors invest in West African cocoa markets. The primary theme and three secondary themes listed are all directly connected to the literature on cocoa processing in West Africa.

Chapter 4 – LMC [1996] and Fold [2002] discuss the specific bean requirements of origin processing, including bean quality and efficiency. Market reports by Benjamin [2007] and Ryan [2007] raise the possibility of a supply deficit in the local processing market

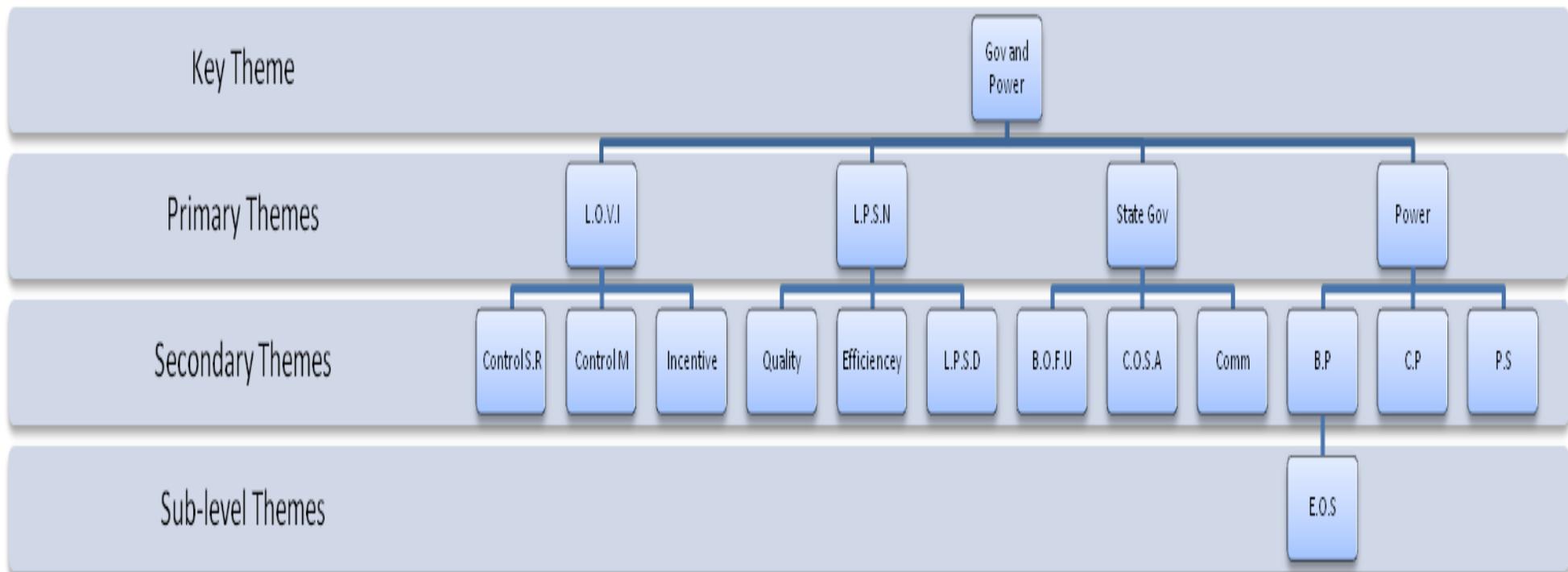
Though the role of government is not generally considered in GVC analysis, this theme was included in light of research question number six. The benefit of functional upgrading in the Ghanaian cocoa market is raised by LMC [1996] and Fold [2002]. The theme of credibility has been informed by NIE literature in chapter 2. The theme of communication arose from concerns raised by processors in market reports [Kpodo 2008b].

The theme of power is at the foundation of GVC analysis as discussed in relation to Gereffi [1994] throughout chapter 3. Fold [2002], Dorin [2003] and Wilcox and Abbot [2004] all raise concerns about buyer power within the cocoa chain. The theme of Cocobod power has been considered in light of the important role of the Cocobod in Ghana and research question 6. Finally, power struggle has emerged in response to market reports suggesting potential conflict between the Cocobod and local processors [Ryan, 2007; Kpodo 2008b].

Key

- Primary Theme
 - Secondary Theme
 - Sub-level theme [not present in this case]

Figure 6.5 – Hierarchical Initial Template: Governance and Power



The key theme of governance and power was identified prior to round one of research in relation to the prominent position of these concepts within GVC analysis, as seen in chapter three. Equally, these concepts are considered hugely important to addressing research question six, leading to them being given additional consideration when selecting key themes prior to research. The primary and secondary themes that are displayed in relation to the key theme of governance and power have been structured in order to show their hierarchical relationship to the key theme. At the stage of developing the initial templates, this hierarchical relationship was devised based on the understanding of these themes that had been developed throughout the literature review and the construction of the interview guides.

Several other key themes were identified prior to round one of research for which the same process of developing the initial template was undertaken. These themes included; the credibility of reform, the relationship between competition and quality, partial model transition, LBC strategy to build market share, the role of the PBC, the role of the buyers association, the link between quality control and cocoa exporting, and governance and power within local processing. Through the course of analysis the key themes of the role of the PBC, LBC strategy to build market share, and the role of the buyers association were reduced to lower order themes. Equally, the theme of supply chain management emerged to become a key theme. Given the emergent nature of this theme, there was no initial template at the beginning of round one coding, and therefore, the initial template was developed almost entirely within the process of phase one coding.

Although the initial templates were detailed and structured, the initial template is only considered a temporary guide, or a starting point, from which the process of coding can begin. The aim of the analytical process was not to verify the themes within the initial template, but rather to understand how the data collected for this study could be used to build knowledge and answer the research questions. As such, where trends within the data were contrary to the prior understanding represented through the initial templates this was considered an important trend for further analysis and consideration. In light of

this, every effort was made to consider new themes emerging within the data throughout the process of data coding.

In order to facilitate the capture and exploration of emergent themes within the data, the technique of memoing was used alongside coding throughout the analytical process. The process of memoing is closely associated with grounded theory, where it is described as;

‘The theorized write up of codes and their relationships as they strike the analyst while coding...its exhausts the analysts momentary ideation based on data with perhaps a little conceptual elaboration’ [Glaser, 1978, pg 83-84].

Whilst coding does involve some element of data analysis and contemplation, it cannot describe and explore the concepts emerging within the data. As such, memoing is used to elaborate upon and develop ideas whilst coding. Occurring simultaneously with the process of coding, memoing is used to record and evaluate all aspects of the data including not only what the participant has said, but also other aspects of data richness such as; the emotion with which it was said, whether they were in any way influenced towards the response they gave and whether they appeared to be avoiding certain topics²⁰³. Alongside this, the quality of the explanation given can also be evaluated looking at issues such as the fullness of the participants account, whether examples were provided and the respondents level of expertise related to the issue being discussed.

Memos were used to consider how the themes and trends within the data related to the templates being used for coding. Based on the concepts being developed within the memos it was possible to update and re-structure the templates in light of the new and enriched understanding of the research phenomenon. The consideration of emergent themes was most important when coding the data using the initial template. As discussed above the initial template represented the understanding of themes that had been developed prior to data collection, and therefore, it was hugely important to update the initial template in light of

²⁰³ Silverman [2005] finds whilst the researcher should guard against respondent omissions, it is also possible to draw insight from what is not being said.

the new themes emerging within the data. Equally, it was necessary to constantly consider the validity of the themes currently within the templates. Indeed, although the consideration of past theory was important throughout the analytical process, the themes that were evident within the data were given prominence at all stages of coding and analysis.

In light of this, all of the templates were constantly evolving throughout every stage of coding and analysis. This was particularly true in the early stages of coding, where, as can be seen in appendix four, the conceptual model clearly identifies a strong level of interaction and evolution between stages three and four of the diagram, leading to the formation of template number two. Equally in appendix number fourteen there are a relatively large amount of emergent themes evident within template number two after round one coding. The technique of constantly re-adjusting the template throughout the first stage of coding is recommended by King [2004], Crabtree and Miller [1999], and, Miles and Huberman [1994], finding that it enables emergent themes to become included in the interpretative process as early as possible.

In order to account for the strong emergence of themes at this early stage of analysis, all round one interviews were coded twice before the development of template number two²⁰⁴. Phase one²⁰⁵ of coding took place with the initial template, which was constantly evolving based on emergence of themes within the data. After all interviews had been coded once, the initial template was adjusted in full and phase two of coding was carried out using the revised initial template. The revised initial template remained unchanged throughout this second phase of coding. The second phase of coding was used to ensure that all round one interview's underwent at least one full phase of coding using the same 'revised' template, prior to the development of template number two. This was considered necessary as template number two was used to form the basis of the

²⁰⁴ Round one interviews are in fact coded a total of three times, where the final stage of coding will take place using template number four, which is used to code both rounds of interviews.

²⁰⁵ In total there were four phases of coding in this study. Phases three and four are explained later in section 6.7.2.1.

interview guides for round two data collection, as can be seen from appendices number four and fourteen.

The only difference between the process used for the first phase of coding with the initial template, as compared all subsequent stages of coding, is that whilst the initial template evolved during phase one of coding, for all other phases of coding the template was not updated during the particular round of coding for which it was developed. For example, template number three remained the same throughout the entirety of phase three coding, until round three coding was complete, at which stage template number three was updated based on the enriched understanding that had been achieved through coding and memoing.

Nevertheless, throughout all stages of coding each theme within the template was evaluated through memoing, based on the new information emerging in the data. Through the process of iterative abstraction new information was used to help refine and enrich the understanding of different concepts related to the research phenomenon. Indeed, where a new understanding of a concept is developed, old information then has to be reconsidered in light of this new understanding. To some extent this highlights the subjective nature of qualitative research where information has to be reconsidered in light of a new understanding or perspective. In order to overcome any potential inconsistencies that may result from a change of perspective or understanding throughout the process of analysis, all interviews from both rounds one and two of research were recoded a final time with template number four before the final stages of analysis.

As discussed earlier, the technique of memoing was a key process in the development of the templates, and therefore, the following section will describe the process of memoing that was undertaken before moving on to discuss the final stage of analysis.

6.6.2.2 - The Process of Memoing

Glaser and Straus [1967] suggest that memos should be orderly, progressive, systematic and easily retrievable for sorting and cross referencing. In light of this a very structured process of memoing was enforced throughout the analysis²⁰⁶. For the interviews gathered during round one of data collection there were four stages of memoing. The first stage or 'preliminary' stage occurred when all round one interviews were coded using the initial template. Within the preliminary memo the emphasis was on observing themes emerging within the data. These emerging themes were then used in the construction of the revised initial template, which was then used to code all first round interviews.

During the second phase of coding, using the revised initial template, two separate memos were recorded. Memo number one contained notes about the participant in the interview, including anything that might affect the manner in which the participant responded, such as; their background, recent experiences that may create bias, any political or social ties that they have and their level of expertise. Aspects of each participant's background were particularly important in this study given the social and political implications of the cocoa market in Ghana. The second memo taken on each interview was part of an evolving document where thematic development and theoretical ideas were explored more fully. These two memos together then guided the process of template adjustment, leading to template number two.

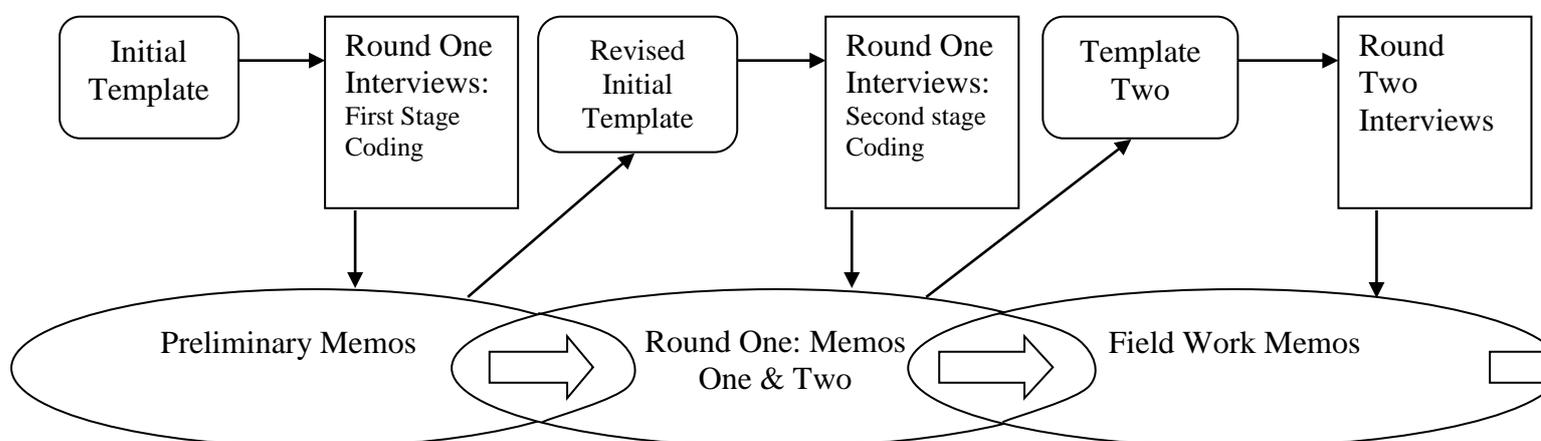
For the interviews carried out in round two of data collection the process of memoing was slightly more focused based on the clearer understanding of themes that had been established within round one analysis. Throughout round two of research in Ghana individual memos were written after every interview based on the themes within template number two. Based on these memos it was possible to make minor adjustments to template number two prior to the coding of round two interviews, as can be seen in appendix number fourteen. During the

²⁰⁶ Figure 6.6 demonstrates the link between the process of memoing and coding.

third phase of coding²⁰⁷, using template number three, two memos were recorded. The first memo focused on the details surrounding the participant in the interview, and the second explored the themes within template number three and their connection with theory.

As demonstrated in figure 6.6, each new round of memos has attempted to build not only on the concepts emerging within each new round of coding, but also the insights garnered from the previous round of memos.

Figure 6.6 – The Link between Coding and Memoing [Source: Author]



Prior to the development of template four, all of the memos recorded throughout the entire analytical process were referred to. This was considered a necessary stage of analytical reflexivity in order to ensure that all themes had been considered in full prior to the development of template four, which would be used for the phase four of coding. During phase four of coding all interviews from rounds one and two were coded with template four. The memo taken whilst coding with template number four focused specifically on developing the key themes identified in previous rounds.

²⁰⁷ As can be seen from appendices four and fourteen the 'Phase 3' of coding is the first time that round two interviews are coded.

6.6.2.3 – Chunking and Data Immersion

Following on from phase four of coding, the process of ‘chunking’ [Crabtree and Miller, 1999] represented the final stage of data sorting in this study. Within the process of sorting interview data is organised into ‘chunks’ of similarly coded text. Crabtree and Miller [1999] find that categorizing data into empirically based and meaningful segments can greatly facilitate the analytical process.

Given the expansive nature of qualitative data it was beneficial to have a clear vision of all the interview data related to each theme. As such, this process greatly facilitated the final stages of analysis. By collecting all this data in one place it was possible to fully assess the validity of some the concepts and ideas that had been developed at an earlier stage, when it was not possible to appreciate the fullness of all of the information within the interviews. Indeed, this acted as another key stage of reflexivity where I was able to adjust any concepts that appeared to be driven by my own predisposition towards an idea, rather than the research evidence.

From my own experience it appears that during the early stages of analysis the threat of researcher bias is at its greatest. Aspects of the research process, such as, the literature review, the establishment of research questions, and the identification of potential generative mechanisms, may act to create a certain predisposition in the researchers mind. As such, there is a risk of focusing on aspects of the evidence which have the closest fit with ideas and concepts that were developed prior to data collection. In light of this, the iterative nature of research in this study and the re-evaluation and reflection that takes place throughout the process of template analysis, have helped to ensure that the validity of ideas are constantly being tested. This took place not only through conceptual reasoning, but also through the re-assessment of old data and the addition of fresh data specifically designed to test the robustness of round one themes.

This process was greatly facilitated by the time in between rounds one and two of data collection. Given the nine month break between field trips I was able to

fully analyse the results from round one before round two data collection. Round one data was subjected to all of the analytical stages including, coding, memoing, chunking and immersion, eventually leading to a full write up of round one findings before the interview guides for round two were developed.

Having round ones findings as a standalone document enabled me to accurately gauge which themes had remained prevalent throughout both rounds of research. As described earlier, time was a key factor in affecting each participant's account of the market. Themes that appeared important in round one were no longer evident in round two. Based on only one round of research such themes would have been assessed as valid within the final templates. As such, once again the iterative nature of this study has had a key role to play in the validity of research findings.

However, the goal of immersion is not only to compare and contrast the two rounds of research. Rather, the goal is to establish a deeper understanding of the partial model based on the structured analysis that has already taken place up to this point. Crabtree and Miller [1999] find that once data has been sorted and the templates have been established it is possible to search for deeper connections within the data, which may have previously been missed based on the overwhelming nature of qualitative data.

As such, the final stages of immersion attempted to spend less time analysing aspects such as the richness data and the strength of each theme, instead focusing on the generative mechanisms at work within the partial model, and how they relate to the research questions. To a large extent this process is facilitated by the challenge which comes with the writing up of research findings, where any element of frailty within the studies arguments would be deeply exposed. Throughout the writing process I was constantly challenged to reassess the strength of my arguments, thus considering as many rival explanations as possible. Not only was it necessary to consider the strength of each argument in isolation, but moreover, each element of the research findings needed to be considered as part of broader narrative on the partial model in Ghana.

At this later stage of analysis it was possible to see causal processes more clearly. In essence the processes of coding, memoing, chunking, and template development enabled me to reach a point where it was possible make a more legitimate assessment of causation. Indeed, whilst themes are initially selected based on a relatively objective criteria²⁰⁸, as the process of template analysis develops through coding, memoing, chunking and immersion, the final templates have been able to achieve the deeper causal explanation strived for in critical realist research.

6.7 – Conclusion

Within the academic literature on research methodology it appears that there is very little guidance on how to construct a methodology for qualitative economic research in the developing country environment. In light of this, the methodology developed within this study has been a largely original development, where the central objective has been to develop a methodology suitable for addressing the phenomenon of the partial model. The approach taken within this study has attempted to strike a balance between the explorative and adaptable nature of qualitative methods, and the need for rigour and reliability within economic research. Throughout the research process structure has been achieved through the use of template analysis as a foundation on which to base the procedural aspects of the methodology. Equally, the problems associated with application of orthodox economic policies within the developing country environment have regularly been used as a starting point from which to build the socially enriched perspective adopted within this study.

Together these two foundational aspects have helped to create a methodology which is both applicable for its application to the developing country environment, and rigorous through the use of a highly structured and iterative process of thematic development. Building on this chapter seven will use the final templates developed for each of the key themes as a structure from which to discuss the findings for this study. Whilst the template itself will not be

²⁰⁸ As noted earlier, themes within the early stages of template development themes are organised based on the richness of data, and the themes link with the research questions.

discussed in great length, the processes described within this chapter have helped to demonstrate that the template is in fact the central structure around which the research findings have been formed.

Chapter Seven – Findings

Section 7.1 - Credibility of Reform

7.1.1 – Introduction

The following section deals with issues surrounding the credibility of reform within the domestic end of the Ghanaian cocoa supply chain. As discussed in chapter four, liberalisation within the domestic market has led to a unique situation where despite the introduction of private sector buyers the Cocobod remains deeply involved in several aspects of the market. In light of this, the issue of reform credibility is expected to play a key role in the level of private sector engagement within the market. Indeed, as observed by Kherallah et al [2000] and Jayne et al [2002], the issue of reform credibility has been paramount in determining the success of market liberalisation policies across sub-Saharan Africa.

In light of the importance placed on reform credibility within the literature chapters, the credibility of reform was highlighted as a key theme prior to the development of round one interview guides. However, within the template for credibility of reform the primary themes of accountability and organisational culture were not identified as factors affecting credibility prior to data collection. As such, they are considered emergent themes.

Within this primary theme of accountability, it was possible to identify several a priori themes that were observed throughout the literature review. In fact all four secondary themes including linkages with the government, moral hazard and rent seeking and good governance were all identified within chapters two and four.

The primary theme of organisational culture presents a mixture of emergent and a priori themes. Whilst, the secondary theme of control emerged throughout the

research process, the theme of institutional change was foremost in the new institutional economics literature highlighted in chapter two.

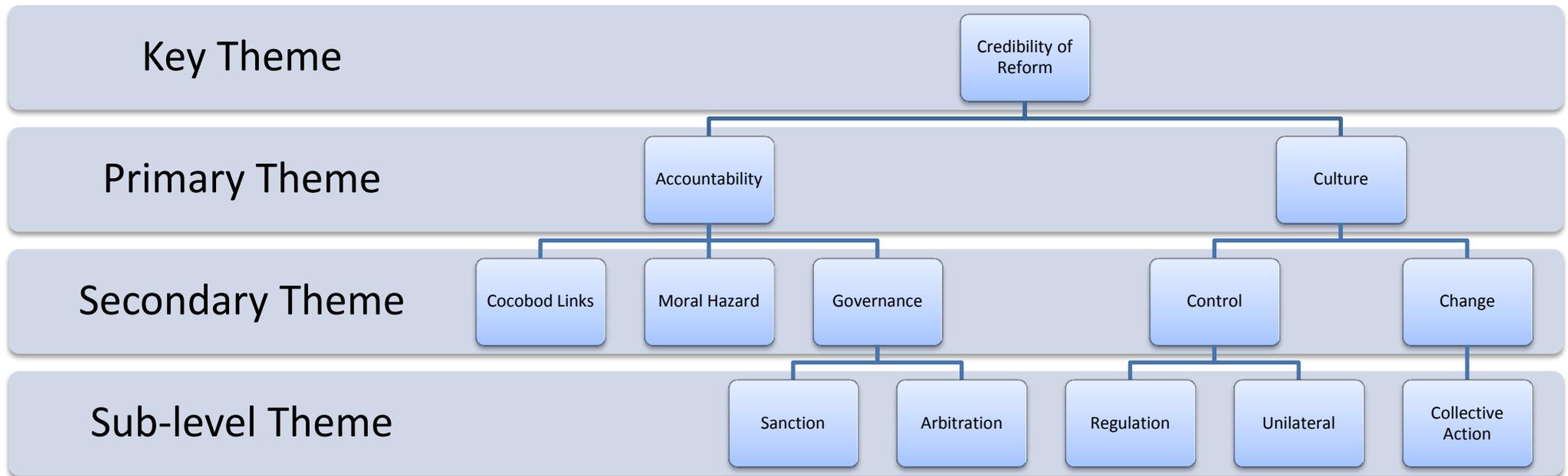
The structure of themes within the final template can be seen in a linear format in figure 7.1.1 and in a hierarchical format in figure 7.1.2.

Figure 7.1.1 – Final Template: Credibility of Reform

- The Accountability of Cocobod Subsidiaries
 - Links with the Cocobod
 - Moral Hazard and Rent Seeking
 - Good Governance
 - Cocobod Sanction
 - Arbitration

- Cocobod Organisational Culture
 - Control
 - Tight Regulation
 - Unilateral Decision Making
 - Institutional Change
 - Collective Action

Figure 7.1.2 – Hierarchical Final Template: Credibility of Reform



7.1.2 – The Accountability of Cocobod Subsidiaries

7.1.2.1 – The Role of Cocobod Subsidiaries

Within Ghana the Cocobod remains active in the cocoa market, not only through tight regulatory conditions, but also through its control of the QCD and CMC. The institutions of QCD and CMC impact extensively on the daily operations of the LBC's. Across both rounds of interviews all LBC participants²⁰⁹, except one, have indicated that the Cocobod's close relationship with these two institutions was something they had hoped would change in the process of liberal reform in Ghana. When commenting on the role of the CMC and the QCD one LBC manager noted that,

'The controls being exercised by the Cocobod are not on the decrease as I was expecting'.

As observed above change in this area has not occurred and findings from the LBC segment strongly suggest that the Cocobod's continual attachment to the QCD and CMC acts as the most significant factor negatively affecting the credibility of reform. The QCD and CMC are negatively associated with market credibility because, as subsidiaries of the Cocobod, LBC's perceive there to be a regulatory bias towards these institutions. This can be seen from the following passage:

'If a regulator is only overseeing what people are doing it is fine, but the QCD they play a very vital role in the success of the LBC's, the CMC they do the same, but he [Cocobod] controls them and when he does the rules he favours them a little bit'.

²⁰⁹ Unless stated otherwise, 'all LBC participants' includes all those under the title 'LBC Participants' in appendix eighteen. This does not include any of the 'rural participants' in appendix eighteen. This rule will apply for all findings sections in chapter seven.

As observed in chapter two, the government's lack of commitment to reform has been highlighted as a factor leading to the failure of liberalisation policies throughout sub-Saharan Africa [Jayne et al, 2002; Kherallah et al, 2000]. In light of this, the Cocobod's strong links with these institutions and the resultant perception of bias within their regulatory actions appears to significantly affect the credibility of reform in Ghana. This is particularly so given that the functions of these institutions are closely integrated with the daily operations of LBC's. Indeed, all LBC respondents considered these institutions to be the Cocobod's representatives in the field, somewhat diminishing the perception of liberalisation within the internal market.

7.1.2.2 – Moral Hazard and Rent seeking

Throughout both stages of research all LBC respondents were highly critical of the Cocobod's regulation of the QCD and CMC. In particular all LBC respondents complained about the Cocobod's failure to hold QCD agents accountable in cases of malpractice. Within interview accounts the problem of accountability is particularly evident in relation to the Cocobod's response to inconsistent grading of cocoa from QCD officers. Typically this inconsistency involves cocoa being passed by QCD's graders at the first quality check upcountry and then failed by a different set of QCD graders once cocoa has been transported to the takeover centres where the second quality check takes place.

Despite the Cocobod's contention that this is not a regular occurrence, every LBC participant across both stages observed this problem²¹⁰ and associated it with costly delays incurred when they have to take time fixing quality defects at the port. In criticism of this, all LBC respondents noted that it is much more costly and logistically problematic to fix quality problems at the port compared with the upcountry level. If a problem is detected at the upcountry level then given the traceability²¹¹ system used in Ghanaian cocoa it is possible to get the

²¹⁰ On average LBC's found that between 5-10% of their cocoa would have to be reconditioned at the takeover centres before being taken over by the Cocobod.

²¹¹ Each sack of cocoa in Ghana displays information on the PC who first bought the cocoa, the LBC it was sold to and the grader who gave it his/her seal of approval.

purchasing clerk, who originally bought the poor quality cocoa, to carry out the additional work at no extra cost to the LBC. However, if the defect is noticed at the port, it is more costly and time consuming to rework the cocoa and tracing the problem back to the original point of quality failure is much more challenging. Commenting on this problem one LBC manager observed that,

‘The upcountry check, they don’t regard it when it comes to the port’.

Indeed, this problem has been in the system for some time as observed in the LMC report [1996]. The most high profile example of this occurred during the purple bean problem of 2004/05, where LBC’s were being fined up to 50% of their commission for a quality defect, which had not been detected by the upcountry QCD graders. Understandably LBC management consider this to represent poor performance on the part of the QCD and therefore not something they should have to pay for.

Another scenario, as described by the Deputy Managing Director of the QCD and two respondents from the LBC’s, is that QCD staff may be captured by LBC district level staff in the form of a bribe. As observed in chapter two, the risk of public agents being captured by interest groups is one of the biggest organizational challenges facing public sector bureaucracies [Tirole, 1994; Dixit, 2002]. Where this problem occurs in Ghana, a financial incentive may be given to a member of the QCD’s upcountry staff by an LBC district officer²¹² to either ignore poor quality cocoa or speed up the grading process, in the hope that any poor quality that is passed will not be detected at the later takeover centre grading.

However, as observed earlier, where any quality problems are detected at the takeover centre this will typically result in the LBC having to carry out expensive reconditioning on the cocoa. In light of this, LBC management do not want their

²¹² This could include any member of staff working at the district level. Within appendix eighteen such participants are under the title of ‘rural participants’.

field agents to act in this way, as indicated by all LBC participants. This can be seen in the following passage taken from an LBC interview,

'You see it is not in the interest of we the LBC's for him to take big money, seal the wrong product, take it all the way to the port, for it to be rejected and confiscated'.

Nevertheless, this problem occurs due to the inability of the top management, in both the LBC's and the QCD, to effectively monitor the actions of the staff in the field. The problem of rent seeking is so extensive within the Ghanaian quality control system that all LBC managers, with the exception of one, complain that no cocoa will ever be graded and sealed by the QCD without some financial incentive being given. As noted by one LBC manager,

'As for that, you have pay, there is no cocoa sealed where you don't pay something'

This problem, which was also observed by Laven [2007], is known in the market as QCD VAT. Indeed, as observed by Bardhan and Udry [1999] in chapter two, the problem of de-centralized corruption in the form of bribe taking is highly problematic within Africa markets.

QCD officers are not remunerated in the form of a high powered incentive contracts and instead have fixed rate salaries. As such, faced with low powered incentives, QCD officers have the opportunity to take advantage of the colossal information asymmetries that exist between themselves and their managers. Information asymmetries in this area exist in a number of forms, and to a large extent it appears that this may be the main reason for the frequency of this problem.

Cocobod sources have indicated that given the organisation's centralised operations it is very difficult for them to monitor the actions of both their subsidiaries and LBC's in the field. Indeed, two Cocobod respondents highlighted

this as an area where the organisation needs to improve. The vast majority of the Cocobod's monitoring is based on reports submitted from the field, as opposed to actual field observations. Commenting on the Cocobod's monitoring one industry source found that,

'Everybody [in Cocobod] likes to sit in Accra and look at paper'.

Similarly a Cocobod source noted that,

'Sometimes we who sit in Accra are not in touch with the reality down there [in the field]'.

As such, it is the QCD themselves who are seen as the Cocobod's monitors in the field, thus making it highly problematic to collect information which may render a QCD officer culpable in the case of quality failure. Coupled with this problem is the disincentive LBC's face to report QCD officers in any case of malpractice. In an environment where QCD resources are already thinly spread, the favour of QCD officers is something that LBC upcountry staff will attempt to court in order to speed up the grading procedure. All LBC managers therefore find that reporting QCD officers is not something which their upcountry staff are willing to do. Indeed, this problem is also observed by the DMD of the QCD, finding that,

'They will try to cover themselves up, they live in the same village, they live in the same town, they drink together, they eat together, if there is a problem this one will say it is not true'

Further information asymmetries are caused by the subjectivity of quality grading itself, where the QCD upcountry staff and the QCD staff at the takeover centre may have a difference of opinion. Indeed, this problem is observed by the LBC respondent in appendix twenty-three. Resultantly, it appears that QCD officers are given some margin of error in the grading process, ultimately enabling them greater freedom in terms of moral hazard behaviour. To a large extent this problem is further heightened by the negative effect that weather

exposure can have on cocoa quality. After upcountry grading cocoa will regularly sit on trucks waiting for takeover at the port for several weeks. Under the extreme heat, humidity and rainfall of the Ghanaian climate this can cause quality to change between the stages of quality grading.

Finally, the actions of the LBC's themselves have caused an increased level of information asymmetry within the quality control system in Ghana. Over the years LBC agents have been caught trying to swap high quality cocoa that has been graded and sealed by the QCD, with low quality cocoa beans in the process of cocoa transit. This act is highly illegal and this breach of trust by LBC staff has created a further variable of doubt when attempting to determine the cause of quality failure. Indeed, the impact which such actions have had on the mindset of Cocobod staff can clearly be seen by the fact that, within six of seven interviews²¹³ where Cocobod officials were asked to comment on the issue of inconsistent grading, the problem of LBC's switching cocoa was cited as one of the main reasons for this.

7.2.1.3 – Good Governance

7.2.1.3.1 - Cocobod Sanction

In light of the above problems associated with opportunism from QCD staff, it might be expected that both the Cocobod and QCD management would have taken a strong stance in sanctioning malpractice amongst their staff. However, based on the responses of all LBC participants in round one it appears that inconsistent grading and rent seeking very rarely leads to any form of sanction

²¹³ To avoid ambiguity the respondents who make up these seven Cocobod interviews have been marked with the symbol ✓ in appendix eighteen. These seven interviews will be referenced with some regularity throughout sections 7.1-7.4, as they make up the core group of Cocobod interviews where questioning covered the Cocobod's role in the domestic supply chain. For example information from the two interviews carried out with members of the CMC will not be referenced with regularity throughout sections 7.1-7.4. Within sections 7.1-7.4 information from CMC interviews will only be used in cases where it is either stated that a member of the CMC has expressed a certain opinion, or where it is stated that 'all' respondents from the Cocobod segment have expressed a certain opinion. The same rules will apply for the interview with the Coordinator of the CODAPEC program, who was also not questioned in detail on the role of the LBC's in the market.

for the QCD officer who has under-performed. Throughout both stages of research this is expressed as a concern for all LBC's respondents, as demonstrated by the interview passage in appendix twenty-three. Indeed, the lack of accountability for Cocobod subsidiaries and regulatory bias exemplified by this problem highlights a significant failure in the credibility of the partial liberalisation model.

As discussed earlier the level of information asymmetry in this area is a major challenge for the regulator when assessing who is at fault for any change of quality between the stages of grading. Nevertheless, the Cocobod must be criticised for their method of sanctioning in this area. Interview findings strongly suggest that the Cocobod's judgment in this area may be biased against the LBC's. From stage one interviews with LBC's, the Cocobod, and the QCD it could be seen that in cases where collusion has taken place between LBC upcountry staff and a QCD grader, it is the LBC who takes the majority of the blame for such behaviour.

Within all seven of the interviews where respondents Cocobod respondents were asked to comment on the issue of malpractice, the respondent displayed the preconception that it is always the LBC's who have acted opportunistically in cases of malpractice. This can be seen from the following quotes taken from interviews with the Cocobod, 'invariably they [LBC's] are on the wrong-side, buyers are full of tricks', and, 'LBC's are in the habit of trying to cut corners'. As such, the Cocobod and QCD management need to adopt a more balanced perspective, thus enabling them to address cases of malpractice in an impartial manner, as would be expected of a credible market regulator.

Furthermore there is a need to increase the level of equality within the distribution of punishment in cases of mal-practice. Interview findings show that in cases where a QCD agent is at fault, the responsible agent will be sanctioned individually. However, in cases where an LBC agent is at fault, the entire LBC organisation is punished. As such, the comparative risk faced by the

QCD organisation appears to be less than that faced by the LBC's. This is seen in the following statement from an LBC manager

'Why when the LBC agent misbehaves they sanction the LBC as a company, but when the Cocobod agent misbehaves they deal with the agent separately'.

By condoning this behaviour the Cocobod is clearly sending out the wrong message to QCD management. In turn this may reduce the QCD's incentive to monitor their staff, thus creating an environment where QCD employees may consider opportunism a priori possible. Indeed, given that it is the QCD who are empowered with the ultimate authority to uphold the quality of Ghana's cocoa it should perhaps be they who take the greatest responsibility in such instances of connivance.

Stage two interviews do, however, indicate that the QCD may be increasing the accountability of upcountry graders. Eight of fifteen LBC managers interviewed in stage two found that Cocobod has been making some effort in this area. Similarly all Cocobod respondents in stage two noted both increased awareness and action in relation to staff accountability. The need for the QCD to take greater responsibility in this area was made especially clear in the stage two interview carried out with the Deputy Managing Director of the QCD. This can be seen from the following passage taken from that interview,

[R] At the upcountry level who has the greatest responsibility for quality?

[QCD] 'It is the QCD, because at the end of the day parcels would not be moved down to the takeover centres if they had not been certified by the QCD'.

Later in the same interview, he also expresses his desire to try and hold employees more accountable for failure in this area,

'If you grade cocoa upcountry we expect you to do a diligent job ...we have sacked a lot of people because of this'.

Indeed, this must be considered a positive sign of change as compared the stage one interview with the same person where despite acknowledging that QCD officers may be at fault, there was much greater responsibility placed on the role of the LBC. However, whilst QCD management did appear to be taking more responsibility for the performance of their graders, based on interview findings it does not appear that the QCD have put in place a formal programme to deal with this problem. Building on this, it is possible to reference the recommendation of Dixit [2002], who finds that when it is not possible for the principle to directly observe the actions of the agent and therefore punish the agent in instances of moral hazard, it is necessary for the principle to devise a system to measure long-term performance. Through such a system it would be possible for QCD management to identify patterns of poor performance amongst upcountry graders whose cocoa is regularly rejected at the takeover centres. As such, despite information asymmetries long-term performance data would enable the principle to effectively measure the level of effort being applied by the agent. In doing so, performance measurement²¹⁴ would increase the accountability of staff operating the field and thus increase the credibility of the Cocobod's subsidiary operations.

7.2.1.3.2 - Arbitration

Building on the recommendation above, the accountability of civil servants operating in the partial model is an area in need of improvement. This finding is not only based on the institutionalised rent seeking of QCD staff, but also recent problems involving the staff of the CMC²¹⁵. Closely related to this, Bates [1981], North and Weingast [1989] and Levy and Spiller [1994] find that in order to achieve the perception of credibility within government intervention, there must

²¹⁴ Kaufmann [2004] recommends rigorous performance monitoring through empirical measures as an effective method to increase the accountability of civil servants.

²¹⁵ In October 2007 it was discovered that CMC and QCD staff had defrauded the Cocobod out of several thousand tonnes of cocoa, by sending short weight shipments of cocoa to the Cocobod's overseas clients. This resulted in a claim against the Cocobod and the payment of \$460,000. In response to this problem the Cocobod sacked thirty-seven staff at the CMC. The Insight Newspaper [2007] 'Ghana loses €46 billion from cocoa export' <http://www.myjoyonline.com/business/200710/9716.asp>.

be an institution with power to constrain arbitrary behaviour by the government. Indeed, within the partial model, where government institutions are so heavily integrated with private sector operations, the necessity of such an institution is magnified.

At the very basic level this would involve a credible mechanism of appeal, through which LBC's could voice concerns over decisions made by the Cocobod. Within all interviews seven of the Cocobod interviews discussing the topic of LBC sanction, it is observed that at the current time LBC's may use an informal method of appeal against sanctioning. This most commonly involves writing a letter to the chief executive. However, when questioning LBC's on this, 71% of respondents across both stages of research indicated that this is not a credible method of appeal. Indeed, within stage two alone six well-established LBC managers found that throughout their time in the market they had never been informed of any formal process through which they could appeal a Cocobod decision. Therefore, establishing a credible method of dispute resolution may be considered hugely important within the partial model. This is especially true given that due to the unique structure of the market the Cocobod is not only the regulator, but a player as well. In cases where there is a dispute between an LBC and the QCD, it is presumed that the Cocobod will be inherently biased towards their own subsidiary due to both financial and cultural reasons. This can be seen in the following passage taken from an interview with two senior managers of an LBC.

[R 1] 'We think that their [the Cocobod] attachment to the other key players in the industry is one of, or, the main reason, why we see them the way we see them...because they have vested interests in the QCD, in the Cocoa Marketing Company, so you find that if the cocoa marketing company are not efficient, who talks to them? It is like a baby of the Cocobod'.

[R 2] 'They cannot be objective...if it was an independent institution which doesn't have anything to do with either the LBC's or the Cocobod...they would be more objective in their statements, in their judgements'.

Moreover, it can be seen that the relative incapacity of LBC's to hold the Cocobod accountable for their actions, presents a significant imbalance within the partial model. Under this structure LBC's could perform very well, but still suffer due to the inefficiencies of the Cocobod, as seen from the following statement from an LBC respondent:

'While the Cocobod has a lot of sanctions it can apply to LBC's it does not hold itself accountable for any value loss, or cost it passes on to an LBC because of its inefficiencies'.

However, within all seven of the Cocobod interviews discussing the topic of LBC appeal, it was indicated that the Cocobod have not considered either a more formal method of appeal, or an independent arbitrator. Indeed, within three Cocobod interviews the question of appeal and arbitration is often linked with the inherent assumption that LBC's are always at fault, thus creating the perception that there is little need for such a mechanism. The apparent apathy demonstrated by the Cocobod in this area is not surprising in light of the Cocobod's dominant position of power within the partial liberalisation model. The omission of a credible appeal system does however represent a significant failing in the partial model, and may to some extent restrict the potential for learning and development within the Cocobod itself.

The Cocobod has improved its performance in several areas since the externally enforced changes of structural readjustment in 1992. Indeed, as indicated by all Cocobod respondents across both stages of research the pressure of reform in the early 1990's did encourage some positive changes within the Cocobod. However, as suggested within recent development literature [Kaufmann et al, 2009], governance and accountability can have a significant effect on market performance, and as such, there is a need for the Cocobod to address the current accountability issues amongst their staff. In light of this, it is recommended that the Cocobod implement an independent arbitrary body with the capacity to increase the accountability of the Cocobod and all of its subsidiary institutions.

7.1.3 – Cocobod Organisational Culture

Given its well-documented historical background and the significance of its influence within the Ghanaian cocoa market, it is not surprising that the culture of the Cocobod as an organisation emerged very strongly throughout the research process. Within this section we are interested in two main aspects of the Cocobod's organisational culture, firstly, how it manifests itself on their style of market regulation, and secondly, the challenge of encouraging change within an old and traditional organisation.

7.1.3.1 - Control

7.1.3.1.1 - Tight Regulation

Across both stages of research it is clearly evident from all interviews within the Cocobod sample that as a regulator they like to have a tight grip on all that takes place in the market. For LBC's this is reflected in a very rigid operating environment where the sanctions that result from operating outside of the Cocobod's guidelines are both numerous and severe. As reflected in the sections above, this is partly due to the Cocobod inherent suspicion of LBC's. This is observed in all interviews within the Cocobod sample and can be seen in the following statements from Cocobod officials,

'The cocoa industry is not the place where when you're handling you must be smiling, when you smile they do too many things, you need to keep them on their toes'.

'From the regulators' point of view if you do not apply the big stick everything will go haywire'.

To some extent the Cocobod's attitude towards LBC's may be based not only the mal-practices that have taken place since 1992 reforms, but also the Cocobod's

experience with private buyers in previous eras of liberalisation. In chapter one it is noted that one of the Cocobod's first tasks after being established in 1947 was to protect farmers from the manipulative practices of private buyers. As such, this preconception with the need to control the private sector may be firmly embedded in the Cocobod.

Interestingly, the Cocobod's current scepticism towards the LBC's may be somewhat justified in light of the admission from all LBC respondents across both stages of research that there is a large amount of malpractice in the local buying market. This can be seen in the following observation of an LBC manager,

'Honestly there is fraud in the field, some buying companies close their eyes to these sorts of things because they enjoy from it'.

Indeed, as noted by Poulton [2006] liberalisation in other cocoa markets has led to various problems associated with a decline in coordination both in terms of the decline in government provided public goods and the removal of government enforced constraints on private sector action. Therefore, whilst the Cocobod's authoritarian style of regulation may be criticised for the impact it has on private sector freedom within the market, it is equally important to recognise the benefits of this approach in the case of developing country markets. To a large extent it appears that the Cocobod's cultural tendency towards control has enabled them to achieve a level of stability in Ghana that has been absent in other examples of liberalisation. In light of this, significant changes in the Cocobod's style of regulation would not be recommended. Indeed, any adjustments in this area, which may be somewhat justified based on the objective of private sector encouragement, must not compromise the Cocobod's position as the clear ruling authority within the market.

7.1.3.1.2 - Unilateral Decision Making

Whilst the Cocobod's cultural tendency towards control can clearly yield certain advantages, it may also engender an attitude of neglect towards the needs of

other participants in the market. Coupled with this is an unyielding perception of self-belief that can be seen in all Cocobod interviews, and also through the observation of Cocobod respondents. After many years of total monopoly control in the market the Cocobod have clearly become accustomed to the habit of taking decisions unilaterally. Across both stages of research all LBC respondents highlight this as a major problem, as reflected in the following statements by LBC managers,

‘We think we are the major participants, we think we must be involved by way of discussion instead of just being involved by way of information, they normally take decisions before they inform us, before we protest’.

‘If they would sit down and talk it will help everybody because at least they will hear our views before they make changes’.

Despite their position of considerable importance in the supply chain, LBC’s do not participate in Cocobod decision making beyond a few very basic considerations. The most high profile example of this was the Cocobod’s failure to consult LBC’s before increasing the price they have to pay farmers for their cocoa mid-way through the 2007/08 season²¹⁶. This was highlighted by nine of the fifteen LBC respondents in stage two. Increasing the farmer price by 26% mid season is clearly going to have a serious effect on the LBC’s not least in the amount of extra money they would have to borrow to purchase the cocoa. Interestingly, the problem of unilateral action is also observed by three respondents in the external buyers segment that and key informant.

As observed by Poulton et al [2006] and Kherallah and Kirsten [2002], unilateral action from the government can reduce the perception of market credibility and increase the level of transaction risk faced by private sector investors. Therefore,

²¹⁶ The farmer price in Ghana is normally fixed for the entire cocoa season, thus enabling LBC’s to plan their finances quite accurately. The Cocobod’s decision to change the price in the 2007/08 season was based on the large price increases in the global cocoa market that meant that farmers working under a free market system in the Ivory Coast were getting a higher price than in Ghana. Before Ghana increased its price this led to around 60,000-100,000 tonnes of cocoa being smuggled from Ghana into the Ivory Coast.

whilst it is not the Cocobod's natural tendency to involve stakeholders in decision-making forums, change in this area will be required. Indeed, throughout all LBC interviews this was strongly emphasised as a change that would greatly increase their perception of belonging within the partial model system. Furthermore, the positive contribution that additional stakeholders could make in the Cocobod's decision making process cannot be overlooked. Based on the attitude displayed by all but one of the respondents in the Cocobod sample there appears to be a relatively homogenous and institutionalised way of thinking within the Cocobod, which may have been developed through years of total market control.

This finding may be linked with North's [1990] conception of path dependency within institutional change, where the cultural and social attachments that individuals form with an institution over time will influence the pace and direction of change. Such attachments may stagnate the process of change, where embedded individuals can use their authority to affectively entrench themselves within the traditional structures of the institution. Indeed, when commenting on the Cocobod's organisational culture one industry informant noted that,

'When parastatals get too big people will get entrenched and presume certain powers.'

As such, the Cocobod's strong organisational culture and the level of power afforded to those in senior positions may be contributing to the slow pace of reform in Ghana. However, as observed by Kydd and Dorward [2004] change and reform is a necessary process within the partial model, enabling both the role of the government and the private sector to respond to the emerging conditions in the market. In light of this the Cocobod might be advised to accept a greater level of input from outside stakeholders in order to help them adjust to new challenges as they emerge within the partial model.

7.1.3.2 – Institutional Change

7.1.3.2.1 - Collective Action

In light the above problems relating to the slow pace of reform in Ghana, it is necessary to draw attention to Olson's [1965] argument that effective collective action can lead to institutional change. Within Ghana the platform through which collective action could take place between LBC's currently exists through the licence buyers' association, also known as Licobag. Earlier in the section on arbitration it was observed that regulatory credibility would be improved by establishing an institution to provide some level of constraint against arbitrary government action. Whilst it is more typical for a court of law, or independent council to perform this role, to some extent the Licobag may help to provide some constraint against arbitrary action from the Cocobod. Support for this argument comes from the finding that across both stages of research all LBC respondents found that the number one objective of the Licobag was to present a common voice against the Cocobod. This can be seen in the following extract taken from an interview with an LBC manager,

'Most of Licobag's agenda is concentrated on Cocobod, Cocobod is a very very strong counter-party and considering they control everything in the chain if you don't have a strong platform in which you can give feedback to the Cocobod you would not be able to get the Cocobod to listen to you'.

Indeed, collective action between LBC's in recent years has contributed to some positive change with regards to both market conditions and the attitude of Cocobod towards LBC's. This was particularly evident in the 2004/05 season when Licobag organised a public press conference to protest against the poor market conditions they faced at that time. During interviews four Cocobod indicated that this show of strength from the LBC's was a major surprise for the Cocobod and forced them to take greater regard of LBC concerns in order to avoid such an incident occurring again in future.

However, despite this clear sign of potential, around 75% of LBC respondents across both stages of research expressed the opinion that the Licobag was largely ineffective at representing the LBC's in front of Cocobod. Whilst all respondents felt that the Licobag was gradually improving, the same respondents also felt that there was room for significant improvement in the future. As observed by all LBC respondents, the most obvious reason for this problem is that LBC's are much more committed to their own self-interest than they are to the collective goals of Licobag. As observed by one LBC manger,

'Every member will have their own self-interest in mind because they are all private players at the end of the day'.

The role of the PBC also presents a constraint to the Licobag's level of success towards the Cocobod. Commanding over 30% market share and having a close relationship with the Cocobod, the significant influence of the PBC is widely observed by all LBC respondents. However, whilst all LBC respondents find that the PBC is becoming increasingly involved in Licobag, 75% of respondents across both stages of research find that they are not fully committed on the issues that really matter. As a former Cocobod subsidiary the allegiance of the PBC is somewhat divided, as can be seen from the extract below taken from an interview with an LBC manager,

'Because of their background it is sometimes difficult for them to come along with us on certain issues... whatever issue that we fight for without their involvement cannot work'

Besides the role of the PBC, Licobag appears to be constrained by its own management structure. In round two of research six of the fifteen LBC respondents found that the most significant improvement that Licobag could make would be the appointment of an independent chief executive. Respondents felt that because the chief executive of Licobag is also a manager for an LBC, he is not able to aggressively pursue the association's objectives without fear of victimisation from the Cocobod. Interviews with all LBC respondents also

indicate that whilst LBC's share the common agenda of lobbying the Cocobod, there is little clarity surrounding the associations detailed goals or plans for action. In this light, Olson [1965] notes that without a clear common goal the strength of collective action is diminished. As such, the appointment of an executive with both the time and independence to establish a clear agenda for action should be the next step in Licobag's development.

The potential benefits of collective action between LBC's can also be seen from interviews carried out with Cocobod officials. In all five of the Cocobod interviews where the respondent was questioned on the Licobag, it was found that the Licobag is considered to be a positive development in the market. Cocobod support is primarily based on the communication channel that has been created through Licobag. Indeed, the deputy chief executive of the Cocobod observes that the Licobag has an important role to play in reporting on the problems that LBC's face within their operations. To a large extent the Cocobod's warmer embrace in this area is also noted by the LBC's, where all LBC participants across both rounds of research observe an improved relationship with the Cocobod in recent years. As such, there may be some future potential for the LBC's to leverage the platform of the buyers' association in order to achieve a greater level of integration into the Cocobod's decision-making process.

Building on section 7.2.1.3 on good governance, collective action amongst LBC's has the potential to increase the level of accountability within the Cocobod. Kaufmann [2004] finds that the type of external accountability provided through key stakeholders outside the government is necessary to augment the type of internal accountability provided by institutions such as arbitration councils. Feedback from LBC's has the potential to stimulate positive change in areas where the Cocobod may otherwise remain negligent. As such, an improved system of appeal may not only lead to the perception of market credibility from LBC's, but equally it may encourage a more responsive and affective Cocobod.

Furthermore, by involving LBC's in decision making forums the Cocobod will help to increase the level of transparency²¹⁷ and credibility within the system. However, as indicated earlier, the Cocobod's culture of control and the resultant practice of unilateral decision making suggest that they have little ambition to involve the LBC's at this level. To a large extent this is confirmed within all seven Cocobod interviews discussing the LBC's role in the market. As such, further change in both the Cocobod's attitude towards stakeholder involvement and LBC's commitment towards collective action will be required before greater this possibility could be realised.

7.1.4 – Conclusion

Throughout this findings section several challenges have been presented surrounding the credibility of reform within the Ghana market. Equally, it must be acknowledged that whilst there are some problems associated with credibility, at the level of application many of the Cocobod systems are performing very well. Indeed, given the findings of past studies examining the credibility of reform within African commodity markets, it might be suggested that the Cocobod have performed with credit in a market system where there are many opportunities for rent-seeking. In light of this, radical change and overhaul is not recommended. There is, however, a need to address issues surrounding the structures of governance that are designed to control the actions of civil servants within the partial model.

Furthermore, it has been found that balancing the needs of different stakeholder groups appears to be one of the most significant challenges facing the Cocobod as a result of the move to partial liberalisation. Whilst the Cocobod's stern regulatory approach has enabled them to achieve control over LBC actions, it appears that based on their predisposition towards market control the Cocobod have been failing in their responsibility to address some of the challenges facing

²¹⁷ Transparency, which can be defined as 'the degree of clarity and openness with which decisions are made' [ODI, 2006, p2], is considered a key indicator of good governance [Kaufmann et al, 2009; Hyden et al, 2004].

LBC's. To some extent this may be caused by the embedded nature of the Cocobod's organisational culture that has been developed throughout their long history of total market control.

There are some positive signs that the Cocobod's attitude towards this problem may be improving. As such, the Cocobod and the LBC's may have an opportunity to work towards a greater level of engagement within the coming years. Indeed, by making minor changes required to improve the standard of governance within Cocobod departments, the Ghanaian cocoa market may be able to avoid the sort of 'knee-jerk' and damaging changes that can result from prolonged periods of disharmony within the market.

Section 7.2 – Supply Chain Management

7.2.1 – Introduction

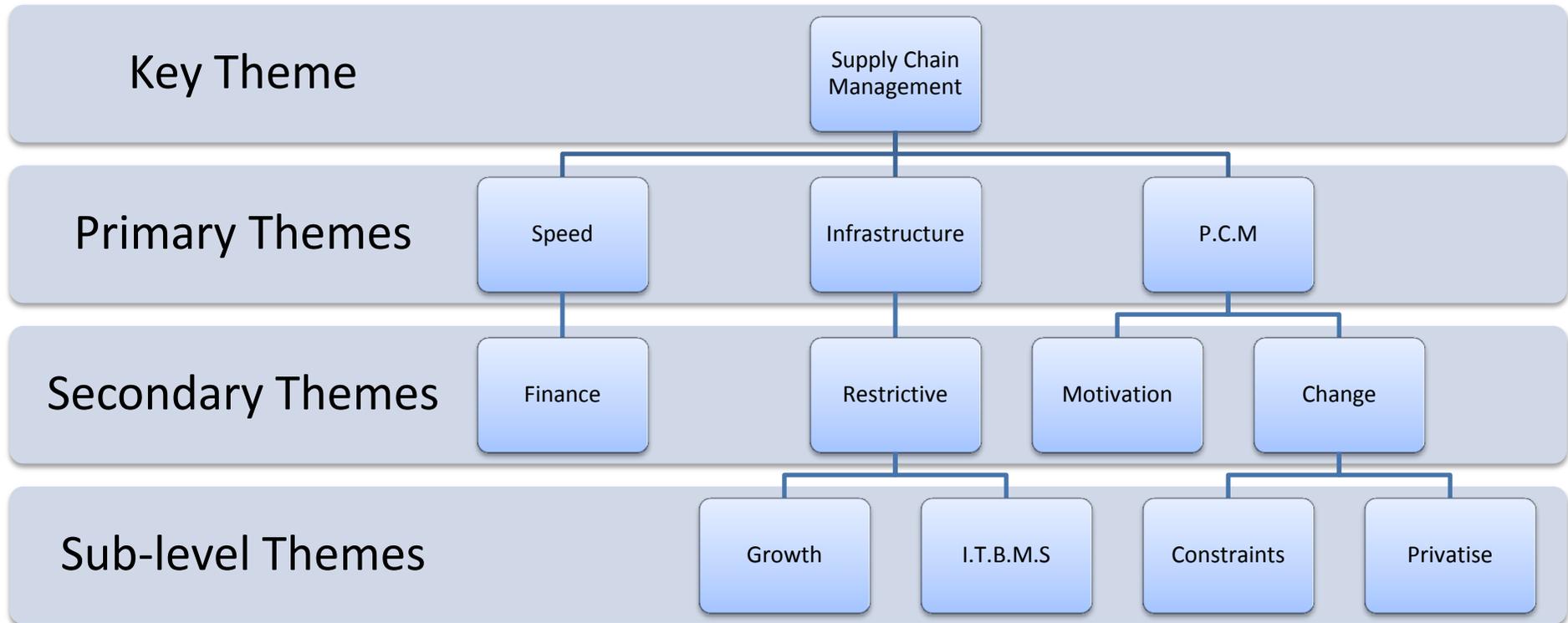
Despite being largely overlooked in recent studies of the Ghanaian cocoa market [Fold ,2002; Laven, 2005], the Cocobod's management of supply chain infrastructure emerged throughout the research process as one of the most important issues facing the credibility of the partial model. Indeed, in many ways this issue very clearly highlights the challenges arising from the high level of interdependence between the government and private sector within the partial model. For LBC's, the speed at which they can turnover their purchases is vitally important to their profitability, placing a great deal of pressure on the Cocobod's supply chain infrastructure to manage the demands of the LBC delivery schedule. As observed in chapter four there have been some problems in this area in recent seasons leading a clashes between the LBC's and the Cocobod [Varangis and Schreiber, 2001]. In light of these problems, the following section will explore the causes of this problem in more detail, using the insights gained from interview data to make recommendations for future changes in this area.

As observed in the introduction above the theme of supply chain management has emerged strongly throughout the research process. Resultantly all of the themes within the template for this section are considered emergent themes. Nevertheless, the template does build upon some of the theoretical insights covered in chapter four. In particular the theme of 'restrictive environment' explores the appropriate balance between competition and coordination [Poulton et al, 2004], whilst the theme of public sector management explores both the government's role in infrastructural development [Kydd and Dorward, 2004], and the process of change within a public sector bureaucracy [Tirole, 1996].

Figure 7.2.1 – Final Template: Supply Chain Management

- Speed of Turnover
 - Finance Costs
- Infrastructural Limitations
 - Restrictive Environment
 - LBC Growth
 - Incentive to Build Market share
- Public Sector Management
 - Civil Servant Motivation
 - Change
 - Cocobod Constraints
 - Privatisation

Figure 7.2.1 – Hierarchical Final Template: Supply Chain Management



7.2.2 – Speed of Turnover

Throughout both stages of research all LBC respondents emphasised that speed of turnover was one of their greatest concerns in the market. Speed of turnover is crucial for three main reasons.

Firstly, the margin LBC's receive on each bag of cocoa delivered is calculated based on the assumption that buyers will be able to achieve at least 2.2 turnovers of the seed-funding provided by Cocobod. If buyers do not achieve this figure of 2.2 then the cost and revenue streams which the Cocobod forecast for the LBC's prior to the fixing of the buyers margin are not accurate. As such, LBC's are required to achieve at least 2.2 turnovers if they wish to make any profits, as determined by the fixed buyer's margin set by the Cocobod.

Secondly, due to the finance constraints facing LBC's, they are forced to operate with a limited amount of working capital. Therefore, by recycling their capital quickly, LBC's are able to go back into the market to buy more cocoa and increase their market share. Indeed, as noted by Fold [2008], Vigneri and Santos [2007], and Laven [2005] LBC's have been competing with a strategy of market share maximisation. In support of this, eleven out of the thirteen LBC respondents in round one indicated that they were following a strategy of market share maximisation. As noted by one LBC manager,

'Each LBC would like to have a larger market share, because that is where you are able to break even or maybe make some profit, the smaller your share of the market the lesser your profit and the more difficulty breaking even'.

Thirdly, the faster LBC's recycle their finances the quicker they are able to pay back any loans accrued, thus lowering their finance charges. Again, the link between finance charges and speed of turnover has also been noted in past studies by Fold [2002] and Losch [2002].

These points were emphasised by a former employee of the Cocobod now working for an LBC,

‘When I came here I realised that time is a very important factor to the licence buyer, a very very important factor, if you are able to turn around very fast, in the first case you cut down your interest charges, in the second case you increase your margin because the higher the turnover the better’.

7.2.2.1 – Finance Costs

Whilst the buyers margin and market share are clear incentives to improve speed of turnover, throughout interviews the main concern emphasised by all LBC respondents in relation to speed of turnover was cost of finance. Cocoa is an expensive crop and all buyers have to borrow money in order to enable purchasing. As noted in Chapter four, the majority of LBC’s gain ‘seed-fund’ financing from the Cocobod to purchase cocoa²¹⁸ at an interest rate of around 10-15%²¹⁹. However, interview findings indicate that all of the top ten LBC’s gain between 30-70% of their financing for crop purchases from external sources including bank overdrafts or parent company financing. As noted by a manager at one of the largest LBC’s,

‘Cocobod is not able to give you all the money that you need to buy cocoa, so LBC’s have to resort to overdrafts or short term loans’

Indeed, it appears that external financing may be a competitive necessity for the top LBC’s, enabling them to achieve the required volume and flexibility in their purchasing activities. In this light, all of the LBC’s interviewed observed that because the Cocobod recall their seed-fund loans in February it is necessary to take bank loans if you wish to purchase cocoa later in the season. Furthermore, when there are delays along the supply chain and LBC’s are unable to recycle

²¹⁸ As noted in chapter four seed-funding can only be used to purchase cocoa. All other expenses have to be covered using company finances or bank loans.

²¹⁹ The seed-fund rate is closely linked with the prime bank rate in Ghana, and is usually around 1-2% points below the prime rate.

their seed-fund efficiently, external funding is required to support purchasing. As noted by one LBC manager,

'We do make arrangements of up to 50% in overdrafts to tie ourselves up in between the takeovers and deliveries...we do that so that we can continue to operate'.

External financing does, however, increase the LBC's cost of capital as bank loans will be borrowed at an interest rate of around 20-23%. As such, the extra cost faced by external financing gives LBC's an additional incentive to work efficiently and maximise their use of the Cocobod's cheaper seed-funding, thus minimising the extent of expensive external financing they have acquire. The additional cost of external financing can be seen in the following passage,

'Currently we are paying 11% from the Cocobod, but 22% from the banks, which is outrageous, when you consider what happens in Europe with regards to interest rates then even 11% is killing, so if you are supposed to pay 22% it is out of place'.

In light of the above problem it would appear that the level of underdevelopment within the Ghanaian banking sector is a major problem facing LBC's. Furthermore, whilst the Cocobod may be commended for offering LBC's a lower rate of interest through their seed-funding, in reality this rate of interest is still much higher than that which could be achieved on the international market. As noted by Shepherd and Farolfi [1999] local buyers within fully liberalised commodity markets have been able access low cost financing through links with external buyers. However, within Ghana, the vast majority of LBC's do not have access this market due to the Cocobod's monopoly over export sales. Indeed, as noted by LMC [1996], Shepherd and Farolfi [1999], and Fold [2002], LBC's in Ghana have high expectations surrounding their ability to gain international financing in absence of the Cocobod. This finding was supported by eight of the fifteen LBC participants interviewed in round two.

In order to facilitate such linkages major changes would be required in the structure of the Ghanaian market. Recognising the current level of success enjoyed by the Cocobod on the external market, such drastic changes are not recommended in this study. Nevertheless, the findings in this section suggest that given both the Cocobod's monopoly over exports and the significance of finance costs for LBC's, the Cocobod would appear to have a responsibility to assist LBC's with their finance charges. Based on research findings the most logical and cost effective way for the Cocobod to achieve this aim would be through the maximisation of supply chain efficiency, thus leading to an improved speed of turnover for LBC's. In recent years, however, significant problems have been encountered in this area as will be discussed throughout the remainder of this chapter.

7.2.3 – Infrastructural Limitations

Within all agricultural supply chains there is a limitation to the amount of crop that can be efficiently handled any point in time based on the capacity limitations of the supply chain infrastructure. As such, in order for efficiency to be achieved each supply chain should have an infrastructural capacity equal to the level of agricultural production. However, as indicated by Varangis and Schreiber [2001] in chapter four, the Cocobod have failed to achieve this balance. The growth of production, as demonstrated in chapter one, has not been matched by an equal level of development in supply chain infrastructure. Resultantly, LBC's have suffered serious delays along the supply chain. Delays are not only due to the insufficiency of warehouse space at the takeover centres, but also the Cocobod use very outdated and labour intensive procedures for the offloading and weighing of cocoa²²⁰.

This problem has been further exacerbated by the fact that since liberalisation buyers have steadily increased their efficiency and turnover speed. As such,

²²⁰ The problems associated with both the limited capacity of warehouses and the use of outdated modes of takeover are observed by all LBC respondents, and are highlighted by the respondent in appendix twenty-four.

cocoa is now moved from the rural areas to the port in an increasingly short time. Whilst this should be heralded as a liberalisation success, in reality it only further exposes the insufficiencies of the Cocobod's supply chain infrastructure. Indeed, as a result of this problem, all LBC respondents argued that it is not appropriate for the Cocobod to set such a difficult standard as 2.2 turnovers, when it is in fact Cocobod who control the ability of buyers to meet this standard.

The level of negative feeling expressed by all LBC's in this area is highly illuminating, as even amongst those LBC respondents which displayed a high level of support for the Cocobod, supply chain inefficiency was highlighted as a major problem. The following extract taken from an interview with an LBC manager highlights the problems in this area,

[R] 'With regards to the Cocobod's standard of 2.2 turnovers of the seed-fund per season, what are the implications of this for you as a buyer?'

[B] 'In fact, over the years the system has run to make it impossible for us to achieve that, especially because of the quota system, the various regulations and restrictions with regards to the limited capacity the Cocobod have, even in terms of grading and sealing it has not been fast enough for us to meet the 2.2 turnover time'.

[R] 'And if you don't meet the 2.2 turnover standard?'

[B] 'You definitely can't make the profit you want, or need, or is reasonable...because that is the parameter with which they measure and give out margins to the licensed buying companies'.

7.2.3.1 - Restrictive Environment

In the above passage it is observed that the quota system used by the Cocobod is a constraint to the speed of turnover achievable by LBC's. With the exception of one respondent, all LBC personnel interviewed across both stages of research

greatly criticised the quota system. The quota system was put in place by the Cocobod during the 2005/06 season in order to alleviate the supply chains congestion problem by regulating the flow of LBC deliveries to the takeover centres.

At the beginning of each season, all LBC's are individually granted a certain delivery quota at each of the three takeover centres, based on their purchasing performance in the previous year. The quota will state how much cocoa they are allowed to deliver each week to Ghana's three takeover centres. If an LBC attempts to deliver cocoa outside of their allotted quota they will face delays and may be subject to sanction from the Cocobod. Whilst, all LBC respondents complain that it is unjust to regulate deliveries, and thus dictate speed of turnover, the Cocobod feel that the quota is necessary to maintain control over deliveries. Indeed, this perspective is indicated in all seven of the Cocobod interviews where the quota system is discussed.

Despite the imposition of the quota system, twelve of the fifteen buyers interviewed in round two observed that once cocoa is ready to be evacuated it will be sent to the takeover centres. Resultantly trucks arrive at the takeover centres outside of their delivery schedule creating mass congestion. As such, the imposition of the quota does not appear to have solved any of the problems associated with the Ghanaian markets limited infrastructure. Indeed, as will be seen in the following section the impact of the quota system at the current time appears to be largely negative through the affect that it has had in stifling private sector dynamism.

7.2.3.1.1 - LBC Growth

Based on research findings it appears that the implications of the Cocobod's infrastructural limitations extend beyond finance costs and into the competitive strategies of individual LBC's. In essence the quota that you are granted by the Cocobod places a direct restriction on the amount of cocoa that you can efficiently buy and deliver. In the opinion of the Cocobod the distribution of

quota can be most objectively decided through the performance of the LBC in the previous season. However, due to the insufficiency of supply chain infrastructure each LBC's quota allocation is very tight, giving LBC's very little flexibility to expand purchasing beyond last season's performance. Indeed, any additional cocoa that LBC's purchase beyond their quota will most likely suffer long delays in the takeover process. As such, LBC's have to rely on their ability to lobby the Cocobod for additional quota if they wish to expand their purchasing beyond the previous year's performance. As can be seen from the passage below taken from an LBC interview, LBC's place great importance on quota additions,

'You may find some companies using all methods to take advantage of the system [quota], because without that you cannot grow as a company, the offloading will determine your general performance'.

However, based on the responses of all LBC managers in round two, there is no formal process through which the LBC's can apply for additional quota. This would appear to be a serious oversight given the importance of quota allocation to each LBC's performance. Indeed, as can be seen from the passage in appendix twenty four the respondent is under the assumption that there is no channel through which you can apply for quota additions.

Based on interviews with the Cocobod it appears that if an LBC wants to acquire additional quota then they will have to physically demonstrate expansion either by acquiring additional resources such as building new upcountry warehouses, or through QCD field reports showing the volume of cocoa that has been purchased. However, based on the accounts of all LBC respondents it appears that even when they have demonstrated to Cocobod their capacity to increase their level of buying, gaining the required quota additions can be highly problematic²²¹. Where additional quota is granted during the season, this may be some weeks or even months after the LBC has increased its purchasing level, thus leading to costly delays while waiting for the cocoa to be taken over.

²²¹ This point is made by the buyer in appendix twenty-four.

In light of the above challenges surrounding quota expansion eleven of the fifteen buyers interviewed in round two observed that the quota restricts your capacity and incentive to grow. Facing extremely high finance costs, the threat of delays in the takeover process acts as a major disincentive for any LBC to expand beyond their quota allocation. Indeed, when asked 'do you think the Cocobod restricts your capacity to grow and develop?', eight out of the fifteen LBC participants in round two indicated that this was the case due to the quota system. In response to this question one LBC manager observed that,

'As for constraint, it is there...like the quota system...Cocobod will decide how much to give you depending on your size or the perception that they have about your company'.

In a similar light another LBC manager noted that,

'This system doesn't give the LBC's room to naturally grow'.

Based on interviews with two relatively young LBCs, Evadox and Diaby, it appears that the restrictive impact of the quota system is particularly damaging to new entrants into the market. Every year the market receives a number of new entrants however, every year some of the smaller companies drop out of the market having failed to make an impact. Quota is distributed based on the LBC's purchasing performance in the previous season, and therefore without an established track record new entrants will receive a minimal quota. Growth beyond this minimal quota is highly problematic due to both the costly delays associated with exceeding the quota, and the investment required to achieve additional quota.

Whilst it is understandable that the Cocobod do not give large quotas to new market entrants, the inability of the quota system to respond to LBC purchasing activity is highly problematic. Both the tightness of each LBC's quota allocation based on the Cocobod's limited capacity for takeover, and also the inflexibility of the quota itself based on the Cocobod's bureaucratic management have created

an environment where it is very difficult for LBC's to grow. In light of this there is a clear need for both an expansion in infrastructural capacity and also more responsive management of quota allocations in order to enable greater freedom in LBC purchasing activity.

7.2.3.1.2 - Incentive to Build Market Share

In the above section on speed of turnover it was observed that eleven out of the thirteen LBC participants from round one suggested that market share maximisation is the dominant strategy for an LBC to pursue. However, during round two seven of the fifteen LBC respondents suggested that based on the conditions they were facing in the market they had come to realise that a strategy of building market share is not always the best option. Due to costly delays incurred in recent years, partly as a result of a volume buying strategy, it appears that a greater number of LBC's have either moved to, or are considering, a strategy of buying a lower volume of cocoa in an attempt to lower costs and maximise efficiency. As noted by one LBC manager,

'I now want to look at buying some reasonable quantity of cocoa with minimal risk and cost'.

For one LBC in particular this has resulted in a radical change of focus, moving away from the most competitive buying region²²² and also choosing to buy at a time of the year when purchasing activity is lower. By doing so this LBC has successfully reduced both the amount of cocoa that it delivers to Takoradi port²²³, and the amount of cocoa it delivers at the peak period of congestion²²⁴. Despite resulting in a significant decline in market share, the manager in charge

²²² The most competitive region is the Western Region where over 50% of Ghana's cocoa is produced. Cocoa purchased in this region is taken over at Takoradi port

²²³ All LBC respondents find that Takoradi port experiences the worst congestion as it is the takeover centre for the Western region.

²²⁴ LBC's highlight that between the months of October and December around 70% of the total cocoa for the season is purchased and evacuated.

of this strategy has found it to be highly successful based on the cost reductions achieved. As noted by the manager of this particular LBC,

'We have restricted ourselves from buying at certain times and we have also restricted ourselves from buying in certain areas...this has led to a volume drop, but also an efficiency improvement'.

Although it is too early to predict the impact of this strategy, the trend that appears to be developing in this area may be interpreted in one of two ways by the Cocobod. On one hand it appears that the quota system enforced by the Cocobod may be encouraging a greater degree of coordination between the Cocobod and LBC's in the areas of purchasing and delivery. Certain LBC's now appear to be controlling their purchasing volumes in line with the infrastructural limitations of the Ghanaian supply chain. On the other hand, the increase in coordination taking place between Cocobod and LBC's in this area, may also lead to a trade off in the form of reduced competition at the farmer level. To some extent this is consistent with the findings of Poulton et al [2004], who find that coordination measures, whilst helping to improve the level of stability in the market, may also lead to a decline in the level of competition.

Indeed, within sub-Saharan markets such coordination measures may be encouraged to reduce some of the negative aspects that have resulted from the introduction of competition, such as quality decline [Poulton et al, 2004]. However, Poulton et al [2004] also encourage balance, where elements of competition are required alongside coordination. As such, it is necessary to question whether LBC competition in the form of increased turnover speeds is an area in which coordination measures should be enforced. The only concern that may be raised in regards to increased turnover speeds is the pressure this may put on quality control, as suggested by the link between speed of turnover and quality decline observed in chapter four [Losch, 2002; Fold, 2002]. In this light, the extent to which the quality control of the QCD is able to control the affect of increased turnover speeds will be an important factor in determining

the appropriate policy response in this area. This will be investigated in greater detail during section 7.3.

However, in support of increased turnover speeds it must be noted that change in this area would not only increase the level of LBC profitability, but it would increase each LBC's turnover of working capital, thus enabling them to compete and invest more actively at the farmer level. Results from both the current and past studies of local marketing in Ghana indicate that since liberalisation in 1992 intense competition between LBC's has led to improved marketing opportunities for farmers. Indeed, the benefits of LBC competition are widely heralded by members of the Cocobod, particularly by the deputy chief executive Mr Charles Ntim.

As such, there appears to be a relatively strong argument in support of increased turnover speeds, especially where there is already a control mechanism in place to reduce quality decline. Indeed, in many respects the dynamism that LBC's have shown in the area of turnover efficiency should be embraced as a positive sign of liberalisation. Within the partial model, the Cocobod has the power to take advantage of such dynamism, whilst also enforcing coordination measures in areas of significant strategic importance, such as quality control.

Whilst the Cocobod may argue that the quota is necessary to maintain control throughout the supply chain, in the opinion of all LBC respondents the quota represents an insufficient response in the Cocobod's responsibilities towards infrastructural development. In order for the partial model to progress and for the Cocobod to maximise the potential of private sector dynamism, it will be necessary for the Cocobod to make some changes and adjust to the way in which the private sector operate. Increasing the infrastructural capacity of the system to enable a larger and more flexible quota offering to LBC's would be one such example of compromise in is this area.

7.2.4 – Public Sector Management

Within the closing statements of the previous section some doubts were raised over the Cocobod's willingness to embrace the dynamism that is inherent within the private sector. In many ways this represents one of the fundamental problems facing the success of the partial model of market organisation, where the juxtaposition between the public and private sectors attitude towards business creates a number of tensions within the system. Concerns in this area were raised throughout both rounds of research by all LBC participants, with the exception of one. In light of these concerns the following sections will explore the challenges resulting from public sector control of a liberalised market.

7.2.4.1 – Civil Servant Motivation

Within round two of research, ten of the fifteen LBC participants associated delays in the supply chain with the work ethic of public sector employees. To some extent this point builds upon the findings in section 7.1, highlighting the behavioural problems resulting from the low powered incentives facing public sector employees [Tirole, 1996]. LBC respondents observe that Cocobod agents employed in functions related to coca takeover and documentation do not have the same financial performance incentive as private sector actors. Indeed, throughout both rounds of interviews the absence of a strong incentive to motivate Cocobod employees towards an efficient approach was an issue of great importance to several LBC respondents. This can be seen from both the extract below and also the passage in appendix twenty-four.

'Because we as private companies we are interfacing with the public sector and our output depends on the impact of the public sector and our attitudes are different from their attitudes...the QCD, the CMC they work as public sector...so when I send a document there, I do my calculations and it is money, everything should be money, but they don't look at it that way'.

Observations made in relation to the work ethic of Cocobod employees are often linked with the Cocobod's bureaucratic mode of operation. The Cocobod is a very large and hierarchical organisation that relies on very traditional and systematic processes. All paper work has to go through a long chain of tiresome checking and all decisions have to be verified by superiors. As observed by one LBC manager,

'It takes time, it is a civil service, it is a bureaucracy...you know the civil service, it is slow'.

Further evidence in support of this is found in the long delays LBC's suffer waiting for their payments from the Cocobod's. Once takeover receipts have been granted by the CMC, in accordance with Cocobod standards LBC's should have to wait no longer than ten days. However, as noted by all LBC participants this is rarely the case and it was regularly noted that LBC's are made to wait for one month before payment is issued. Furthermore, whilst this process is being delayed LBC's are still paying interest charges on loans taken. As noted by one LBC manager,

'I personally think that once I give over cocoa you must give me instant money, at times you wait for one month for your documents to claim your money'

Unlike the infrastructural problems leading to delays in the takeover process, the issue of delays in payment is more closely related to the effort and efficiency of Cocobod employees. As such, similar to the problem of moral hazard identified in section 7.1, the issue of delays in payment may be addressed using the understanding of public sector organisational behaviour developed by Tirole [1996] and Dixit [2002]. Whilst, it was not possible to interview the CMC and the Cocobod in the performance measurement system put in place for staff involved in LBC payments, it may be the case that based on the performance of staff in this area, efficiency is not a major goal on which performance is measured. To some extent this suggestion is supported by round two findings, where twelve of the

fifteen LBC managers interviewed indicated that Cocobod staff are encouraged to emphasis caution over efficiency²²⁵. As noted by one LBC manager,

‘The delays [in payment] this year are much more than any other year...they are being careful and that carefulness costs us a lot of money’.

In light of this finding, it may be recommended that the Cocobod should place a greater emphasis on efficiency when monitoring staff performance. Again this problem may be related to the challenge of achieving a balance between competition and control [coordination] in a market where the dominant actor has a clear preference for control. Nevertheless, it should not be beyond the realms of possibility for the Cocobod to increase the efficiency of staff performance without jeopardising the diligence of their work. To some extent this may require an increased resource expenditure on performance monitoring throughout the Cocobod. However, based on LBC interview findings this is clearly an issue of great importance, where the trickle down affects on LBC profitability and motivation would be expected to more than compensate for any additional Cocobod expenditure.

7.2.4.2 - Change

In light of the above findings it is not surprising that all LBC respondents highlight the takeover process as the one aspect of the market in which they would most like to see improvement. To achieve this goal change is required in several areas, including, an expansion of warehousing capacity, the installation of modern machinery²²⁶, the development of an effective IT system for recording deliveries and making payments, and also behavioural improvements amongst Cocobod employees.

To some extent there are now positive signs that change in this area is being carried out. In the 2007/08 season the Cocobod opened a new 50,000 tonne

²²⁵ This point is observed by the respondent in appendix twenty-four.

²²⁶ Modern equipment is required to takeover, weigh, and store the cocoa.

warehouse at Tema port, and a 100,000 tonne warehouse has been commissioned for Takoradi port. Whilst buyers welcome this as a positive sign of change, the overriding emphasis of LBC responses in this area is related to their concerns regarding the sluggish nature with which the Cocobod have addressed this problem. In light of this issue it is necessary to examine the reasons why it has taken the Cocobod a relatively long time²²⁷ to make changes in supply chain infrastructure.

7.2.4.2.1 - Cocobod Constraints

Within section 7.1 organisational culture was emphasised as a key factor in determining the Cocobod's style of market regulation. Closely related to this, six out of the fifteen LBC respondents and three local processors in round two, indicated that the Cocobod's organisational culture engenders a very conservative attitude with regards to change. Indeed, further evidence in support of the argument that a conservative culture exists within the Cocobod was found in interviews with all Cocobod respondents across both stages of research. When questioned about the need to upgrade supply chain infrastructure, the risk and cost of over expansion are often emphasised over and above the efficiency improvements that such change would bring. As noted by one Cocobod respondent,

'The buyers are sometimes unhappy with us, but we cannot do any different...we cannot increase warehouse capacity on the basis of one years crop²²⁸'.

Once again in close relation to the findings on organisational culture in section 7.1, it appears that the Cocobod's conservative attitude towards change may be sustained by their unwillingness to embrace external input from other stakeholders in the market. The Cocobod's reluctance to embrace new ways of

²²⁷ The LMC report [1996] observed problems with delays in the takeover process, demonstrating the length of time supply chain infrastructure has been a problem in Ghana.

²²⁸ As can be seen from figure 1.6 in chapter one, Ghana's cocoa production has been consistently around the 700,000 mark since 2002/03.; however, at the time of fieldwork LBC's complained that Cocobod were still operating with supply chain infrastructure suitable for an annual production of 400,000 tonnes.

thinking was observed by nine of the fifteen LBC respondents in round two. Indeed, when questioning an LBC manager on the Cocobod's attitude towards change he responded,

'Not good enough! They normally don't think outside the box, anytime we meet and you want to introduce change, they think no, this is the way we have been doing it...and this is the normal public sector attitude'.

This finding may be related to North's [1990] conception of path dependency. During interviews with two industry sources it was suggested that the Cocobod's reluctance or conservatism towards change is driven by the older generation of senior management. Interview findings suggest that personnel working at this level have been involved in the Cocobod for a long time and their mindset is closely associated with the Cocobod's traditional mode of operation. Furthermore, as suggested by North [1990], it is quite possible that the more senior members of the Cocobod have a strong interest in maintaining the traditional institutional structure, in which they yield power and influence. In light of this it is appropriate to draw upon a recommendation from section 7.1, where it was suggested that in the coming seasons the Cocobod need to draw upon input from outside stakeholders. Indeed, the example of supply chain infrastructure further strengthens the case made in section 7.1 that increased external voice may be required to encourage progress and harmony within the partial model in future seasons.

7.2.4.2.2 - Privatisation

In light of the above problems, it is very interesting to observe that towards the end of round two research the deputy chief executive of the Cocobod raised the possibility that in the coming seasons they may tender a contract for the privatisation of the takeover centres. Amongst LBC's support for such a change would be strong, as indicated by ten of the fifteen buyers interviewed in round

two who recommended that takeover should be handled by the private sector²²⁹. Buyers in support of privatisation feel that the private sector would not hesitate in extending warehouse capacity and installing modern takeover equipment. There are three main arguments why the private sector would face a greater incentive to improve the takeover process as compared the Cocobod. The first argument is quite simply that based on the contentions of LBC managers in Ghana it is felt that the private sector has a more dynamic attitude towards change. This was indicated by ten of the fifteen LBC participants from round two, and is demonstrated by the passage in appendix twenty-five. Indeed, further support for this argument is found in the earlier section on the Cocobod's conservative organisational culture.

Secondly, LBC's suggest that because private sector organisations are financially accountable for their performance they are more willing to make risky investments that will reap financial rewards further down the line. To some extent this builds on the low powered incentives argument of Tirole [1996] and Dixit [2002], as discussed in chapter two. Indeed, Tirole [1996] and Dixit [2002] both acknowledge that privatisation may be used to overcome the problem of low powered incentives. Not only may public agents face a lower motivation towards effort, but equally, because they do not face the same financial incentive as private sector actors, they may lack the desire to make high risk and reward investments. Furthermore, this attitude may exist within the Cocobod based on the lack of financial incentive presented by increased turnover speeds. Whilst, the private sector may logically conclude that higher speeds of turnover could equally correspond to higher charges for takeover, the Cocobod system does not operate with such an incentive structure in place.

Thirdly, there is a strong efficiency argument for introducing modern technology in the process of takeover. Whilst the initial investment in modern technology is high, interview findings with LBC's and cocoa processors suggest that the long-term savings in time and labour costs are colossal. At the current time the Cocobod individually offload, weigh and store each bags of cocoa using manual

²²⁹ Please see appendix twenty-five.

labour. Using modern equipment all of these tasks could be performed manually, in a fraction of the time. For the Cocobod, however, there is a major constraint to such change. Within Ghana there is great pressure on the government to provide jobs, and operating as a government institution the Cocobod faces similar pressures. Therefore, just as labour issues were a major issue at the time of initial reforms in 1992, in recent years they have contributed to the slow rate of change at the takeover centres. As observed by an industry source,

‘If we could mechanised the warehouses, we don’t need all that labour...we still carry cocoa on our back...maybe this is the way we want to create employment’.

Being somewhat removed from the social responsibilities that occupy the conscious of government, the private sector would be able to make such efficiency improvements without the same fears of a public backlash. Furthermore, it may be argued that not only do the Cocobod face a labour incentive to maintain the traditional methods of takeover, but they may also face an incentive to maintain a slow rate of LBC turnover. In cases where the rate of LBC turnover is low the Cocobod is able accrue a greater amount of interest on the seed-funding that they provide for LBC’s. Whilst it is not the aim of this section to argue that the Cocobod may deliberately slow down the rate of takeover, this issue is raised within twenty of the twenty-eight LBC interviews across both stages of research. Indeed, given their dual role in both the takeover centres and LBC financing, it appears that the Cocobod’s willingness to maintain interest charges in periods of high congestion has become credibility issue facing the regulator.

Given the breadth of credibility issues surrounding the governments role in sub-Saharan markets [Jayne et al, 2002; Kherallah et al, 2000], the Cocobod should make every effort to avoid this problem through a more appropriate division of responsibility within the partial model. Both the labour and finance issues currently associated with the takeover process raise concern surrounding the Cocobod’s role as a regulator within a liberalised market. Such problems could easily be solved by transferring responsibility in this area to the private sector.

In this light, it may be argued that, if exercised correctly, one of the partial models greatest strengths should be the governments ability to strategically select and divorce itself from any functions in which there are credibility issues surrounding its role. Indeed, the case for privatisation of the takeover centres is particularly strong given that, unlike the previous section on quality control, there are relatively few perceived advantages to the Cocobod remaining in control of takeover.

In order to understand the benefits that may result from privatisation it is possible to look at the example of the PBC that was privatised in 2000. Results in this area are generally positive. Indeed, based on the change in LBC attitude towards the PBC, evident between rounds one and two, it appears that the PBC is increasingly operating in the manner of a private sector organisation. This is associated with a more efficient performance in recent seasons, evident in the steadily improving performance figures published in Feb 2008, and Jan 2009²³⁰.

Two interviews with the deputy Managing Director of the PBC also confirm the positive impact which privatisation has had on the organisation. He notes that before privatisation PBC employees operated with the knowledge that regardless of their performance the Cocobod would always support them. However, now employees recognise that you have to perform in order to compete and survive in the market. Equally, the fact that PBC have to publish their performance figures as a publicly traded company means that their performance can be closely monitored. Therefore, to some extent privatisation in the PBC has yielded the sort of private sector accountability that buyers found to be missing from the performance of the QCD and CMC in the earlier section on credibility of reform.

However, the privatisation of the PBC has not been an easy process and it appears to have taken several years to change the organisations attitude away

²³⁰ Daily Guide Newspaper [2008] 'Good News for PBC Shareholders.' <http://www.dailyguideghana.com/portal/modules/news/article.php?storyid=3696>:
Odoi-Larbi, S [2009] 'PBC on a Flying Note.' - <http://www.ghanaiian-chronicle.com/thestory.asp?id=10103&title=PBC%20on%20flying%20note>

from that of a public sector organisation. To a large extent this challenge appears to have resulted from the organisations continued links with the government. Part owned by the government, and with the Cocobod chief executive sitting in the PBC's board, it is understandable that the process towards privatisation has been uneasy. This finding builds upon the studies by Kherallah et al [2000] and Jayne et al [2002] highlighting the government's failure to remove itself from liberalised aspects of the market as one major constraints to successful private sector development.

Within the model of developmental coordination observed in chapter two, Kydd and Dorward [2004] suggest that the government has a key role to play in encouraging the private sector to make investments that contribute towards market development. Improving the takeover centres in Ghana will require a significant investment of both time and money from any potential developer. As such, it would appear that in order for privatisation of the takeover centres to be successful in Ghana, the Cocobod may have to loosen their traditionally harsh regulatory approach, in order to give developers the necessary freedom and incentive to make the investments required.

In closing it must be noted that in light of the Cocobod's conservative organisational culture, there is no guarantee that the initial interest expressed in privatization will develop into the level of commitment required for reform in the area of cocoa takeover.

7.2.5 – Conclusion

This findings section has explored the problem of congestion within the Ghanaian cocoa supply chain. As indicated by past literature, congestion has been a problem for several years [LMC, 1996; Varangis and Schreiber, 2001]. Research findings suggest that in the opinion of LBC management congestion is the most significant problem that they face in the market. As observed throughout this section, this problem has resulted from the Cocobod's failure to update supply chain infrastructure in line with both Ghana's increased cocoa

production, and also the increased speed of cocoa turnover resulting from the introduction of LBC competition. In light of the importance that LBC's place on the issue of congestion, the Cocobod must be criticised for their failure to respond more effectively in this area.

Equally, it is important to recognise that as a public sector body the Cocobod face a significant challenge in responding to the changes that are required in supply chain infrastructure. Not only does infrastructural development require a significant financial investment of already limited public finances, but equally the retrenchment that will result from such changes may result in political unrest. In light of these problems, the majority of LBC participants from round two have recommended the privatisation of the takeover centres. Indeed, throughout this section it has been suggested that the private sector may face a greater incentive towards change in the takeover centres, as compared the public sector actors currently in control.

However, in closing, it is necessary to add the caveat that, based on the experience of liberalisation across other sub-Saharan countries, there is no guarantee that privatisation in this area will prove successful. As such, it is suggested that under a privatisation scenario the Cocobod's regulation will be one of the key determinants of success. If this can be achieved then it would serve to further strengthen the case for partial models of market organisation, demonstrating the optimal division of responsibility that can be achieved between the government and the private sector.

7.3 - The Relationship between Competition and Quality Enforcement

7.3.1 - Introduction

Throughout its history as a cocoa trading nation Ghana has established a reputation for quality, which has enabled it to achieve several advantages such as price premiums and the stability of forward contracting. Building on this, the literature in chapters one and four observed that cocoa quality has become an issue of national importance in Ghana [Fold, 2002]. Equally, during chapter four there were several studies reporting the negative impact that the introduction of competitive buying has had throughout liberalised commodity markets [Shepherd and Farolfi, 1999; Varangis and Schreiber, 2001; Losch, 2002; Ponte, 2002]. Indeed, building on the common trend observed in this area Laven [2007] finds that in recent seasons competition between LBC's has led to quality decline in Ghana. In light of these findings the following section will attempt to further explore the link between competition and quality in Ghana. Furthermore, given the unique structure of the Ghanaian market, this section will also attempt to explore how the role of the QCD in Ghana has affected the seemingly natural trend for buyer competition to lead to quality decline.

Building on the relatively large and conclusive body of literature linking buyer competition to quality decline, the key theme of competition and quality was identified a priori in this study. Alongside this key theme, the primary theme of quality decline and the secondary theme of buyer practice were also identified within the literature. The secondary themes of organisational risk²³¹ and farmer training are, however, considered as emergent themes. Whilst the issue of farmer training was identified a priori and was therefore present within the

²³¹ Organisational Risk is in fact considered the most emergent theme within this study, having not been covered in any past studies. The theme of organisational risk will be raised again in section 7.4. My findings in this area have attracted interest from academics working with the Overseas Development Institute, for whom I have contributed a draft paper to be used in support of an ESRC research grant application.

round one interview guides, its link with quality decline was largely emergent. The theme of organisational risk is emergent, and is an original finding from this study.

Based on past studies of the Ghanaian cocoa market [Shepherd and Onumah, 1997; Varangis and Schreiber, 2001; Laven, 2005] the primary theme of quality control was identified a priori. At the secondary level, the theme of quality sanction was also identified a priori in light of both the importance placed on this area in studies such as Laven [2007], and the key role of enforcement within NIE literature. The themes of quality incentive and increased responsibility have, however, emerged within this study. In particular the theme of increased responsibility emerged within the second round of interviews, once again demonstrating the importance of the iterative research process.

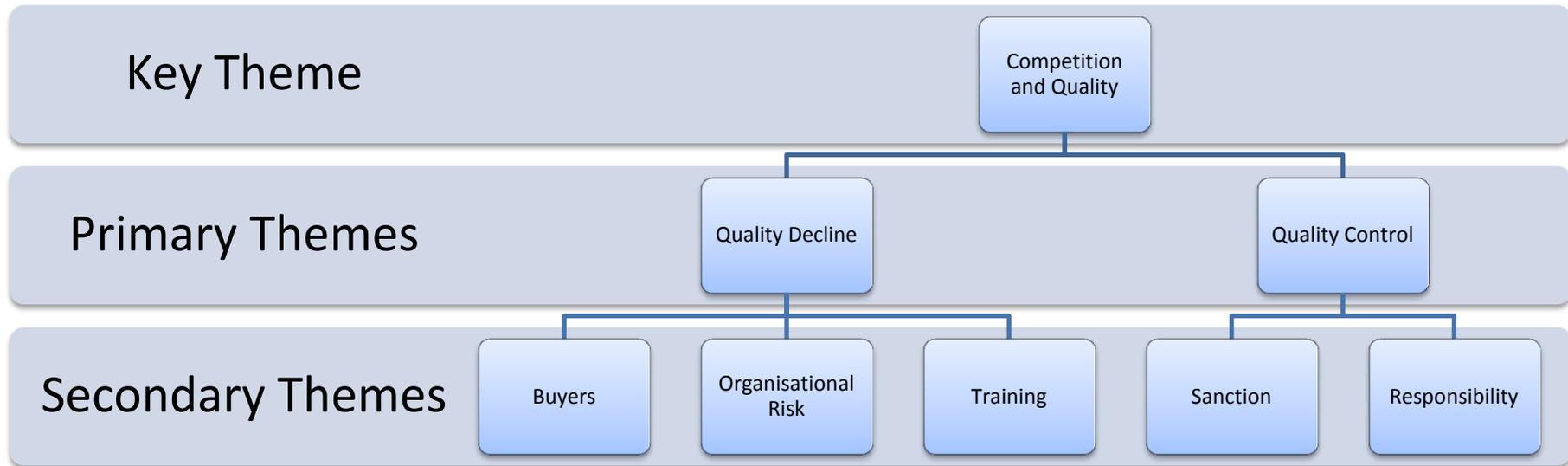
The structure of themes within the final template can be seen in figure 7.4.1.

Figure 7.3.1 – Final Template: Competition and Quality

- Quality Decline
 - Buyer Practices
 - Organisational Risk
 - Farmer Training

- Quality Control
 - Quality Sanction
 - Increased Responsibility

Figure 7.3.2 – Hierarchical Final Template: Competition and Quality



7.3.2 – Quality Decline

7.3.2.1 – Buyer Practices

At the beginning of this section it is important to qualify that the scale of quality decline in response to market liberalisation in Ghana cannot be compared with that of other liberalised cocoa markets. Nevertheless, high quality cocoa is the backbone of the Cocobod system and therefore recent studies indicating a negative trend in Ghanaian quality have been a cause of great concern [Laven, 2007]. In particular the purple bean problem of 2004/05, as highlighted in chapter four, has been associated with quality decline [Laven, 2007].

In light of this it was very interesting to observe that during round one the impact of the purple bean problem was still very recognisable within interview responses. In particular, three respondents from the Cocobod sample²³², and all of the LBC participants from round one observed that to some extent the purple bean problem could be related to LBC competition. Indeed, whilst findings from round one indicate that purple beans are no longer a problem in the market, round one interview responses from the Cocobod still display an automatic negativity towards the LBC's role in quality control. This can be seen from the passage below taken from a round one Cocobod interview:

[R] 'What is the buyer's role in quality control?'

[Cocobod] 'They must buy according to the standards set by the Cocobod...if not your cocoa will be rejected! QCD does not compromise on quality!'

Findings from round one indicate that to some extent the Cocobod's concerns surrounding the buying practices of LBC's may be justified. Past studies of quality decline in the Ghanaian cocoa market have found that buyers have been encouraging farmers to sell their cocoa before post harvesting is complete in

²³² These three round one Cocobod respondents are highlighted with a ✓ symbol in appendix eighteen. Amongst the three Cocobod respondents is the deputy executive director of the QCD.

order to avoid the threat of competition [Laven, 2007]. In support of this all LBC respondents from round one of research observed that this practice does take place. Indeed, all LBC's participants in round one accepted that they have suffered problems with purple beans. As observed by one LBC manager,

'When competition came on the scene people were clamouring to buy the same quantity of cocoa, so the farmer would only ferment for four, not six, days...because somebody is standing there ready to buy.'

As noted in both the passage above and the beginning of the respondents' account in appendix twenty-six, operating in this way was often justified based on the intensity of competition at the local level. Furthermore, it appears that given that the pressure of competition is somewhat unavoidable, once a certain percentage of LBC's begin to adopt bad practices, such as buying a farmer's crop early, then other LBC's may be forced to follow suit in order to compete. This finding is similar to those reported by Gibbon [2005] and Poulton [2006] in chapter four, where buyers that search for quality have been undercut by those with a volume strategy. This is described as a coordination failure by Poulton [2006], and to some extent LBC's in Ghana may be displaying a similar problem.

Within Poulton's [2008] example buyers are unable to respond to the price signal of the market due to the intensity of competition at the local level. In a similar light, LBC's in Ghana may be failing to respond to the sanctioning threat of the QCD due to the pressure of competition. Indeed, during round one all LBC participants indicated that in order to secure market share, buyers had become accustomed to accepting lower quality cocoa. This can be seen from the passage below,

[R] 'Can you reject bad quality cocoa?'

[LBC] 'Oh yes, we are supposed to, but in practice it doesn't happen because if you reject another company will buy...and we work on commission, the more you buy the more you get'.

Furthermore, recognising the threat of predatory buying another LBC manager observed that,

‘As early as 3 am you get people running around the society picking cocoa because if you don’t get there early, the hawks are already there.’

In light of these findings, it appears that there is a coordination failure between LBC’s and the QCD in terms of the failure of LBC’s to respond to the QCD’s threat of sanction. This problem is partly driven by the atomistic competition and lack of collective action between LBC’s, both of which result in LBC’s buying low quality cocoa to protect their market share. As such, this problem could be overcome through an increased level of collective action from LBC’s in order to establish a minimum level of quality that should be accepted by buyers. Under this condition, all LBC’s could benefit by reducing the threat of sanctioning from the QCD and increasing the efficiency of the supply chain. However, based on all interviews carried out with LBC’s in round one it was established that such collective action could not be upheld due to the intensity of competition and the risk of a competitor free riding in order to enhance market share²³³.

As such, the buying practices of LBC’s in Ghana appear to support the argument that quality decline within liberalised buying markets has resulted intense and uncoordinated competition amongst local traders [Shepherd and Farolfi, 1999; Varangis and Schreiber, 2001; Losch, 2002; Gibbon, 2005; Poulton, 2006]. Within chapter four this was described as an upstream supply side effect in response to the impact which such competition has on the farmers and traders ability to supply downstream buyers with quality.

In combination with supply side effects several writers also observe the importance of demand side effects in quality decline, where downstream buyers have not been encouraging the production of high quality cocoa [Fold, 2002; Losch, 2002; Tollens and Gilbert, 2003]. However, within Ghana, there appear to

²³³ This is consistent with the findings of Poulton [2006] who finds that it is much easier to uphold competitive agreements on quality within markets that are highly concentrated, leading to greater coordination amongst buyers and lower free-riding.

be very few demand effects encouraging a decline in quality. Indeed, the Cocobod demands high quality cocoa and any LBC that does not meet this standard will receive strict sanction²³⁴. As such, the LBC is strongly encouraged to deliver quality, and therefore any quality decline may be considered the result of up-stream supply side market dynamics. This argument is of particular interest as it appears to counter that made by Tollens and Gilbert [2003], who suggest that quality decline in West African cocoa was entirely the result of changing demand patterns from downstream buyers.

Nevertheless, Tollens and Gilberts [2003] argument does offer some insight into another possible cause of quality decline in Ghana. Tollens and Gilbert suggest that in cases where downstream buyers offer sufficient price signals for high quality cocoa, upstream traders will take the appropriate action to make sure this quality is delivered. In light of this it is necessary to question the strength of the incentive LBC's face to buy quality cocoa, beyond the threat of sanction from the QCD. LBC's receive the same commission from the Cocobod for the supply of grade one and grade two cocoa. As such, whilst it was acknowledged earlier that LBC's have a clear financial incentive to maximise volume [commission], there appears to be less of an incentive to maximise quality. Indeed, recognising the immediate need to compete for market share, LBC's may lower their quality standards aware that grade two cocoa is sufficient to obtain their margin. In support of this, the findings above suggest that LBC's have been willing to sacrifice a certain degree of quality in order to maximise market share. Therefore, whilst there is no demand side affect directly encouraging lower quality, it may be argued that the incentive on the demand side [buyer's margin] is not sufficient to dominate the supply side incentive [commission].

One possible solution to this problem would be to introduce a system of differential pricing in which LBC's would receive a larger commission for delivering grade one cocoa, compared with grade two. However, based on evidence of sub-Saharan markets, Poulton [2006] warns that where such

²³⁴ As noted in Chapter four, cocoa that is below grade two standard will, [a] require costly reconditioning, [b] lead to the LBC receiving only 50% of the standard buyers margin, [c] be confiscated with the LBC receiving no payment.

premiums are not significantly large the buyer may still be faced with a greater incentive to follow a volume buying strategy. As such, if the Cocobod were not committed to this change, offering LBC's an insignificant premium for the delivery of grade one cocoa, then there is a risk that quality searchers would continue to be undercut by volume buyers. In light of this it is interesting to observe that on two occasions the deputy chief executive director of the QCD rejected the possibility of a differential pricing system based on the following concern,

'I know my people [LBC's], they will cheat the farmer and buy all cocoa as grade two cocoa...if the system will not benefit the farmer then I don't think we should bring it in.'

Indeed, this same concern was echoed by two other Cocobod respondents. It therefore appears that the Cocobod has not considered a change in its pricing system, instead preferring to focus on the buying practices of the LBC's. As such, the maintenance of quality in Ghana may be based on the Cocobod ability to enforce constraints on LBC supply side buying practices through the institution of the QCD. The most obvious way to achieve this would be to increase both the vigilance of the QCD and the level of sanction faced for delivering cocoa below grade two standard.

7.3.2.2 – Organisational Risk

Building on the above concerns surrounding the link between quality decline and the buying practices of LBC's, it appears that to some extent the challenges in this area may be exacerbated by the problem of organisational risk. The concept of organisational risk, developed entirely based on research findings within this study, can be closely associated with the problems of rural transacting identified in chapter two. Organisational risk represents the transaction risk faced by LBC's as a result of their inability to affectively control, monitor, and sanction the behaviour of their purchasing clerks [PC's].

PC's are buying agents used by the LBC's to purchase cocoa of farmers at the local level. Due to the highly atomistic nature of cocoa production in Ghana, LBC's find it very difficult to monitor the actions of their PC's. Compounding this monitoring problem, all LBC participants indicate that PC's show very little loyalty, moving between LBC's with relative ease. As such, the threat of opportunistic behaviour from the PC was highlighted as a major transaction risk facing LBC's in the market²³⁵.

In relation to the topic of cocoa quality, organisational risk manifests itself through PC's showing less regard for cocoa quality than demanded by their LBC principles. Indeed, during both rounds of research around 50% of LBC respondents indicated that the PC may have less regard for quality than the LBC itself. As noted by one LBC manager,

'Sometimes if you are not checking well he will want to pull a fast one because there is plenty of money...when the sack comes in you don't know if he has put something inside'.

PC's work on a commission only basis, where each individual PC will be paid in proportion to the amount of cocoa he delivers throughout the course of the season. As such, the PC's main objective is to maximise his market share. Further evidence in support of this argument comes from interviews with four PC's where it is found that at the busiest periods of the season the PC will bypass the stage of quality inspection in order to maximise the time available to purchase cocoa. All PC respondents also found that unless cocoa is of a very bad quality they will not reject it for fear of losing out to a competitor.

As such, it appears that the PC's level of risk aversion, in terms of cocoa quality, may be lower than that of the LBC's. This may be caused by two main problems. Firstly, the PC may be willing to take advantage of the information asymmetry between themselves and the LBC, knowing that because the QCD's upcountry

²³⁵ This problem between the principle and the agent may be closely related to 'agency theory', as developed by Eisenhardt [1985, 1989].

quality grading procedure is not 100% accurate²³⁶, the LBC may not be able to accurately determine the quality of the cocoa supplied by the PC²³⁷. Indeed, as observed in section 7.1, on credibility of reform, once cocoa is passed by the upcountry graders and transferred to the takeover centres it then becomes very difficult to determine the exact point of quality failure.

Secondly, LBC's may be more risk averse, as it appears that they face a greater threat of sanction in cases of quality failure as compared the PC's. As observed in the earlier section on the credibility of reform, in cases where cocoa is rejected at the takeover centres, this comes at a great cost to the LBC's. Not only do LBC's suffer the time and efficiency cost²³⁸ of re-working the cocoa, but they also face the threat of financial sanction from the Cocobod. In cases where cocoa is rejected at the upcountry level by the QCD the cost facing the PC is much less severe. Firstly, they do not face the same time constraint as LBC's, and secondly, there is no threat of financial sanction from the LBC's.

In order to counteract this problem seven of the fifteen LBC participants in round two observed that they were making a greater effort tracing quality problems discovered at the port back to the PC level. As observed by the LBC manager in the passage below in certain cases this has led to improved performance from the PC,

[R] Last time you said the PC would not reject cocoa is that still the same?

[LBC] No, no, no...now you bring cocoa, when cocoa is rejected on the basis of quality, we have a way of reporting...so when it comes to the time when the PC should be paid his commission the value of the cocoa is taken away from it'.

²³⁶ Please refer to section 7.1 on credibility of reform where the performance of the QCD's upcountry grading was questioned.

²³⁷ This is an example of 'adverse selection' on the part of the PC, where they may withhold superior knowledge about the product being supplied in order to gain an advantage [Akerlof, 1970].

²³⁸ As discussed in section 7.2, the finance charges faced by LBC's in the market are very severe and therefore speed of turnover is a major issue facing LBC's.

As such, it appears that increased enforcement from LBC's, which helps to reduce the level of information asymmetry between themselves and the PC, may help to improve the PC's performance in quality control. However, as noted by the respondent in appendix twenty-six, it is not easy to trace to quality problems discovered at the takeover centres back to the PC. Indeed, during section 7.1 it was observed that there are a number of reasons why quality of cocoa may change in transit between the upcountry check and the takeover centres. Therefore, building on the findings of section 7.1 it is necessary for the QCD to improve the accuracy of their upcountry grading so that any quality problems can be discovered at this stage, thus reducing the level of information asymmetry between the PC and the LBC. If the QCD were able to lower the volume of defective cocoa passed at the upcountry then this would increase the LBC's ability to monitor the quality performance of their PC's. In turn this may increase the PC's risk aversion towards the act of buying low quality cocoa and reduce the level of transaction costs faced by LBC's in this area.

7.3.2.3 – Farmer Training

As observed in chapter four the role of the farmer is paramount in the production of quality in Ghana [MOFEP, 1999]. In light of this it is interesting to observe that, based on findings from eight Cocobod interviews²³⁹ and all LBC interviews, it appears that in recent seasons the farmer's attitude towards quality has deteriorated. In the opinion of the Cocobod, this deterioration has been brought about by the competitive buying practices of LBC's, as observed in the following statement by the executive director of the QCD,

'With the influx of private buyers because the farmer had a choice sometimes the preparatory stages were short circuited...the farmer thinks if I can sell my cocoa anyway why should I go through all the tedious work'.

²³⁹ This includes the seven interviews marked with ✓ in appendix eighteen, plus the interview with the director of the CODAPEC program.

Whilst the findings above would corroborate with the suggestions that buyers have influenced farmers in this way²⁴⁰, there may be another factor contributing to the decline in farmer attitude in recent seasons. During the process of market reform in recent years the extent of training given to the Ghanaian farmers has declined significantly. The decline in farmer training has resulted from the termination of the CSD in 2000 and the resultant transfer of farmer extension services to the MOFA. As observed in chapter four the CSD formerly operated as a subsidiary of Cocobod, focusing independently on cocoa farmer extension. However, once the CSD's responsibilities were absorbed by MOFA, cocoa was only given equal priority amongst all other agricultural crops.

Based on an interview with a former CSD extension officer now working for MOFA, the level of both time and resources being invested in cocoa farmer training has declined greatly since 2000. This perspective is also supported in a recent study by Baah et al [2009] which finds that Ghana's agricultural extension officers involved are under-resourced and de-motivated. Interviews with four key informants working in the sector of agricultural practice indicate that cocoa farming requires a high level of farmer training and therefore the rationalisation of extension services is likely to have a noticeable effect on the farmer's production of quality.

In support of this, eight of the thirteen LBC participants in round one found that the decline in farmer training has had a significant role to play in the quality problems experienced in recent years. This can be seen from the passage below taken from an LBC interview,

[R] Why did purple bean only become a problem in recent seasons?

[LBC] 'Ok, ok, ok...Cocobod had done away with the system that had been with the farmers telling them what to do'.

²⁴⁰ The influence of buyer competition on farmer attitude is acknowledged by the respondent in appendix twenty-six.

The decrease in farmer training may help to explain why despite the introduction of competition in 1992, no serious quality problems were reported until 2004/05, at which point the impact of the decline in training would have been felt. Indeed, both interview findings and market share data indicate that the level of competition between LBC's did not increase significantly around the time of the purple bean problem, and therefore additional factors beyond competition may have contributed to the decline in quality.

In response to this, there is clearly a need for the Cocobod to adjust the current policy on farmer training. As observed by one LBC manager,

'Having gone through this we are all under the realisation that it [extension] should be back with Cocobod'

The need for farmer training is particularly apparent in light of the competitive buying conditions facing LBC's, as observed earlier. Under current market conditions it is very difficult for an LBC to reject a farmer's cocoa if they wish to maintain their market share. The challenge of maintaining quality within a highly competitive market clearly requires a collaborative effort from all actors involved at the local level. Under the former monopsony system not only were farmers receiving better training, but the buyer was also under no pressure to accept low quality cocoa from the farmer. This was observed by the deputy executive director of the QCD when commenting on the monopsony system,

'The kind of quality cocoa the buyer wants is what the farmer will bring...it was a bit easier for us to make an impact on the farmers because if you don't do what we are asking you to do then selling your stocks will be a bit difficult'.

Within the competitive market system the Cocobod, acting as the market regulator, have an obligation to assist the LBC's with their difficulties in this area. This could be achieved through the introduction of rigorous farmer training program. As indicated within the following passage the deputy executive

director of the QCD also believes that farmer training is the key to balancing competition and coordination,

'We have to talk to the farmers and if we intensify our education it will not matter how many LBC's are there'.

As noted by Poulton et al [2004], the regulator should be encouraged to achieve a balance of both competition and coordination with developing country markets. In light of this, it appears that, if implemented correctly, farmer training could be used as a coordination measure used to enable competitive buying, whilst also providing an element of restraint against quality decline. Increased training may help to increase the farmer's attention to cocoa quality, thus enabling buyers to compete for cocoa with less risk of the cocoa being sub-standard. Whilst it is unrealistic to assume that increased training would completely alleviate the risk of quality decline, it may be argued that training has the potential to augment the quality control efforts put in place by the QCD.

7.3.3 – Quality Control

7.3.3.1 – Quality Sanction

LBC's are encouraged to purchase high quality cocoa in two main ways; firstly, the threat of cocoa rejection, and secondly, the risk of sanction. Without a system of differential pricing the Cocobod's capacity to maintain cocoa quality within Ghana's current competitive market setting is largely dependent on the effectiveness of these two mechanisms.

As observed throughout section 7.2, speed and efficiency are particularly important aspects of an LBC's competitive strategy. Resultantly the threat of delays caused by cocoa rejection provides an effective incentive towards LBC quality control. This was observed by all LBC respondents in round two interviews. As noted by one LBC manager,

'Even though the two grading system helps quality, it is a financial cost for the LBC's, if cocoa is passed upcountry and then failed at the ports it is a huge expense for us'.

Coupled with the additional finance costs that LBC's incur through the process of cocoa rejection is the threat of financial sanction for delivering low quality cocoa. As observed in chapter four, when an LBC delivers cocoa of sub-standard quality, then the LBC will either receive only 50% of the cocoa's value, or the cocoa will be confiscated. Furthermore, the Cocobod records every case in which an LBC presents low quality cocoa and financial sanctions are issued at the end of the season in accordance with the LBC's level of indiscretion.

Based on the two interviews carried out with the deputy executive director of the QCD, it appears that the sanctioning of LBC's in the case of quality failure is considered key to the maintenance of cocoa quality within Ghana. During the seven interviews from the Cocobod sample discussing the issue of quality control it was regularly observed that the LBC's are assumed to be culpable in almost all cases of quality failure. As can be seen from the following extract taken from an interview with a Cocobod official, LBC's were held entirely responsible for the purple bean problem,

'Because the LBC's were not allowing the farmer to do the right thing, we punished the LBC's'.

Furthermore, within all seven Cocobod interviews discussing quality control it is suggested that strong sanctions against LBC's are necessary in order to achieve an improved attitude towards quality. To some extent this mentality is consistent with the earlier finding in credibility of reform, where the Cocobod was found to have a firm regulatory approach. The following extract taken from an interview with the deputy executive director of the QCD, helps to demonstrate this firm approach,

‘The kind of foolhardiness that goes on in this industry if you don’t tighten the sanctions you may not be solving any problems’.

In response to this treatment, eight of the thirteen LBC managers interviewed in round one found that the Cocobod’s method of sanctioning in the case of quality failure was both an unfair and ineffective way of dealing with quality issues. Interestingly, however, in round two the LBC’s stance on this issue appears to have softened. Indeed, the nature of LBC responses in round two would appear to indicate not only a greater acceptance of the QCD’s sanctioning, but also a greater acceptance of the buyer’s responsibility in quality control. To some extent the LBC’s change in attitude may be related to the passing of time since the purple bean incident of 2004/05. During round one interviews the harsh treatment that LBC’s received throughout the purple bean problem was at the forefront of all discussions surrounding quality control. However, within round two the influence of the purple bean problem appears to have passed suggesting that it may have been an extreme case and therefore unreflective of the normal market conditions in Ghana.

During round two all fifteen LBC participants found that, whilst competition may have the capacity to put pressure on quality, due to the sanctioning of the QCD there is no room to compromise. Indeed, the unanimity of LBC responses in this area during round two was quite remarkable. The passage below taken from an LBC interview indicates the effect the quality control is having on reducing quality decline,

‘Because of the amount of money chasing the cocoa the farmer tends to fasten the process...but that is getting regulated by the QCD, because the QCD would keep on rejecting any cocoa that would come in at a lower quality’.

Within both the QCD and the Cocobod there is a keen awareness that this firm approach in the sanctioning of LBC’s is yielding positive results. Both interviews with the deputy executive director of the QCD indicate a high level of confidence with regards to the way in which the QCD has responded to the reported decline

in Ghana's quality. When commenting on the purple bean problem the deputy executive director of the QCD noted that,

'We put in measures to stem that difficulty and I can say that as of now we have almost overcome that difficulty'.

Indeed, whilst round one findings alone would suggest that this tough approach was achieving little besides resentment from the LBC's, the findings from round two of research are much more positive. It appears that by increasing the threat of sanction against low quality the QCD have been able to reduce the coordination failure previously taking place in the realm of quality control. Whereas previously buyers may have been prepared to sacrifice quality in order to pursue market share, there now appears to be an acceptance amongst LBC's that this is not satisfactory practice. As such, by increasing the threat of sanction the QCD have implicitly increased the level of coordination amongst LBC's, without significantly hampering their ability to compete²⁴¹. This positive situation²⁴² should be maintained provided that the majority of LBC's continue to prioritise the threat of quality sanction above the need to enhance market share at the expense of quality.

7.3.3.2 – LBC responsibility

Within round two of research, it was possible to observe various examples of LBC's taking greater responsibility for upcountry quality control. The two most regularly observed examples of this are the increased rejection of poor quality cocoa and the reconditioning of poor quality cocoa. Earlier it was observed that

²⁴¹ In theory the same number of LBC's will still be competing for the same volume of cocoa, albeit in less of a rush than they were before. As such, the level of competition at the farmer level should not be significantly different. It must however be noted that the threat of sanction may deter certain LBC's from competing in the market.

²⁴² This outcome is considered positive within the Ghanaian example. Within a perfectly efficient market there would be some value loss in the form of the additional finance costs that LBC's face waiting 2/3 extra days for farmers to harvest quality cocoa. However, within Ghana where there are severe supply chain inefficiencies causing LBC's to store purchased cocoa for several weeks, the 2/3 day buffer required for the farmer to achieve first class quality may be relatively insignificant, thus making the affect of recent QCD sanctioning largely positive. Furthermore, the financial gain from avoiding sanction should compensate for any LBC value loss.

during round one of research LBC managers and PC's regularly found that due to competition in the market it was not common for a buyer to reject cocoa. However, when questioned about this during round two, ten LBC managers claimed that PC's would now reject poor quality cocoa. This was often qualified with the belief that purchasing low quality cocoa was pointless due to the vigilance of the QCD in quality control. As noted by one LBC manager in round two,

'Well for quality there is nothing you can do about it, because if you don't buy quality cocoa Cocobod will not take it...even if they take it they will pay you less...so for quality you have to abide by the Cocobod's rules'.

Amongst the remaining five round two LBC participants, who found that their PC's would not reject poor quality cocoa, again the results were positive for quality control. In light of the competitive threat faced by rejecting a farmer's cocoa, these five LBC participants found that rather than reject poor quality cocoa, PC's will now help the farmer recondition the cocoa to an acceptable level of quality. Reconditioning would typically involve further drying of the cocoa or the separation of good from bad beans²⁴³. Interviews with PC's in round two also confirmed the practice of reconditioning. All six PC's interviewed in round two found that they would very rarely reject a farmer's cocoa for fear of losing out to their competitors, but instead they would recondition the beans where possible. As observed by one LBC manager,

'You need a very good relationship [with farmers], especially where there is competition, so you have to pet them....you may have to take on jobs that ordinarily you would not have done'.

To some extent, this finding may be related to the Tollens and Gilbert [2003] study covered in chapter four. Tollens and Gilbert argue that competition does not reduce the level of quality produced by farmers, because the local buyer has

²⁴³ Please note that fermentation deficiencies, such as those leading to purple beans, cannot be fixed by PC reconditioning. This is also acknowledged by Tollens and Gilbert [2003].

the capacity to improve any low quality cocoa purchased from the farmer. As such, if the market is willing to pay for quality then the buyer will take time to prepare the cocoa to a higher standard. However, whilst this argument may hold for certain minor quality defects, such as drying, interview findings indicate that reconditioning by the PC is a second-best approach in the achievement of good quality. Reconditioning cannot improve aspects such as fermentation, which is the key process affecting the flavour characteristic of the cocoa bean.

Furthermore, because of the degree of urgency in local buying the PC is always in a rush and therefore any secondary reconditioning work carried out may not receive the time and care that the farmer can give. Interview findings suggest that local traders face a significant time constraint due to several factors. Firstly, because of the organisational risk associated with PC's, district managers keep very tight control of any money released to the PC. As such, the PC must account for any money received with physical cocoa in a short period of time. Secondly, the PC does not want to devote a large amount of time to reconditioning as this will inevitably reduce the amount of time they can spend in the field competing for more cocoa, and ultimately more commission. This was indicated in all eight PC interviews carried out across both stages of research.

As such, whilst reconditioning may be considered an indication of the buyer taking extra responsibility towards quality, it may not in fact lead to the high level of quality that the QCD requires. In support of this, all buyers and Cocobod officials, along with four key informants found that the role of the farmer is paramount in quality. As noted one LBC manager,

'I would say the main reason behind Ghana's high quality cocoa is actually the effort the farmer puts in after he has produced the cocoa, he goes through the fermentation process correctly'.

To a large extent this builds upon the earlier recommendation of increased farmer training in Ghana. As discussed earlier farmer training could help to improve the balance between competition and quality control in Ghana. Within

the partial model it has become too easy for the Cocobod to shift the emphasis of quality responsibility on to the LBC's, effectively making them a scapegoat for any quality problems in recent years. Resources have been transferred away from farmer education, at the same time as competition entered the market. Under such circumstances it is understandable that quality problems have been experienced. Increased farmer training could help to provide balance in this area, enabling LBC's to pursue their competitive instincts to some extent, whilst reducing the threat of buying poor quality cocoa.

Building on the argument of competition and coordination [Poulton et al, 2004] and in reference to section 7.2, it may also be suggested that increased quality control in the form of farmer training could provide a further check against the quality decline that may result from the modernisation of the takeover centres. As discussed in section 7.2, the quality decline that may result from increased turnover speed needs to be considered by the Cocobod. With the potential for LBC's to turnover cocoa faster, the pressure on farmers to sell cocoa early may increase. The findings from this section do, however, suggest that the QCD is now firmly in control of quality within the Ghanaian cocoa market. LBC's have responded positively to the constraints put in place by the QCD and there is now a greater degree of coordination between LBC purchasing habits and Cocobod quality requirements. As such, in reference to section 7.2, the modernisation of the takeover centres may be endorsed as a competition inducing change, provided the Cocobod continue to be vigilant in the maintenance of their quality controls. Should this take place it would be a positive example of the balanced regulatory approach that may be required to sustain development within the partial model.

7.3.4 - Conclusion

Throughout this section it has been observed that the danger of quality decline resulting from buyer competition is clearly an issue that the Cocobod take very seriously. To some extent these concerns may be justified, as based on the findings reported throughout this section it appears that the practices pursued

by LBC's in Ghana are somewhat similar to those employed by traders in the fully liberalised markets of the Ivory Coast and Cameroon, where severe quality decline has been experienced [Varangis and Schreiber, 2001; Losch, 2002]. However, whilst the degree of importance placed on this issue by the Cocobod is quite severe, in reality any decline in the quality of Ghanaian cocoa in recent years has been relatively marginal.

In light of this praise must be given to the controlling role played by the QCD within the Ghanaian market. Experience has proven that the maintenance of quality alongside competitive market buying is a challenging process, and therefore it is not appropriate to criticise the QCD's firm approach to quality control. Equally, it must be recognised that the Cocobod's simultaneous pursuit of both competition and quality has led to tensions within the partial model.

Indeed, as seen in the previous section on speed of turnover, it may be argued that trade-offs between the objectives of competition and coordination are an inherent feature of the partial model in Ghana. Reducing the tensions that exist between quality control and competition will require both compromise and collaboration between the major stakeholders in the market.

Such compromises may, however, be required in order to achieve the sustained development, made possible by a balance of competition and coordination [Poulton et al, 2004]. The performance of the Ghanaian market to date in the realms of both competition and quality strongly suggests that a balance in this area may yield positive benefits throughout the entire market. As such, it is recommended that the Cocobod re-direct some resources to the objective of farmer training, so that farmers, LBC's, and the Cocobod can all begin to contribute, as appropriate, to the maintenance of Ghana's quality.

Section 7.4 - Partial Model Transition

7.4.1 – Introduction

Despite beginning liberalisation in 1992, reform in the Ghanaian cocoa market has been slow and the Cocobod has maintained many of the traditional functions of the old government parastatals. Alongside the role of the QCD in quality control and the CMC in cocoa exports, the Cocobod has also remained heavily involved in the provision of farmer inputs. Fungicides and insecticides are provided twice annually as a public good, and in recent years there have been a number of different fertiliser subsidy programs. However, whilst quality control and cocoa exports are two areas in which the Cocobod has no intention of relinquishing any control, interview findings suggest that there may be scope for greater private sector involvement in farmer inputs.

Gradual reform is a key component of Kydd and Dorward's [2004] model of developmental coordination. Within this model there is a deliberate transition of responsibility in certain functions of the market from public to private sector. One such function is the provision of farmer inputs, and as pointed out by Spooner and Smith [1991], this is typically one of the first functions to be privatised in the process of reform. However, successful and sustainable privatisation presents a major challenge. Recent studies show that the development of private sector input markets in Sub-Saharan agriculture has proven very difficult and missing markets have been the norm in many recent examples of market liberalisation [Kherallah et al, 2000; Shepherd and Farolfi, 1999].

Nevertheless, there may be a need for such change within the Ghanaian cocoa market. The total proposed government expenditure on farmer inputs for 2008/09 is 161.5 million Ghana cedis²⁴⁴. Whilst recent global cocoa prices have been abnormally high, thus enabling the Cocobod to make such significant

²⁴⁴ Ghana News Agency [2008] 'Government Raises Cocoa Producer Price By 36 Percent', http://ghana.gov.gh/ghana/government_raises_cocoa_producer_price_36_percent.jsp

investments, given the cyclical nature of cocoa price movements [Ruf, 1995] there will come a time when such surpluses are not available to invest. Recognising this, five Cocobod participants²⁴⁵ accepted that overtime it will necessary for the Cocobod to transfer responsibility for these services to the private sector. In light of this the following section will attempt to explore both the constraints facing LBC's in input provision and future possibilities for the development of private sector input markets.

In recognition of the emphasis placed on transition within the model of developmental coordination [Kydd and Dorward, 2004], the theme of partial model transition was identified a priori as a key theme in this study. Furthermore, based on past studies [Poulton et al, 2004; Larsen, 2002], the potential for buyers to take on more responsibility in the market for farmer inputs was also targeted within interview guides.

Within the key theme of transition, however, the primary theme of buyer constraints, alongside the secondary themes of interlocking, collective action and buyer attitude are considered as emergent themes. Indeed, whilst it was anticipated that buyers may face some constraints in the market for farmer inputs, the extent to which these particular themes emerged as constraints was unexpected. The sub-level theme of organisational risk is also an emergent theme, and as discussed in section 7.3, this is an original finding from this study. The sub-level theme of strategic default was identified a priori based on the analysis of this problem within recent studies of sub-Saharan input markets [Poulton et al, 1998].

The theme of public private partnership is also an emergent theme. Indeed, this theme emerged specifically in response to a new Cocobod program that was being implemented during round two. In recognition of the highly emergent nature of the primary theme private public partnership, the secondary themes of LBC interface and partnership are also considered to be emergent themes.

²⁴⁵ These five Cocobod officials include four of the respondents with a ✓ in appendix eighteen, plus the director of the CODAPEC program.

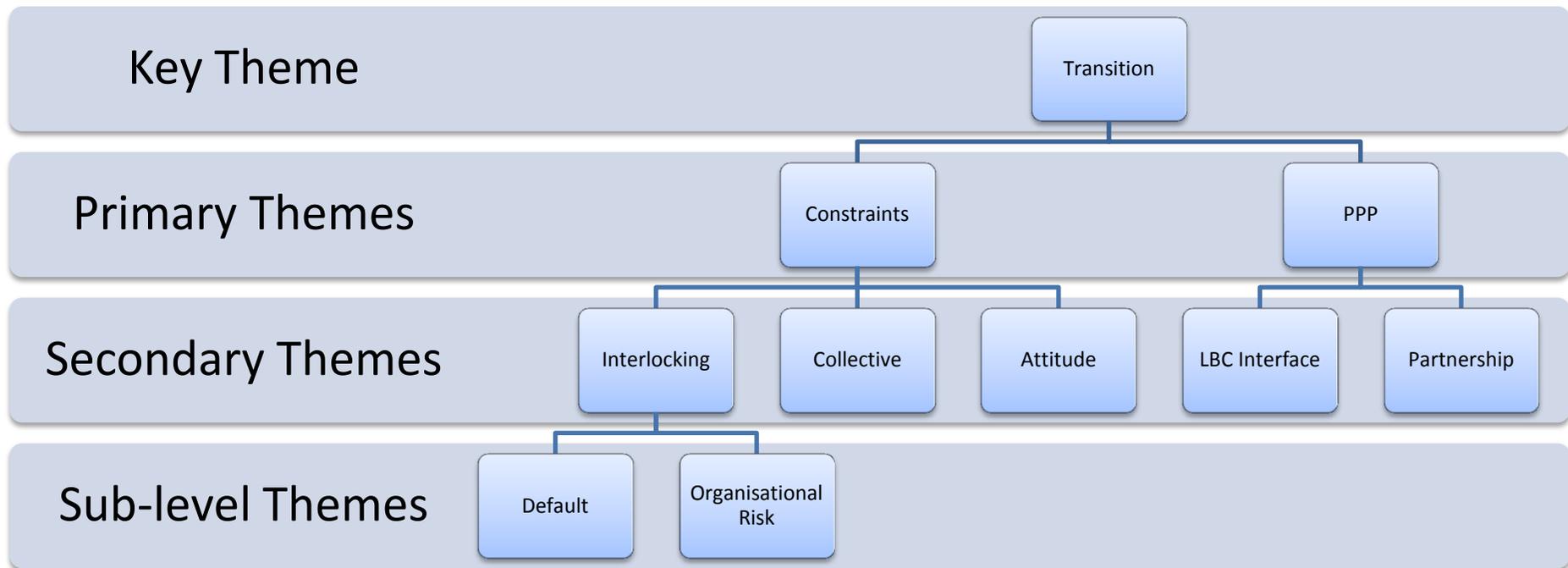
The structure of themes within the final template can be seen in a linear format in figure 7.4.1 and in a hierarchical format in figure 7.4.2.

Figure 7.4.1 – Final Template: Partial Model Transition

- LBC Constraints
 - Interlocking
 - Strategic Default
 - Organisational Risk
 - Collective Action
 - Buyer Attitude

- Public Private Partnership
 - LBC interface
 - Partnership

Figure 7.5.2 – Hierarchical Final Template: Partial Model Transition



7.4.2 - LBC Constraints

7.4.2.1 - Interlocking

During chapter two it was observed that interlocking arrangements between buyers and farmers can be used to overcome the financial constraints facing farmers by enabling buyers to provide farmers with either financial credit, or inputs on credit. Building on this, Zeitlin [2006] finds that LBC's have used interlocking arrangements to facilitate the provision of inputs/credit to farmers in Ghana. Indeed, Teal et al [2006] and Vigneri and Santos [2007] also find that this is one of the major positives resulting from the introduction of competition into the Ghanaian cocoa market. As such, it was very interesting to observe that all LBC respondents report a very negative experience of using interlocking transactions in Ghana. In light of this the following two sections will explore the constraints LBC's faced in using interlocking arrangements.

7.4.2.1.1 - Strategic Default

Within chapter two it was observed that strategic default has been a major problem in several sub-Saharan markets, causing buyer to retract from interlocking arrangements, instead selling inputs on a cash only basis [Poulton et al, 1998; Poulton, 2006]. Strategic default occurs when a farmer takes credit from one buyer based on an interlocking arrangement and then sells the contingent produce to a different buyer in order to avoid repayment [Poulton et al, 1998]. Building on these findings, all LBC respondents in round one indicated that in response to the high level of strategic default experienced in recent years, they have stopped offering any form of credit/inputs to farmers²⁴⁶.

Poulton [2006] suggests that increased levels of default, and the resultant retraction of buyers from the provision of credit, may be explained by an increased number of buyers in the market. However, based on interview

²⁴⁶ The high level of default experienced in the past is acknowledged by the respondents in appendices twenty seven and twenty eight.

findings, and also the market share data in appendix three, it appears that the level of competition in the internal market has not changed significantly in recent years. Whilst there were three LBC respondents in round two who felt that the level competition had increased, the general consensus of the remaining twelve respondents was that although competition is currently intense, it has been the same for several years. This can be seen in the following passage:

[R] 'How has the level of competition between buyers changed in recent years?'

[LBC] 'The level hasn't changed.'

[R] 'Has the intensity changed?'

[LBC] 'It is always intense cause they are all fighting to get more cocoa'

As such it appears that whilst buyer competition clearly facilitates strategic default amongst farmers, an increase in competition cannot be used to explain the retraction of LBC credit in Ghana. Recognising the insufficiency of increased competition as an explanation in this case, it has been necessary to explore alternative explanations for why buyers have retracted from the provision of credit/inputs in recent seasons. In this light, it interesting to observe that when questioned on the topic of interlocking all LBC respondents across both stages of research found that the Ghanaian farmer has a negative attitude towards the repayment of credit. As observed by one LBC manager,

'The farmer in Ghana does not operate on credit to anybody'.

This problem is also acknowledged during six interviews with members of the Cocobod²⁴⁷ and four key informant interviews, where it is found that based on years of receiving inputs in the form of government handouts farmers in Ghana have developed a cultural problem towards repayment. Closely related to this

²⁴⁷ This includes all five of the Cocobod interviews marked with ✓ in appendix eighteen, plus the director of the CODAPEC program.

Poulton et al [1998] and Dorward et al [1998b], find that the cultural impact of government handouts on farmer attitude towards repayments can help to explain why strategic default has become such a major problem in sub-Saharan markets.

During an interview with a Cocobod officer it was observed that this attitude is deeply embedded in the farmers psyche and dates back as far as the 1960's when Cocobod began a program of free pesticide spraying for farmers. Over the years Cocobod have not attempted to engender an attitude of self-sufficiency amongst farmers, and as such farmers have come to expect to receive inputs for free. To a large extent the negative impact of government hand outs can be seen in the Cocobod's current mass spraying programme. Within this program the farmers are encouraged to spray their farm twice a year, in combination with the two free sprayings offered by the Cocobod. The majority of farmers have not been doing this, however, rather than let farmers learn from the negative results of not spraying, the Cocobod have been providing additional inputs for free. As observed by one LBC manager this type of support has led to an engrained belief amongst farmers towards inputs,

'When some of these issues settle in peoples minds it takes a long time to get rid of...they think that for cocoa anything that comes their way is for free'.

In reference to the above findings on competition it is also found that strategic default was a problem in the Ghanaian market prior to 1992 when the PBC was the monopsony buyer. As noted by a Cocobod official,

'The farmers had their own way of doing things, even though the company was only one [PBC], the farmer wouldn't sell to you where his records are, he can travel to another marketing clerk and sell the produce, so that the marketing clerk who sold the input to the farmer, the cocoa wouldn't go to that marketing clerk'.

In light of this it is argued that, although strategic default has been made easier for farmers with the introduction of a multi-buying system, the farmers cultural negativity towards repayment pre-dates the introduction of private buyers. As such, having experimented with farmer credit as a form of competitive strategy, LBC's have only recently learned that, due to the deeply embedded nature of the Ghanaian farmer's reluctance towards repayment, it is very difficult to make this strategy a success. LBC's have had to experience the extent of this problem, before making the decision to retract from the provision of framers inputs. In light of this it appears that, without a concerted effort towards a change in framer attitude, it is difficult to see how strategic default will cease to be a constraint to LBC involvement in farmer inputs.

7.4.2.1.2 - Organisational Risk

As discussed in section 7.3, LBC's face a significant challenge when attempting to monitor and control the actions of their PC's. This creates the potential for opportunistic behaviour by PC's. Indeed, throughout research it was found that PC's have previously used interlocking arrangements with farmers as an opportunity to defraud LBC's. Aware of the Ghanaian farmer's reputation for strategic default, PC's have been stealing LBC money and then reporting that the money was lost as a result of farmer default. This problem was acknowledged by nine of the thirteen LBC participants interviewed in round one. In such cases it is often very difficult for management to determine who is at fault, due to the problems of monitoring and information asymmetry at the local level. In light of this, one LBC manager noted,

'That is why sometimes we send them to the police, some of them [PC's] have collected the money and tell me that they gave it to my farmers...and it is very difficult for me to go from one farmer to another... the executive time wasted'.

This loss of trust appears to be a strong constraint to the use of interlocking arrangements, as the LBC is somewhat dependent on the honesty of the PC in this area. Not only is the PC required to deliver inputs and collect payment, but it

is also very important that the PC monitors the actions of the farmer to avoid the risk of the farmer selling his cocoa to a different buyer. As such, there is a need for LBC's to improve upon the monitoring and control of PC actions in order to reduce the level of transaction risk associated with interlocking arrangements.

7.4.2.2 - Collective Action

In theory the threat of strategic default from farmers and organisational risk from PC's can be reduced through a greater level of collective action between LBC's [Larsen, 2002; Poulton et al 2004].

In relation to strategic default, collective action can take place in two main forms. Firstly, buyers may collectively contribute to a central fund for farmer inputs, which are then distributed as a public good. This is known as a 'Coasian solution', where the potential beneficiaries of a public good may pull their resources together in order to collectively reap the benefit of the service provided [Coase, 1960]. Buyers may be motivated to do this aware that without certain inputs farmer production will decline and buyer profits will suffer. Coasian solutions require a very strong degree of collective action between buyers. Within Ghana, however, the required level of collective effort and infrastructure necessary to sustain collective action at the local level has never been implemented by the LBC's. In light of this, all LBC respondents in round one strongly indicated that there no chance of buyers working together to provide inputs as a public good. As noted by one buyer,

'As a group they could have a bigger yield, but individually because of the competition...individually it is difficult to see the association coming together to raise some money to help the farmers'.

The second form of collective action that may be used to reduce default is simply a greater degree of coordination between LBC's in the implementation and enforcement of market practices. Such coordination can take the form of enforceable competitive agreements and codes of conduct amongst LBC's. For

example, a rule that stops rival LBC's buying cocoa from a farmer, if another LBC has made a substantial loan to the same farmer. Indeed, as observed in chapter two, studies by Poulton et al [2004], and Larsen [2002], have demonstrated that buyers in the Zimbabwean cotton market have used this type of 'relational coordination' to achieve low default rates and high quality output. However, when LBC participants were questioned about the possibility of coordination in this area, again they were unanimous in their belief that this would not be possible. As was the case in the earlier findings section on organisational risk, the extent of competition in the market is cited by all respondents in round one as the main reason why this could not happen.

In this light, it is interesting to observe that Poulton et al [2004] find that when a farmer strategically defaults, the buyer to whom the farmer sells his produce is considered to be free-riding on the investment [input loan] of the buyer who originally gave the farmer the inputs. However, based on interviews with LBC respondents in Ghana, it appears that buyers do not find strategic default to be a form of free-riding. Indeed, all LBC respondents questioned on this issue in round two found that all buyers are free to compete for all available cocoa in the market, regardless of any investments that have been made in a farmer. As noted by one LBC manager,

'In the spirit of competition farmer loyalty is what everybody wants...if he not selling to me, but selling to someone else, that person would not worry.'

This finding is not presented as a challenge to Poulton et al's [2004] understanding of free-riding, but rather it is used to illustrate how the atomistic competitiveness of the market in Ghana, and the mindset which this creates, acts as a constraint to collective action. Indeed, the results recorded in the Ghanaian study in many ways corroborate with the contentions of Poulton et al [2004]. As discussed in chapter two, Poulton et al [2004] find that the strongest degree of collective action amongst buyers has been recorded in cases where the market is highly concentrated. Indeed, at the time of the Zimbabwean cotton studies there were only three major buyers in the market and therefore collective action

amongst buyers was much more possible[Poulton et al, 2004; Larsen, 2002]. However, within the Ghanaian market there are nineteen active LBC's. Furthermore, amongst this group many of the peripheral players are not active members of the Licobag. As such, it is unrealistic for LBC's to achieve the level of collective action required for the 'relational coordination' described by Poulton et al [2004].

The above finding may also be related to the LBC's failure to work collectively in the sanctioning of PC's that behave opportunistically. During round two of research all LBC participants found that even in cases where a PC acts opportunistically and is dismissed by an LBC, the same PC will be able to find work with another LBC in the market. Therefore, the threat of job loss is not a major deterrent to PC opportunism, as can be seen from the extract below taken from an interview with an LBC manager,

[R] 'If a PC is found to have been cheating, how easy is it for him to move to another LBC?'

[LBC] 'It is very easy, it is very easy, it is just a matter of going to the LBC and saying I want to buy for you, incidentally we as LBC's haven't resolved enough to have, we are making it easy for a person to move from one company to another.'

Ostrom [2000] observes that collective action between market participants can increase the threat of credible sanction for opportunistic acts. Either by sharing information on opportunistic actors, or by resolving to collectively sanction those who act opportunistically, collective action can reduce the incentive for opportunism. In the case of organisational risk, collective action would take the form of district managers sharing information on opportunistic PC's, with the intention that any PC who is sacked for acting in this way will not be able to get a job with any other LBC. Indeed, this suggestion is much more realistic in

relation to the problem of PC opportunism, instead of farmer default, due to the relatively small number of PC's in the system compared with farmers²⁴⁸.

During research it emerged that the possibility of collective action in this area had been discussed amongst LBC's for several years. However, close to 80% of LBC respondents across both stages of research expressed the opinion that either it was not Licobags' responsibility to take action in this area, or that Licobag did not have the capacity to achieve such a goal. As such, it would appear that further development is required in both the level of LBC commitment towards Licobag, and the level of organisational infrastructure in Licobag, before collective action in relation to PC opportunism could be achieved.

7.4.2.3 - Buyers Role

The LBC's natural tendency to reject the possibility of a more active role in the market for farmer inputs may also be related to their perception of their role in the market. During round two interviews thirteen of the fifteen LBC respondents indicated that they only considered themselves to be agents of the Cocobod, contracted to purchase and deliver cocoa. As such, it appears that the majority of LBC's have a rather narrow perception of the opportunities that exist in the market, focusing only on their immediate responsibility of purchasing and delivering. Indeed, as observed by one LBC manager,

'We particularly are traders, we are buying to sell to Cocobod, I don't think it our duty to oversee the program [fertilisers] in the field, it will take of a lot of time from us.'

Given the potential for LBC's to take on more responsibility in the Ghanaian market, it is important to question why LBC's consider themselves in this light. As witnessed in section 7.3 on supply chain management, the cost and efficiency focus of LBC's is primarily driven by the market conditions set for them by the

²⁴⁸ It should be noted that there are potentially around 25,000 PC's in the cocoa market. As such, the number of PC's is not small; however, in comparison with the estimated 3.2 million cocoa farmers in Ghana, the number of PC's is significantly more manageable.

Cocobod. Working on a tight fixed margin it may be argued that LBC's are fully justified to focus single-mindedly on their roles in purchase and delivery. Within this framework it is understandably difficult for LBC's make the long term investments required to develop a private sector input market. In support of this fourteen of the fifteen LBC participants in round two indicated that, rather than searching for opportunities to invest, in recent years LBC's have been struggling for survival. When discussing the possibility of investing more in farmers, one buyer noted,

'It would be ideal if we could do that, but you know most of us have been saddled with financial problems in the past four years...when you are working as a private company you must create before you can share'.

In recent seasons, Ghana has experienced high rates of inflation²⁴⁹ and resultantly all buyers in round two complained that the margin they receive no longer reflects the cost of doing business. Indeed, as discussed in chapter four, LBC's have struggled to make a profit since their inception in 1992. Resultantly, it is not surprising that the role of the LBC has not significantly evolved since the beginning of market reform.

Within Kydd and Dorward's [2004] model, private sector growth is contingent upon government encouragement and the creation of investment opportunities. However, in Ghana there are very few examples of the Cocobod taking action to lower the investment threshold faced by buyers²⁵⁰, or increasing the returns available from investment. As such, it may not be the case that buyers have a narrow perception of their role, but rather that their role has been somewhat limited by the absence of profitable investment opportunities.

In light of this, the following theme of 'public private partnership' will attempt to explore the LBC response to a recent investment opportunity created by the

²⁴⁹ Kpodo [2009c] Ghana Inflation rises to 20.56 pct in April'. - <http://af.reuters.com/article/ghanaNews/idAFLE36176820090515?sp=true>

²⁵⁰ The one exception to this is the Cocobod's provision of seed-fund financing at an interest rate lower than the standard bank rate in Ghana.

Cocobod in the area of farmer inputs. Whilst this example was only beginning to emerge during round two research, the actions of both the Cocobod and the LBC's in this area offer valuable insight into the potential for input services to be transferred to the private sector.

7.4.3 - Public Private Partnership

7.4.3.1 - LBC Interface

As can be seen from the findings above, throughout round one all LBC's respondents displayed a reluctance to become involved in the area of input delivery. In light of this, it was surprising to observe that during the second round of research three Cocobod respondents indicated that in the coming seasons LBC's are to become the main channel through which fertilisers are marketed to farmers. The Cocobod's motivations for this are twofold.

Firstly, the Cocobod have been largely unsuccessful in their own efforts to market fertilisers to farmers. The Cocobod's most recent program of selling fertilisers farmers at a subsidised price on a cash upfront basis has proven ineffective at reaching a large amount of farmers. Interviews with two Cocobod officials in round two suggest that this has been because of the farmers' financial credit constraint. In the past when Cocobod have attempted to overcome this constraint by giving farmers inputs on credit, high default rates have been recorded. This can be seen in the following statement by a Cocobod official:

'When Cocobod goes in everybody says that Cocobod is government, so I know that we will never get our money back'.

This is consistent with the earlier findings on strategic default where it was found that the farmer's negative attitude towards repayment is a major constraint to farmer credit in Ghana.

Secondly, given the LBC's are already situated at the farmer level, all Cocobod respondents indicated that LBC's are appropriately placed to sell inputs to farmers. As observed by one Cocobod official,

'Ideally the LBC's are now the interface between the Cocobod and the farmers, so it is easier to work with them'.

Logistically LBC's are also well placed to; distribute the inputs to farmers, monitor the farmer's activities, and collect repayments. This is consistent with the findings of, Hoff et al [1993], Poulton et al [1998] and Coulter et al [1999], as reported in chapter two. Building on the advantage that LBC's have in this area, the deputy chief executive of the Cocobod, Mr Charles Ntim, was very enthusiastic about the possibility of using the LBC's as a marketing channel to the farmers. Mr Ntim noted that in the coming season's he expected LBC's to be used increasingly as the Cocobod attempts to transfer some its farmer services to the private sector.

Beyond the logistical advantages of using LBC's as input providers, there is another major advantage in this role. As discussed at the beginning of this section, LBC's have experimented in the past with providing farmer credit as a form of competitive strategy. Indeed, nine of the fifteen LBC respondents in round two indicated that, although very risky, farmer credit is one of the strongest incentives that a buyer can offer a farmer²⁵¹. When asked about farmer credit one LBC manager noted that,

'A major benefit is to some extent it increases loyalty²⁵² if we provide soft loans or a credit facility'.

In light of this, it appears that LBC's may be naturally motivated to explore any opportunity to incentivise farmers. LBC's are fierce competitors and therefore

²⁵¹ This finding is consistent with those reported by Laven [2005], Zeitlin [2006], and Vigneri and Santos [2007].

²⁵² The buyer in appendix twenty seven also observed that 'soft loans' [credit] can help to build relationships with farmers.

should a viable opportunity to gain competitive advantage present itself, then there will be interest from LBC's. Indeed, as noted by Poulton et al [1998], where opportunities for profit making exist in sub-Saharan markets, local traders will find a way to make it work. As such, given the close link between competitive strategy and the provision of farmer inputs, once again it appears that the role of the LBC's has a natural fit with the market for farmer inputs.

In response to the above conditions, the Cocobod have developed a new program for fertiliser marketing involving the LBC's, due to begin in the 2008/09 season. With the new fertiliser program LBC's purchase inputs from Cocobod on a part credit basis. LBC's repay the cost of the inputs in three separate instalments; 30% on the initial receipt of the fertilisers, 50% more by the end of December, and the final 20% is paid off by the end of February. Fertilisers are bought at the subsidised price of 13.28 Ghana cedis per bag of cocoa and LBC's receive a commission of 2.45 Ghana cedis for every bag of fertiliser sold.

This may be considered a logical approach by the Cocobod. Given the relationship that LBC's already have with their farmers they are best placed to decide which farmers are most trustworthy and thus most likely to make repayments on any inputs received on credit. This was observed by the following Cocobod official,

'Now we are going to ask PBC to give us a list of his large scale farmers, and PBC can vouch for them...because PBC identify the farmer and they say they know him, it is the PBC that make the down-payment'.

The Cocobod have also attempted to make the new program more attractive for LBC's. By selling the inputs to LBC's on a part credit basis, the Cocobod are helping to overcome the LBC's finance constraint. Rather than suffer the finance costs associated with cash payment for fertilisers upfront, LBC's are able to make repayments for the fertilisers throughout the season, allowing them to balance borrowing against their income stream. Finally the offer of commission on each

sale means that LBC's will benefit not only from the productivity gain associated with increased fertiliser use, but there is also a direct financial incentive.

In keeping with Kydd and Dorward's [2004] model of developmental coordination, the Cocobod have helped to reduce the investment threshold faced by LBC's in the market for farmer's inputs. The investment decision has been improved both with regards to the cost of credit, as well as the potential financial benefit. Indeed, this builds on the suggestion of Poulton et al [1998] who find that the government have an important role to play in encouraging the development of input markets by lowering the financial constraints faced by traders. However, despite these improvements, at the time of round two research only three out of the nine LBC's that had been asked to participate in the program felt that they would want to be involved. In order to understand why may be LBC's reluctant to participate in this new program it is necessary to look at their past experiences of private-public partnerships with Cocobod.

7.4.3.2 - Partnership

During the 2004/05 and 2005/06 seasons the Cocobod attempted to use LBC's in the marketing of farmer's inputs. In the first year of this program LBC's were tasked with both the distribution of inputs to trustworthy farmers on a credit basis, and the corresponding collection of repayment for these inputs. Based on interview findings it appears that LBC's were willing to carry out this function based on the Cocobod's promise that they would not be held liable for instances of farmer default. During the second year of the program, however, the Cocobod unilaterally changed the conditions of the agreement so that LBC's became financially liable in cases of farmer default. Resulting from this, LBC's suffered significant financial loss as high levels of default were experienced²⁵³. As observed by one LBC manager,

²⁵³ This is acknowledged by the respondent in appendix twenty eight.

'We found it difficult collecting the money, the farmers, most of them were not honest...the Cocobod also did not manage it well, what they did was they tried to take money from our margins...so much harm has been done, they took about five billion from my money'.

Interview responses from all LBC managers in round two show that at no point in time were LBC top management fully engaged by Cocobod in this project. Regional level managers were given the freedom to decide whether or not the LBC would distribute inputs. Cocobod officials themselves admit that this was a major failing of this program. The Cocobod did not communicate with top management either before distributing inputs to LBC local level operatives, or before deciding to change the rules on liability. Resultantly, the Cocobod's credibility as a partner has been severely diminished. In light of this experience all LBC's managers in round one found that they would not consider the option of working with the Cocobod on farmers inputs in the future. As noted by one LBC manager,

'We would not want to get into any particular fertiliser program...last time the program ran through the LBC's we suffered losses'.

Closely related to this, Kherallah et al [2000] find that unilateral policy changes and the threat of policy reversal have been a major hindrance to the development of private sector inputs markets across sub-Saharan Africa.

Interestingly, however, the Cocobod's credibility as a partner is not the main justification given by the six LBC's that indicated a reluctance to engage in the new program. Closely related to the earlier findings on interlocking, the major stumbling block for these LBC's is the risk of default. Whilst the improved terms of credit and the potential of commission offered by Cocobod are clearly an incentive, past experiences with default have created a deep-seated negativity towards the provision of credit to farmers.

In many ways this attitude is justified not only by the buyers own experiences of default, but also the added risk of default that arises when farmers know the program is linked to the government. As observed earlier in this section, the Ghanaian farmer's negative attitude is closely linked to the history of government handouts. Indeed, the close link between the Ghanaian government and the first attempt at a public-private partnership in fertilisers was highlighted as a key problem by eight of the thirteen LBC managers interviewed in round one²⁵⁴.

As observed by one LBC manager,

'The way they [inputs] were sent out, because they were attached to government, they [farmers] refused to pay'.

This attachment continues to play a significant role in the new program, where the government has publicly announced its support for farmers through the release of 65.5 million Ghana cedis for fertiliser subsidies²⁵⁵. As such, despite the fact that LBC's will be used as the main channel of delivery, the farmer will still be aware that the government is linked to the program. Indeed, it may be argued that if the Cocobod were really committed to the success of a private sector input market they would attempt to distance themselves from the program, regardless of the whether or not they have offered financial support. However, because of the political points that can be gained through such programs it is highly unlikely that the Cocobod would ever separate themselves from the program in this way. The impact of politics on the previous LBC program can be seen from the passage below taken from an interview with an LBC manager,

²⁵⁴ The negative role that the government played in this area is acknowledged by the LBC manager in the passage in appendix twenty eight.

²⁵⁵ Ghana News Agency [2008] 'Government Raises Cocoa Producer Price by 36 percent', - http://www.ghana.gov.gh/ghana/government_raises_cocoa_producer_price_36_percent.jsp

‘They did a lot of politics with it, the way that they packaged it, it looked like they were dashing²⁵⁶ the farmers and I believe their intention was to win political power’.

This finding can be closed the problem of uncommitted liberalisation, as highlighted by Kherallah et al [2000], and Jayne et al [2002]. On this basis it is argued that the poor performance of market reform policies in sub-Saharan Africa has been caused by the unwillingness of African governments to correctly implement policies due to their desire to maintain power and control. In relation to input subsidies Poulton et al [2007], Crawford et al [2007] and Gregory and Bumb [2006] find that the government’s refusal to divorce itself from the political gains associated with subsidies may constrain the level of private sector growth. In this light, it appears that whilst efforts are currently being made towards a private sector fertiliser market, in many ways the positive messages of this development may be undermined by the Ghanaian government’s desire to be visibly associated with the program.

The challenge that the Cocobod faces in this area is conceptually similar to problems that have been witnessed elsewhere in the partial model, most notably in section 7.1, on the credibility of reform. Whilst the Ghanaian cocoa market continues to benefit from a significant level of government intervention, to some extent this same intervention restricts the potential for future private market development. Within the function of farmer inputs it appears that, whilst in some ways government subsidies may act to reduce the invest threshold faced by LBC’s, equally there are aspects of having the government associated with the program that increase the investment threshold. Indeed, it has been regularly observed throughout research findings that whilst the partial model in Ghana has many benefits, thus far its capacity to leverage the potential of private sector investment has not been seen.

²⁵⁶ In Ghana dashing means to give somebody something for free.

7.4.4 - Conclusion

This findings section has explored the opportunities and constraints surrounding the transition of input marketing from the Cocobod to the LBC's. In balance, the findings have indicated that whilst there is a clear opportunity to develop the LBC's role in input delivery in the future, at the moment there are one or two strong constraints hindering the LBC's engagement in this area. In particular the Ghanaian farmer's negative attitude towards loan repayment and the resultantly high risk of default has been highlighted by LBC respondents.

As such, the experience of input market transition within the Ghanaian cocoa market has been broadly consistent with Kydd and Dorward [2004], where it is suggested that the movement from hard government coordination to private sector coordination is likely to be a very challenging process. However, whilst the findings in this section suggest that LBC's are not yet willing to embrace the role of input providers, positive advances have been made by the Cocobod. Both the content and the implementation of the 2008/09 fertiliser program are a significant improvement on the previous attempt in 2004/05. As such, having recognised the LBC's potential as a channel of input delivery it is vital that the Cocobod continue to build on the opportunity that they have foreseen in this area. Furthermore, as encouraged by Crawford et al [2006], the Cocobod must remain consistent in their approach, recognising that input market development is a long-term process. Knee jerk policy changes, such as those seen in the past, will only take the Cocobod back to the beginning of the building process, where they currently find themselves.

Consistency of policy will also be required to help change farmer attitudes towards repayment. As noted by Poulton et al [1998], farmers have the greatest incentive to repay loans where they feel that repayment in the current year will lead to loan availability in the subsequent year. To date this attitude has not been enforced in Ghana, as even where farmers have defaulted on loans, thus causing LBC's to leave the credit market, the Cocobod have intervened in the subsequent season to once again make inputs available to farmers. Now that the

Cocobod have put in place a credible private sector input program they must commit to supporting its development over the long term. Reducing the availability of inputs to defaulting farmers will be a key part of this process.

As recommended by two key informants with a specialisation in farmer inputs, the Cocobod would also be advised to invest in an education program teaching farmers both the benefit of input application, and the long term value of loan repayment. This recommendation is consistent with the findings of Poulton et al [2007] and Crawford et al [2006] both of which find that farmer education is an important step in developing a sustainable private sector input market. At the current time the Cocobod have no formal program of farmer education.

7.5 – Government Quality Control and the CMC

7.5.1 – Introduction

During chapters one and four it was observed that one of the most recognisable outcomes of market liberalisation with sub-Saharan commodity markets has been the removal of the government's role in quality control. As observed throughout chapter four, the resultant changes not only in the quality produced within African markets, but also the quality of product demanded by external buyers, have formed the basis of several GVC studies [Ponte, 2002; Losch, 2002; Fold, 2002]. Based on these studies it appears that global cocoa demand is now characterised by low quality, low price cocoa.

Within Ghana, however, the traditional methods of quality control and monopolised exporting remain intact. Indeed, whilst the Cocobod's system of cocoa marketing was once the norm across West Africa, within the current global market, the Ghanaian system is now unique. Compared with a fully liberalised supply chain, the Cocobod's system of supply chain governance differs in the areas of price, quality, and control of supply. As observed by Humphrey and Schmitz [2001] these are the three primary areas of concern for lead buyers in global supply chains. In light of these concerns, this section will assess the Cocobod's ability to fulfil buyer's needs and compete as an alternative mode of governance within the ever changing global cocoa chain²⁵⁷. Alongside this, the potential for change within the current system of quality control will also be

²⁵⁷ It must be noted that this section is focused on the Cocobod's role in the cocoa export market. The Cocobod's role in supplying local processing factories, which is slightly different, will be considered in section 7.6. The respondents used for the current section on cocoa exports will mainly include multinational processors and key informants who have recent experience of the cocoa export market. Within the sample of local processors three of the four respondents in round one and four of the five respondents in round two work for multinational processing companies. These respondents have experience of working in several different countries around the world and also have close links with their parent company operations in Europe and North America. As such, they can offer informed insight into the Cocobod's role in the cocoa export market. Further understanding of the Cocobod role in the export market is also gained through interviews with seven key informants. In appendix eighteen these particular key informants can be identified as those with the letters EB after their name.

discussed in order to further understand the optimal division of responsibility between the government and the private sector within the partial model.

Based on the strength of GVC literature on the topics of quality control and commodity exports the following template contains several themes that were identified a priori in the literature review. In particular the primary themes of reputation and private sector quality control, and the secondary themes of quality reputation and public goods were identified prior to round one research.

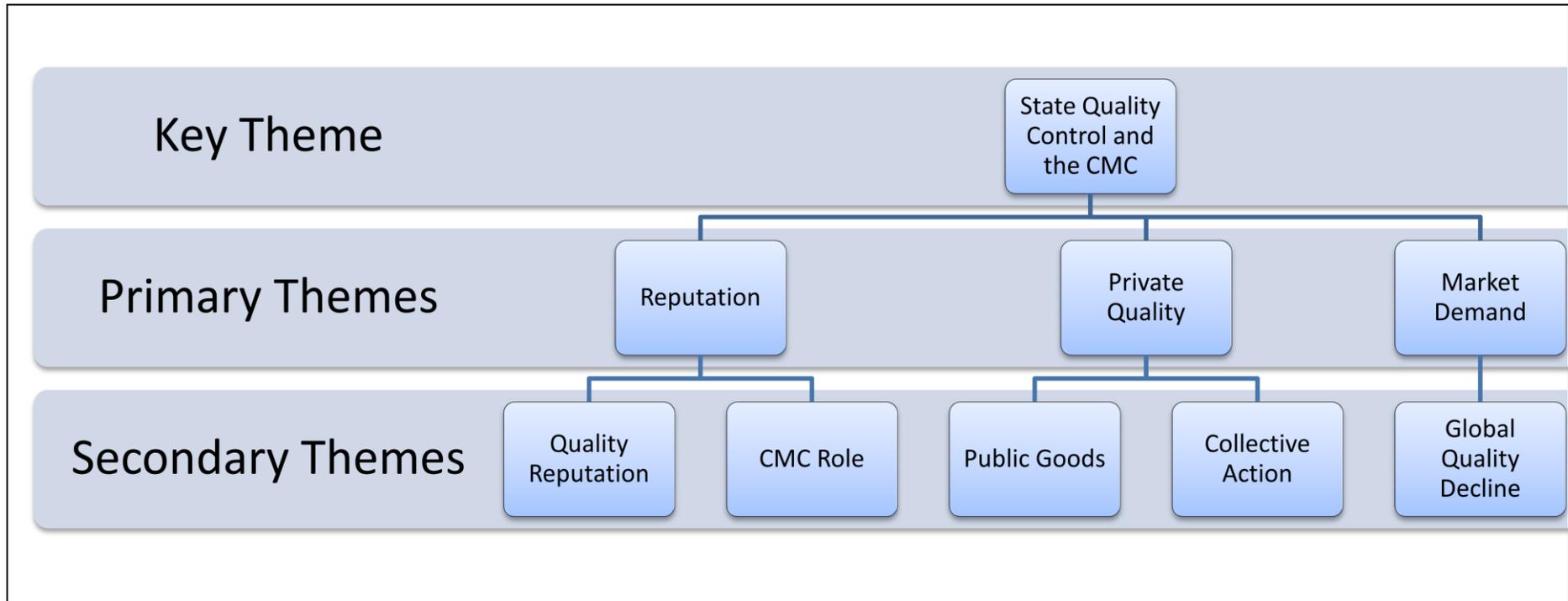
Alongside these a priori themes, some new topics have also emerged. The secondary theme on the role of the CMC emerged strongly as a factor affecting Ghana's reputation. Equally, the theme of collective action emerged as an interesting line of debate informing the argument on private sector quality control. The primary theme of market demand and its secondary theme of global quality decline are also considered emergent themes. These themes related to market demand are considered emergent, not because of their absence from past literature in this area, but because of the fresh perspective that emerged in relation to these themes.

The structure of themes within the final template can be seen in a linear format in figure 7.5.1 and in a hierarchical format in figure 7.5.2.

Figure 7.5.1 – Final Template: Government Quality Control and the CMC

- Reputation
 - Quality Reputation
 - The Role of the CMC
- Private Sector Quality
 - Public Goods
 - Collective Action
- Market Demand
 - Global Quality Decline

Figure 7.5.2 – Hierarchical Template: Government Quality Control and the CMC



7.5.2 – Reputation

7.5.2.1 - Quality Reputation

During chapter three it was observed that, prior to market liberalisation in the 1990's, national reputations for quality played an important role in international commodity trading [Daviron, 2002; Fold, 2002; Losch, 2002]. National reputations came to convey information about the cocoa being traded, and on this basis different origins were traded at different price levels on the market. As such, the benefits accruable to a nation as a result of their reputation for quality have previously been used in support of government quality control [Ponte, 2002; Daviron and Gibbon, 2002]. Government marketing agencies, such as the Caistab in the Ivory Coast, had an incentive to maintain their reputation for quality in order to reap the increased trading and price premiums associated with a good reputation.

However, as observed in chapter four, post-market liberalisation the traditional process of trading cocoa based on reputation has been largely abolished [Losch, 2002]. Quality decline across liberalised cocoa markets has meant that a nation's former reputation for quality is no longer applicable, and cocoa is traded according to homogenous standards of product quality [Losch, 2002; Fold, 2002]. Indeed, the interview responses of all multinational processors²⁵⁸ and seven key informants involved in the cocoa export market²⁵⁹ confirm that the information formerly conveyed by an origins reputation is no longer considered sufficient in the assessment of quality.

²⁵⁸ For the purpose of this section on the cocoa export market any respondent in the local processing segment that works for a multinational processor will be referred to as a 'multinational processor'. As noted earlier this includes three of the four local processor respondents in round one and four of the five local processor respondents in round two.

²⁵⁹ Throughout section 7.5 in all cases where the response of key informants is used to support a research finding, it can be assumed that the key informants are amongst the seven with direct experience of the cocoa export market. These respondents are identified in appendix eighteen with an EB after their name.

Therefore, within fully liberalised markets cocoa now undergoes an onsite quality assessment before contractual parameters are defined. This has resulted in a move away from forward selling, in favour of spot market trading²⁶⁰ where quality parameters are defined after an assessment of the physical cocoa. Forward trading, on the other the other hand, relies on the reputation of the seller, as contractual parameters are defined long in advance of the cocoa harvest. As noted by the respondent in appendix twenty-nine,

‘What happened with the Ivory Coast is that when it liberalised and became a melting pot, it became a spot market’.

The one exception to this is the export market for Ghanaian cocoa, where cocoa is still traded on the basis of Ghana’s reputation for quality. Interview findings show that due to Ghana’s reputation for quality, international buyers are prepared to operate through forward contracts where the contractual parameters of quality are defined well in advance of the cocoa being harvested. Indeed, all multinational processor respondents and seven key informants found that the market’s willingness to operate through forward contracts represents a clear sign of the confidence buyers have in the Cocobod’s capacity to deliver quality cocoa. As observed by the processor in appendix twenty-nine,

‘The system is as such that you should get a quality bean out of a Cocobod contract, so dealing with the CMC you will have a quality aspect that is not certain out of a private a trader’.

Throughout all seven Cocobod interviews discussing the sale of cocoa on the export market²⁶¹ there is a strong emphasis on the importance of Ghana’s reputation for

²⁶⁰ The spot market is also known as the cash or physical market. Commodities traded on the spot market are sold for cash and delivered immediately.

²⁶¹ Within appendix eighteen these seven Cocobod interviews are identified with the ☐ symbol. During these interviews respondents were asked a range of questions on the Cocobod’s role in the external market and therefore these interviews will be reference regularly throughout section 7.5 and 7.6.

quality cocoa. Indeed, all seven external market respondents within the Cocobod sample are keen to emphasise that the Cocobod will always prioritise any action necessary to maintain Ghana's reputation. To a large extent this can be seen from the severity of the Cocobod's actions during the purple bean problem observed earlier in section 7.3. When discussing this problem with the deputy executive director of the QCD he found that whilst purple beans are not considered a defect on the international market, they can be seen as a signal of quality deterioration. As such, the Cocobod considered it necessary to take firm action in order to enhance Ghana's reputation with their export clients. This was noted by the deputy executive director of the QCD,

'Our aim is one hundred percent...that is why we feel concerned even though the problems are minor'.

The value of Ghana's reputation for quality is also widely acknowledged by all multinational processors and seven key informants. Indeed, all multinational processors noted that at least 50% of Ghana's export market premium is based on the quality of cocoa produced in Ghana. Due to years of adherence to quality standards export buyers are willing to pay a premium for Ghana cocoa, in the knowledge that based on the Cocobod's reputation they will receive high quality of cocoa. The significance of quality in the premium that Ghana receives for its cocoa can be seen in the quotation below,

'Quality control is the big one, they have got to be sure they stay on top of that, that really is the key, because if the market perceives that they lose that they will take a big hit'.

7.5.2.2 – The Role of the CMC

Throughout the quotations highlighted above it can be observed that, alongside the QCD, the role of the CMC is often very closely associated with the positive reputation

of Ghanaian cocoa²⁶². Indeed, during all multinational processor interviews and three key informant interviews, the role of the CMC emerged very strongly as a significant factor affecting the price premium obtained by Ghanaian cocoa.

Based on the responses of all multinational processors and seven key informants it appears that the CMC play an important coordinative role for downstream cocoa buyers. As observed in chapter three, vertical coordination²⁶³ is one of the main areas of concern in supply chain governance [Gereffi et al, 1994]. In light of this it appears that value is attributed to the CMC based on their ability to reduce the level of supply risk facing downstream users of cocoa. Indeed, as observed by Humphrey and Schmitz [2000], within the unstable market environments of the developing world, control of supply risk has become a key issue facing supply chain governors.

The responses of all multinational processors and seven key informants indicate that an essential aspect of CMC coordination is their level of contract security. This is observed by the buyer in appendix twenty-nine, and can also be seen from the interview extract below,

‘CMC has a very well established name and has a reputation for honouring their contracts...with the CMC you will get the quality you asked for at the correct price you agreed in the contract’.

Respondents emphasise that the contract security of dealing with the CMC is a significant departure from the relative uncertainty of the cocoa trade. Cocoa trading is fraught with uncertainty and contract default occurs both in terms of non-delivery of goods and also the failure of delivered goods to meet contract specifications. By comparison, the CMC proudly boast of never having defaulted on a contract and

²⁶² This can be clearly seen from the response to the opening question in appendix twenty-nine.

²⁶³ It is important to differentiate between the use of coordination within the GVC and the type of coordination discussed in the developmental coordination framework in sections 7.1-7.4. Throughout sections 7.5-7.6 the term coordination will be used in reference to the GVC definition of coordination discussed in chapters three and five.

claims against cocoa not meeting the specified standards are very rare²⁶⁴. In support of this, all multinational processors and four key informants find that the CMC is a very willing partner and will always do its utmost to honour all contracts. As noted by a member of the CMC,

‘If you are buying forward in a developing country, naturally you must weigh your risks in terms of performance, but CMC over the years has shown a high degree of performance in reliability of contracts so naturally buyers are prepared to pay more for the reliability’.

Interestingly, all multinational processors interviewed highlighted that a major source of security when dealing with the CMC comes from their relationship with the government. Within the predominantly liberalised global cocoa market no private sector seller can offer a contract counter party with the same level of security as the Ghanaian government. This can be observed in the extract below,

‘Their dependability on the fulfilment of a contract, this is basically dependent on the Cocobod, you couldn’t have the same dependability of contract if there wasn’t the well organised state, or another large contract counterparty in place’.

Resulting from the CMC’s reputation as reliable trading partner, there are a number of supply chain coordination advantages for downstream buyers. Firstly, buyers dealing with the CMC have a level of trust and familiarity that enables them to conduct their transactions with confidence and efficiency. The significance of this was greatly emphasised by a CMC trader interviewed in round one. Indeed, all multinational processors and two key informants noted that in recent years the CMC have become increasingly professional, in turn raising the level of efficiency experienced when conducting business with them. As noted by one processor,

²⁶⁴ According to the CMC’s website over 98% of Ghana’s cocoa meets the contractual quality specifications - http://www.cocoamarketing.com/what_we_production.php

'We consider them as the top reliable trader that we can do business with'.

The second advantage is the relative ease of procuring cocoa from the CMC. Buyers simply have to make one phone call to the CMC trading desk and provided cocoa is available, the buyer should be able to obtain the required quality and quantity of cocoa. Unlike other origins, buyers of Ghanaian cocoa do not carry out any third party checks against quality before cocoa is shipped. Indeed, as noted by a key informant 'the covenant of the CMC' offers buyers all the assurance they require in this area. As such, for buyers without a presence at origin, this service greatly eases the process of procurement. This was noted by a member of the CMC,

'It boils down to reliability, over the years people have been very comfortable calling in from around the world with a phone call to the CMC...that is the faith that people have shown in the CMC'.

Thirdly, the level of confidence buyers place in CMC contracts enables the CMC to operate through forward sales. As described in chapter four, forward contracting involves establishing a contract for the sale of cocoa typically around 6-12 months prior to the agreed delivery date. The CMC is able to guarantee such contracts due to the quality assurance offered by the QCD²⁶⁵. When questioned on this topic all multinational processors and members of the Cocobod found that without the assurance offered by the QCD, forward contracting would not be possible. Buying forward will reduce the need for buyers to enter the much less reliable spot market for cocoa, thus reducing the level of supply risk faced.

The size of the premium achieved by Ghanaian cocoa on the export market in recent years offers a further indication of how the roles of the CMC and QCD combine to

²⁶⁵ As discussed in chapter four, operating through forward contracts has also led to significant benefits for the Cocobod, enabling them to borrow money offshore using forward contracts as security. For the 2009/10 season the Cocobod have borrowed a record \$1.2 billion using this facility: Blowers and Wessels [2009] 'Ghana Gets Biggest IMF Crisis Loan to African Nation' - <http://www.bloomberg.com/apps/news?pid=20601116&sid=avqGFSywtr8s>

achieve a large market premium for Ghana cocoa. The Cocoa Merchants Association²⁶⁶ spot cocoa bean and product price indicators, show that between March 19th 2008 and May 28th 2008, one ton of Ghana main grade cocoa was being traded at a premium of \$110-140 above main grade Ivorian cocoa and \$140-160 above main grade Nigerian cocoa. Indeed, whilst this alone is an impressive premium it was recently reported that one tonne of Ghanaian cocoa being sold in July 2008, for delivery in December 2008, was being traded at £207 over the LIFFE quoted London contract²⁶⁷ for December 2008²⁶⁸. On the 16th of January 2009, one tonne of Ghanaian cocoa was quoted at £230-250 over the LIFFE quoted London contract²⁶⁹. Whilst this premium is exceptionally large, and may therefore not be maintained in the long-term, it does show the additional value which the market is currently placing on Ghanaian quality.

Based on the findings above it appears that having both the QCD and CMC operating under the government can lead to synergistic benefits in the export performance of Ghanaian cocoa. Operating within an international commodity chain where a premium is placed on coordination, the role of the CMC appears to be of significant value to external buyers. To some extent this challenges the GVC understanding of supply chain governance developed in chapter three, where it is assumed that modern systems of supply chain governance will be adopted based on the advanced organisational capabilities of lead firms [Gereffi et al, 1994].

On this basis Fold [2002] and Losch [2002] find that lead buyers have driven change within the global cocoa chain, creating a new form of chain governance more suitable to their needs, as compared the former system of government control.

²⁶⁶ Daily market prices for cocoa are found at - <http://www.cocoamerchants.com/dailyspotprice/index.asp>

²⁶⁷ Liffe stands for London International Financial Futures and Foreign Exchange Options. Liffe will quote standard prices for cocoa futures being traded at different stages throughout the year. The Liffe contract will quote prices for one tonne of cocoa of a standardised quality.

²⁶⁸ Reuters [2008] Ghana price surges in European cash cocoa market. <http://africa.reuters.com/country/GH/news/usnEUCOC1.html>

²⁶⁹ Reuters [2009a] London fall generates European cash cocoa buying. <http://africa.reuters.com/country/GH/>

However, in the case of Ghana, where the government's monopoly over cocoa trading is still intact, research findings suggest market support for the role of the CMC. As such, it appears that where the traditional mode of supply chain coordination remains effective at meeting the needs of buyers, change in line with the modern organisational capabilities of lead actors may not take place.

7.5.3 - Private Sector Quality

Whilst the above findings clearly highlight that there are advantages to the government's role in quality control, it is also important to observe some of the negative aspects created by the government's role in this area. As observed in section 7.1, the lack of accountability amongst QCD staff, leading to institutionalised rent seeking and the potential for moral hazard, is a major concern for LBC's in the market. In light of this problem 43% of the LBC participants suggested that there is a need to introduce competition into upcountry quality grading in order to eradicate the problem of inconsistent grading²⁷⁰. Indeed, as observed in chapter two, competition is often recommended as a solution to the organisational problems facing public sector agencies [Tirole, 1994; Dixit, 2002]. As such, whilst the Cocobod does not have any plans to transfer the function of quality control to the private sector, it is still necessary to consider how quality control would operate under a fully liberalised market situation in Ghana²⁷¹. In turn, this discussion will contribute to our understanding of the optimal division of responsibility between the private sector and the government within the partial model.

²⁷⁰ The buyer in appendix twenty-three suggests that the introduction of competition would help raise the accountability of the quality control system in Ghana.

²⁷¹ Under this scenario both the QCD and CMC's monopolies have been broken up and there are multiple private cocoa exporters and quality graders. This scenario has been chosen as, based on research findings, it would appear that the only circumstances under which the QCD's monopoly would be broken up is if the Cocobod was no longer the monopoly seller of cocoa. As such, the fully liberalised situation was chosen over the alternative situation in which the Cocobod remained as the monopoly seller and there are multiple quality graders in the market for quality control.

7.5.3.1 – Public Goods

Analysis of quality decline across several liberalised sub-Saharan commodity markets has generally found that private buyers and sellers do not have the same incentive to enforce quality as the government [Fold, 2001; Ponte, 2002, Poulton, 2006]. Indeed, experience shows that in a liberalised market situation when there are multiple sellers it is much more difficult to maintain a nation's reputation for quality. To a large extent this argument is based on the public good characteristics of national reputations [Kindelberger, 1983; Daviron and Gibbon, 2002, Fold, 2001]. The benefits resulting from a good reputation are both non-exhaustible and non-excludable [Samuelson, 1954]. Reputations convey free and valuable information about the product being traded, and any one trading under this reputation has the capacity to reap the rewards associated with it.

However, as a public good, the reputation will only be maintained if it is possible to internalise both the costs resulting from any deterioration in the reputation, and the benefits associated with the ability to trade under the good reputation. Within a liberalised market, where there are multiple sellers, no single private actor can internalise the benefits or costs associated with national reputations, thus creating the incentive to free-ride. Free-riding occurs when some sellers feel that they can reap the rewards associated with trading under a good reputation, without making the investments required to sustain the reputation [Tollens and Gilbert, 2003].

In Ghana, however, where the costs and benefits of any change in reputation are internalised under the monopoly of the CMC, there is no risk of free riding behaviour [Fold, 2001]. Indeed, as observed by Olson [1965] the risk of free-riding in the case of public goods, offers a strong case for why such services should be provided by the public sector. Furthermore, given the link between quality control and the CMC's position as the monopoly seller there is a very strong incentive for the government to maintain quality. The strength of this incentive is key because, as observed from the buying practices of LBC's in section 7.3, the maintenance of quality within a

partially liberalised market requires strong enforcement²⁷². Without the potential to achieve large premiums, as gained by the CMC on the export market, it is possible that the Cocobod's motivation towards quality control may not be the same. As such, it would appear that the high level of Ghanaian quality is not solely based on the operation of the QCD as an institution under the Ghanaian government, but also the strength of the government's motivation towards quality control based on their financial accountability for Ghana's export performance.

7.5.3.2 – Collective Action

Within the section above, it was observed that the Cocobod's motivation towards quality maintenance is based on their monopoly position in the sale of Ghanaian cocoa. In theory this same incentive could be achieved through collective action from a group of private exporters. Recognising the benefits of a good quality reputation a group of organised exporters could financially contribute to quality control, thus internalising the costs and benefits associated with a change in reputation. However, all interviews carried with LBC's, and six out of seven multinational processor interviews indicate that the prospect of the private sector working together in the area of quality control is highly unlikely. There are two main reasons why this is the case.

Firstly, collective action between private sector actors requires a high level of commitment and motivation towards a common goal from all group members [Olson, 1965]. In relation to this, all multinational processor interviews across both stages of research, along with six key informant interviews, indicate that in a liberalised market setting private sector actors will all have differing priorities in relation to quality. In particular it was noted that many exporters may be prepared to sacrifice an element of quality for a volume-based strategy. Indeed, all bar one

²⁷² This is also supported by the private sectors failed attempts to establish a system of quality control in the Ivory Coast cocoa market post market liberalisation [Losch, 2002]. As observed by Losch [2002] the dynamics of local market competition were simply too strong to sustain a system of quality control.

respondent from the multinational processor segment across both stages of research found that LBC's and external buyer's priorities in the area of market share would most likely distract them from the significant effort required for quality maintenance. As noted by one key informant,

'Buyers of cocoa whether they are from developed consuming countries or not always want to cut corners...as soon as you start to liberalise the race is for the bean, they will take volume and try to make good quality out of it'.

This is consistent with the findings in section 7.3 showing how the dynamics of local competition lead to buying practices that favour volume over quality²⁷³. In light of both this finding and the experience of other markets, it appears that in a liberalised setting market share becomes the dominant strategy for competing buyers. As described by Poulton [2006], buyers with a preference for quality risk being undercut by volume buyers in liberalised markets. Therefore, even if there was an attempt to enforce quality control through collective action in a fully liberalised Ghanaian market, recent experiences suggest that the risk of free-riding from buyers pursuing a market share maximisation strategy would be high.

The second reason restricting buyers from working collectively to achieve quality control is the element of subjectivity that occurs in quality judgement. All multinational processors interviewed indicate that it is highly unlikely that a group of external buyers would be able to agree upon a set of quality parameters to be enforced across the entirety of Ghana's crop. Major cocoa processors will have their own specific quality requirements depending on the products they are making and the clients they are serving. In addition to this, each individual processor will have an individual perception of what is good and bad quality cocoa. Therefore, whilst research findings show that buyers are quite happy to accept the standardised

²⁷³ This is also supported by the examples of the Ivory Coast, Cameroon and Nigeria, where market liberalisation saw buyers rushing for the product at the expense of quality [Varangis and Schreiber, 2001; Losch, 2002].

quality enforced by the Cocobod, in a liberalised market standardised quality is much more difficult to achieve. This can be seen in the following passage taken from an interview with a multinational processor,

[R] 'Why could quality control not be maintained in a private market setting?'

[LBC] 'It's too subjective, there are too many grey areas, whether beans are for example 3% mouldy or 4% mouldy...with a network as numerous as one million farmers there are no end of, and there still are in the present system, grey areas'.

To a large extent the above findings are supported by recent experiences in the liberalised markets of the Ivory Coast, Nigeria and Cameroon. Indeed, throughout both stages of research all multinational processors and five key informants often related their experiences in fully liberalised markets with their concerns about private sector quality control in Ghana. Based on these experiences, external buyers have come to realise that quality control within an African environment requires government enforcement. Indeed, when asked about the possibility of private sector quality control in a liberalised Ghanaian market one key informant stated,

'I have my doubts, the free marketers think it [quality decline] is just a period of adjustment, I don't think these people have ever worked in Africa where there is very little trust involved in anything'.

Divorced from the competitive pressures of local market buying and the global competition for supply, the government is able to dogmatically enforce quality based on its desire to uphold the nations' reputation. Concerned with the more pressing issues related to market competition, interview findings suggest that the private sector does not have the required commitment to achieve the strong enforcement required in this area. Indeed, recognising the LBC's tendency towards

a volume strategy at the expense of quality, the Cocobod's efforts to preserve quality within the partial model must be commended.

7.5.4 – Market Demand

7.5.4.1 – Global Quality Decline

During chapter four, it was observed that post-market liberalisation the level of global demand for high quality cocoa had reduced, contributing to the quality decline observed in liberalised West African cocoa markets [Fold, 2002]. At the extreme end of this argument, Tollens and Gilbert [2003] suggest that the decline in quality has been brought about purely as a result of demand factors. On this basis they argue that local level supply factors, such as those covered in section 7.3, have no significance in the level of high quality cocoa available on the market. As such, there is no need for government led quality control, as local buyers can deliver whatever quality is demanded by exporters.

In light of this it was interesting to observe that, during round two interviews all multinational processors and three key informants noted that in recent seasons the international cocoa market has become extremely concerned by the level of quality decline in the Ivory Coast. As noted by one by one key informant,

'We have seen quality decline in the Ivory Coast to quite horrendously poor levels'.

This finding is supported by a number of market reports expressing concern in this area²⁷⁴. As such, it appears that, in disagreement with the argument put forward by Tollens and Gilbert [2003], the level of quality available on the market may not directly reflect that demanded from buyers. Indeed, in recognition of both the level

²⁷⁴ Two examples of market reports in this area include: Aboa, A, [2008] 'Exporters fret over falling Ivorian cocoa quality.' - <http://africa.reuters.com/country/CI/news/usnBAN245485.html>; and: James, J, and, Attai, O [2009] 'Ivory Coast cocoa buyers see rapid fall's in quality.' - <http://www.djnewswires.com>.

of quality decline in Ivory Coast and also the supply side factors observed in section 7.3, it might be suggested that the level of quality available on the international cocoa market is dependent upon a complexity of demand and supply factors.

Based on interview data it appears that, in recognition of the supply factors affecting the production of quality within liberalised cocoa markets, there is a strong degree of support for the Cocobod's role in quality control. Indeed, the positive aspects of the Cocobod's system as compared the quality decline experienced in the Ivory Coast are acknowledged by the respondent in appendix twenty-nine. Responding to their experience in the Ivory Coast, all multinational processors, along with the two internationally experienced LBC's, indicate that the area of the Cocobod in which they would least like to see change is quality control. As noted by one multinational processor,

'Everything to do with the quality assurance, they should keep that in place as much as possible'.

As such, it would appear that the supply factors affecting cocoa decline are clearly recognised by external buyers. However, as suggested above, demand factors have also had an effect on quality decline. This is supported by three key informants and one multinational processor who suggested that in recent years the cocoa industry has been largely uninterested in improving the quality of cocoa within liberalised markets. Indeed, consistent with the findings of LMC [1996] and Fold [2002], one key informant noted that,

'We seem to be transferring the technology to the processing machines to deal with poor quality, rather than sending a message through the market to signal to the farmers that quality should be improved'.

Based on the responses of all multinational processors and two key informants, it appears that the strength and pervasiveness of the supply factors that encourage

low quality have created a situation in which the level of intervention required to resolve West Africa's quality problems is not considered cost effective. As such, the support shown for Ghanaian quality may not be reflective of external buyer's efforts to revive quality in other markets.

Nevertheless, the level of support currently shown for Ghanaian quality does lead to a revision of the argument put forward by Fold [2001, 2002] suggesting that lead buyer's broader preference for lower quality cocoa may lead to a decline in demand for Ghanaian quality. Whilst research findings suggest that although Fold [2002] was correct in his analysis of the trend towards quality industrialisation, he did not predict that buyers would continue to staunchly differentiate between high quality Ghanaian beans and beans from other origins. Indeed, the trend towards quality industrialisation appears to have increased the level of demand for Ghanaian cocoa, by solidifying Ghana's place as the only viable supplier of high quality cocoa.

All multinational processors interviewed indicate that whilst processing technology can help to alleviate some minor quality defects, good quality beans are still required to make chocolate. As observed by one multinational processor,

'Some of the big pressers can knock out some of the poor quality, but you can't turn bad cocoa into a good product'.

As such, cocoa processors will use high quality Ghanaian cocoa beans to blend with low quality beans elsewhere in order to achieve a marketable product. High quality cocoa beans have characteristics such as a rich flavour, a high fat content and a low FFA²⁷⁵ level, all of which are required in chocolate production. Indeed, bean quality is increasingly an issue due to European chocolate regulations placing a restriction on the FFA levels present in cocoa products²⁷⁶. High quality beans such as Ghanaian

²⁷⁵ FFA stands for free fatty acids.

²⁷⁶ European regulations state that cocoa butter used in chocolate production can be composed of no more than 1.75% free fatty acids [FFA], also known as Oleic acid.

beans have a very low FFA level, whilst low quality beans such as those currently produced in the Ivory Coast have a high FFA level.

Traditionally, processors have been able to rely on some amount of high quality cocoa beans from the Ivory Coast to carry out blending. However, as quality continues to decline, more and more buyers are being forced into the market for Ghanaian beans. Financially this has resulted in a higher premium for Ghanaian cocoa, as demonstrated by the record premiums highlighted earlier. The current demand for Ghanaian cocoa can also be observed from both the passage in appendix twenty-nine, and the following extract taken from an interview with a multinational processor,

‘Due to lower quality standards in other countries a lot of companies in Europe buy Ghana to blend with other origins, to get the average quality they had before.’

The responses of all multinational processors and four key informants interviewed in round two suggest that the industry is increasingly dependent on Ghanaian beans. The level of decline in Ivorian quality during the 2007/08 season was more dramatic than expected. Resolving the situation in the Ivory Coast appears to be increasingly challenging and as such the importance placed on Ghana as a supplier of quality continues to grow²⁷⁷. Recognising the extent to which the industry is now reliant on the Ghanaian cocoa crop one multinational processor commented,

‘The reason why 700,000 tonnes is still fetching a premium is because the world needs it, often to blend down some of the poorer quality, it’s an insurance premium, it’s the insurance of the industry, the Ghana crop’.

In light of the above findings, it appears that Ghana has managed to avoid the trend of quality industrialisation and in many ways Ghana cocoa now exists as a niche

²⁷⁷ This point is clearly observed during the passage in appendix twenty-nine.

product on the mainstream cocoa market. Building on the earlier findings on the unique role of the CMC in the global cocoa chain, the role of Ghana as a reliable supplier of high quality control cocoa further contributes to the understanding of governance within global supply chains. Despite the efficiency advantages and organisational capabilities of lead buyers that could be exercised in absence of the Cocobod [Fold, 2002], change is not supported based on the Cocobod's ability to achieve a level of supply chain coordination that is absent in liberalised markets. As such, contrary to the financially driven 'industrial quality' argument put forward by Fold [2002], the sourcing strategies of mainstream global cocoa buyers appear to be more strategic.

In support of this Ponte [2002] notes that external buyers within the global coffee chain have strategically encouraged market liberalisation within nations with a poor quality reputation, whilst offering support for systems of government control in nations with a good reputation. Recognising the level of supply risk created by quality decline in cocoa markets around the world, lead buyers in the global cocoa chain appear to be acting in a similar fashion, through continued support for the Cocobod. In this light, it may be argued that, as long as lead buyers continue to exercise their sourcing preferences in such a manner, there will be limited risk of the Cocobod's advantage in the market for high quality cocoa becoming diminished.

7.5.5 – Conclusion

Throughout this findings section it has been observed that as a result of the government's monopoly over quality control and cocoa exports, Ghana has been able to maintain its reputation as a supplier of high quality cocoa. Despite the restructuring that has taken place in other commodity markets, the Cocobod has been able to recognise the strength of its role in quality control and trading, leading to a number of benefits throughout the Ghanaian cocoa market. Research findings indicate that Ghana's strength in this area results from having both the QCD and the

CMC directly under the Cocobod, creating the incentive required to maintain quality in a partially liberalised market. Findings have also suggested that the significant level of benefit generated through Ghana's strong reputation for quality may not be available to the private sector. As such, it was suggested that under a scenario of complete market liberalisation the private sector may fail to maintain the high quality of Ghanaian cocoa.

To a large extent the risk that exists in this area is roundly acknowledged by external buyers involved in the Ghanaian cocoa chain. Whilst the findings of past studies [Fold, 2002; Losch, 2002] suggest that lead buyers in the cocoa chain have little demand for high quality cocoa, findings in this study indicate a strong level of support for high quality Ghanaian cocoa. The demand that exists for high quality cocoa can be clearly seen from both, the record high market premiums achieved by the CMC and the strong level of market support for the QCD/CMC axis.

In light of the impressive financial performance of the CMC on the cocoa export market, it is recommended that the Cocobod continue with the production of high quality cocoa. In order to maintain their position of strength, the Cocobod must recognise that their success as an alternative mode of governance has been based on their ability to meet the needs of buyers in a way unmatched by other suppliers. Indeed, research findings suggest that as long as the Cocobod continues to meet buyer's supply needs there will be no pressure for change in the areas of quality control and cocoa exports.

7.6 - Governance and Power²⁷⁸

7.6.1 - Introduction

During chapters three and five it was observed that the themes of governance and power are widely observed within the literature on global value chain analysis. Governance can be defined as: the patterns of authority and power relations which structure the parameters under which supply chain actors operate [Humphrey and Schmitz, 2001, p 4]. In relation to cocoa supply, where the role of the Cocobod is most clearly observed, lead buyers will attempt to exercise governance in the areas of quantity, quality and price. Building on this, the following section will attempt to explore the emerging relationship between the supply needs of local processors and the Cocobod's governance of supply in the Ghanaian cocoa market.

As described in chapter four, control of supply is of major importance to lead buyers in the global cocoa chain [Losch, 2002, Fold, 2002]. Indeed, within the segment of origin processing, supply control is of even greater importance. In light of this, the the following template will attempt to explore the supply requirements of local processors²⁷⁹ in the Ghanaian cocoa market. Given the link between governance and power, the template will also explore the how the power of lead buyers is manifesting itself in light of the supply issues facing local processing. In recent seasons all of the world's most powerful cocoa processors have investing in Ghana, suggesting the potential for lead buyers to influence governance within the Ghanaian market. As such, it will be necessary to explore the challenge this presents

²⁷⁸ It is important to note that this section deals with governance and power as they are understood within Global Value Chain Analysis. Please refer back to chapter three for further information.

²⁷⁹ Within the following section the focus of analysis is the Cocobod's role within the market for local processing. As such, we are interested in information that is specific to processors experience in Ghana. The processing respondents used in this section will be all the local processors' listed in appendix eighteen. This includes multinational processors with factories in Ghana, and processors whose operations are limited to Ghana.

to the the role of the Cocobod as the dominant power within the Ghanaian cocoa chain.

Given the significance of governance, power and supply within the GVC literature, there are a number of a priori themes within this template. In light of this, the secondary themes of the logic of vertical integration, bean specification, and processing incentives were identified a priori based on studies by Losch [2002] and Fold [2002]. The theme of supply shortage is also an a priori theme, given the importance of this topic within market reports, as indicated in chapter four. The primary theme of supply priority is, however, considered an emergent theme given the importance that processors place on this issue above all other issues facing them in the local market.

The theme of government governance focuses on the implications of having an influential government institution controlling supply within the the local processing industry. Whilst governance in this area has not been given much consideration within previous GVC studies, the primary theme of government governance was identified a priori based on the importance of the Cocobod's role in Ghana. The benefit of functional upgrading was also identified a priori from the GVC literature. The secondary themes of agreement credibility and Cocobod adaptability emerged throughout the course of research and offer an interesting insight into the challenge of government governance in the local processing industry.

Gereffi's [1994] analysis of buyer power within the early GVC literature is considered fundamental to the understanding of modern global supply chains. As such, the primary theme of buyer power, along with the secondary theme of Cocobod power were considered a priori in the development of interview guides for round one. To some extent the secondary theme of Cocobod power may also be considered emergent, given the unexpectedly strong cross section of support highlighting the importance of the Cocobod's role both within Ghana and the global cocoa market. The theme of strategic investments is also considered emergent,

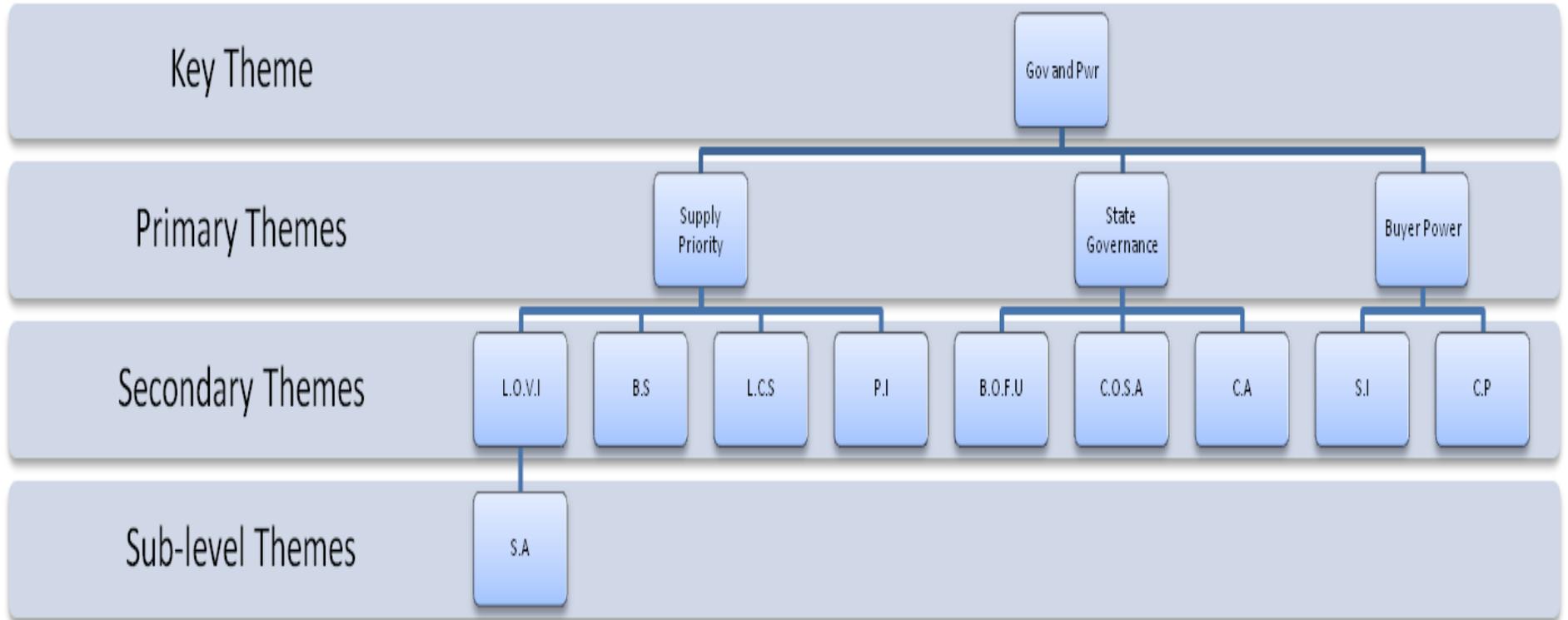
given that the information related to this theme has emerged in response to the recent market conditions facing processors.

The structure of themes within the final template can be seen in a linear format in figure 7.6.1 and in a hierarchical format in figure 7.6.2.

Figure 7.6.1 – Final Template: Governance and Power

- Processors Supply Priority
 - The Logic of Vertical Integration
 - Bean Supply Agreements
 - Bean Specifications
 - Light Crop Shortage
 - Processing Incentives
- Government Governance
 - The Benefits of Functional Upgrading
 - The Credibility of Bean Supply Agreements
 - Cocobod Adaptability
- Buyer Power
 - Strategic Investments
 - Cocobod Power

Figure 7.6.2 – Final Hierarchical Template: Governance and Power



7.6.2 – Processors’ Supply Priority

7.6.2.1 - The Logic of Vertical Integration

Losch [2002] finds that multinational processors had two main objectives when investing in origin processing facilities in the Ivory Coast throughout the late 1990’s. Firstly, due to the breakdown of horizontal coordination systems, such as quality control, processors wanted to get closer to the source of cocoa. By shortening the supply chain processors have been able to increase their level of control and reducing the risks associated with supply in the disorganised Ivorian market. Secondly, processors invested in order to increase their level of market share in Ivorian cocoa. Through establishing facilities at the domestic level, processors have been able to build alliances with local traders²⁸⁰, enabling them to increase their share of first hand cocoa²⁸¹.

The above justifications demonstrate a strong logic behind vertical integration in the Ivory Coast²⁸². However, due to the functions of the Cocabod, these justifications do not apply to the same extent in Ghana. This is particularly true for the justification of improved supply chain coordination. As demonstrated in section 7.5, both horizontal and vertical coordination are very strong in Ghana, enabling processors located in remote locations of the globe to access high quality cocoa with relative ease. As noted by one processor,

‘The big advantage of the state controlled system is that you do not have to set up a very big organisation to collect the beans of the farmers’.

²⁸⁰ Reuters [2007] report that ADM and Cargill were offering traders a price premium of \$150-200 per ton of cocoa, as compared the rate being offered by cocoa exporters. Local processors in the Ivory Coast have therefore made it very difficult for their competitors on the international market to access better quality cocoa beans.

²⁸¹ The first hand cocoa market is cocoa that is purchased directly from local cocoa traders/farmers. The second hand cocoa market [the terminal and spot markets] is cocoa that is purchased from the cocoa trade i.e. specialised cocoa exporters selling on the terminal market, or cocoa traders selling on spot. Cocoa on the second hand market will be more expensive as you will be paying for the services of the cocoa trader that procured this cocoa. Operating on the second hand [terminal] market also carries a greater degree of supply risk for cocoa processors due to the additional competition for beans that exists at this level. Increased competition is caused by the greater ease of accessing cocoa on the second hand market.

²⁸² Barry Callebaut [2007] reported that it doubled its local level purchasing operations in the Ivory Coast in a bid to gain access to the better quality beans and reduce the risk of having to rely on sales through the terminal market.

In relation to the incentive of market share and control, again this justification does not appear to be as powerful as it was in the Ivory Coast, due to the Cocobod's monopoly in external sales²⁸³. Processors in Ghana have to make all purchases through the CMC, thus ruling out access to first hand cocoa. Indeed, based on the way in which the CMC distributes beans amongst competing buyers they are able to restrict the extent of control that the larger processors can gain over Ghana's cocoa supply. As noted by a CMC trader,

'Nobody would like to find his buyers aggregated to five buyers, you really like to have a fine spread, and deal with them'.

Therefore, in terms of access to bean quantities²⁸⁴, the CMC would appear to present a greater level of supply risk compared with the option of vertical integration employed in the Ivory Coast.

7.6.2.1.1 - Supply Agreements

Though processors are not able to form linkages with suppliers at the local level, some additional degree of supply security is available to processors in Ghana through the bean supply agreements that they can establish with the Cocobod. Whilst the exact terms of each bean supply agreement were not available²⁸⁵, it is understood that based on this agreement Cocobod will attempt to ensure that a certain quantity of beans is supplied to each factory on an annual basis. In theory bean supply agreements should therefore remove the risk of having to compete for Ghanaian cocoa beans on the market, thus providing processors with an additional level of security. This was acknowledged by all processors interviewed during both stages of research, and can be seen in the extract below,

'All of the processors get a bean supply agreement, which endeavours to satisfy them that they are going to get the sort of tonnages they need'.

²⁸³ External sales include sales to local processors as well as overseas buyers.

²⁸⁴ As discussed in the previous section on quality control, due to the CMC's relationship with the QCD, the CMC presents very little risk in terms of bean qualities.

²⁸⁵ Bean supply agreements contain confidential information that processors did not wish to revealed for competitive reasons.

Bean supply agreements also offer processors an additional privilege, again not accessible to processors operating outside of Ghana. As discussed in chapter four, local processors can access light crop cocoa at a discount of 20% cheaper than main crop cocoa. In theory light crop beans are to be set aside for use by local processors and not exported out of Ghana. Light crop beans, which traditionally make up around 25% of Ghana's total production, are to be distributed to processors on a pro-rata basis dependent on the capacity of each processor's factory. Interviews with two members of the CMC indicate that they have operated this policy for a number of years, believing that selling light crop beans on the international market may jeopardise Ghana's reputation for quality.

However, all respondents in the local processor segment indicate that light crop cocoa beans are of a similar quality to main crop beans. The only minor issue with light crop beans is that due to their smaller size they are slightly less efficient to process. One local processor found that whilst main crop cocoa beans will offer a yield²⁸⁶ of 81-82%, the yield of light crop beans is slightly less at 78-79%. As such, the discount of 20% offered by the Cocobod greatly outweighs the minor efficiency loss from using light crop beans. In light of this, all of the processors interviewed in round two, claimed that the availability of light crop beans at a 20% discount was a major incentive to invest in Ghana. This can be seen from the passage below,

[R] 'What are the main incentives for setting up a processing facility in Ghana?'

[P] 'Access to light crop, the big processors can take light crop beans, which are slightly smaller, they are selling it at a significant discount as they don't want to sell it on the outside market'.

Aside from light crop, there are additional supply reasons behind the recent surge of investments into processing facilities in Ghana. ICCO figures show that global demand for cocoa based products increased at over 4% during the 2006/07 and 2007/08 cocoa

²⁸⁶ The yield of a cocoa bean is the percentage of the bean that is cocoa nib, which can be used in processing. The remaining waste is mainly made up of the bean shell. Because light crop beans are slightly smaller they have a higher shell to bean ratio.

seasons²⁸⁷. During the same two seasons, the ICCO reported global cocoa supply deficits²⁸⁸ of 301,000 tonnes in 2006/07²⁸⁹ and 88,000 tonnes in 2007/08²⁹⁰. ICCO forecasts for the 2008/09 season, again predict a deficit of 193,000²⁹¹tonnes. In response to the supply squeeze taking place in global cocoa markets, cocoa prices hit a twenty three year high in December 2008²⁹².

In light of the above trends cocoa processors have needed to both increase their processing capacity in order to meet growing demand, and also expand their sourcing capabilities in order to guarantee supply in an increasingly competitive global cocoa trade. Investments in factories at origin appear to offer processors both of these advantages and it is therefore understandable that origin processing has become an increasingly popular investment decision in the last ten years²⁹³. Ghana in particular has received increased investment in recent years as a result of the relatively small amount of processing capacity that existed in Ghana before 2007/08²⁹⁴. In this light, three of the processors interviewed in round two found that Ghana is the logical next step for processors wishing to expand their processing capacity at origin. As noted by one local processor,

‘There is clearly nowadays a move to get closer to the raw material and get your hands on the supply chain, but I think in Ghana’s case whilst that is true, I think the factors that drew the big processors to come here were, it is the second biggest cocoa producer, they had no interest here, and there were problems next door in Ivory Coast’.

²⁸⁷ Brough, D [2008] ‘ICCO sees fall in cocoa demand growth’ <http://africa.reuters.com/country/CI/news/usnBAN954866.html>

²⁸⁸ A cocoa supply deficits means that the annual figure for grinding as driven by demand, is greater than the annual level of raw cocoa production

²⁸⁹ Brough, D, and Nicholson, M [2008] ‘Cocoa prices at over 20-year high’ [http://www.iht.com/bin/printfriendly .php?id=13804450](http://www.iht.com/bin/printfriendly.php?id=13804450)

²⁹⁰ ICCO, March [2009] Latest Quarterly Bulletin of Cocoa Statistics <http://www.icco.org/about/press2.aspx?id=nve11543>

²⁹¹ ICCO, March [2009] Latest Quarterly Bulletin of Cocoa Statistics

²⁹² Blas, J [2008] ‘Cocoa hits 23-year high on supply fears’ - <http://www.ft.com/cms/s/0/1f48a1b8-d129-11dd-8cc3-000077b07658.html>

²⁹³ Please see Table 4.5 in chapter four showing the growth of African processing.

²⁹⁴ The growth of origin processing in Ghana is documented in chapter four.

As observed within the passage above another key reason for the recent expansion of processing in Ghana has been the instability of the political and economic environment in the Ivory Coast. The Ivorian cocoa market has been destabilised not only through market liberalisation and defunct market institutions²⁹⁵, but also through the ongoing civil war and political unrest throughout the country²⁹⁶. This instability has had a significant influence on the security of global cocoa supplies²⁹⁷. In light of this all processors interviewed found that they were attracted to Ghana based on both the degree of political stability in Ghana, and also the sustainability of the cocoa sector itself. As such, once again the Cocobod's stabilising influence is being supported as one of the Ghanaian cocoa market's major strengths.

7.6.2.2 - Bean Specifications

Whilst the findings above indicate that local processors receive a strong incentive through the supply of light crop beans at a discount of 20%, the same level of support from local processors is not shown for Ghanaian beans sold at the full market price. In some respects the findings in this area build on the arguments of Fold [2001] who finds that processors at origin have a lower quality requirement than export buyers and are therefore reluctant to pay the premium for Ghana's high quality beans. This argument is based upon the fact certain processed products do not require a high quality cocoa bean. During round two 80% of the processors interviewed found that factories making cocoa butter and cake will have a preference for lower quality beans. Cocoa butter and cocoa cake are relatively standardised commodities regardless of the quality of cocoa beans used to produce them. Resultantly, the majority of processors²⁹⁸ that have recently invested in Ghana have only

²⁹⁵ Dow Jones Newswire [2007] 'Ivory Coast President Calls for Probe into Cocoa, Coffee Boards' -<http://www.flex-news-food.com/pages/11546/Ivory-Coast/ivory-coast-president-calls-probe-cocoa-coffee-boards-dj.html>

²⁹⁶ Lewis, D [2008] Reuters, Sept 13th 2008 'ANALYSIS-Ivory Coast cocoa sector faces season in turmoil' -
<http://www.reuters.com/article/GCA-Agflation/idUSLC25967020080912>

²⁹⁷ Dow Jones Newswire [2009] 'Ivory Coast cocoa arrivals to Aug 23 seen down 15% on year'. <http://www.analyst-palmoil.com/ivory-coast-cocoa-arrivals-to-aug-23-seen-down-15-on-year/>

²⁹⁸ The one exception is Cargill who have invested \$100 million in a state of the art processing factory with the capacity to go further downstream and make cocoa butter and cocoa cake.

put in place the equipment required for the first stage of processing²⁹⁹. As observed by one local processor,

‘I wouldn’t press³⁰⁰ the Ghana bean because for me the premium is way too high, if you press the Ghana bean you get two products out of it, cocoa cake and cocoa butter, on the cocoa butter you don’t get a premium, it is the same butter no matter which bean you use’.

The justification for this decision, as indicated by three of the processors interviewed in round two is that, unlike cocoa butter and cake, cocoa liquor made using Ghanaian beans will carry some level of premium on the market. Cocoa liquor is not a standardised product as different cocoa liquors will be used to flavour different qualities of chocolate. Processors therefore prefer to use low quality beans in the production of cocoa butter and high quality beans in the production of cocoa liquor. Within Ghana, however, processors do not have this option, as only high quality beans are available.

Furthermore, it appears that the premium available for Ghanaian liquor does not fully compensate for the cost of using Ghana main crop beans. One processor suggested that the market for Ghana liquor is only a ‘niche market’, and therefore the number of buyers willing to pay a significant premium may actually be quite small. As such, the Ghanaian processing industry is concerned that the premium currently available for Ghanaian liquor will diminish in line with the increased level of processing in Ghana. As noted by one processor,

‘If you process everything into Ghana liquor then you will have more liquor to sell than buyers who are willing to pay a premium for Ghana liquor’.

The difference in the level of market demand for Ghanaian liquor, as compared Ghanaian raw beans, results from the level of differentiation within the market for cocoa liquor. Whilst cocoa beans within the mainstream market are a relatively homogenous product,

²⁹⁹ The first stages of processing includes the de-shelling of cocoa beans to get cocoa nibs, and then the processing of cocoa nibs to achieve cocoa liquor.

³⁰⁰ Pressing is the stage of processing after beans have been made into cocoa liquor. Pressing cocoa liquor makes two products of equal proportion, cocoa butter and cocoa cake.

cocoa liquors can vary greatly depending on the specific requirements of the product being made. Each chocolate manufacturer will use a specific blend of different types of cocoa bean in order to achieve a cocoa liquor with the flavour characteristics demanded by their customers. As such, there is a greater premium placed on raw Ghanaian beans, as processors have a greater level of flexibility in using beans to make the end product they require.

The Ghanaian bean is at its most proficient when it is used to blend with other types of lower quality cocoa beans, either to achieve a certain type of flavour, increase the fat content, or lower the level of FFA. This finding is in keeping with several previous studies, all of which contend that Ghanaian beans are typically used for blending with lower quality beans [Gibbon and Ponte, 2005; Fold, 2001; Gilbert, 1997]. Processors will typically want to use only a small quantity of expensive Ghana beans in their blend.

However, factories located in Ghana do not have this option as they are unable to access beans from different origins with the same level of efficiency as factories in consumer markets. As such, it appears that processors in Ghana are somewhat restricted in the level of value that they can extract from Ghanaian quality. Some of blending issues that result from processing at origin are emphasised by the processors in the passage below,

‘Processing at origin would tend to give you another complication, what you get at origin is 100% Ghana and most of your top chocolate blends are maybe 80% Ghana, you don’t have that flexibility here’.

Blending using different varieties of beans at origin is not cost effective due to the location of cocoa consumer markets. Ghana is not a major consumer of cocoa, with almost 100%³⁰¹ of Ghana’s semi-processed cocoa products being exported to the major chocolate consumer markets of Europe, North America, and Asia. It is highly inefficient to import different

³⁰¹ The CPC is the only processor whose products remain in Ghana for consumption. However, around 90% of the CPC’s output is exported to the major consumer markets of Europe, North America, and Asia.

varieties of cocoa bean into Ghana³⁰², only for them to be processed and then exported. As such, it appears that the structure of the global cocoa chain creates a disadvantage for processors operating in the Ghanaian market, where only high quality cocoa beans can be sourced efficiently. This argument builds upon that presented by Fold [2001] and Losch [2002] where it is suggested that origin processors are disadvantaged by their inability to market products that incorporate a blend of beans.

7.6.2.3 – Light Crop Shortage

As can be seen from both of the sections above, there are relatively strong arguments against processing investments in Ghana. In terms of supply chain coordination and market dominance, the advantages created by investing in Ghana, as compared the Ivory Coast, appear to be relatively weak. Furthermore, the high priced cocoa beans available in Ghana do not appear to meet the ideal supply requirements of local processors.

There are, however, some clear advantages to investing in Ghana. In particular all processors highlighted the 20% discount on light crop beans as the number one incentive for investment. As can be seen from the coded interview passage in appendix thirty, this discount is in many ways the key to processing in Ghana. Indeed, without this discount all three of the major global processors interviewed found that the decision to invest in Ghana could not be economically justified. Therefore, it appears that whilst Ghanaian quality is a positive aspect for processors, this advantage can only be realised when beans are sold at the discounted price. Outside of this discount the price position of Ghanaian cocoa on the market, as determined by quality, is considered a disadvantage.

In light of the importance placed on light crop, research findings show that processors are greatly concerned by the rate of market entry into the local processing market. Light crop cocoa traditionally makes up around 25% [170,000] of Ghana's overall production

³⁰² Please note that imported beans have to be transported by sea, due to the Cocobod's fear that trucks bringing beans across the border by land could increase the amount of low quality cocoa being smuggled into Ghana for purchase by LBC's. Sea transportation is more expensive and inefficient.

[680,000]³⁰³. However, the amount of light crop cocoa appears to be decreasing with only 27,030³⁰⁴ tonnes reported by Cocobod in 2006/07 and only 16,826³⁰⁵ tonnes in 2007/08. Even with a total estimated light crop of around 57,000 tonnes [see footnote 304], the amount of light crop available will be vastly short of that required to supply the 380,000 tonnes of processing that will be operational by the end of 2008/09. This has been a major concern of Ghanaian processors for the last two years, and as can be seen from the interview statement below, the Cocobod has apparently failed to appreciate the significance of this for local industry,

‘You don’t process main crop Ghana at a profit, you can only process light crop Ghana at a profit, and there are some fundamental economics in there that I think the Cocobod has got to take on board as they are allowing too many people in’.

Whilst interviews with processors in round one indicated that they were hopeful the Cocobod would find a solution to this problem, round two interviews suggest that during 2007/08 the situation has only worsened. As observed by the respondents in appendices thirty and thirty-one the Cocobod have not taken any action to appease processors concerns in this area. Indeed, despite processors concerns, processing capacity in Ghana continues to increase³⁰⁶. The newly elected NDC government, which came into power under a mandate of increased manufacturing, has vowed to increase processing in Ghana to

³⁰³ In the last 5 years Ghana has averaged around 670,000-700,000 per annum. Therefore light crop is normally around 160,000-180,000 tonnes.

³⁰⁴ This figure is for light crop cocoa harvested during the mid-crop between May-August. The mid-crop traditionally produces more light crop beans as compared the main crop during September-May. Whilst the Cocobod do not publish the figures for the amount of light crop beans harvested during the main crop, local processors suggest it is normally around 40,000 tonnes. Therefore to estimate the total light crop produced in a season I have added 40,000 to the figure published by Cocobod. In theory all light crop beans, whether they are harvested during the main crop or the mid-crop should be set aside for local processors.

³⁰⁵ Kpodo, K [2009a] ‘Ghana Cocoa Purchases 14 pct down at Jan 1’ -<http://af.reuters.com/article/idAFJJOE50D0IW20090114?pageNumber=2&virtualBrandChannel=0&sp=true>.

³⁰⁶ Kpodo [2009b] estimates that Ghana’s processing capacity will soon reach 494,000. [Kpodo, K, 2009b, ‘FACTBOX-Ghanaian cocoa grinding capacity’ - <http://www.reuters.com/article/companyNews/idUKLS7848920080829?symbol=ADM.N>]

60% of the country's total production³⁰⁷. As such, the previous figure of 50%, about which processors have expressed concern, has now been revised upwards.

During all seven of the Cocobod interviews³⁰⁸ discussing the light crop shortage facing local processors, it was stated that if local processors do not want to use Ghana main crop cocoa beans, then there is a clause in their supply agreements that enables them to import beans from other countries. However, as discussed earlier the logistics of this are highly inefficient. Furthermore, if the main objective of processing in Ghana is to increase your access to a Ghanaian beans, then it is counter intuitive to import beans.

In light of this, all processors interviewed during round one disregarded the option of importing beans from other origins as a way to solve the local industry's supply problem. Interestingly, however, during round two interviews it emerged that light crop shortages in the 2007/08 season had forced one local processor to bring in a shipment of beans from Nigeria. When I interviewed the processor in question about this, he indicated that this had been done out of necessity and should not be considered a good supply alternative. As such, this offers some indication of the relatively desperate supply situation facing local processors in Ghana. This is exemplified by the level of discontent expressed by the respondent in appendix thirty-one.

Offering some perspective on the level of light crop shortage that currently exists, two of the major processors interviewed suggested that a processing operation making cocoa liquor would need to use 65% discounted light crop beans in order to survive. Indeed, the respondent in appendix thirty suggests that using a smaller volume of discounted beans would result in a financial loss for the processor. Based on the current processing capacity within Ghana³⁰⁹ this would require a light crop of 247,000 tonnes, which is still much

³⁰⁷ The Daily Guide [2009] 'New Cocoa Processing Plant for Ghana' - <http://ghanareview.com/review/nshownews1.php3?class=all&date=2009-01-27&id=32071>;', 'scrollbars = yes,width=600

³⁰⁸ These seven Cocobod respondents are marked with an  in appendix eighteen and will be referred to regularly throughout this section.

³⁰⁹ This does not account for the proposed factories indicated earlier which could see the light crop requirement increase by close to 70,000 tonnes based on the estimation that each factory requires 65% light crop.

greater than the 150,000³¹⁰ tonnes of light crop produced on average.

7.6.2.4 - Processing Incentives

Consistent with the contentions of Fold [2002], interview findings indicate that processors require a strong financial incentive to operate in Ghana. Currently it appears that it is not possible to market Ghanaian processed products at a price that covers the cost of main crop beans and, as such, processors require an incentive to compensate for the value loss that results from using Ghana main crop beans at origin. Furthermore, all processors interviewed found that operating in Ghana leads to additional costs over and above those faced in Europe or North America³¹¹. Alongside inconsistent and expensive electricity and water, processors have to suffer additional costs in the transportation of their processed goods. As noted by the respondent in appendix thirty, cocoa liquor produced in Ghana has to be solidified in order to enable shipment. In turn the solidified liquor then has to be melted by the client upon arrival. These two additional stages, not incurred by factories located in consumer markets, result in an efficiency loss.

In light of the above findings it appears that in absence of government incentives, such as the 20% on light crop beans, it is more advantageous to locate cocoa processing plants close to consumer markets. This is consistent with Fold [2002], who finds that all of the world's largest cocoa processors have consolidated their operations around the Zaanstreek port in Amsterdam, due to the ease of access to consumer markets. In this light, Gereffi et al [1994] find that global supply chains have been developed in a manner that takes advantage of each country's functional specialization, whereby the geographical location of each stage of production will be selected to maximise supply chain performance. The development of processing factories in origin countries does not appear to represent such functional specialization. As such, incentives are often required to encourage processing at origin [Fold, 2002; Losch, 2002; Wilcox and Abbot, 2004].

³¹⁰ Earlier it was noted that an estimated 47,000 tonnes of light crop had been made available to processors in 2007/08, making 150,000 tonnes a generous estimate. Processors did, however, indicate that in the most recent years the light crop has been especially small and therefore an average of 150,000 is more likely to be a fair reflection of the future light crop output.

³¹¹ These problems are acknowledged by the respondents in appendices thirty and thirty-one.

Within the Ivory Coast, processors have received such incentives through a tax reduction available on processed goods. Interviews with multinational processors indicate that the Ivorian authorities are able to finance such a tax reduction through the overly exorbitant export tax they charge on raw goods, such as cocoa beans³¹². As such, there is a clear incentive to process cocoa in the Ivory Coast, rather than export heavily taxed cocoa beans. As noted by one local processor,

‘In the Ivory Coast there is an incentive system to overcome the disadvantage of being so far away from the consumer’.

Furthermore, lead buyers have an incentive to set up processing facilities in the Ivory Coast in order to enhance their competitive strength through control of the supply channel. Within Ghana, however, there is no possibility of market capture based on the role of the Cocobod. Furthermore, the Cocobod is not able to differentiate between the export taxes for raw and processed cocoa products, due to affect this would have on the CMC’s competitiveness in the export market for raw beans. As such, the only available incentives in Ghana are the supply security offered by bean supply agreements and the 20% discount on light crop cocoa.

As the processing market in Ghana continues to expand, both of these incentives are being diminished. In light of this, all processors interviewed expressed concerns about the depth of incentives offered in Ghana³¹³. Nevertheless, it must be remembered that all processors who have invested in the last two seasons would have been fully aware of this situation. As such, it would appear that the extent of supply concerns in the international market, may be forcing processors to make investments that strongly defy GVC logic both in terms of their functional specialization and also the thinness of the supporting incentives.

³¹² Raw cocoa beans in the Ivory Coast are taxed at 40% of the FOB price.

³¹³ The respondents in both appendices thirty and thirty-one express concerns over the current incentive situation.

7.6.3 – Government Governance

Gibbon and Ponte [2005] find one of the major failings of GVC analysis is the apparent assumption that lead buyers operate in a regulatory vacuum unaffected by the government policies under which they operate. In a similar vein, Neilson and Pritchard [2009] argue that the formal and informal institutions that operate within a national market have a profound impact on the nature of change within value chains. Within this understanding the Cocobod in Ghana, and its subsidiary organisations, can be understood as nationally based institutions that impact on the nature of governance and change within the Ghanaian cocoa chain. In light of this, the following three themes will explore the role of the government in Ghana's cocoa processing industry.

7.6.3.1 The benefits of Functional Upgrading

As observed in chapters three and four the process of functional upgrading, also known as agro-industrialisation in the case of agriculture, is widely researched within the GVC literature [Fold, 2000]. Gereffi [1995] finds that successful upgrading enables states to transform the traditional export base of the economy and move towards the more advanced stages of the chain. Agro-industrialisation has been highlighted by the Ghanaian government as a key process in helping Ghana achieve their stated goal of reaching middle income status³¹⁴ by 2020 [The World Bank, 2003]. Resultantly the government have been strong advocates of the recent increase in Ghana's processing capacity, as seen through the regular public announcements made by the Ghanaian president in this area during 2007 and 2008³¹⁵. The level of government support in this area was also acknowledged within all Cocobod interviews. Acknowledging the government's leadership in this area one Cocobod respondent noted that,

'It was a government policy and we act on government policy'.

³¹⁴ The World Bank states that based on 2007 GNI figures, lower middle income countries have a GNI per capita of \$936 – \$3705, and upper middle income is \$3706 - \$11455. In 2007, Ghana was classified as a low income country and had a GNI per capita of \$590: <http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf>

³¹⁵ Twum, N, S [2006] 'Cocoa: We'll Process 50% Here – President Kuffour'. <http://www.copalcpa.org/newsletters/Newsletter%20No%20181.pdf>

Within the development literature, national governments are encouraged to facilitate the process of agro-industrialisation, as it 'increases value added in the commodity chain, enhances technological and organisational know-how, stimulates capacity in supplier and buyer linked industries and diversifies exports' [Fold 2000, p 264]. However, in the case of cocoa, many of the benefits commonly associated with agro-industrialisation may not be as widely available [Fold, 2001; Talbot, 2002; Wilcox and Abbot, 2004]. Indeed, as observed earlier, it is possible to challenge the argument of value addition in Ghana, based on the premium which the market places on Ghanaian beans in their raw format. In relative terms cocoa processing appears to diminish the value of Ghanaian beans. In light of this, there were eight interview respondents throughout both rounds of research that questioned the logic behind the government's argument of value addition. Commenting on the motivation for local processing one industry informant noted that,

'I think it comes from the belief that value addition would help earnings and there was an assumption that it would create greater employment, but we have realised it does not'.

Fold [2000] suggests that if agro-industrialisation is to be successful then the government has a key role to play in making sure expert knowledge from foreign investors is transferred to domestic industry. This can happen in two ways, either through the exchange of technology and skills, or the training and development of a large national workforce. However, in the case of cocoa, past studies find little support for the argument that processing will lead to knowledge transfer [Fold, 2001; Wilcox, Abbot and Muir, 2005]. Indeed, interviews carried out with Cocobod officials, key informants and local processors show that knowledge transfer is not taking place on a significant scale in Ghana. As noted by one industry informant,

'I find that argument very hollow...some of the factories have come with the argument of knowledge transfer...most of the factories are so highly mechanised that you don't need experts to run them'.

Multinational processors have been given no government mandate to share or exchange information with Ghanaian factories and due to the highly automated nature of cocoa

processing internationally owned factories have a relatively small workforce. As such, the opportunities for training and development appear limited, leading eight interview respondents to question the logic behind knowledge transfer as a justification for agro-industrialisation in the cocoa sector.

However, in defence of the government's industrial policy towards processing, it must be acknowledged that further research into the spillover effects of processing investments is required in order to make a full assessment of the benefits associated with these investments. Furthermore, research findings indicate that increasing the capacity of processing at origin may have a positive effect through insulating the Ghanaian cocoa market against demand fluctuations on the global market. Origin processing creates structural demand for Ghanaian cocoa that is unlikely to change year upon year based on the demand and supply conditions on the global market. In light of this all respondents in the Cocobod segment found that origin processing would help to protect the price of Ghanaian cocoa on the global market.

This argument is particularly strong under the scenario where the Cocobod is able to achieve its target of one million tonnes of cocoa production. If Ghana were to achieve this production level it would greatly increase the supply of high quality cocoa on the world market, thus placing significant downward pressure on Ghana's price premium. As such, the demand created by origin processing would help to reduce the impact of this production increase on export market prices. Indeed, as noted by one Cocobod respondent,

'In order for us not to affect prices, if we do one million tonnes, it is better not to put it all on as beans'.

The strength of the above argument is entirely dependent on the Cocobod's ability to reach one million tonnes in the near future. In recent years Ghanaian production appears to have plateaued at around 700,000 tonnes, despite the government's efforts to increase pesticide and fertiliser application. As such, there are concerns that Ghana may have encouraged a drastic increase in origin processing capacity, without sufficient evidence showing the

required growth in cocoa production. Indeed, it may have been more appropriate for the Ghanaian government to pace market entry into the processing segment at the same speed as growth in cocoa production in order to avoid the disparity between supply and demand that will be experienced in the near future.

In light of the above evidence indicating the current challenges associated with rapid growth in the origin processing market, it is necessary to question why the Ghanaian government have pursued this industrial policy. It may be speculated that to some extent processing is being supported as a populist economic policy. As observed earlier agro-industrialisation as an ideal is widely supported within the academic literature [Dunning and Lundan, 2008; UNCTAD, 2008]. Indeed, UNCTAD's 2008 Economic Development in Africa Report encourages growth in Africa's manufacturing sector as a pathway to economic development across the continent [UNCTAD, 2008].

However, such reports cannot cover the nuances of processing different commodities in different countries. As noted by Cramer [1999] arguments for origin processing in developing countries are normally made at a high level of abstraction. Indeed, interview findings suggest that decisions on this particular aspect of the cocoa sector in Ghana may not be driven by experts in the Cocobod. It appears that Cocobod have not been widely consulted on the government's policy drive to process 50-60% of Ghana's cocoa. The extent of concern in this area can be seen from the following quote from an industry informant,

'I have a little bit of trouble seeing where they get this 50%³¹⁶, there is a conceptual point which I struggle with anyway, at times I think that it has not been thought through properly'.

Fold [2000] and Cramer [1999] find that each nation's industrial policy for agro-processing must be carefully designed based on a number of highly specific factors, including: the characteristics of the commodity, the nature of the processing industry, market conditions,

³¹⁶ At the time of research the government's target for processing growth was 50%. As noted earlier this has now been revised upwards to 60%.

and the political and economic conditions of the country. In light of both the high quality nature of the Ghanaian crop and the strong performance of the CMC's model for cocoa exporting, it would appear that the policy to rapidly increase processing is not matched with the Ghana's competitive strengths in the cocoa market. The Cocobod system has been developed for export market success and as a result of this there appears to be little flexibility in adapting to the conditions required for a large scale local processing industry. Nevertheless, as Ghana nears its projected target of 60% cocoa processing, thus making local processors the CMC's main customer, the Cocobod's system of marketing may have to be restructured in order to service the needs of local factories.

7.6.3.2 - Credibility of Bean Supply Agreements

During chapter two the credibility of government action was highlighted as a crucial factor affecting the level of private sector investment in developing countries [Jayne et al, 2002; Kherallah et al, 2000; Stone et al, 1996]. Whilst the earlier sections of this findings chapter have generally found the Cocobod to be a credible institution, the current supply situation facing local processors appears to have become an issue affecting the Cocobod's credibility as a market regulator. Although it has not been possible to establish the exact terms of any bean supply agreements between the Cocobod and local processors, throughout both stages of research doubts were raised about the level of supply security bean supply agreements offered local processors.

Based on seven Cocobod interviews and all local processor interviews, it was found that supply agreements do not state that Cocobod will supply processors with as much light crop as they require, but that light crop will be distributed on a pro rata basis, as and when available. Commenting on this, seven of the nine respondents in the processing segment expressed concerns about the impartiality of light crop distribution. Indeed, the Cocobod's continued link with CPC³¹⁷ may act to fuel speculation in this area. To overcome this issue the Cocobod need to increase the transparency of light crop distribution amongst local

³¹⁷ Despite the privatisation of the CPC in 2004/05, the Ghanaian government is the CPC's major shareholder and the Cocobod chief executive sits on the CPC board.

processors, as at the current time figures surrounding this issue are not made available. This can be seen from the passage below,

[R] 'What assurances do the Cocobod give you that all processors are being treated the same?'

[P] 'That is a clause in our contract so we just hope it is being respected.'

[R] 'Is there any way they can assure you?'

[P] 'Yes, they could increase transparency a lot.'

Further doubts have been raised in relation to the bean supply agreements due to media reports that the Cocobod was planning to remove the discount on light crop currently afforded to local processors³¹⁸. Whilst this news story was quickly rebuked by a follow up article quoting the government's special advisor on cocoa³¹⁹, in many ways the original article represents the current level of uncertainty that exists in this area.

As a result of the current light crop shortage, a situation has arisen whereby a significant portion of each processor's supply agreement will have to be made up with main crop cocoa. Traditionally, local processors used forward contracts in the rare instances that they needed to use main crop cocoa. Indeed, Cocobod sources have indicated that, despite supply agreements, local processors will now have to compete for the large amount of main crop cocoa they require on the forward market. Cocobod sources indicate that local processors will be given 'priority' when competing for forward contracts; however, they will still have to pay the same price as export buyers.

For local processors this is not an acceptable situation, feeling that they should not have to resort to forward contracts in order to have their supply agreements fulfilled. Operating through forward contracts creates many additional risks and problems over and above the

³¹⁸ Kpodo, K [2008b] 'Ghana Ends Local Monopoly on Light Crop' – <http://af.reuters.com/news/country?Type=ghanaNews>

³¹⁹ Kpodo, K [2008c], 'Ghana Reassures Grinders Over Cocoa Crop Sale.' <http://af.reuters.com/news/country?type=ghanaNews>

guaranteed supply local processors hoped they would attain through bean supply agreements. In particular it is very difficult for a processor to know how much main crop cocoa to purchase on forward contracts, especially when it appears virtually impossible to accurately forecast how much light crop they will be granted in several months time³²⁰. Processors clearly have a preference for light crop cocoa; however, based on recent production figures it would be very risky to bank on a large quota of light crop. As such, they will need to hedge against the risk of a small light crop through the purchase of expensive main crop on the forward market. This would appear to create an additional supply risk for local producers, thus further reducing the level of incentive created through bean supply agreements.

7.6.3.3 – Cocobod Adaptability

During section 7.5, it was suggested that a key indicator of success for the Cocobod as a mode of governance is their capacity to meet the supply needs of cocoa buyers. Given that local processing is set to reach 50-60% of Ghana's total production capacity in the coming years, meeting the needs of local processors will most likely become a key determinant of the Cocobod's competitiveness as a mode of governance.

In light of the evidence presented above, it does not appear that the Cocobod are currently meeting the supply needs of local processors. By encouraging a level of market entry, far beyond the expectations of all processors interviewed, the Cocobod have created a situation in which the previous incentives offered to local processors are now insufficient. This is new territory for the Cocobod, as for many years the light crop has easily satisfied the demands of the small local processing industry³²¹. However, now the Cocobod are challenged with developing a new incentive structure, more suited to the needs of a large scale processing. To date this appears to be a problem, and to some extent this may be caused by the Cocobod's level of experience and understanding in cocoa processing.

³²⁰ As noted in chapter four, light crop cocoa is traditionally harvested at the end of the season, some 8-16 months after the CMC have sold the majority of their main crop cocoa through forward contracts.

³²¹ This is acknowledged by the processor in appendix thirty.

Indeed, all of the cocoa processors interviewed expressed a concern that the Cocobod do not fully understand the dynamics of cocoa processing³²².

As noted by Fold [2002] cocoa processing is an industry built on scale and efficiency. Competitive cocoa processors operate their factories twenty four hours a day, seven days a week. To make this possible, good stock control and supply chain management are vital. Having spent many years as an entirely independent government parastatal, such principles of efficiency do not appear to be an inherent feature of the Cocobod's way of thinking. This was also evident in section 7.2 on supply chain management.

The Cocobod's main experience of cocoa processing comes from the Cocoa Processing Company, which prior to 2004 was run as a fully owned subsidiary of the Cocobod. During seven interviews conducted with a range of participants from the cocoa processing and key informant segments it was noted that the CPC does not operate with the same efficiency mentality as most modern cocoa processors. Whilst it is unfair to blame the CPC for this situation, given their many years of government ownership, the apparent difference between the CPC and multinational processors helps understand the Cocobod's perception of cocoa processing. During round one interviews with two members of the Cocobod it was suggested that if cocoa beans are not available then local processors could simply shut down their factories. However, throughout both rounds of research, 78% of processor respondents suggested that in order to obtain the efficiency required for profitable cocoa processing it is not possible to periodically close your factory. Commenting on the Cocobod's perception of cocoa processing one respondent noted that,

'For them to fully understand that in today's competitive world your factory must run twenty four hours seven days a week, they find it hard'.

Interviews with local processors also indicate that the Cocobod is currently underestimating the severity of the situation facing local processors³²³. Again, this may be partly caused by the Cocobod's lack of experience in the area of modern cocoa processing.

³²² This is acknowledged by the processor in appendix thirty-one.

³²³ This is acknowledged by the processor in appendix thirty-one.

All local processors interviewed found that Cocobod do not fully appreciate the impact which the current supply situation is having and that within the next two years there could be a spate of bankruptcies within the local market³²⁴. Indeed, during an interview with one of the smaller local processors great concern was expressed about their ability to survive within the current market³²⁵. Such concerns appear to be well founded given the high profile closure of a WAMCO's cocoa processing factories in April 2008³²⁶. The stated reason for this closure was the unavailability of light crop beans for processing.

Based on seven interviews with participants in the Cocobod sample it appears that the level of supply risk facing local processors is currently not an area of great concern for the Cocobod. Within all seven interviews, Cocobod participants express the opinion that processors should be able to operate using main crop cocoa. As noted by one Cocobod respondent,

'They will have to buy more main crop, we assume that they realised that before they came'.

Furthermore, any suggestion that the Cocobod might offer processors a discount on main crop cocoa was firmly rejected in all seven Cocobod interviews discussing this topic. As such, there is no evidence to suggest that the Cocobod is considering a compromise on the price of beans supplied to local factories. This can be seen from the following extract taken from an interview from a respondent within the Cocobod segment,

'Our job is to make sure that we guarantee value for Ghana's cocoa, so under no circumstances are we willing to compromise on value'.

However, whilst the goal of value maximisation is highly credible, to some extent this may be indicative of the Cocobod's inability to adapt their traditional mode of thinking and evaluate decisions in light of emerging market conditions. Local processors are fast

³²⁴ The risk of bankruptcies in the local market is acknowledged by the respondent in appendix thirty-one.

³²⁵ This processor interviewed during rounds one and two of research wished to remain anonymous.

³²⁶ Adams [2008] 'Wamco to Be Closed Down' - <http://www.modernghana.com/news/162748/1/wamco-to-be-closed-down-due-to-non-availability-of.html>

becoming the CMC's most important customer base; however, at the current time they do not feel that the Cocobod is treating them with the appropriate level of consideration.

This can be seen from the following passage taken from an interview with a processor in round two,

'We are now a captive customer for Ghana, we would expect them to first deliver to the local industry and then what they have in excess they should then deliver to the trade for export'.

As suggested in the early findings sections [7.1-7.4], the Cocobod is not accustomed to adapting to the needs of domestic private sector stakeholders due to their long history of complete market control. Indeed, as observed by Talbot [2002], Ghana's previous attempt to establish a large scale domestic processing industry during the 1960's failed because of the government's lack of support for private sector development. However, in light of the amount of buyer power commanded by the multinational processors now located in Ghana, the Cocobod may now find themselves in a situation where a greater degree of compromise is required in order to avoid unnecessary conflict with important market stakeholders.

7.6.4 - Buyer Power

During chapters one, three and four reference was made to the significance of buyer power within the global cocoa market [Fold, 2002; Losch, 2002]. Through a series of mergers and acquisitions beginning in the 1980's, Cargill, ADM and Barry Callebaut have grown to form an oligopoly of processors, completely dominating the intermediate stages of the cocoa chain. All three of these companies are now invested in Ghana, and between them they have the capacity to process 155,000 tonnes of cocoa. In light of this, it is necessary to investigate the market power implications of recent investments in Ghana.

7.6.4.2 - Strategic Investments

Earlier in section 7.6.2 it was observed that as a result of the current shortage of light crop cocoa, processors have begun to question their incentive to operate in Ghana. However,

given that all recent investors would have had a clear understanding of the potential for a light crop deficit prior to investing, the light crop incentive should not be considered the only reason for recent investments. This is particularly true for large multinationals such as ADM and Cargill, for whom the long term opportunities created by an investment in Ghana appear to offer some justification for their recent decisions to invest.

It may be speculated that, given their financial muscle, ADM and Cargill have entered Ghana aware that should a supply squeeze occur in the market it is they that have financial strength to survive. In a situation where companies are struggling for survival due to the price of beans made available by the Cocobod, then it will most likely be the smaller processors that collapse first. As noted by an industry source,

‘The big boys will survive in this world, because the big boys control their risk very carefully, the smaller grinders around don’t do that and I suspect they are not funded well enough to carry big stocks, so there will come a day when some of the smaller boys begin to hit the wall’.

As such, there may be an opportunity for the larger processors to establish their dominance in Ghana in the coming years.

Furthermore, for the multinational processors their decision to invest will not be based entirely on the profit potential of their Ghanaian factories, but also the role of their Ghanaian factories in helping them achieve their global supply requirements. As noted earlier, the current supply deficit in the global cocoa market has led to a period of extraordinarily high cocoa prices and concern amongst cocoa processors. In light of this, interview findings suggest that the recent investments of ADM and Cargill have been made in order to improve their strategic position in terms of future cocoa supplies. When commenting on recent investments one industry informant commented that,

‘It’s more a strategic decision in case there are problems with bean availabilities in the next three, four, five years...if you are in the biggest producing countries you probably stand a better chance of getting access to those beans’.

To a large extent this builds on the findings of Fold [2001, 2002], who suggests that strategic supply concerns have been a significant motivation behind the trend of multinational corporations establishing processing facilities in origin countries. Indeed, commenting on recent investments in Ghana one industry informant observed that,

‘I think that they have just got to be there, they are so dependent on continuous supplies’.

In recognition of this all seven Cocobod interviews discussing processing investments indicate that the Cocobod feel processors have come to Ghana in order to secure supply. However, this does not mean that the Cocobod can remain ignorant to the finer aspects of local processor supply needs. The extent of power and influence within the processing segment is very real and as noted by three industry informants, this segment may be able to influence change in the Cocobod. Indeed, whilst no respondent expressed direct support towards total liberalization in Ghana, there were four respondents who suggested that, dependent on the Cocobod’s performance, future pressure towards liberalization should not be ruled out.

Closely related to this, Fold [2002] finds that the ‘establishment of grinding facilities in countries of origin further strengthens the dominance of transnational companies because it gives them higher shares of global capacity and increased political clout’. Therefore, now that the big processors are present in Ghana, it may be the case that the Cocobod’s extent of power and control over the Ghanaian supply chain has marginally diminished. Before the expansion of the processing industry, lead buyers were forced to accept the role of the Cocobod, as they were dependent on the Cocobod’s supply of high quality cocoa on the export market. However, now that processors are present in Ghana their capacity to influence change may have increased³²⁷. Building on this, local processors have taken steps towards the formation of a processors association in order to strengthen their bargaining position in Ghana. Indeed, whilst an association of processors’ has not been seen in any other origin countries, the relevant actors in Ghana have been motivated to take such action in light of their current supply problems.

³²⁷ The respondent in appendix thirty talks about the processors beginning to lobby the Cocobod.

7.6.4.3 – Cocobod Power

The vast majority of recent studies focusing on the role of powerful buyers within commodity chains share a common feature through their focus on fully liberalised markets [Gereffi, 1994; Losch, 2002; Gibbon, 2005]. Resultantly our understanding of government power within modern global supply chains is largely undeveloped. As has been documented throughout this study the Cocobod is currently the dominant actor within the Ghanaian chain and to their credit they have been able to use their power to achieve a high level of performance in recent years. Indeed, whilst lead buyers have been criticized for using their power to negative effect in liberalised cocoa markets [Losch, 2002], in Ghana the Cocobod have used their power to achieve a stable and sustainable market.

As a result of the success that the Cocobod have achieved in recent years the power which they command in the cocoa market appears to have grown. In recognition of this one key informant noted that,

‘Because Ghana has been in control of the sale and quality parameters maintained, it seems that the country itself could be better off and the cocoa world better off for having an organisation structured like that’.

Whilst processors may not be achieving their exact supply needs in the current Ghanaian system, to some extent Ghana’s overall level of market performance appears to supersede this issue. As indicated earlier, the powerful processors now located in Ghana control their supply risk at a global level. Therefore, whilst the high quality beans produced in Ghana may not be ideal for local processing, they are nonetheless fundamental to the global sourcing operations of multinational processors. In support of this, four out of the five processors interviewed in round two found that despite the current problems Ghana would not be encouraged to fully liberalise due to the importance of Ghanaian quality in the global market.

As noted by one processor,

'At this point in time I wouldn't like to see the board disappear at all, any diminution of the Cocobod's tentacles I would not particularly wish just now, obviously the quality control, to an extent the research, I would like to see it stay as it is'.

Furthermore, the same four processors emphasised support for the Cocobod, based on their belief that production in Ghana should increase over time and that the system in Ghana is sustainable. In light of current instabilities and supply risks emanating from other markets, these factors clearly place the Cocobod in a position of strength.

Ultimately this is good news for the Ghanaian cocoa market and Ghana as a whole. The experiences of complete liberalisation in other cocoa markets suggest that major reform may not be in the interest of the Ghanaian market. Indeed, research findings indicate that the global cocoa market has begun to recognise the important role played by the Cocobod, not only in terms of Ghanaian market development, but also the sustainability of global cocoa supplies. As such, it is recommended that the Cocobod should attempt to leverage their current level of market support to maintain their position of dominance in the Ghanaian supply chain. However, it is equally important that the Cocobod realise that they are no longer the only actor with influence in the Ghanaian cocoa market, and that they must use their position of power and leadership to achieve harmony amongst key stakeholders. Indeed, this positive change in attitude would most likely help to reduce the threat of externally enforced reform in future years.

7.6.5 – Conclusion

During section 7.5 it was observed that the foundation of Cocobod's success as an alternative mode of governance within the global cocoa chain has been their ability to meet the needs of buyers in the market. Buyers operating on the cocoa export market have given strong support to Ghana, based on its strategic importance as a provider of quality. The degree of supply control that lead buyers could achieve over the Ghanaian cocoa supply was considered secondary to the quality of cocoa they could achieve when buying through the CMC. However, recent investments in processing factories in Ghana appear to have changed the landscape on this issue given the importance of supply control in origin

processing. Whilst export buyers can strategically source different quantities and qualities of cocoa from various origins dependent on their needs, local processors are captive customers for Ghanaian cocoa. As such, local processors require an incentive to process in Ghana.

In light of this, it appears that the extent of cocoa processing pursued by the Ghanaian government may pose a threat to the Cocobod's current model for cocoa exports. Whilst it is too early to suggest that the Ghanaian government have over-expanded in this area, research findings indicate that as this industry continues to grow the Cocobod may have to adjust in order to create a viable incentive structure for local processors. Creating an incentive through the system of cocoa supply would appear to be the most realistic option for the Cocobod, given the importance that local processors place on this issue.

The power and influence of multinational cocoa processors now located in Ghana, further accentuates the need for the Cocobod to respond to local processors' supply requirements. To date the Cocobod's handling of this situation appears to be largely inadequate, and therefore in order for the Cocobod to maintain their credible status within the cocoa market change may be required. Not only have there been doubts surrounding the credibility of bean supply agreements, but the Cocobod have also failed to communicate their plans over what has become a very sensitive issue³²⁸. The Cocobod's failure to respond to the private sector's needs in this area is indicative of their broader attitude towards stakeholder integration and adjustment within the partial model.

However, despite the challenge that exists in this area the Cocobod remains the dominant actor in the Ghanaian cocoa market. In light of this it is imperative that the Cocobod use their position of power to create a market environment in which processors can operate. Indeed, based on interview responses from processors it appears that the Cocobod will maintain their position of authority, provided government actions remain transparent and that local processors' supply needs are being met. Should this situation prevail, then research findings suggest that there will be no further pressure towards liberalisation in

³²⁸ The Cocobod's failure to communicate with processors on this issue is noted by the respondent in appendix thirty-one.

Ghana. Indeed, despite the loss of export revenues that may result from adjustments in the marketing system, it is recommended that the Cocobod make any necessary sacrifices to remain in power, thus protecting the wider interests of the Ghanaian cocoa market.

Chapter Eight – Conclusions

8.1 – Introduction

Throughout the course of this study the main objective has been to fulfil the research aims outlined in chapter one:

Primary Aim: To carry out a detailed exploration of the partial model³²⁹ of liberalisation in the Ghanaian cocoa market, in an attempt to contribute towards the post-Washington consensus perspective on market development.

Secondary Aim: To assess the future reform options facing the Ghanaian cocoa market.

Research aims not only present the researcher with a target on which to focus, but they also put forward a benchmark against which the success of the study may be measured. In order to achieve the aims of this study a number of research questions were also developed in chapter one. As indicated in the methodology chapter, the research questions have been central to every stage of analytic process throughout this study. Indeed, it was felt that by keeping the research questions central within the analysis, the aims of the study would be fulfilled. In light of this the following chapter will attempt to address each of the research questions separately, drawing reference to their contribution towards the research aims³³⁰.

To a large extent the central role that the research questions have played in this study can be seen through the selection of key themes within the findings chapter. As noted in the methodology chapter, the research questions were hugely influential in directing the selection and organisation of themes within the templates. As such, there is a strong connection between the key themes and the research questions that will be displayed

³²⁹ As noted in chapter one the term ‘partial model’ is not an established theoretical terminology. Rather the term partial model has been used in this study to describe the style of market organisation used in Ghana. Indeed, with reference to the external validity of the findings in this study the term ‘partial model’ will be used to describe the concept of a market where the government plays an influential role alongside that of the private sector.

³³⁰ The primary aim will be addressed within the main body of the answer to each of the research questions. The secondary will be addressed in a separate section at the end of the main answer where recommendations on future reform will be made.

throughout this chapter. The later sections of this chapter will address the limitations of the research process, and also the potential for future research on the topics addressed in this study.

8.2 – Question One: How does the private sector perceive the credibility of the Cocobod’s role in the market, and what actions have the Cocobod taken to improve their credibility in this area?

Key Theme – Credibility of Reform [7.1]

Within the conclusion to section 7.1 it was emphasised that although the Cocobod’s credibility had been questioned in response to allegations of QCD rent seeking, in light of both their good overall performance, and their positive reputation amongst the majority of market stakeholders the Cocobod should be considered a largely credible organisation. In comparison with the large-scale corruption witnessed in other African markets, such as the Ivory Coast’s cocoa market, the level of problems in Ghana are relatively small and appear to be confined to small-scale transactions amongst remote actors. Indeed, given the number of opportunities for abuse of power that exist within the partial model, the relative scarcity of serious complaints in Ghana is a positive sign for the Cocobod’s credibility³³¹.

Nevertheless, the issue of moral hazard within the QCD does highlight the potential for rent seeking that arises in partial models of organisation due to the high level of interaction between government and the private sector. Private sector actors depend on civil servants for favourable judgements, and where such judgements are made without the appropriate systems of monitoring, the potential for moral hazard is very high. In light of this, it would appear that rigorous monitoring and detailed performance measurement are required within partial models of organisation. This recommendation is particularly true when government institutions operate in remote locations, where low monitoring increases the potential for moral hazard.

³³¹ Ghana was ranked in joint first place in the World Bank’s African governance indicators for 2009 [Kaufmann et al, 2009].

The problems associated with the Cocobod's links with certain institutions in the market could also be seen in section 7.2, further adding to our understanding of credibility within the partial model. During section 7.2, the Cocobod's roles in both the collection of interest payments and the determination of LBC turnover speeds was raised as an issue of discredit amongst LBC participants. In analysis of this problem it was found that the Cocobod's role in the takeover centres was non-essential and as such, there is an opportunity for the Cocobod to divorce themselves from this issue and send a positive signal to the private sector. Indeed, the same could be said for the Cocobod's links with the CPC, which act to fuel speculation over the impartiality of light crop distribution. In light of these findings, it may be suggested that when determining the division of responsibility within partial models of organisation every effort should be made achieve a structure where the government's role as a non-biased regulator is not conflicted by their roles in other aspects of the market.

The issue of accountability was also addressed in section 7.1, where the LBC's inability to hold the Cocobod accountable in cases of poor performance was highlighted as a governance problem within the partial model. LBC's in particular highlighted the need for a non-partisan arbitration body to oversee any disagreements between the Cocobod and themselves. Based on the potential for government bias within partial models of organisation, it may be suggested that such an institution should be seen as a minimum requirement in order increase the perception of credibility amongst private sector actors. Indeed, as noted by Kydd and Dorward [2004], the private sectors perception of credibility within partial models can be highly important in determining the level of investment and development.

Given the LBC's standing as important stakeholders within the partial model, concerns were raised in response to their lack of integration into the Cocobod's decision-making framework. In many respects this problem also addresses the issue of governance within the partial model. Greater voice for private sector participants is considered a key determinant of good governance by providing a source of external accountability for government actions. However, as addressed in section 7.1, to date the Cocobod have been

largely resistant to such advances from the LBC's due to their habitual preference for total control. Whilst the Cocobod is comfortable with this position, it may be having a negative impact on the market, as seen through their failure to respond to private sector concerns. This is evident in section 7.2, where the Cocobod's failure to respond to congestion problems has acted as a disincentive to several LBC's, and also in section 7.6, where the Cocobod's failure to communicate over the supply shortage facing processors has raised serious concerns. Again it must be accepted that the process of adjustment towards the private sector's mode of operation is likely to be a major challenge for the Cocobod. However, given both the amount of time the Cocobod have had to adjust and the significant power of private sector stakeholders in the Ghanaian market, change must be expected in this area.

The introduction of private sector stakeholders into Cocobod decision-making forums would appear to have a number of positive benefits. To date, liberalisation pressure in Ghana has achieved largely positive results, as indicated by Ghana's improved performance post-1992. As such, the infiltration of further private sector ideals may have the potential to encourage further efficiency improvements in the Cocobod. Equally, the issue of transparency, which continues to be a major concern amongst private sector actors, could be overcome with a more open and representative decision-making process. Indeed, given the problems that have been created as a result of the Cocobod's failure to integrate stakeholder needs, it is suggested that representative and participative decision-making forums should be considered a key institution within all partial models of organisation.

Recommendations

- 1. That the Ghanaian government establish an independent council for arbitration over disagreements between the LBC's and Cocobod. Such a council could be made up of elected representatives from the public sector, private sector, academic community and legal profession.*
- 2. That when considering future reforms the Cocobod strongly consider the possibility of divorcing themselves from any functions in the market that may jeopardise their position as a*

non-biased regulator. In cases where the Cocobod's role in a certain function is considered essential, such as quality control, then the case for retraction is much less strong.

3. That private sector³³² stakeholders be involved in Cocobod decision-making forums. This does not mean that the private sector actors assume the same level decision-making power as the government, but rather that on issues that affect the private sector they should be able to participate. The extent to which the private sector is given the power to object to decisions made against them, and also the course of action in such cases, must be clearly established prior to their involvement in order to avoid inefficient delays in the decision-making process.

8.3 – Question Two: Based on a critical examination of the Cocobod's various functions in the domestic supply chain, in which areas is the Cocobod's role most important to market performance?

Key Themes – Supply Chain Management [7.2], and Competition and Quality Enforcement [7.3].

Throughout the course of research, it was possible to assess several of the Cocobod's functions in the domestic supply chain, including quality control, price fixing, input subsidies, control of takeover and payment, and LBC seed-funding. Whilst all of these functions influence the performance of the domestic supply chain, some appear to be more significant than others. In particular quality control and control of takeover and payment featured heavily within the accounts of market participants. As such, these functions will form the basis of the response to question two.

As highlighted in several previous studies, the role of quality control is of great importance in the Ghanaian cocoa market [LMC, 1996; Fold, 2002; Laven, 2007]. Findings in this study have further emphasised the importance of quality control, where, in particular, the QCD is praised for guarding against the dangers of quality decline inherent within liberalised buying. Further support for the government's role in quality was also evident in section 7.5, where it was found that given both the public good characteristics of national

³³² The LBC's and local processors in particular.

reputation, and also the challenges related to collective action in quality control, the private sector is unlikely to face enough incentive to replicate the Cocobod's performance in this area. This is clearly reflected in interview responses, where local processors show strong support for the Cocobod's role in quality due to their fears surrounding the performance of a private sector quality control organisation.

The Cocobod's incentive towards quality control is particularly strong due to the financial value Ghana is able to achieve for its cocoa on the export market. Based on this incentive the Cocobod have a strong motivation to enforce quality control despite the pressure resulting from liberalised buying. Indeed, the Cocobod's success in overcoming the threat of liberalising buying perfectly exemplifies the type of hard coordination advocated in the model of developmental coordination [Kydd and Dorward, 2004]. The stability which this has created may be considered one of the key factors enabling the steady rate of development witnessed in the Ghanaian cocoa market in recent years. As such, the example of quality control in Ghana can be used as evidence in support of the positive stabilising effect that targeted government intervention can have on market development.

To some extent, the Cocobod's dogmatic attitude towards quality control is reflective of the organisation's broader cultural preference for control, as indicated in by the analysis of organisational culture in section 7.1. However, whilst control is well suited to some aspects of the market, there may also be cases in which the Cocobod's preference for control is having a stifling effect on the market. This is exemplified through the Cocobod's role in cocoa takeover and also their response to congestion along the Ghanaian supply chain. Within section 7.2, the Cocobod's inability to reduce congestion was highlighted as the most significant issue facing LBC's in the current market. LBC's have clearly highlighted speed of turnover, not only as a key area of competition, but also an issue which greatly affects their incentive to compete in other aspects of the market. Whilst the Cocobod have attempted to respond to this problem with a controlling quota system, research findings suggest that this is a flawed system, used to mask the insufficiency of supply chain infrastructure. In response to this, it was suggested that the responsibility for quality control should be transferred to the private sector.

The contrasting effect of the Cocobod's control of cocoa quality, as compared cocoa takeover, can be used to offer insight into Poulton et al's [2004³³³] theory that market development in sub-Saharan Africa is best achieved through a balance of competition and coordination [control]. Whilst the case of quality control clearly highlights the need for government intervention in an area where both market failures and a lack of supporting institutions represent a risk to national interests, in the case of cocoa takeover there is less support for control. Though, some element of control is required to ensure that cocoa is offloaded and stored correctly, this can be easily achieved through the use of efficient modern takeover equipment. Equally, the QCD's effectiveness in the area of quality control should help to guard against any quality decline resulting from increased turnover speeds. As such, the takeover process represents an opportunity to encourage private sector dynamism, without significantly jeopardising the level of control in the system.

Whilst the takeover centres may represent an opportunity to address the balance of competition and control in the local purchasing market, criticism of the Cocobod's role in cocoa takeover should not detract significantly from the positive impact of control in the Ghanaian cocoa market. Indeed, the results of this study may be considered consistent with the contentions of Poulton et al [2004], who find that coordination [control] can have a positive effect on market performance, even where it compromises competition. Equally, Poulton et al [2004] suggest that where possible a balance between these two elements should be the regulators ultimate goal. As such, despite the positive impact of control on several aspects of the Ghanaian market, it is recommended that when deciding upon the appropriate level of regulatory control in partial models of organisation careful consideration must be given to both the necessity of control in certain areas, and also the impact of control on private sector dynamism. There is no universal prescription in this area, but rather each regulatory approach must be carefully tailored in response to market conditions and also the functional abilities of the government and private sector.

³³³ It is interesting to note that Poulton et al's [2004] findings that increased competition does not always improve development and that markets may benefit from a balance of competition and coordination were recently tested in Tschirley et al [2009]. The results of this recent paper fully support the findings of Poulton et al [2004].

Further insight into partial models of organisation can be gained from the different incentives that the Cocobod faces in the areas of quality control and cocoa takeover, and how these incentives may influence the Cocobod's performance. Earlier it was noted that through their role in the export market the Cocobod face a strong incentive towards quality maintenance. Resulting from this incentive the Cocobod have been motivated to perform this function very effectively. However, as noted in section 7.2, the Cocobod face no such incentive to improve their performance in the area of cocoa takeover. To some extent this may explain why the Cocobod have been so slow to invest in the warehouse improvements needed to increase the speed of LBC turnover. In light of this it is recommended that when deciding upon the optimal division of responsibility between the government and the private sector in partial models of organisation, careful consideration must be given to the opportunities and incentives that are present within the various functions in the market.

Recommendations

- 1. That the Cocobod continue to rigidly enforce their standards of quality control along the domestic supply chain and remain aware of the potential threat resulting from the buying practices of LBC's.*
- 2. That, as recommended in section 7.3, the Cocobod increase the level of farmer training on the issue of cocoa quality. This will help to lower the amount of low quality cocoa farmers present to buyers, thus reducing pressure on LBC's trying to balance their need to compete at the local level against the Cocobod's quality demands.*
- 3. That the Cocobod continue to pursue their stated interest in the privatisation of cocoa takeover. Building on the findings in section 7.2, any reform in the area of cocoa takeover should incorporate a system where the performance of those in charge of takeover is assessed based on the efficiency of the takeover process. The performance of those in charge of takeover must also be linked with reward.*

4. Under the circumstances where an LBC does not receive payment for cocoa delivered within the ten days³³⁴ stipulated by the Cocabod, all interest charges on seed-fund must be frozen until such a time as the LBC receives payment for the cocoa.

8.4 - Question 3: Based on both the transaction risks and incentives presented within the model of partial liberalisation, what level of engagement can be witnessed from the LBC's in the development of the domestic supply chain?

Key themes – Supply Chain Management [7.2], and Input Market Transition [7.4].

Before answering the above question it is appropriate to address the issue of what level of engagement can be expected from LBC's in supply chain development.

Within past studies, discussed in chapter four, the focus of LBC engagement has been at the farmer level, where the provision of farmer rewards, and inputs on credit has been heralded as a positive aspect of market liberalisation [Teal et al, 2006]. To some extent, it is understandable to assess LBC engagement at this level given their close proximity to the farmer. However, based on the understanding of LBC functional capabilities obtained during this study, it might be suggested the LBC's potential in the Ghanaian market extends beyond the sort of ad hoc farmer incentive schemes identified in previous studies. Throughout research, LBC's³³⁵ displayed impressive capabilities in the areas of financial management, organisational infrastructure, formal collective action, and human resource management. Furthermore, LBC's command a position of great importance in the supply chain, controlling the flow of all cocoa from the farmer level to the CMC. As such, there appears to be the potential for positive LBC engagement in several aspects of the domestic supply chain including farmer inputs, supply chain infrastructure, and the policy arena.

The above assessment of LBC capabilities does not, however, reflect their current level of engagement in the Ghanaian cocoa market. LBC's continue to limit themselves to the role

³³⁴ As noted in section 7.2, the Cocabod has stated that LBC's should receive payment for cocoa delivered no more than ten days after the cocoa has been taken over on schedule with the Cocabod's quota. If the Cocabod is not meeting its quota schedule then compensation must be made for this.

³³⁵ It must be remembered that ten of the eleven LBC's interviewed make up the top ten LBC's in Ghana, and as observed during chapter four, these top ten LBC's have a very dominant position in the market.

of buying agents, commissioned to buy and deliver cocoa, with limited responsibility outside of this basic remit. Indeed, throughout the research process it became apparent that the majority of LBC's have now retracted from the ad hoc provision of farmer incentives identified in previous studies. Based on the findings developed throughout this study there are a number of possible explanations behind the limited role of LBC's.

Firstly, LBC's receive a low level of financial reward in the current market. As discussed in chapter four LBC's have traditionally suffered from very low profit margins and high rates of bankruptcy. In recent years market conditions have not improved, as high levels of supply chain congestion and sanctions against purple beans have led to significant financial losses for LBC's. Supply chain congestion in particular has reduced the level of profit achievable by LBC's. Resultantly, all LBC's state that they do not have sufficient finances to reinvest in the supply chain.

Secondly, the level of transaction risk facing LBC's in the current market appears to be quite high. In section 7.4 the level of strategic default from farmers and organisational risk from purchasing clerks were both highlighted as constraints to LBC's becoming more involved in the market for farmer inputs. Within Kydd and Doward's [2004] model of development coordination the private sector can overcome such risks through the use of soft coordination mechanisms such as interlocking transactions and collective action. However, as observed in section 7.4, neither of these soft coordination mechanisms have been used successfully in response to farmer default or organisational risk. Furthermore, section 7.4 also highlighted the Cocobod's inconsistent policy towards input market subsidies as a transaction risk facing LBC's wishing to get involved in the market for farmers' inputs.

Thirdly, the Cocobod have not been active in encouraging a higher level of engagement from LBC's. As discussed in sections 7.1 and 7.3, the Cocobod appear to be sceptical of the LBC's intentions in the market. Resultantly, the focus of the Cocobod has been on reducing the level of LBC malpractice, as opposed to encouraging and engaging with LBC's. Indeed, the Cocobod's reluctance to support LBC engagement may be considered the most

significant factor affecting the level of LBC investment in the market³³⁶. As noted by Kydd and Dorward [2004] the government has a key role to play as a catalyst for private sector engagement, both through reducing the level of transaction risk and increasing the returns to investment. However, within Ghana there is no evidence of the Cocobod actively engaging in these areas.

Whilst it is possible to be critical of the Cocobod's reluctance towards LBC engagement, it is also important to note that as a regulator the Cocobod has generally performed to a high level. Aware of the problems associated with fully liberalised markets, it is understandable that the Cocobod have treated LBC's with caution. Equally, having become accustomed to a system of total government control it will clearly take time for the Cocobod to adjust to a system that embraces the potential of private sector dynamism. However, reform began in 1992, and over the course of time the Cocobod's attitude towards the private sector should have changed. In this light, there were encouraging signs in round two of the research where the deputy chief executive of the Cocobod suggested that there will be an increased level of engagement with LBC's in the coming seasons.

This change of perspective could prove to be significant for the Ghanaian market, as there is clear potential within the functional capabilities of the LBC's. The significance of the Cocobod's role in realising the potential of the LBC's should not be underestimated. Indeed, the dampening effect that the Cocobod have had on private sector dynamism in the past strongly suggests that the Cocobod will have an influential role in reversing this trend in the future. In light of this it may be suggested that the role of the government is one of the main factors affecting the level of private sector engagement within partial models of organisation. Equally, it must be noted that in cases where the government is not averse to private sector growth, then the government's role must go beyond that of a passive observer. Indeed, the government must play a facilitative role in helping to reduce the level of transaction risk faced by private sector investors.

³³⁶ This is consistent with the findings of Laven [2005] who finds that the Cocobod may be constraining LBC's from realising their potential in the Ghanaian market.

Recommendations

1. *Consistent with recommendation three in section 8.1, the Cocobod should attempt to engage with the LBC's in order to build a working partnership. This partnership should be formalised through a bi-annual meeting involving representatives of the Cocobod and LBC's, where issues concerning both the Cocobod and LBC's could be discussed. Amongst several other benefits, this partnership will help the Cocobod and LBC's to reach an understanding on [a] the aspects of the market which need to change in order to incentivise LBC's, and [b] the aspects of the market where there is the greatest potential for LBC's to take on more responsibility in the coming seasons. Working within a partnership it is hoped that an affective plan could be put in place to maximise LBC potential in the coming seasons.*

2. *LBC's themselves need to target improvement in soft coordination mechanisms. In particular improved collective action could prove to be highly beneficial. During section 7.4 it was suggested that improved collective action could help to reduce the risk of strategic default and organisational risk, both of which are significant barriers to LBC engagement at the local level.*

3. *Increased policy consistency is required from the Cocobod in order to reduce transaction risk and increase private sector confidence in long-term investments.*

8.5 – Question Four: In light of both the performance of the Cocobod and the opportunities that exist in the private sector, what functions of the Cocobod could be transferred to the private sector?

Key themes: Input transition, Competition and Quality, and Supply Chain Management

As discussed in chapter two, the authors of the development coordination approach suggest that as the market develops liberalisation reform should take place depending on the evolving strengths of both the government and private sector, and the depth of supporting institutions [Kydd and Dorward, 2004; Poulton et al, 2006]. In light of this, it is interesting to observe that although the Cocobod have been making gradual reforms since

1992³³⁷, interview findings clearly suggest that the Cocobod do not believe that as the market develops the private sector will automatically begin to control a greater number of Cocobod functions. To some extent this is understandable in light of the Cocobod's success using their current system of market organisation. Indeed, given the risks associated with liberalisation it is suggested that any decision to reform the current system should be based on a careful analysis of market conditions, rather than on the assumption that liberalisation should occur in line with market development.

Nevertheless, the option of gradual reform is something that the Cocobod must remain open to. Given the level of established support for Cocobod amongst market actors, they are now in a position where any reforms will be implemented on their terms. In light of this it is appropriate to question in what aspects of the market the Cocobod would consider reducing their level of functional responsibility.

Based on research findings the provision of farmers' inputs emerges strongly as the function in which the Cocobod is most strongly considering transferring their responsibility to the private sector. The motivation for this change appears to be primarily based on concerns surrounding the sustainability of the Cocobod's involvement in this area. As noted in chapter four, the Cocobod is reported to have spent over \$100 million on input subsidies in 2007/08. To some extent the Cocobod's ability to fund such programmes is based on the profitability of cocoa exports due to the high cocoa prices experienced in recent years. Historically, however, cocoa prices have followed a boom-to-recession cycle [Ruf, 1995] and, as such, the Cocobod will be aware that the current surpluses may not be available in the long term. Indeed, the recent global financial crisis appears to have triggered a period of more difficult conditions for the Cocobod with global cocoa demand dropping by a record level³³⁸, and the Ghanaian government announcing the need to reduce public spending³³⁹.

³³⁷ Please see chapter one section 1.5 for a detailed discussion of the reforms in Ghana post 1992.

³³⁸ Reuters [2009] 'ICCO see's biggest fall in cocoa grindings in 50 years.' <http://www.flex-news-food.com/pages/23631/Cocoa/icco-biggest-fall-cocoa-grindings-50-years.html>

³³⁹ Kpodo [2009d] 'Ghana budget aims to slash spending, create jobs.' <http://af.reuters.com/article/topNews/idAFJOE5240IV20090305?feedType=RSS&feedName=topNews&sp=true>

In light of this, there may now be increased motivation for the Cocobod to transfer this function to the private sector. As suggested in section 7.4 the use of LBC's in this function would appear to be logical based on their close proximity to farmers and the organisational infrastructure that they have developed at this level. To some extent it appears that the Cocobod are beginning to act on this, as demonstrated in section 7.4 through the increased incentives they have offered to LBC's in the new fertiliser programme. Indeed, through this public-private partnership it is possible that the Cocobod could help overcome some of the constraints that LBC's face in the provision of farmers' inputs. The role of the Cocobod in this area is a positive indication of the facilitative role that the government can play in encouraging increased private sector development. Building on this, it may be suggested that the potential for public-private partnerships should be considered as an advantage of partial models of organisation, given the constraints that private sector actors have traditionally faced when attempting to invest in developing country markets. Indeed, long term private-public partnerships may help to avoid the problem of missing markets, as observed in previous examples of market liberalisation.

Consistent with recommendation three in section 8.3, the Cocobod should also consider the privatisation of cocoa takeover. For several years the inefficiencies in this area have been a major constraint to LBC development, with the Cocobod demonstrating little motivation for the major investment required in the modernisation of the takeover centres. However, in light of the Cocobod's past attitude towards the process of cocoa takeover there should be concerns surrounding the incentive structure that may be offered to private sector developers. In particular there is doubt whether the Cocobod will offer the required incentives to engender the type of investment and efficiency improvements required in the takeover process. The Cocobod's past treatment of LBC's serves as a warning in this area. As such, it is suggested that the Cocobod should only commit to the privatisation of cocoa takeover if they are fully prepared offer private sector developers the freedom and incentives required to achieve modern and efficient takeover centres.

In closing, the findings from this study strongly suggest that the transfer of functions from the government to private sector should not be considered a process that occurs

automatically in response to market development. In particular the Cocobod's high level of performance in the functions of quality control and cocoa exports suggests that in terms of national benefit, Ghana appears to be better served by having these functions controlled by the government rather than by the private sector. In light of this it is necessary for each nation's reform strategy to be assessed at an individual level, where decisions are based not on economic ideology, but rather the associated strengths and weaknesses of the government and private sector in different aspects of the market. The one possible caveat to this suggestion surrounds the potential reluctance of the government to relinquish its control over certain aspects of the market, even where there is strong evidence in support of reform. As such, once again the system of governance in the market will be important, where external accountability, achieved through greater stakeholder voice, may provide the necessary safeguard against government entrenchment.

Recommendations,

- 1. In light of the financial costs of input subsidies the Cocobod should continue to encourage and support the development of LBC's as providers of farmers' input's . Policy consistency and an incentive structure that rewards the LBC's appropriately for the risk they are taking will be required to help ease the LBC's into this challenging market.*
- 2. Consistent with the findings in section 7.4 the Cocobod should increase the level of farmer education on the benefits of input application. By diverting some of the financial resources allocated for input subsidies towards increased farmer education the Cocobod would be making a sustainable investment in the long-term development of a private sector input market.*
- 3. Any future reform in Ghana must not be externally enforced. Decisions should be based on joint discussions between all major stakeholders actively involved in the market, and changes should be made only where it is considered to be in the long-term interests of the Ghanaian economy.*

8.6 – Question 5: To what extent is the Cocobod able to compete on the global cocoa market using the traditional model of monopolised cocoa exporting?

Key Theme – Quality Control and the Role of the CMC.

To a large extent question five was directly addressed in the findings section 7.5, where both the strong level of support from external buyers and the premiums obtained by the CMC, were presented in support of the Cocobod's monopoly over cocoa exports. Indeed, based on this evidence it was possible to conclude that the Cocobod system of monopoly exports appears to be very competitive in the global cocoa market at the current time. However, the global cocoa market is in a constant state of flux as a result of changes in both the demand³⁴⁰ of cocoa buyers and the supply³⁴¹ produced by competing cocoa-producing nations. As such, the Cocobod's current level of support may not be reflective of their capacity to remain competitive in the longer term. Taking this into account, this section will attempt to address the Cocobod's capacity to sustain their competitiveness in the global cocoa market.

During chapters one and four, and section 7.5, it was observed that to a large extent the Cocobod's competitiveness in the market for cocoa exports has been bolstered by declines in production and quality in competing cocoa producing nations. In particular the plight of the Ivory Coast appears to have elevated the level of market support for the Cocobod. Indeed, given that the Ivory Coast is Ghana's main competitor on the cocoa market, any reduction in the Ivorian's level of competitiveness will undoubtedly be to Ghana's advantage.

In light of this it is interesting to observe that, even though they began in September 2007, recent attempts towards reform in the Ivory Coast have made very little progress³⁴². As

³⁴⁰ Demand can include both the volume and quality requirements of buyers.

³⁴¹ Supply can include both the volume and quality of supply produced by rival producers.

³⁴² As observed in section 7.5, in recent seasons the quality of Ivorian cocoa has worsened. This is supported by interviews with multinational processors and key informants that also suggest the Ivorian cocoa sector remains in a state of disarray. Market reports are also consistent with interview findings in this area: Reuters [2009c] 'Ivorian Cocoa Reform Seen Urgent, Delayed by Polls.' <http://www.flex-news-food.com/pages/25129/Cocoa/Ivory-Coast/ivorian-cocoa-reform-seen-urgent-delayed-polls.html>

such, despite the Ivory Coast's attempts towards reform, the Cocobod remain in a strong position. Indeed, the challenge the Ivorian's are facing in reversing the damage of failed liberalisation policies and government corruption suggests that it will be difficult for any market experiencing similar problems to simply replicate the model for success employed in Ghana.

However, in the hypothetical situation where the Ivorian market returned to its former position as a provider of quality, the Cocobod's competitive advantage would undoubtedly be diminished. Although external buyers appear to value the CMC's role in vertical coordination, the majority of market support for the CMC may be based on their unique position in providing high quality cocoa. As such, if there was an alternative source of high quality cocoa on the global market then the value of the CMC may begin to be questioned. Indeed, it is quite plausible that if it became possible to access quality from other markets, then lead buyers may prefer to see the CMC's monopoly removed so that they could then establish a greater level of supply control within Ghana.

Therefore, the onus is now on the Cocobod to extend their competitive advantage in the market by using their highly structured quality control system to enhance their offering to external buyers. As observed in chapter three, alternative grades and standards, and product certification have become increasingly important at the producer end of the value chain in response to the demand for product differentiation from upstream consumers [Henson and Reardon, 2005]. In light of this, Fold [2008] suggests that 'certified spaces' are likely to gain increased importance in the Ghanaian cocoa market in the coming seasons.

Whilst product differentiation has traditionally been of relatively little importance with the market for raw cocoa beans, in recent years a number of major developments may have led to a change of perspective in this area. In particular, the growing importance of cocoa products being certified against the use of child labour and also Cadbury's decision to use

fair-trade certification as a competitive strategy on the mainstream market³⁴³, are likely to have a profound effect in reshaping lead buyers' perspective on the importance of product differentiation within the market for raw cocoa beans. Ghana clearly has the potential to meet buyer's needs in these areas. Indeed, as a result of the structure and stability of the Ghanaian market, it would appear that Ghana has been able to respond positively to the demand for fair-trade³⁴⁴ and child labour³⁴⁵ certification. Therefore, given the relative lack of structure and control within other producing countries around the world there may be an opportunity for Ghana to enhance its reputation within the external buying market by establishing itself as the market leader in certified cocoa.

In reference to the main aim of this study, the Cocobod's role in the global cocoa market offers several insights into partial models of organisation. Firstly, the Cocobod's capacity to compete on the global market and achieve premiums for Ghanaian cocoa strongly suggests that export market liberalisation should not be considered a prerequisite for market development. Secondly, the incentive created through a monopoly over cocoa exports appears to have a positive influence over the government's performance in internal market regulation. Thirdly, global commodity chains have the potential to be highly dynamic environments, where regular adjustments may be required at the producer end, both in response to the organisational capabilities of lead buyers and the demand requirements of upstream consumers. As such, any government institution operating in the role of a commodity exporter will need to be alive to such changes and attempt to adapt in the manner expected of a private sector organisation.

The first two findings, reported in the paragraph above, highlight the strong micro-macro link that has been observed throughout this study. During Cocobod interviews it was clear that as an organisation their motivation in the internal and external markets is inextricably linked. As such, it would appear that in order to achieve the level of performance that the

³⁴³ Bowers [2009] 'Sweet Deal: Dairy milk to carry fair-trade badge.' <http://www.guardian.co.uk/environment/2009/mar/04/cadbury-fair-trade-dairy-milk>

³⁴⁴ Cadbury's will source their fair-trade cocoa from Ghana: All Africa [2009] 'Ghana: Cadbury's Fair-trade Certification to Boost Cocoa Farming' [24/07/09] <http://allafrica.com/stories/200907240740.html>.

³⁴⁵ Daily Graphic [2009] 'Government Takes Action to Eliminate Child Labour in Cocoa Growing Areas' <http://www.modernghana.com/news/231752/1/government-takes-action-to-eliminate-child-labour-.html>

Cocobod has achieved, it may be necessary for the government to have some level of incentive attached to the export market. This may not require the government to have monopoly control over exports, however, based on the findings in this study it is not possible to recommend an alternative incentive structure other than the system of complete export market control. As such, further investigation into alternative systems such as the Caisse system formerly used in the Ivorian cocoa market, or the auction system currently used in Kenyan coffee, is recommended in order to enhance understanding in this area.

Recommendations

- 1. That the Cocobod remain in monopoly control over cocoa exports through the CMC.*
- 2. That the CMC continue to communicate with external buyers in relation to the growing importance of alternative grades and standards. Equally, the Cocobod must remain open to making any changes required to adjust to new quality requirements, such as child labour certification.*

8.7 – Question Six – How are increased investments from large multinational corporations and the subsequent increase in origin processing capacity in Ghana likely to impact upon the Cocobod’s governance of the Ghanaian supply chain?

Key Theme – Governance and Power

During section 7.6 it was observed that, running somewhat the contrary to the benefits commonly associated with agro-industrialisation, the growth of origin processing in Ghana has emerged as one of the most significant problems facing the Cocobod in the current market. The problem that has arisen in this area is based on the difference that exists between the Cocobod’s model for external cocoa supply, and the incentive requirements of local processors. Local processors require an incentive to process in Ghana, due to the challenges of operating in the developing country environment, the logistical challenge of

being located a long distance from consumer markets, and also the value loss that results from using Ghana main crop cocoa at origin.

In previous years this incentive has been provided through a discount on light crop beans. However, as processing capacity has expanded, thus reducing each processors allocation of light crop, this incentive has rapidly diminished, leading to unrest in the processing market. Furthermore, in light of the Ghanaian government's recent objective to locally process 60% of Ghana's annual cocoa production, it would appear that unless changes are made in the incentive system for local processing, this issue will only continue to grow in significance throughout the coming seasons.

In light of this, concerns were raised about the process of policy formulation in Ghana. Findings suggest that some of the most prominent stakeholders in the Ghanaian cocoa community were not actively involved in the decision to increase cocoa processing. Indeed, given the government's failure to respond to the recent concerns of local processors, it appears that a specific incentive system suitable to the needs of large scale origin processing was not established prior to the decision to increase processing capacity. Whilst the government may have thought that the 20% discount on light crop beans would provide sufficient incentive, interviews with local processors and key informants, suggest that this position is not supported within the processing industry. Resultantly, it appears that change is required in the system of cocoa supply used for local processors, thus placing pressure on the Cocobod's highly successful model of cocoa exports. As such, it is suggested that when devising industrial policy for highly specific industries, such as cocoa processing, it is hugely important for government ministers to involve a range of industry experts in the decision-making process.

To some extent, the Cocobod appear to have compounded the above problems in relation to industrial policy, through their failure to offer a credible response to concerns over the future of bean supply in the local processing industry. Throughout section 7.6 it was observed that the Cocobod's handling of this issue has been poor. When related to the findings from domestic supply chain, it may be suggested that the Cocobod's failure to effectively respond to the concerns of the private sector is a weakness of their regulation

within the partial model. Indeed, the Cocobod's failure to work with transparency in order to allay the credibility issues surrounding bean supply agreements may be related to the issue of good governance highlighted in sections 7.1 and 8.2. As such, the findings in this area offer further support to the argument that in order to increase the credibility within partial models of organisation the regulator must strictly enforce a code of good governance across all departments.

The issue of buyer power was also investigated in section 7.6. Research findings suggest that Cargill and ADM, two of the most recent additions to the local processing market, would not have invested if they were not confident of change within the incentive structure used for local processors. Indeed, as Ghana nears its target of processing 60% of their cocoa, the level of influence and power commanded by the local processing industry is likely to increase. Based on the responses of local processors it appears that the most likely area for change will involve the way in which cocoa is supplied to local processors.

In particular, local processors will be very keen to address the issues of cocoa price. As noted in section 7.6, main crop cocoa is considered too expensive for use in origin processing. In response to this, processors have requested a discount. However, change in this area is rejected by the Cocobod based on the current demand for main crop cocoa on the export market and their objective of value maximisation. As such, the Cocobod will have to find a way to maintain the value they gain for Ghana's cocoa on the export market, whilst fulfilling the supply requirements of local processors.

This may be possible if Ghana is able to reach its target of producing one million tonnes of cocoa. Under this scenario, not only would the level of light crop increase, but the Cocobod could offer a discounted price on main crop cocoa to local processors whilst maintaining a sufficient volume of main crop cocoa to sell on the export market at a premium price. With a production volume of one million tonnes, the level of cocoa supply in Ghana would begin to match the level of demand from export buyers and local processors. As such, after fulfilling their premium export contracts, the CMC would have enough surplus cocoa to supply processors at a discounted price. Indeed, as suggested in section 7.6, with one million tonnes to sell the CMC would have to rely on strong demand within the local

processing industry in order to maintain their premium on the export market. Whilst it is not possible to predict the volume of cocoa the CMC could sell on the export market at a premium price, within three key informant interviews it is suggested that if the CMC was to flood the export market with one million tonnes of cocoa, Ghana's premium would decline.

This scenario is entirely dependent on the Cocobod's ability to increase production, with the goal of reaching one million tonnes. Progress in this area is not promising, as the previous target of one million by 2010 has been put back to 2011 in light of disappointing production figures. Reaching this target will be a significant challenge for the Cocobod within a budget constrained economy³⁴⁶. However, in light of the significant contribution that cocoa revenues make towards Ghanaian GDP, production increases in cocoa should be targeted as the sort of sustainable and cost effective investments that are required to help Ghana achieve a greater degree of economic stability.

In closing, it is necessary to observe that based on the level of market support for the Cocobod within the global cocoa market, it would appear that there is relatively little threat of lead buyers forcing major change in the Cocobod model, regardless of processors' supply concerns. Indeed, the same lead buyers that express concerns about their Ghanaian factories also depend on the Cocobod for their global quality requirements. However, lead buyers may have the power to enforce some degree of change in the Cocobod marketing model. As such, rather than contest the power of lead buyers by refusing to communicate or compromise over buyers' specific supply requirements, the Cocobod would be advised to treat this as an opportunity to enhance their reputation as a regulator by taking the lead in constructive talks with local processors.

Recommendations

1. Regardless of the level of production increase achieved within Ghana, the Cocobod must begin to communicate more regularly with the processors on their supply requirements.

³⁴⁶ As noted earlier Ghanaian public spending has declined in response to budget deficits. In recent weeks the situation in this area has worsened with the Ghanaian government announcing higher deficits than previously thought: Kpodo [2009e] 'Ghana says budget deficit higher than thought.' <http://www.forbes.com/feeds/afx/2009/08/25/afx6811944.html>.

Some degree of compromise will be required to appease local processors and signal the Cocobod's intention to support the local processing industry.

2. The Cocobod would be advised to continue with their programmes to increase the level of cocoa production in Ghana. This will require a mix of both farmer education and the focused application of pesticides and fertilisers. Given the budgetary restrictions currently facing the Ghanaian economy, the efficiency of these programmes is hugely important, and therefore where possible public private partnerships are encouraged to avoid any further periods of wasteful government subsidies.

3. The Ghanaian government must freeze any plans to further increase the capacity of cocoa processing in Ghana. In future capacity increases must only be undertaken when there is a clear and viable incentive structure in place for processors and where the level of supply in Ghana is sufficient to meet processors needs.

8.8 – Response to the Primary Research Question

The above sections, responding to the study's six secondary research questions, have focused on how the findings of this study have helped to enhance our understanding of the various features of the partial model in Ghana and how this impacts upon market development. Building on this, the goal of the following section, responding to the study's primary research question, is to focus more specifically on how the findings can help to illuminate the theoretical perspectives on market organisation within NIE and GVC. This will be done in two ways; firstly, by revisiting and discussing the theoretical framework outlined in chapter five, and secondly, by specifically stating the areas in which this study has contributed towards the understanding of market organisation and development within NIE and GVC.

8.8.1 - Revisiting the theoretical framework

During chapter five, outlining the conceptual framework for this study, specific aspects of NIE and GVC theory were highlighted as the core foundations upon which the theoretical

analysis was to be based. This was most clearly done in the visual conceptual framework [section 5.6], where five key aspects of the developmental coordination framework within NIE were highlighted and three key aspects of GVC were highlighted. Based on the exploration of these topics, throughout both the findings chapter and the above responses to the research questions, the following section will specifically highlight how this study has built upon the theoretical framework for this study. The theoretical framework for the micro analysis will be discussed before moving on to the conceptual framework used in the macro analysis.

8.8.1.1 – Micro analysis theoretical framework

The conceptual framework for the micro analysis was guided by the approach of developmental coordination, as developed by Dorward, Kydd and Poulton [1998a, 2005a, 2006]. Within this approach the key aspects that were highlighted included; hard coordination from the government, threshold shifting from the government, soft coordination from the private sector, the balance of competition and coordination in the market, the process of transition within services from the public to the private sector and the process of institutional change. In addition to this, the role of supporting institutions in providing governance over government actions was also considered; however, this has not received as much attention in past developmental coordination literature.

In reference to hard coordination, section 7.3 of the findings chapter demonstrated the positive impact of strategically targeted and well enforced coordination from the Cocobod/QCD. The introduction of private sector buyers into the Ghanaian cocoa market has created a greater level of transaction cost for the Cocobod, in terms of the risk of quality failure [coordination failure] and the actions that have to be taken to achieve coordination with LBC's. In response to this, decisive action from the Cocobod/QCD by increasing the vigilance of their quality control operation and raising the threat of sanctioning in the case of quality failure appears to have reduced the coordination failure that was taking place in this area, thus solidifying Ghana's reputation as a supplier of high quality cocoa.

However, although the role of the QCD appears to be having a transaction cost reducing affect for the Cocobod, section 7.1 of the findings section highlighted the impact that moral hazard from QCD officers is having on the transaction costs faced by LBC's. Based on the huge monitoring challenge within the Ghanaian rural environment and the massive informational asymmetries that result from this, moral hazard and other forms of opportunistic behaviour are highly possible. This is particularly true in the case of the partial model where there is a high level of interaction between public and private sector actors. Indeed, the negative impact of public sector workers and organisations on the level of transaction costs faced by LBC's was a common theme throughout the analysis. This was not, however, a key theme within the developmental coordination literature observed in chapter two, and therefore, this is an area where the study of the partial model in Ghana can help to advance the theory of developmental coordination.

Findings section 7.1 also highlighted the important role of supporting institutions that provide governance over government actions within the partial model. Having traditionally had a complete monopoly over all aspects of the Ghanaian cocoa chain the Cocobod are not accustomed to being made fully accountable for their actions. To some extent, accountability was enhanced during the World Bank structural adjustment program; however, research findings suggest that there is now a need to develop institutions with the capacity to provide governance over Cocobod actions. Indeed, it might be suggested that this option should be considered within all partially liberalised systems where the governments countervailing power over the private sector creates the potential for bias in regulation. The lack of discussion in this area within past developmental coordination literature needs to be addressed in future research given the fundamental importance of such institutions in cases where the government interacts closely with the private sector.

Within chapter seven, section 7.4 explored the potential for the private sector to engage in soft coordination and encourage the process of transition from public to private sector service provision. This is considered a key process within the developmental coordination framework. Nevertheless, Kydd and Dorward [2004] warn that the movement from hard

to soft coordination is likely to be a very challenging process and, to a large extent, the results reported in section 7.4 support this argument. LBC's in Ghana face a number of transaction costs from their purchasing clerks, farmers and the Cocobod, all of which restrict their ability to take on more responsibility within the provision of services to farmers. Under the developmental coordination framework it would be recommended that the Cocobod should engage in threshold shifting to reduce the investment threshold facing the LBC's. In light of this, it must be noted that although the developmental coordination framework highlights several ways in which the government can undertake threshold shifting, there is little discussion of the ways in which the government may be encouraged to engage in threshold shifting. Indeed, based on results from Ghana it appears that this is a fundamental process, given both the government's reluctance to support the private sector and the private sectors current unwillingness to engage in what are high risk markets.

The Cocobod's reluctance to change and create an environment that supports private sector dynamism and investment was another common theme throughout the findings. This was highlighted in findings sections 7.1 and 7.2, where it was observed that the Cocobod's embedded organisational culture and traditional mode of operation may have slowed the process of adjustment towards regulating the market in a way that encourages private sector engagement. In light of this, it was observed that there is an imbalance of competition and coordination in the domestic market, with the Cocobod's traditional preference for control somewhat stifling the LBC's competition and dynamism. As such, the Cocobod have not been able to achieve a balance between competition and coordination recommended by Poulton et al [2004].

Though the Cocobod must take some of the blame for this, it appears that it is hugely challenging to achieve a balance between competition and coordination in a market that has traditionally been ruled through government monopoly. Research findings suggest that the Cocobod have a natural preference for control, and as such, they are very reluctant to make any decisions which will remove aspects of their power and place important decisions in the hands of private sector actors. To some extent, this may be compared to

the concept of path dependent institutional change, where a combination of the Cocobod's historical position of power, their desire to maintain power and their ingrained belief in the traditional mode of operation, appears to have created a natural reluctance towards change.

In light of this, it may be noted that, although the developmental coordination framework does not assume that change will be an automatic or easy process, future research should address the topic in greater detail. This is especially the case given that the process of transition and role of private sector competition are fundamental to the growth and development of partially liberalised systems within the development coordination approach. In particular, it is necessary to address the constraints to change, where insight into institutional literature that draws on the topic of path dependency [North, 1990] has the potential to create a more informed understanding of the process of change within old and embedded institutions.

8.8.1.2 - Macro analysis theoretical framework

As discussed in chapter five, the conceptual framework for the macro analysis was guided by the theoretical arguments of global value chain analysis. The theoretical framework highlighted three separate aspects of GVC to be explored in the analysis; namely, the link between governance and quality, the link between governance and power and the process of change in governance.

The link between governance and quality was explored predominantly in findings section 7.5, where it was found that international cocoa buyers strongly support the production of high quality cocoa in Ghana. In comparison with other cocoa producing nations, where it now appears that quality is a secondary consideration behind economies of scale [Fold, 2002], quality is still the primary consideration within the Ghanaian supply chain, which largely defines the system of governance used by the Cocobod. The differentiation between governance in the Ghanaian cocoa supply chain, as compared the cocoa supply chains elsewhere in West Africa, can be seen as a departure from the original GVC understanding of governance where it appeared that one of two dominant typologies could be used to

describe governance across commodity supply chains. Indeed, early GVC theory would have predicted that for a commodity such as cocoa, where there is a relatively small amount of product differentiation, the governance structures seen across producing nations would be broadly homogenous. This was seen in Gibbon [2001] where it was noted that based on the low level of quality differentiation within the cocoa market, cocoa could be considered a buyer driven commodity. It should, however, be noted that the two dominant typologies of governance within GVC was only a foundational understanding and, as discussed in chapter three, GVC authors have now developed a more nuanced understanding of governance [Gereffi et al, 2005; Neilson and Pritchard, 2009].

The level of support for the Cocobod's role in quality control has been amplified by the deterioration of both quality and production levels in other cocoa producing nations in recent years. In this environment the CMC's capacity to provide reliable vertical coordination and improved supply security, appears to have increased the Cocobod's legitimacy as a governance structure on the external market. This legitimacy gives the Cocobod significant power and within the Ghanaian cocoa chain they are the lead actors, despite the immense and highly concentrated power that is held within the processing segment of the chain. This expands upon the GVC understanding of governance by building on the idea that powerful buyers do not operate in a vacuum and that, dependent on the supply chain, there may be other stakeholders with significant power to shape the various elements of governance along the supply chain. Indeed, based on the prevailing situation in other cocoa markets, international buyers have been willing to accept the Cocobod's imposed governance system, largely because it enables them to meet their supply needs.

As such, it appears that somewhat contrary to the GVC argument that governance structures will change in line with the advanced organisational capabilities of the chains lead actors [Gereffi et al, 1994], within the Ghanaian cocoa market the Cocobod's traditional system of governance has remained dominant. This dominance is not enforced through governmental power or patronage, but rather through the CMC and QCD's capacity to provide vertical coordination in an increasingly risky and fragmented global supply chain. The Cocobod system is, however, reliant on the production of homogenous cocoa,

and to some extent, it may be argued that their legitimacy in global market has been strengthened by the relatively slow uptake of product differentiation within the market for raw cocoa beans. Therefore, as differentiation increases in-line with the trend of product certification, the Cocobod's traditional and homogenous system of quality control and trading may become increasingly under threat. Indeed, the Cocobod's ability to adapt and meet the differentiated needs of buyers in the coming seasons has the potential to offer further insight into the capacity of traditional systems of governance to compete in modern supply chains.

Based on the above discussion of governance and quality it appears that within the Ghanaian cocoa chain, the power of international cocoa buyers has not manifested itself as a force for change due to the Cocobod's capacity to meet buyer's needs. However, within findings section 7.6, where the relationship between governance and power was explored more closely, it was possible to observe a different manifestation of buyer power, driven largely by the supply risk local processors are facing in Ghana. In light of this, it would appear that the discussion of buyer power within the GVC could be advanced by further consideration of the conditions under which lead buyers are inclined to enforce their power. Indeed, within the early GVC literature it was almost assumed that lead buyers would enforce change in-line with their advanced organisational capabilities, again failing to recognise the implications of having other influential actors in the supply chain.

In light of this, the discussion of governance and power in the GVC is advanced by exploring the relationship between the Cocobod and local processors in Ghana. As indicated in section 7.6, market entry into the local processing market in recent seasons has created a supply deficit, leading to concern within the local processing market surrounding the Cocobod's system of cocoa supply. However, even though the world's three largest cocoa processors are located in Ghana, the Cocobod do not seem to be under any great pressure to make significant changes in this area. The Cocobod's legitimacy and power has been augmented by their performance in fulfilling the supply needs of international cocoa buyers, and as such, there appears to be relatively little potential for major change. Indeed, before investing in Ghana lead buyers were aware of the trade-offs they would have to

accept in order to operate in Ghana, thus giving us some insight into the limited capacity for lead buyers to enforce change in certain circumstances.

The decision to invest in local processing facilities is traditionally motivated by the desire to gain increased control over the local supply chain, specifically in terms of the greater volumes that can be procured when processing locally. However, even though this incentive was lacking lead buyers have invested in Ghana, predominantly due to the level of supply risk and uncertainty that was being created by the disorganisation in other cocoa producing nations. As such, the governance structure currently observed within the Ghanaian local processing market is not the result of the traditional GVC logic, where lead buyers use power to orchestrate the supply chain [Daviron and Gibbon, 2002], but rather it has resulted from the concerning supply and demand conditions in global cocoa markets. Indeed, the recent investments by lead buyers in local processing facilities in Ghana are considered strategic investments to protect their supply security at a global level, as opposed to the short term profit opportunities of being located in Ghana.

In light of the above discussion of governance and power, again it appears that governance within the Ghanaian cocoa market does not follow the traditional GVC understanding where lead buyers influence change in line with their organisational capabilities [Gereffi et al, 1994]. In practice, supply chain governance is multifaceted and in order to appreciate its complexity several factors need to be considered outside the traditional GVC understanding of power and coordination. Though the power of dominant actors and the objective of improved coordination should still be considered the foundation for understanding governance in GVC, the situation in the Ghanaian cocoa market suggests that other factors such as a nations institutional environment and the prevailing market conditions both at a national and global level can have a profound effect in shaping the process of change within governance. To a large extent this is consistent with emerging literature in GVC, such as Neilson and Pritchard [2009], where an attempt is made to broaden the GVC understanding of governance by examining the importance of local institutions in shaping the governance and change within value chains.

8.8.2 – Contribution to Knowledge

8.8.2.1 – Developmental Coordination within NIE

1. Hard coordination from the government can be effective at reducing the level of coordination failure in the market when it is strategically targeted at the areas in which it is most needed. Based on the assessment of quality control in the Ghanaian cocoa market, it is suggested that hard coordination should not be seen as a short term process required only at the early stages of development. Instead, it was found that there may be certain situations where hard coordination can be prescribed for the long term based on an assessment of the government's coordinative strengths in certain functions of the market.

2. Though effective in certain situations, government intervention can lead to increased transaction costs for the private sector, especially within partially liberalised markets where there is a high level of interaction between private sector actors and civil servants. In light of this, research on development coordination should focus in greater detail on the role of supporting institutions which have the capacity to provide governance over government actions and arbitrate in cases of dispute between the private sector and government institutions.

3. The process of institutional change appears to be highly important to the successful integration of private sector actors within partial models of organisation. In light of this, research on development coordination should investigate the constraints to change faced by government institutions and the specific ways in which institutional change can be used to enhance the level of private sector engagement.

The above contributions have attempted to build on the developmental coordination framework and where possible advance the understanding of market organisation within this approach. Based on the analysis within this study, it was found that the development coordination framework, as developed by Dorward, Kydd and Poulton [1998a, 2005a, 2006], is a highly applicable framework for the analysis of market organisation and development, particularly in cases where both the government and the private sector are

deeply involved in the market. In order to advance the development coordination framework it has been suggested that greater attention should be given to the wider implications of having the government involved in the market. Indeed, findings from the Ghanaian study suggest that beyond the government's role in coordination, there are several aspects of its operation which impact upon the development trajectory of the market.

8.8.3 – GVC

1. Effective vertical coordination is highly valued by international buyers operating in fragmented global supply chains. Where reliable and effective vertical coordination is being achieved this gives a governance structure power and legitimacy, even if it is not controlled by lead buyers. Furthermore, it should not be assumed that the power of lead buyers will always manifest itself towards change in governance, especially in cases where the current system of governance has the capacity to meet buyers supply needs.
2. It should not be assumed that lead buyers operate in supply chains where they are the only actor with power and that global market conditions may force even the most powerful buyers to accept trade-offs in their investment decisions. Though lead buyers undoubtedly exude power and influence in the supply chain, a deeper understanding of governance can be achieved by considering power as one of several factors affecting governance along the supply chain.

The above contributions have attempted to build on the two understandings of governance as power and coordination outlined in chapters three and five. Though GVC presents a unique and applicable framework from which to examine the actions of powerful actors in global supply chains, it would undoubtedly benefit from a broader examination of the factors effecting governance in practice. As observed in chapter five, GVC scholars have worked within both macro and micro approaches to analyse governance; however, as noted by Neilson and Pritchard [2009], a singular analytical approach would be more effective at presenting a compelling and complete understanding of governance in GVC. Based on the understanding developed throughout this study, it is suggested that GVC can

make the greatest impact on academic and policy discussions by focusing on macro level analysis where factors such as buyer power, quality conventions, national institutional environments and global market conditions can be explored to help understand the governance structures that exist across supply chains.

8.8.4 – Contribution towards post Washington consensus understanding of market organisation and development

The above sections have explicitly addressed how the examination of the Ghanaian cocoa market as a model of partial liberalisation has contributed to the to the understanding market organisation in NIE and GVC. In terms of the studies overall contribution to the post Washington consensus understanding of market organisation this has been implicit throughout the entirety of chapter eight, based on the examination of the Ghanaian cocoa market. As discussed in chapter one, the Ghanaian cocoa market was chosen for this study based on its proximity to several of the organisational principles espoused within the post Washington consensus perspective on development. For example, exploring the role of the Cocobod in the domestic market has helped advance understanding of having the government so actively involved in the market and how this affects the level of private sector engagement. Equally, by examining the interaction between the Cocobod and powerful international buyers it has been possible to understand the legitimacy of the Cocobod's governance in this arena and how powerful buyers interact with the unique system of governance in Ghana. As such, by exploring the role of the Cocobod both at the domestic and international levels of the market and by linking the findings of the study back to the theoretical perspectives of NIE and GVC it has been possible to make a sound contribution to the post Washington consensus on market organisation and development.

8.9 – Research Limitations and Future Lines of Enquiry

8.9.1 – Limitations

Whilst every effort has been made to fully address the research aims set out in chapter one, the ambitious nature of this project has inevitably led to challenges. Partially liberalised

models of market organisation represent a relatively new research phenomenon and as such the level of understanding achieved in this study has been somewhat limited by the lack of previous research directly focused on this area. Though this is not the first study investigating a partially liberalised market, at the current time there are relatively few theoretical foundations directly related to partial models on which to build. As such, it has been necessary to focus on the Ghanaian cocoa market as a single case, with the objective of carrying out in-depth exploratory research into partial models of organisation.

Though the single case approach has undoubtedly yielded benefits in terms of the level of understanding achieved, it has also led to certain limitations in terms of the external validity of the research findings. For example, if presented with sufficient time and resources to carry out the same research methodology on another example of a partially liberalised market, the process of comparison across case studies may have enhanced the external validity of findings. In particular, the central importance of the Cocobod's monopoly over cocoa exports in Ghana raises important questions surrounding the benefits of partial liberalisation without an export monopoly in place. Equally, the opportunity to research a fully liberalised cocoa market would have led to an interesting comparison between the two systems.

However, it must be noted that given the wide scope of this research project, the two-case approach described above could only be achieved with double the human and financial resources expended on this project. Resource limitations have also placed restrictions on the amount of data that could be gathered. Whilst it would have been ideal to extend my stay on both Ghanaian trips, in order to increase the number of interview participants, this was not possible. Research within foreign countries is hugely expensive owing to the costs of travel and accommodation. Although this challenge has been somewhat overcome through the use of key informant interviews carried out in the UK, given the network of contacts I was able to establish in Ghana, there would have been the opportunity to expand the research sample further.

Finally, the expansive scope of this research project has possibly led to limitations in the depth of knowledge achieved within the specific functions of the Ghanaian market itself. As

can be seen from the detailed description of the partial model in chapter four, the Ghanaian cocoa market is a fascinating case, presenting many interesting lines of enquiry and many complicated processes to examine. Resultantly it has been necessary to try and balance my desire to achieve a full understanding of the Ghanaian market, against the need to achieve a detailed and informed perspective surrounding the most important features of the market. Resulting from this process, trade-offs have been made both in terms of the breadth of scope and the extent of detail. Again, with a greater amount of time and resources it would be possible to focus in greater detail on each specific aspect of the Cocobod, the LBC's, and the origin processor's various roles in the market. Though this has not been possible, it is hoped that, given the emergent nature of research on partial models, this study will provide a firm foundation from which future research efforts can draw more specific lines of enquiry.

8.9.2 – Future Lines of Enquiry

Building on the limitations highlighted above, the main recommendation for future research involves using the same research methodology developed in this study to investigate different examples of partially liberalised models of market organisation. In order to keep the findings of direct relevance to this study, research should focus on agricultural export markets within the developing world. In particular it would be highly beneficial to examine a market in which the government does not have complete monopoly control over exports in order to ascertain whether a performance similar to that of the Cocobod's could be achieved in this setting.

The coffee market in Kenya could be examined as one such example of a partially liberalised system [Akiyama, 2001; Ponte, 2002; Kondliffe et al, 2008]. Within this market the Coffee Board of Kenya continues to play an important role in several aspects of the market, including coffee milling, enforcing a co-operative buying model, issuing export licenses, and controlling the process of coffee auction. Indeed, the system of coffee auction offers an interesting example of an alternative method of export market control that has enabled the Kenyan market to maintain its reputation for coffee quality [Ponte, 2002].

Further insight into the partial model of organisation used in Ghana could be gained by applying the research methodology from this study to the case of a fully liberalised cocoa market. In this case it is necessary to focus specifically on a cocoa market, as the fully liberalised example will achieve the greatest level of insight when it can be directly compared with the market processes and buyers' experiences from the partially liberalised Ghanaian case. Based on interviews with a variety of cocoa stakeholders, the Cameroonian cocoa market has been recommended as the best example of a well functioning liberalised cocoa market in West Africa.

Through examination of the Cameroonian case it would be possible to further establish the strengths and weaknesses of the partially liberalised as compared the fully liberalised model. Furthermore, it would be interesting to explore whether participants in the Cameroonian and Ghanaian market share the same views on the need for government controls. For example, the Cameroonian perspective would help to establish whether the support for the Cocobod evident in this study is reflective of an industry wide movement towards increased organisation within producer countries, or if instead, the Cocobod is only supported based on buyers' strategic need for a source of quality. Indeed, this is a poignant question given that the Ghanaian example appears to reflect market support for post-Washington consensus thinking on the role of the government. As such, further case studies are required to establish the extent to which this thinking is reflected in the actions of industry stakeholders across different developing country markets.

Focusing specifically on further research within the Ghanaian cocoa market, there are several examples of issues that will evolve over time, thus requiring further investigation to explore how the outcomes relate to analysis made in this study. The Ghanaian cocoa market is an evolving system, and therefore at a basic level further understanding of partial models can be gained by exploring how the role of the Cocobod in Ghana changes over time. However, within this study three particular issues stood out as aspects of the market in which change may be experienced in the near future. As such, these issues should be the focus of research within the next three or four years.

Building on the concept of transition, as highlighted by Kydd and Dorward [2004], the Cocobod appeared to be considering the transition of responsibility to the private sector in both the provision of fertilisers to farmers, and also the control of the takeover centres. As such, it would be particularly interesting to explore how these two functions have evolved. If change has taken place it will be necessary to explore the role of Cocobod in the process of change, and also how well the private sector has adapted to their roles in these areas. Whilst it is possible to speculate how such transitions may evolve, past experience of market liberalisation has shown that the outcomes may be significantly different to any predicted outcome. Equally, it remains possible that significant change will not take place in these functions. As such, should the process of transition stagnate, further evaluation will be required to ascertain why this has happened, and whether the Cocobod's performance in these areas has justified their maintenance of control.

Further change was also predicted within the market for local processing where the supply shortages facing processors appeared to be creating tension between the Cocobod and local processors. Based on analysis it appeared that this confrontation may result in some degree of change in the Cocobod's system of supply for local processors. However, unlike the above examples where change was recommended based on an assessment of the Cocobod's and private sector's capabilities, any change in the Cocobod's system of cocoa supply may be considered externally enforced. This raises interesting questions surrounding how the Cocobod system will adapt to such changes given that they have been reliant on the traditional model of exports for a long period of time. Equally, if the Cocobod refuse to adjust to the requirements of local processors then the emerging supply crisis in Ghana has the potential to teach us more about how buyer power manifests itself in a market with a dominant government actor. Despite the dominance of the Cocobod as an institution, the Ghanaian cocoa market cannot be considered in isolation from the dynamics of governance within the broader cocoa industry. Indeed, this is especially true now that lead buyers within the powerful processing segment are now firmly embedded in the Ghanaian market.

8.10 – Conclusion

Throughout this chapter the primary objective has been to address the research aims set out at the beginning of this study. Using a structured approach, this has been achieved through individual responses to each of the study's research questions. By addressing each of the research questions at this individual level the arguments presented in this chapter have tended to focus more specifically on the mechanisms at work within the partial model in Ghana, instead of how partial models of organisation may function in general. Whilst this may appear to reduce the external validity of the research findings, it is felt that by focusing specifically on the Ghanaian model in the immediate term, it may be possible for future studies to build a richer understanding of partial models in the long term. Indeed, based on the ontological perspective of critical realism outlined in the methodological chapter, it was felt that an in-depth case study analysis of the mechanisms at work within Ghana would best serve the objectives of this study.

However, whilst generalisation has not been the primary goal of research, the study has been carried out with the aim of contributing towards post-Washington consensus thinking on market organisation. In order to achieve this goal the theoretical perspectives of new institutional economics and global value chain analysis have been central throughout every stage of the study. Indeed, based on the theoretical references made throughout chapters seven and eight it is hoped that the findings of this study may contribute to the understanding of market development within the fields of NIE and GVC. Furthermore, in light of the Cocobod's influence within both the domestic and international dimensions of the market, it has proven to be a highly suitable case in which to apply the cross-disciplinary theoretical approach adopted in this study.

In closing, it is appropriate to acknowledge that based on my understanding of the Ghanaian cocoa market developed throughout this study, I have come to believe that the Cocobod system is a highly suitable mode of market organisation within the Ghanaian cocoa market. Whilst research has shown that the Cocobod model has flaws, the overall performance of the Ghanaian cocoa market and the credibility of the Cocobod as an

organisation surpass any of the criticisms levelled at the Cocobod throughout this study. Based on the evidence from this study it is not possible to determine whether the Cocobod model could be applied with the same success in other export agricultural markets throughout the developing world. However, based on the strengths identified, there is the potential to further explore partially liberalised models of market organisation with the objective of building further understanding within this promising field of research.

Bibliography

Akerlof, G. (1970). "The Market for Lemons; Qualitative Uncertainty and the Market Mechanism." Quarterly Journal of Economics **84**: 488-500.

Africa Confidential. (2004). "Ghana". Africa Confidential. **45** [14]: 6-7.

Agenor, P.-R., and Monteil, P. (1996). Development Microeconomics. Princeton, Princeton University Press

Akiyama, T. (2001). "Coffee Market Liberalization since 1990." Commodity Market Reforms: Lessons from two decades. T. Akiyama, Baffes, J., Larson, D., and Varangis, P. [eds]. Washington, DC, The World Bank: 83-120

Akiyama, T., Baffes, J., Larson, D., and Varangis, P. (2001). Commodity Market Reforms: Lessons from two decades. Washington DC, The World Bank.

Arhin, K., Hesp, P., and Van Der Laan, L. (1985). Marketing Boards in Tropical Africa. London, KPI.

Austin, G. (1998). "National Poverty and the Vampire State in Ghana: A review article." Journal of International Development **8**(4): 553-573.

Baah, F., Anchirinah, V., and Badu-Yeboah, A. (2009). "Perception of Extension Agents on Information Exchange with Cocoa Farmers in the Eastern Region of Ghana." Scientific Research and Essays **4** (7): 694-699.

Baffes, J. (2001). "Policy reform experience in cotton markets." Commodity market reforms: lessons of two decades. T. Akiyama, J, Baffes. D. Larson and Varangis, P. [eds]. Washington DC, World Bank: 165-190

Bair, J. (2008). "Analysing economic organization: embedded networks and global chains compared." Economy and Society **37** (3) pp 339-364.

Bank of Ghana. (2003). "Financial Implications of Liberalising Cocoa Marketing." Sector Study Reports. Bank of Ghana Research Department.

Bardhan, P. (1989). "Alternative Approaches to the theory of Institutions in Economic Development." The Economic Theory of Agrarian Institutions. Bardhan, P. [ed]. Oxford, Claredon Press: 3-17.

Bardhan, P., and Udry, C. (1999). "Institutional Economics and the State in Economic Development." Development Microeconomics. P. Bardhan, and Udry, C. [eds]. Oxford, Oxford University Press: 217-236.

Bates, R. H. (1981). Markets and States in Tropical Africa. The Political Basis of Agricultural Policies. Berkeley, University of California Press.

Bates, R. H. (1983). Essays on the Political Economy of Rural Africa. Cambridge, Cambridge University Press.

Beckman, B. (1976). Organising the Farmer: Cocoa Politics and National Development in Ghana. Uppsala, Scandinavian Institute of African Studies.

Berg, E. (1981). Accelerated Development in Sub-Saharan Africa: An agenda for action. Washington DC, The World Bank.

Bhaskar, R. (1975). "Philosophy and Scientific Realism." A Realist Theory of Science. Bhaskar, R. [ed]. Leeds, Leeds Books: 11-52.

Bhaskar, R. (1986). "Scientific Realism and the Aporias of Contemporary Philosophy" Scientific Realism and Human Emancipation. Bhaskar, R. [ed]. Verso, London: 1-66.

Blowfield, M. (1999). "Ethical Trade: a review of developments and issues." Third World Quarterly **20**(4): 753-770.

Blowfield, M. (2003). "Ethical Supply Chains in the Cocoa, Coffee and Tea Industries." Greener Management International **43**: 15-24.

Braverman, A., Guasch, J., Huppi, L., and Pohlmeier, L. (1991). "Promoting Rural Cooperatives in Developing Countries." World Bank Discussion Paper, 121. Washington DC, The World Bank.

Bryman, A. (1988). "Problems in Qualitative Research." Quantity and Quality in Social Research. Bryman, A [ed]. London, Unwin Hyman Publications: 72-92.

Chang, H.-J. (2002). "Breaking the mould: an institutionalist political economy alternative to the neoliberal theory of the market and the state." Cambridge Journal of Economics **26**(5): 539-559.

Christie, M., Rowe, P., Perry, C., and Chamard, J. (2000). "Implementation of Realism in Case Study Research." International Council for Small Business. Brisbane.

Coase, R. (1937). "The Nature of the Firm." Economica **4**: 386-405.

Coase, R. (1960). "The Problem of Social Cost." Journal of Law and Economics **3**: 1-44.

Cocobod. (2006). 37th Annual Reports and Accounts for the Year Ending 30th September 2006. Accra, The Ghana Cocoa Board.

Collier, A. (1994). Critical realism: An introduction to Roy Bhaskars philosophy. London, Verso.

Collier, R., and Collier, D. (1991). Shaping the Political Arena. Princeton, Princeton University Press.

Commons, J. R. (1934). Institutional Economics. New York, Macmillan.

Cook, M. L., and Chaddad, F. (2000). "Agroindustrialisation of the Global Agrifood Economy: Bridging Development Economics and Agribusiness Research." Agricultural Economics 23(3): 1-12.

Coulter, J., Goodland, A., Tallontire, A., and Stringfellow, R. (1999). "Marrying Farmer Cooperation and Contract Farming for Service Provision in a Liberalising Sub-Saharan Africa." Natural Resource Perspectives, No. 48, Overseas Development Institute [ODI]

Crabtree, B., and Miller, W. L. (1999). "Using codes and code manuals: a template organizing style of interpretation." Doing Qualitative Research. B. Crabtree, and Miller, W. L. [eds]. Newbury Park, CA, Sage: 163-178

Cramer, C. (1999). "Can Africa Industrialise by Processing Primary Commodities: The Case of Mozambican Cashew Nuts " World Development 27(7): 1247-1266.

Crawford, E., Jayne, T., and Kelly, V. (2006). "Alternative Approaches for Promoting Fertiliser Use in Africa." Agriculture and Rural Development Discussion Paper, No. 22, Washington DC, The World Bank.

Dand, R. (1999). The International Cocoa Trade. Cambridge, Woodhead.

Davidson, B. (2005). "Arguing Critical Realism: The Case of Economics " The Journal of Critical Realism 4(2): 291-314.

Daviron, B., and Gibbon, P. (2002). "Global Commodity Chains and African Export Agriculture." Journal of Agrarian Change 2(2): 137-161

Davis, L. E., and North, D. C. (1971). "A Theory of Institutional Change." Institutional Change and American Economic Growth. Davis, L. E. and North, D. C. [eds]. Cambridge, Cambridge University Press: 3-82.

Davron, B. (2002). "Small Farm Production and the Standardization of Tropical Products." Journal of Agrarian Change 2(2): 162-184.

Dixit, A. (2002). "Incentives and Organizations in the Public Sector: An interpretative review." The Journal of Human Resources **37**(4): 696-727

Dolan, C., Humphrey, J., and Harris-Pascal, C. (1999). "Horticulture Commodity Chains: The Impact of the UK Market on the African Fresh Vegetable Industry." Working Paper: No. 96. Sussex, Institute of Development Studies.

Dolan, C., and Humphrey, J. (2004). "Changing governance patterns in the trade in fresh vegetables between Africa and the United Kingdom." Environment and Planning A **36**(3): 491-509.

Dolan, C., and Humphrey, J. (2000). "Governance and Trade in fresh vegetables: The impact of UK supermarkets on the African Horticulture industry." Journal of Development Studies **37**(2): 147-176

Dorin, B. (2003). From Ivorian Cocoa Bean to French Dark Chocolate Tablet: Price Transmission, Value Sharing and North/South Competition Policy. Paris, CIRAD.

Dorward, A., Kydd, J., and Poulton, C. (2005a). "Beyond liberalisation: 'Developmental coordination' policies for African smallholder agriculture." Ids Bulletin-Institute of Development Studies **36**(2): 80-85.

Dorward, A., Kydd, J., Lyon, F., Poole, N., Poulton, C., Smith, L., and Stockbridge, M. (1998). "Commercial financing of seasonal input use by smallholders in liberalised agricultural marketing systems." ODI Natural Resource Perspectives: No. 30. London, Overseas Development Institute.

Dorward, A., Kydd, J., Morrison, J., and Poulton, C. (2003). "Institutions for Markets or Markets as Institutions: Theory, Praxis and Policy in Institutional Development." Working Paper. Centre for Development and Poverty Reduction, Imperial College London.

Dorward, A., Kydd, J., Morrison, J., and Poulton, C. (2005). "Institutions, Markets and Economic Coordination: Linking Development Policy to Theory and Praxis." Development and Change **36**(1): 1-25

Dorward, A., and Kydd, J. (2006). "Making Agricultural Market Systems Work for the Poor: Promoting Effective, Efficient and Accessible Coordination and Exchange." Making Markets Work for the Poor, Working Paper: No. 2. London, DFID.

Dorward, A., and Kydd, J. (2004). "The Malawi 2002 food crisis: the rural development challenge." Journal of Modern African Studies **42**(3): 343-361.

Dorward, A., Kydd, J., Morrison, J. and Urey, I. (2004). "A Policy Agenda for Pro-Poor Agricultural Growth." World Development **32**(1): 73-89.

- Dorward, A., Kydd, J. and Poulton, C. (1998). Smallholder Cash Crop Production under Market Liberalisation: A New Institutional Economics Perspective. Wallingford, CAB International.
- Dorward, A., Kydd, J. and Poulton, C. (2006). "Traditional Domestic Markets and Marketing Systems for Agricultural Products." Background Paper for the World Development Report 2008. Washington DC, World Bank .
- Dow, A. C., and Dow, S. C. (2005). "The application of development economics: general principles and context specificity." Cambridge Journal of Economics **29**: 1129-1143.
- Downward, P., Finch, J. H., and Ramsay, J. (2002). "Critical Realism, Empirical Methods and Inference: a Critical Discussion." Cambridge Journal of Economics **26**: 481-501.
- Duncan, A., and Jones, S. (1993). "Agricultural Marketing and Pricing Reform: a Review of Experience." World Development **21**: 1495-1514.
- Dunning, J.H., and Lundan, S.M. (2008) "The Impact of MNE Activity." Multinational Enterprises and the Global Economy, Second Edition. Dunning, J.H., and Lundan, S.M. [eds]. Edward Elgar, Cheltenham: 295-732.
- Economist Intelligence Unit. (2008). Viewswire: Ghana Quarterly Economic Indicators. The Economist. **14th August 2008**: p14.
- Eisenhardt, K. (1985). "Control: Organisational and Economic Approaches." Management Science **31**(2): 134-149.
- Eisenhardt, K. (1989). "Agency Theory: An Assessment and Review." Academy of Management Review **14**(1): 57-74.
- Fafchamps, M. (1996). "The enforcement of commercial contracts in Ghana." World Development **24**(3): 427-448.
- Flood, J., Guest, D., Holmes, K., Keane, P., Padi, B., and Sulistyowatki, E. (2004). "Cocoa Under Attack." Cocoa Futures: A source book of some of the important issues confronting the cocoa industry. J. Flood., and R. Murphy [eds]. Cali, Columbia, The Commodities Press: 33-53.
- Flyvbjerg, B. (2006). "Five Misunderstandings about Case-Study Research." Qualitative Enquiry **12**: 219-245.
- Fold, N. (2000). "Globalisation, state regulation and industrial upgrading of the oil seed industries in Malaysia and Brazil." Singapore Journal of Tropical Geography **21**(3): 263-278.

- Fold, N. (2001). "Restructuring of the European chocolate Industry and its impact on Cocoa Production in West Africa." Journal of Economic Geography **1**(4): 405-420.
- Fold, N. (2002). "Lead Firms and Competition in 'Bi-polar' Commodity Chains: Grinders and Branders in the Global Cocoa-chocolate Industry." Journal of Agrarian Change **2**(2): 228-247.
- Fold, N. (2008). "Transnational Sourcing Practices in Ghana's Perennial Crop Sectors." Journal of Agrarian Change **8**(1): 94-112.
- Friedman, M. (1962). Capitalism and Freedom. Chicago University of Chicago Press.
- Frimpong-Ansah, J.-H (1992). The Vampire State in Africa: Political Economy of Decline in Ghana. London, James Currey Ltd.
- Fry, J. (1995). Cocoa processing at origin and the impact of cocoa butter substitutes upon the demand for cocoa products. Asian International Cocoa Trade Conference. Bali.
- Furubotn, E. G., and Richter, R. (1997). "Introductory Observations." Institutions and Economic Theory: The contribution of New Institutional Economics. Furubotn, E. G., and Richter, R. [eds]. Ann Arbor, University of Michigan Press: 1-37.
- GAIN. (2005). "Ghana Cocoa Annual Report 2005." Report Number: GH5003 USDA: Global Agriculture Information Network.
- Gereffi, G., and M. Korzeniewicz. (1994). Commodity Chains and Global Capitalism. Westport, Praeger.
- Gereffi, G., M. Korzeniewicz, and R. Korzeniewicz. (1994). "Introduction: Global Commodity Chains." Commodity Chains and Global Capitalism G. Gereffi, and M. Korzeniewicz. [eds]. Westport, Praeger: 1-15
- Gereffi, G. (1995). "Global Production Systems and Third World Development." Global Change, Regional Response - The New International Context of Development. B. Stallings. [ed]. Cambridge, Cambridge University Press: 100-142.
- Gereffi, G. (1999). "International Trade and Industrial Upgrading in the Apparel Commodity Chain." Journal of International Economics **48**(1): 37-70.
- Gereffi, G. (2001). "Beyond the Producer-driven/Buyer-driven Dichotomy: The evolution of global value chains in the internet era." IDS Bulletin **32**(3): 30-40.
- Gereffi, G., Humphrey, J., and Sturgeon, T. (2005). "The governance of global value chains." Review of International Political Economy **12**(1): 78-104.

- Gerreffi, G. (1994). 'The Organisation of Buyer Driven Global Commodity Chains: How US retailers shape overseas production networks'. Commodity Chains and Global Capitalism. G. Gereffi, and, M, Korzeniewicz [eds]. Westport, Praeger: 95-122.
- Gibbon, P. (2005). "The Commodity Question New Thinking on Old Problems" Human Development Report 2005. New York, United Nations Development Programme.
- Gibbon, P., and Ponte, S. (2005). Trading Down, Africa Value Chains and the Global Economy. Philadelphia, Temple University Press.
- Gibbon, P. (2001). "Upgrading primary production: A global commodity chain approach." World Development **29**(2): 345-363.
- Gibbon, P., Bair, J. and Ponte, S. (2008). "Governing global value chains: an introduction." Economy and Society. **37** (3) pp 315–338.
- Gilbert, C. (1997). Cocoa Market Liberalization: Its Effects on Quality, Futures Trading and Prices. London, Cocoa Association of London.
- Gilbert, C., and Varangis, P. (2003). "Globalization and International Commodity Trade with Specific Reference to the West African Cocoa Producers." Working Paper No. W9668. NBER.
- Glaser, B, G., and Strauss, A, L. (1967) The Discovery of Grounded Theory: Strategies for qualitative research. Chicago, Aldine Publishing Company.
- Glaser, B. G. (1978). Theoretical Sensitivity: Advances in the Methodology of Grounded Theory. Mill Hill California, Sociology Press.
- Goldstein, M., and Udry, C. (2005). "The Profits of Power: Land Rights and Agricultural Investment in Ghana." Mimeo, Yale University.
- Gomm, R., Hammersely, M. (2000). "Introduction" Case Study Method. Gomm, R., Hammersely, M., and Foster, P. [eds]. London, Sage.
- Granovetter, M. (1978). "Economic Action and Social Structure: The problem of embeddedness." American Journal of Sociology **91**(3): 481-510.
- Gregory, D., and Bumb, D. (2006). "Factors Affecting Supply for Fertilisers in Sub Sahara Africa." Agriculture and Rural Development Discussion Paper Series: No.24. Washington DC, The World Bank.
- Grief, A. (1993). "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders Coalition." The American Economic Review **83**(3): 525-548.

Groenewegen, J., Kerstholt, F., and Nagelkerke, A. (1995). "On Integrating New and Old Institutionalism: Douglass North Building Bridges." Journal of Economic Issues **29**(2): 467-475.

Groenewegen, J. (2006). "Different Types of Regulation for Different Types of Transactions: A framework for analysis based on Oliver Williamson and John R. Commons." Applied Infrastructure Research, Berlin, Delft University of Technology

Guba, E. G., and Lincoln, Y. S. (2000). "Paradigmatic Controversies, Contradictions, and Emerging Confluences ." Handbook of Qualitative Research [2nd ed]. N. Denzin, and Lincoln, Y. S. [eds]. Thousand Oaks, Sage: 163-188.

Hall, P. A. and Taylor, R. C. R. (1996) "Political Science and Three New Institutionalisms." Comparative Political Studies. **44** pp 936-957.

Hall, P. A., and Soskice, D. (2001). "An Introduction to the Varieties of Capitalism." Varieties of Capitalism: The Institutional Foundations of Comparative Advantage. P. Hall, P. A., and Soskice, D. [eds] New York, Oxford University Press.

Hart, O., Schleifer, A., and Vishny, R. (1997). "The Proper Scope of Government: Theory and an Application to Prisons." Quarterly Journal of Economics **112**.

Hatanaka, M., Bain, C., and Busch, L. (2005). "Third Party Certification in the Global Agrifood System." Food Policy **30**: 354-369.

Hayek, F. (1944). The Road to Serfdom. Routledge, London.

Healy, M., and Perry, C. (2000). "Comprehensive Criteria to Judge the Validity and Reliability of Qualitative Research within the Realism Paradigm." Qualitative Market Research **3**(3): 118-126.

Henson, S., and Reardon, T. (2005). "Private Agrifood Standards: Implications for Food Policy and the Agrifood System." Food Policy **30**: 241-253.

Herbst, J. (1993). The Politics of Reform in Ghana, 1982-1991. Berkeley, University of California Press.

Hirsch, P., and Lounsbury, M. (1996). "Book Review Essay: Rediscovering Volition: The Institutional Economics of Douglass, C, North." The Academy of Management Review **21**(3): 872-884.

Hobbs, J. E., and Young, L. M. (2001). "Vertical Linkages in Agri-Food Supply Chains in Canada and the United States." Research and Analysis Directorate. Strategic Policy Branch, Agriculture and Agri-Food Canada, Ottawa, Ontario.

Hoff, K., Braverman, A., and Stiglitz, J. E. (1993). The Economics of Rural Organization: Theory Practice and Policy. New York, Oxford University Press.

Hoff, K. (2000). "Beyond Rosenstein-Rodan: The Modern Theory of Underdevelopment Traps." Washington DC, World Bank Economic Conference 2000.

Hoff, K., and Stiglitz, J. E. (2001). "Modern Economic Theory and Development" Frontiers of Development Economics: The future in perspective. Meier, G. M. and J. E. Stiglitz [eds]. Washington DC, The World Bank: 389-459.

Hopkins, T. K., and Wallerstein, I (1986). "Commodity Chains in the World Economy Prior to 1800." Review **10**(1): 157-70.

Hulme, D., and Toye, J (2006). "The Case for Cross Disciplinary Social Science Research on Poverty, Inequality and the Quality of Life." Journal of Development Studies **42**(7): 1085-1107.

Humphrey, J., and Schmitz, H. (2000). "Governance and Upgrading: Linking industrial cluster and global value chain research" IDS Working Paper: No. 120. Sussex, Institute of Development Studies.

Humphrey, J., and Schmitz, H. (2001). "Governance in Global Value Chains." IDS Bulletin **32**(3): 1-17.

Humphrey, J. (2004). Commodities Diversification and Poverty Reduction Symposium on the state of agricultural commodity research, Rome, FAO.

Hyden, G., Court, J., and Mease, K. (2004). Making Sense of Governance: Empirical Evidence from Sixteen Developing Countries. Boulder County, Lynne Rienner.

ICCO (1999). "What Proportion of Cocoa Worldwide is Produced by Smallholders?" ICCO Discussion Paper, London, International Cocoa Organisation.

ICCO (2005). "Quarterly Bulletin of Cocoa Statistics." **31**(5), London, International Cocoa Organisation.

ICCO (2008). "Assessment of the Movement of Global Supply and Demand." Executive Committee Meeting [136]. London, International Cocoa Organisation

ICCO (2009). "Quarterly Bulletin of Cocoa Statistics." March 2009. London, International Cocoa Organisation.

ul-Haque, I. (2004) "Commodities under neoliberalism: The case of cocoa." United Nations Conference on Trade and Development, New York, United Nations.

- Jayne, T., Govereh, J., Wanzala, M., and Demeke, M. (2003). "Fertiliser Market Development: A Comparative Analysis of Ethiopia, Kenya and Zambia." Food Policy **28**(4): 293-316.
- Jayne, T., Govereh, J., Mwanauo, A., Nyoro, J., and Chapoto, A. (2002). "False promise or false premise? The experience of food and input market reform in eastern and southern Africa." World Development **30**(11): 1967-1985.
- Jeffrey, P. (2003). "Smoothing the Waters: Observations on the process of cross-disciplinary research collaboration." Social Studies of Science **33**(4): 539-562.
- Jones, B. (2001). "Explaining Global Poverty: A Realist Critique of the Orthodox Approach." Journal of Critical Realism **4**(1): 2-10.
- Jutting, J. (2003). "Institutions and Development: A Critical Review." Social Institutions and Dialogue, Working Paper, No. 210, OECD.
- Kaplinsky, R. (2004). "Competition policy and the global coffee and cocoa value chains." Mimeo. Sussex, Institute of Development Studies.
- Kaufmann, D. (2004). "Rethinking Governance: Empirical Lessons Challenge Orthodoxy." Discussion Paper, Washington DC, The World Bank.
- Kaufmann, D., Kraay, A., and Mastruzzi, M. (2009). "Governance Matters VIII: Aggregate and individual governance indicators, 1996-2008." World Bank Policy Research: Working Paper No. 4978. Washington DC, The World Bank.
- Keefer, P., and Knack, S. (2005). "Social Capital, Social Norms and the New Institutional Economics." Handbook of New Institutional Economics. C. Menard, and Shirley, M. [eds]. Dordrecht, Springer: 701-726.
- Kerssens-van Drongelen, I. (2001). "The Iterative Theory Building Process: rationale, principles and evaluation." Management Decision **37**(9): 503-512.
- Keynes, J. M. (1936). The General Theory of Employment Interest and Money. London, Palgrave Macmillan
- Kherallah, M., and Kirsten, J. (2002). "The New Institutional Economics: Applications for Agricultural Policy Research in Developing Countries." Agrekon **41**(2): 110-133.
- Kherallah, M., Delgado, C., Gabre-Madhin, E., Minot, N., Johnson, M. (2002). Reforming Agricultural Markets in Africa. Baltimore, IFPRI/John Hopkins University Press.
- Kindelberger, C. (1983). "Standards as Public Collective and Private Goods." Kyklos **36**(3): 377-396.

King, N. (1998). "Template analysis." Qualitative Methods and Analysis in Organizational Research. G. Symon, and, Cassell, C [eds] London, Sage: 118-134.

King, N. (2004a). "Using interviews in qualitative research." Essential guide to qualitative methods in organizational research. C. Cassell, and Symon, G. [eds]. London, Sage: 11-22.

King, N. (2004). "Using templates in the thematic analysis of text." Essential guide to qualitative methods in organizational research. C. Cassell, and Symon, G. [eds]. London, Sage: 256-270.

Kondliffe, A., Kebuchi, W., Love, C., and Ruparell, R. (2008). "Kenya Coffee: A Cluster Analysis." Working Paper: Microeconomics of Competitiveness, Harvard Business School.

Kvale, S. (1983). "The Qualitative Research Interview: a phenomenological and a hermeneutical mode of understanding." Journal of Phenomenological Psychology **14**: 171-196.

Kydd, J., and Dorward, A. (2004). "Implications of market and coordination failures for rural development in least developed countries." Journal of International Development **16**(7): 951-970.

Kydd, J. (2009). "A New Institutional Economic Analysis of the State and Agriculture in Sub-Saharan Africa." In, Kirsten, F., Dorward, A., Poulton, C, and Vink, N. (eds.) Institutional Economic Perspectives of African Agricultural Development, International Food Policy Research Institute, Washington: 429-460.

Larsen, M. N. (2002). "Is Oligopoly a Condition of Successful Privatisation." Journal of Agrarian Change **2**(2): 185-205.

Larsen, M. N. (2003). Quality Standard Setting in the Global Cotton Chain and Cotton Sector Reforms in Sub-Saharan Africa. Working Paper: No. 03.13. Copenhagen, Danish Institute for International Studies.

Larsen, M. N. (2006). "Market Coordination and Social Differentiation: A Comparison of Cotton Producing Households in Tanzania and Zimbabwe." Journal of Agrarian Change **6**(1): 102-131.

Larsen, M. N. (2004). Governing post-liberalised markets: National market coordination and the global cotton chain. PhD Thesis, Institute of Geography, Faculty of Science, University of Copenhagen.

Laven, A. (2005). "Relating Cluster and Value Chain Theory to Upgrading of Primary Commodities: The Cocoa Chain in Ghana". Working Paper: AMIDSt, The University of Amsterdam.

- Laven, A. (2007). "Who is Interested in Good Quality Cocoa from Ghana." Tropical Food Chains: Governance Regimes for Quality. R. Ruben, M.van, Boekel, A.van, Tilburg, and Trienekens, J. [eds], Wageningen: Academic Publishers: 189-211.
- Lawson, C. (1996). "Holism and Collectivism in the work of J. R. Commons." Journal of Economic Issues **30**: 967-984.
- Lawson, T. (1987). "The Relative/Absolute Nature of Knowledge and Economic Analysis." The Economic Journal **97**(388): 951-970.
- Lawson, T. (1997). Economics and Reality. London, Routledge.
- Lawson, T. (2003). Reorientating Economics. London, Routledge.
- Lawson, T. (2006). "The Nature of Heterodox Economics" Cambridge Journal of Economics **30** (4) 483-505.
- Levy, B., and Spiller, P. (1994). "The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulations." Journal of Law Economics & Organization **10**(2): 201-246.
- LMC. (1996). "The External Marketing of Ghana's Cocoa." Consultancy Paper: Final Report. Accra, The Ministry of Finance.
- Losch, B. (2002). "Global restructuring and liberalisation: Cote d'Ivoire and the end of the international cocoa market?" Journal of Agrarian Change **2**(2): 206-227.
- Lyon, F. (2000). "Trust, Networks and Norms: The Creation of Social Capital in Agricultural Economies in Ghana." World Development **28**: 663-681.
- McCulloch, N., and Ota, M. (2002). "Export Horticulture and Poverty in Kenya" IDS Working Paper: No. 174. Sussex, Institute of Development Studies.
- Menard, C., and Valceschini, E. (2005). "New institutions for governing the agri-food industry." European Review of Agricultural Economics **32**(3): 421-440.
- Meyer, J., and Rowan, B. (1997). "Institutionalised Organisations: Formal Structure as Myth and Ceremony." American Journal of Sociology **83**, pp 340-363.
- Miguel, R., and Jones, L. (1963). "Vertical Coordination in Agriculture." Economic Research Service: Paper 19. Washington, DC, US Department of Agriculture.
- Miles, M., and Huberman, A. (1994). Qualitative Data Analysis: An Expanded Sourcebook. Beverly Hills, CA, Sage.

MOFEP. (1999). Ghana Cocoa Sector Development Strategy. Accra, Ministry of Finance and Economic Planning

Monnier, F. (2006). Bankers Taste for Cocoa. Commodities Now **December 2006**.

Morgan, J. (2003). "The Global Power of Orthodox Economics." Journal of Critical Realism **1(2)**: 7-34.

Nabli, M., and Nugent, J. (1989). "The new institutional economics and its applicability to development." World Development **17(9)**: 1333-1347.

Nee, V., and Swedberg, R. (2005). "Economic Sociology and New Institutional Economics" Handbook of New Institutional Economics. C. Menard, and Shirley, M. [eds]. Amsterdam, Springer: 789-818.

Neilson, J. and B, Pritchard. (2009). Value Chain Struggles: Institutions and Governance in the Plantation Districts of South India. Chichester, Wiley Blackwell.

Norde, D., and, Duursen, J. (2003). Identifying and Assessing Converges of Interest in the Cocoa Chain. Discussion Paper: Farm Income and Sustainable Production. Amsterdam, Fairventures.

North, D. C., and Thomas, R. (1973). The Rise of the Western World. Cambridge, UK, Cambridge University Press.

North, D. C. (1981). Structure and Change in Economic History. New York, Norton.

North, D. C., and, Weingast, B. (1989). "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth Century England." The Journal of Economic History **49(4)**: 803-83.

North, D. C. (1990). Institutions, Institutional Change and Economic Performance. Cambridge, Cambridge University Press.

North, D. C. (1993). "The New Institutional Economics and Development" Economic History: Working Paper - 9309002.

North, D. C. (1993a). "What do we mean by rationality?" Public Choice **77(1)**: 159-162.

North, D. C. (2005). "Institutions and the Performance of Economies over Time." Handbook of New Institutional Economics. C. Menard, and Shirley, M. [eds]. Amsterdam, Springer: 21-30.

Nyanteng, V. K. (1995). "A Review of the Internal Marketing of Cocoa Following the Introduction of Competition in 1993." Report Commissioned by Ghana Cocobod. Accra.

ODI. (2006). "Governance, Development and Aid Effectiveness: A quick guide to complex relationships" ODI Briefing Paper: March 2006. London, Overseas Development Institute.

Olsen, W. (2006). "Pluralism, poverty and sharecropping: Cultivating open-mindedness in development studies." Journal of Development Studies **42**(7): 1130-1157.

Olson, M. (1965). The Logic of Collective Action: Public Goods and the Theory of Groups. Cambridge, Harvard University Press.

Ostrom, E. (1999). "Social capital: a fad or a fundamental concept?" Social Capital: A Multifaceted Perspective. P. Dasgupta, and Serageldin, I. [eds]. Washington DC, World Bank Publications: 172-214.

Ostrom, E. (2000). "Collective Action and the Evolution of Social Norms." Journal of Economic Perspectives **14**(3): 137-158.

Pande, R., and Udry, C. (2006). "Institutions and Development: A View From Below." Mimeo, Yale University.

Pawson, R., and Tilley, N. (1997). Realistic Evaluation. London, Sage.

Pierson, P. (1996) "The Path to European Integration: A Historical Institutional Analysis." Comparative Political Studies. **29** (2) pp 123-163.

Perry, C. (1998). "Processes of a case study methodology for post graduate research in marketing." The European Journal of Marketing **32**(9/10): 785-802.

Ponte, S. (2002). "Brewing a Bitter Cup? De-regulation, Quality and Re-organisation of Coffee Marketing in East Africa." Journal of Agrarian Change **2**(2): 248-272.

Ponte, S., and Gibbon, P. (2005). "Quality standards, conventions and the governance of global value chains." Economy and Society **34**(1): 1-31.

Poulton, C, and Lyne, M. (2009). "Coordination for Market Development." In, Kirsten, F., Dorward, A., Poulton, C, and Vink, N. (eds.) Institutional Economic Perspectives of African Agricultural Development, International Food Policy Research Institute, Washington: 143-184.

Poulton, C., Dorward, A., Kydd, J. (1998). "The revival of smallholder cash crops in Africa: public and private roles in the provision of finance." Journal of International Development **10**(1): 85-103.

Poulton, C., Gibbon, P., Hanyani-Mlambo, B., Kydd, J., Maro, W., Larsen, M. N., Osorio, A., Tschirley, D., and Zulu, B. (2004). "Competition and coordination in liberalized African cotton market systems." World Development **32**(3): 519-536.

Poulton, C., Kydd, J., and Dorward, A. (2004). "Overcoming Market Constraints to Pro Poor Agricultural Growth." Paper Prepared for the Africa Commission November 2004.

Poulton, C., Kydd, J., and Dorward, A. (2006). "Overcoming market constraints on pro-poor agricultural growth in sub-Saharan Africa." Development Policy Review **24**(3): 243-277.

Poulton, C., Hazell, P., Wiggins, S., and Dorward, A. (2007). "The Future of Small Farms for Poverty Reduction and Growth." 2020 Discussion Paper; No.42. Washington International Food Policy Research Institute.

Poulton, C., Kydd, J., and Dorward, A. (2007). "Increased Fertiliser Use in Africa: What Have We Learned?" Agriculture and Rural Development Discussion Paper, No. 25, Washington DC, The World Bank.

Poulton, C. (2006). "Bulk Export Commodities: Trends and Challenges." Background Paper for the World Development Report 2008. Washington DC, The World Bank.

Powell, W., and DiMaggio, P. (1991). The New Institutionalism in Organisational Analysis. Chicago, University of Chicago Press.

Powell, W. (2007). "The New Institutionalism". in; The International Encyclopedia of Organisation Studies. Clegg, S., and Bailey, R (eds). Thousand Oaks, Ca; Sage Publishers.

Pratten, S. (1997). "The nature of transaction cost economics." Journal of Economic Issues **31**(3): 781-804.

Putnam, R. D. (1993). Making Democracy Work. Civic traditions in modern Italy. Princeton, NJ, Princeton University Press.

Raikes, P., Jensen, M., and Ponte, S. (2000). "Global Commodity Chain Analysis and the French Filiere Approach: Comparison and Critique." Economy and Society **29**(3): 390-417.

Raynolds, L. (1994). "Institutionalising Flexibility: A comparative analysis of Fordist and Post-Fordist models of third world agro-export production." Commodity Chains and Global Capitalism. G. Gereffi, and M. Korzeniewicz [eds]. Westport, Greenwood Press: 143-61.

Reardon, T., and Barrett, C. B. (2000). "Agroindustrialisation, globalisation, and international development: An overview of issues, patterns, and determinants." Agricultural Economics **23**(3): 195-205.

Reardon, T., Codron, J. M., Busch, L., Bingen, J., and Harris, C. (2001). "Global Change in Agrifood Grades and Standards: Agribusiness Strategic Responses in Developing Countries." International Food and Agribusiness Management Review **2**(3/4): 421-435.

- Reardon, T., Barret, C. B., Berdegue, J. A., Swinnen, J. A. (2009). "Agrifood Industry Transformation and Small Framers in Developing Countries." World Development, **37** (11), 1717-1727.
- Renard, M. C. (2003). "Fair Trade: quality, market and conventions." Journal of Rural Studies **19**: 87-96.
- Richter, R. (2001). "New Economic Sociology and New Institutional Economics." International Society for New Institutional Economics Berkley, California.
- Rimmer, D. (1992). Staying Poor: Ghana's Political Economy 1950-1990. New York, Pergamon.
- Rodrik, D., Subramanian, A., and Trebbi, F. (2002). "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development" Discussion Paper Series: No. 3643, Centre for Economic Policy Research.
- Rosenstein-Rodan, P. (1943). "Problems of Industrialisation of Eastern and South-Eastern Europe." Economic Journal **53**: 202-211.
- Rossini, F., and Porter, L. (1984). Interdisciplinary Research: Performance and Policy Issues. Problems in Interdisciplinary Studies. R. Jurkovich, and Paelinck, J. [eds]. Aldershot, Gower: 26-45.
- Rottger, A. (2000). The Ghanaian Cocoa Industry: Present and Future. Consultancy Paper. Accra.
- Ruf, F. (1995). "From Forest Rent to Tree Capital: The Basic Laws of Cocoa Supply." Cocoa Cycles: The economics of cocoa supply. Ruf, F. and Sisowoputranto, P. [eds]. Cambridge, Woodhead Publishing: 1-55.
- Sachs, J., and Warner, A. (1995). "Economic Reform and the Process of Global Integration." Brookings Papers on Economic Activity **1**: 1-118.
- Samuelson, P. (1954). "The Pure Theory of Public Expenditure." Review of Economics and Statistics **36**(4): 387-389.
- Sayer, A., and Morgan, K. (1985). "A modern industry in a declining region: links between method, theory and policy." The Politics of Method: Contrasting Studies in Industrial Geography. Massey, D., and Meegan, R. [eds]. London, Methuen: 144-168.
- Sayer, A. (1992). Method in Social Science. A Realist Approach. London and New York, Routledge.
- Schmitz, H., and P. Knorringa. (2000). "Learning from global buyers." Journal of Development Studies **37**(2): 177-205.

Shelanski, H., and Klein, P. (1995). "Empirical Research in Transaction Cost Economics: A Review and Assessment." Journal of Law, Economics and Organization. **11**: 335-361.

Shepherd, A., and Onumah, G. (1997). "Liberalised Agricultural Markets in Ghana. The Roles and Capacity of Government." The Role of Government in Adjusting Economies. Birmingham University.

Shepherd, A., and Farolfi, S. (1999). "Export Crop Liberalization in Africa; A Review." FAO Agricultural Services Bulletin. No. 139. Rome, Food and Agriculture Organisation.

Shirley, M. (2005). "Institutions and Development." Handbook of New Institutional Economics. C. Menard, and Shirley, M. [eds]. Amsterdam, Springer: 611-638.

Silverman, D. (2005). Doing Qualitative Research: A practical handbook. London, Sage.

Simon, H. (1955). "A Behavioural Model of Rational Choice." The Quarterly Journal of Economics **69** (1): 99-118.

Simon, H. (1986). "Rationality in Psychology and Economics." Journal of Business **59**(4): 209-224.

Spooner, N., and Smith, L. (1991). "Structural Adjustment Policy Sequencing in Sub-Saharan Africa." FAO Economic and Social Development Paper No. 104. Rome, FAO.

Stake, R. (2000). "Case-Studies." Handbook of Qualitative Research [2nd ed]. N. Denzin, and Lincoln, Y. [eds]. Thousand Oaks, Sage: 435-454.

Stiglitz, J. E. (1985). "Information and Economic Analysis: A perspective." The Economic Journal **95**: 21-41.

Stiglitz, J. E. (1989). "Markets, Market Failures and Development." American Economic Review **79**(2): 197-203.

Stiglitz, J. E. (1989A). "Rational Peasants, Efficient Institutions, and a Theory of Rural Organization." The Economic Theory of Agrarian Institutions. Bardhan, P. [ed]. Oxford, Clarendon Press: 18-31.

Stiglitz, J. E. (1998). "Towards a New Paradigm for Development: Strategies, Policies and Processes." Prebisch Lecture, Geneva, UNCTAD.

Stiglitz, J. E. (1999). "Whither Reform? Ten years of transition." World Bank Annual Conference on Development Economics. Washington DC, The World Bank.

Stone, A., Levy, B., and Paredes, R. (1994). "Public Institutions and Private Transactions: The Legal and Regulatory Environment for Business Transactions in Brazil and Chile." Policy Research Working Paper: No. 891. Washington DC, The World Bank.

Straus, A., and Corbin, J. (1990). Basics of Qualitative Research: Grounded Theory Procedures and Techniques. Newbury Park California, Sage.

Sturgeon, T. (2000). Turnkey Production Networks: A new American Model of Industrial Organisation? Massachusetts Institute of Technology, Industrial Performance Centre.

Sturgeon, T. (2001). "How do we define value chains and production networks?" IDS Bulletin 32(3): 9-18.

Sturgeon, T. (2002). "Modular production networks: a new American model of industrial organization." Industrial and Corporate Change 11(3): 451-496.

Sykuta, M., and Cook, M. (2001). "A New Institutional Economics Approach to Contracts and Cooperatives." American Journal of Agricultural Economics 83(5): 1273-1279.

Talbot, J. (2002). "Tropical commodity chains, forward integration strategies and international inequality: coffee, cocoa and tea." Review of International Political Economy 9(4): 701-734.

Teal, F., and Vigneri, M. (2004) "Coping with Agricultural Reforms in the 90's: The case of cocoa farmers in Ghana." Improving Institutions for Growth: Global Poverty Research Group. Centre for the Study of African Economies, Oxford.

Teal, F., Zeitlin, A., and Maamah, H. (2006). "Ghana Cocoa Farmers Survey 2004." Report to Ghana Cocoa Board, Accra.

The World Bank. (1997). World Development Report 1997: The State in a Changing World New York, Oxford University Press.

The World Bank. (2002). World Development Report 2002: Building Institutions for Markets. Washington DC, The World Bank.

The World Bank. (2003). "Ghana Poverty Reduction Strategy Paper." IMF Country Report 03/56. Washington DC, The World Bank.

The World Bank (2005). Economic Growth in the 1990's: Learning from a decade of reform. Washington DC, The World Bank.

The World Bank (2008). World Development Report 2008: Agriculture for Development Washington, DC, The World Bank.

Thelen, K. (1999). "Historical Institutionalism in Comparative Politics." Annual Review of Political Science, 2, pp 369-404.

Tiffen, P., Maamah, H., Lewin, B., Kim, B., and Bryla, E. (2002). "Ghana: Cocoa Price Risk Management." Phase Two Report, Common Fund for Commodities.

Tirole, J. (1994). "The Internal Organization of Government." Oxford Economic Papers 46 (1): 1-29.

Tollens, E., and Gilbert, C. (2003). "Does Market Liberalisation Jeopardise Export Quality? Cameroonian Cocoa, 1988-2000." Journal of African Economies 12(3): 303-342.

Tschirley, D., Poulton, C., Gergely, N., Labaste, P., Baffes, J., Boughton, G., Estur, G. (2009). "A Method for Analysing the Differential Effects of Reform in African Cotton Sectors." Cahiers Agricultures 18 (5) 385-92.

UNCTAD (2008). "Export Performance Following Trade Liberalisation: Some Patterns and Policy Perspectives." Economic Development in Africa. New York, United Nations.

ul-Haque, I. (2004). Commodities Under Neoliberalism: The Case of Cocoa. G-24 Discussion Paper New York, United Nations.

Varangis, P., and Schreiber, G. (2001). "Cocoa market reforms in west Africa." Commodity Market Reforms: Lessons of Two Decades. A. Akiyama, Baffes, J., Larson, D., and Varangis, P. [eds]. Washington DC, The World Bank: 35-82.

Vigneri, M., and Santos, P (2007). Ghana and the cocoa marketing dilemma: What has liberalisation without price competition achieved. ODI Project Briefing, No. 3, Overseas Development Institute.

Wade, R. (1990). "States Markets and Industrial Policy". Governing the Market: Economic Theory and the Role of Government in East Asian Industrialisation. Wade, R [ed]. Princeton, Princeton University Press: 8-34.

Waeyenberge, E. (2006). "From Washington Consensus to Post-Washington Consensus: Illusions of Development." The New Development Economics: After the Washington Consensus. K. Jomo, and B. Fine [eds]. London, Zed Books: 21-45.

Walters, B., and Young, D. (2001). "Critical Realism as a Basis for Economic Methodology: a critique." Review of Political Economy 13(4): 483-501.

Wilcox, M., and Abbot, P. (2004). "Market Power and Structural Adjustment: The Case of West African Cocoa." American Agricultural Economics Association Annual Meeting Denver, Colorado.

Williamson, J. (1990). "What Washington Means by Policy Reform." Latin American Adjustment: How much has happened. J. Williamson [ed]. Washington DC, Institute for International Economics: 7-38.

Williamson, J. (2000). "What should the World Bank think about the Washington Consensus?" World Bank Research Observer **15**(2): 251-264.

Williamson, O. E (1975). Markets and Hierarchies: Analysis and Antitrust Implications. New York, Free Press.

Williamson, O. E. (1981). "The Economics of Organization: The Transaction Cost Approach." The American Journal of Sociology **87**(3): 548-577.

Williamson, O. E. (1985). The Economic Institutions of Capitalism. New York, Free Press.

Williamson, O. E. (1991). "Strategising, Economising, and Economic Organisation." Strategic Management Journal **12**: 75-94.

Williamson, O. E. (1998). "Transaction cost economics: How it works; where it is headed." Economist **146**(1): 23-58.

Williamson, O. E. (1999). "Public and private bureaucracies: A transaction cost economics perspective." Journal of Law Economics & Organization **15**(1): 306-342.

Wilson, J. (1989). "Part One: Organisations." Bureaucracy: What government agencies do and why they do it. Wilson, J. [ed]. New York, Basic Books.

Yeung, H. (1997). "Critical Realism and Realist Research in Human Geography: A method of a philosophy in search of a method?" Progress in Human Geography **21**(1): 51-74.

Yin, R. (1984). Case Study Research – Design and Methods. Thousand Oaks, CA, Sage.

Zeitlin, A. (2006). "Market Institutions and Productivity: Microeconomic Evidence from Ghanaian Cocoa." Dissertation, Centre for the Study of African Economies, University of Oxford.

On-line Newspaper Articles [Market Reports]

Aboa, A. (2008). 'Exporters fret over falling Ivorian cocoa quality.' Reuters [12/09/08]. <http://africa.Reuters.com/country/CI/news/usnBAN245485.html>

Adams, A. (2008). 'Wamco to Be Closed Down.' The Ghana Chronicle [15/04/08]. <http://www.modernghana.com/news/162748/1/wamco-to-be-closed-down-due-to-non-availability-of.html>

African Echoe News. (2006). 'Rising Output Costs Strains in Ghana's cocoa industry.' [14/09/2006]. <http://africanecho.co.uk/africanechonews20-sept14.html>

All Africa. (2009). 'Ghana: Cadbury's Fairtrade Certification to Boost Cocoa Farming.' [24/07/09]. <http://allafrica.com/stories/200907240740.html>

Barry Callebaut. (2007). 'Barry Callebaut Expands its Operations in Ivory Coast.' [24/07/2007]. <http://www.flex-news-food.com/pages/9978/Barry-Callebaut/barry-callebaut-expands-operations-ivory-coast.html>

Benjamin, C. (2007). 'Is 50% cocoa processing a reasonable goal for Ghana?' The Statesman [15/02/2007]. http://www.thestatesmanonline.com/pages/news_detail.php?newsid=2548§ion=9

Blas, J. (2008). 'Cocoa hits 23-year high on supply fears.' The Financial Times [23/12/08]. <http://www.ft.com/cms/s/0/1f48a1b8-d129-11dd-8cc3-000077b07658.html>

Blowers, E., and Wessels, V. (2009). 'Ghana Gets Biggest IMF Crisis Loan to African Nation.' Bloomberg [16/07/09]. <http://www.bloomberg.com/apps/news?pid=20601116&sid=avqGFSywtr8s>

Bowers (2009) 'Sweet Deal: Dairy milk to carry fair-trade badge.' The Guardian [04/03/09]. <http://www.guardian.co.uk/environment/2009/mar/04/cadbury-fair-trade-dairy-milk>

Brough, D. (2008) 'ICCO sees fall in cocoa demand growth.' Reuters [19/09/08]. <http://africa.reuters.com/country/CI/news/usnBAN954866.html>.

Brough, D., and Nicholson, M. (2008) 'Cocoa prices at over 20-year high.' Reuters [06/06/08] - <http://www.iht.com/bin/printfriendly.php?id=13804450>.

Daily Graphic (2008) 'Ghana Must Reduce Stake in PBC'. [11/02/08]. <http://www.modernghana.com/news/157278/1/ghana-must-reduce-stake-in-pbc.html>

Daily Graphic. (2009). 'Government Takes Action to Eliminate Child Labour in Cocoa Growing Areas.' [07/08/09]. <http://www.modernghana.com/news/231752/1/government-takes-action-to-eliminate-child-labour-.html>

Daily Guide Newspaper. (2008). 'Good News for PBC Shareholders.' [11/02/08]. <http://www.dailyguideghana.com/portal/modules/news/article.php?storyid=3696>:

Dow Jones Newswire. (2007). 'Ivory Coast President Calls for Probe into Cocoa, Coffee Boards.' [15/10/07]. <http://www.flex-news-food.com/pages/11546/Ivory-Coast/ivory-coast-president-calls-probe-cocoa-coffee-boards-dj.html>

Dow Jones Newswire. (2007a). 'Ivory Coast to Reform Cocoa Sector by End of March 2008.' [27/09/07]. <http://www.flex-news-food.com/console/PageViewer.aspx?page=11163&str=Cocoa%20European%20Union>

Dow Jones Newswire. (2009). 'Ivory Coast cocoa arrivals to Aug 23 seen down 15% on year.' [27/08/09]. <http://www.analyst.palmoil.com/ivory-coast-cocoa-arrivals-to-aug-23-seen-down-15-on-year/>

Flex News. (2007a). 'Ghana's Afrotropic Eyes Expansion.' [9/5/2007]. <http://www.flex-news-food.com/pages/8642/Cocoa/Ghana/ghanas-afrotropic-eyes-cocoa-expansion.html>

Flex News. (2007b). 'Ghana to boost processing capacity by 100,000 tonnes.' [9/11/2007]. <http://www.flex-news-food.com/pages/12191/Cocoa/Ghana/ghana-boost-cocoa-processing-100000-tons.html>.

Freiku, S. (2007). '5 billion Fraud Exposed at Sunshine Commodities.' Ghanaian Chronicle [04/12/07]. <http://ghanaweb.com/mobile/wap.small/news.article.php?ID=135371>

Ghana News Agency. (2008). 'Government Raises Cocoa Producer Price By 36 Percent.' [06/09/08]. http://ghana.gov.gh/ghana/government_raises_cocoa_producer_price_36_percent.jsp

Ghana News Agency. (2008a). 'District Officers Arrested for Diversion of Cocoa' [25/03/08] <http://ghanaweb.net/GhanaHomePage//NewsArchive/artikel.php?ID=141209>

James, J., and Attai, K. (2009) 'Ivory Coast cocoa buyers see rapid fall's in quality.' Dow Jones Newswire. [11/03/2009]. <http://www.djnewswires.com>

Kpodo, K. (2007a). 'Ghana Bullish for 2007/08 Crop'. Reuters - [12/10/07] <http://africa.reuters.com/nbc/GH/>

Kpodo, K. (2007b). 'Ghana moves to cut cocoa shipment delays at ports.' Reuters. [16/10/07]. <http://africa.reuters.com/nbc/GH/>.

Kpodo, K. (2008a). 'Ghana see's 650,000 tonnes for 2008/09 crop, and signs new loan.' Reuters. [03/09/2008]. <http://africa.reuters.com/country/CI/news/usnL3523501.html>

Kpodo, K. (2008b). 'Ghana Ends Local Monopoly on Light Crop.' Reuters. [03/14/08]. <http://af.reuters.com/news/country?type=ghanaNews>

Kpodo, K. (2008c). 'Ghana Reassures Grinders Over Cocoa Crop Sale.' Reuters. [24/03/08]. available at; <http://af.reuters.com/news/country?type=ghanaNews>

Kpodo, K. (2009a). 'Ghana Cocoa Purchases 14 pct down at Jan 1.' Reuters. [14/01/09]. <http://af.reuters.com/article/idAFJ0E50D0IW20090114?pageNumber=2&virtualBrandChannel=0&sp=true>

Kpodo, K. (2009b). 'FACTBOX-Ghanaian cocoa grinding capacity.' Reuters. [29/08/09]. <http://www.reuters.com/article/companyNews/idUKLS7848920080829?symbol=ADM.N>

Kpodo, K. (2009c). 'Ghana Inflation rises to 20.56 pct in April.' [15/05/09]. <http://af.reuters.com/article/ghanaNews/idAFLE36176820090515?sp=true>

- Kpodo, K. (2009d). 'Ghana budget aims to slash spending, create jobs.' Reuters [05/03/09]. <http://af.reuters.com/article/topNews/idAFJ0E5240IV20090305?feedType=RSS&feedName=topNews&sp=true>
- Kpodo, K. (2009e). 'Ghana says budget deficit higher than thought.' Reuters [25/08/09]. <http://www.forbes.com/feeds/afx/2009/08/25/afx6811944.html>
- Lewis, D. (2008). 'ANALYSIS-Ivory Coast cocoa sector faces season in turmoil.' Reuters [13/10/08]. <http://www.reuters.com/article/GCA-Agflation/idUSLC25967020080912>
- My Joy Online News. (2006). 'Government Spends 97 billion on mass spraying.' [16/11/2006]. <http://www.myjoyonline.com/tools/print/printnews.asp?contentid=115>
- Odoi-Larbi, S. (2009). 'PBC on a Flying Note.' The Ghanaian Chronicle. [12/01/09]. <http://www.ghanaian-chronicle.com/thestory.asp?id=10103&title=PBC%20on%20flying%20note>
- Oredein, O. [2007]. 'SW Nigeria Graded Cocoa Prices at NGN 175,000-180,000/Ton.' [18th/05/07]. Oster Dow Jones. www.dowjonesnews.com
- Reuters. (2007). 'Unsold Cocoa Stocks Pile Up in Ivorian Warehouses.' [15/07/2007]. www.flex-news-food.com/console/PageViewer.aspx?page=12349&str=ADM%20Cargill%20Cocoa
- Reuters. (2008). 'Ghana price surges in European cash cocoa market.' [25/07/08]. <http://africa.reuters.com/country/GH/news/usnEUCOC1.html>
- Reuters. (2008a). 'Tariff's undermine Ghana's cocoa sales to china and India.' [25/04/2008]. <http://www.flex-news-food.com/console/PageViewer.aspx?page=16016&str=>
- Reuters. (2009). 'Ivory Coast Sets 3-month Target for New Cocoa Reform Body.' [03/03/09]. <http://www.flex-news-food.com/pages/22376/Cocoa/Ivory-Coast/ivory-coast-sets-month-target-new-cocoa-reform-body.html>
- Reuters. (2009a). 'London fall generates European cash cocoa buying.' [02/01/08]. <http://africa.reuters.com/country/GH/>
- Reuters. (2009b). 'ICCO see's biggest fall in cocoa grindings in 50 years.' [11/05/09]. <http://www.flex-news-food.com/pages/23631/Cocoa/icco-biggest-fall-cocoa-grindings-50-years.html>
- Reuters. (2009c). 'Ivorian Cocoa Reform Seen Urgent, Delayed by Polls.' [29/07/09]. <http://www.flex-news-food.com/pages/25129/Cocoa/Ivory-Coast/ivorian-cocoa-reform-seen-urgent-delayed-polls.html>

Ryan, O. (2007a). 'Ghana to ease fertiliser bill for cocoa growers.' Reuters. [17/5/2007]. <http://africa.reuters.com/nbc/GH/>

Ryan, O. (2007b). 'Ghana cocoa grinders fear bean supply crunch.' Reuters [21/08/07]. <http://www.reuters.com/article/companyNewsAndPR/idUSL2136654120070821>

The Daily Guide. (2009). 'New Cocoa Processing Plant for Ghana.' [27/01/09] <http://ghanareview.com/review/shownews1.php3?class=all&date=2009-01-27&id=32071','','scrollbars=yes,width=600>

The Insight Newspaper. (2007). 'Ghana loses ₵46 billion from cocoa export.' [22/10/07]. <http://www.myjoyonline.com/business/200710/9716.asp>

Twum, N. (2006). 'Cocoa: We'll Process 50% Here – President Kuffour.' Graphics Communications Group Limited. [06/05/06]. <http://www.copalcpa.org/newsletters/Newsletter%20No%20181.pdf>

Websites

The Ghana Cocoa Marketing Board [Cocobod]: www.cocobod.gh

The Ghana Quality Control Division: www.qcdcocobod.com

The Ghana Cocoa Marketing Company: www.cocoamarketing.com

Congoo News: www.congoo.com

Flex News: www.flex-news-food.com

The International Cocoa Organisation: www.icco.org

Cocoa Merchants of America: www.cocoamerchants.com/dailyspotprice/index.asp

Reuters News Africa: www.af.reuters.com/news/countries

The Federation of Cocoa Commerce: www.cocoafederation.com

The Cocoa Producers Alliance: www.copal-cpa.org

OTAL Commodity Reports: www.otal.com/commodities

Appendix One – Detailed Cocoa Revenue Breakdown

Table A - 1

| Cocoa Season | 1994/95 | 1999/00 | 2002/03 | 2004/05 | 2006/07 |
|-------------------------------------|--|-------------------|--------------------|--------------------|--------------------|
| | Figures in Million Cedis: Brackets show percentage of FOB derived revenue. | | | | |
| Revenue³⁴⁷ | 45.343 [100%] | 164.619 [100%] | 728.562 [100%] | 888.503 [100%] | 1076.000 [100%] |
| Producer Payments | 20.550 [45.3%] | 98.566 [59.9%] | 427.265 [58.6%] | 623.901 [70.2%] | 706.858 [65.7%] |
| Buyers Margin³⁴⁸ | 3.258 [7.2%] | 15.830 [9.6%] | 58.068 [8.0%] | 57.875 [6.5%] | 71.833 [6.7%] |
| Freight | 3.123 [6.9%] | 4.629 [2.8%] | 36.457 [5.0%] | 54.691 [6.2%] | 66.574 [6.2%] |
| Finance Costs³⁴⁹ | 0.740 [1.6%] | 7.071 [4.3%] | 10.856 [1.5%] | 21.327 [2.4%] | 39.513 [3.7%] |
| Administration³⁵⁰ | 0.352 [0.7%] | 3.049 [1.6%] | 35.459 [4.9%] | 65.202 [7.3%] | 92.434 [8.6%] |
| Other³⁵¹ | 2.616 [5.8%] | 12.286 [7.5%] | 7.719 [1.1%] | 24.342 [2.7%] | 36.173 [3.4%] |
| Export Handling | - | 3.685 [2.2%] | 13.602 [1.9%] | 5.294 [0.6%] | 3.232 [0.3%] |
| Government Tax | 15.402 [34.0%] | 19.502 [11.8%] | 78.390 [10.8%] | 64.119 [7.2%] | 92.055 [8.6%] |

Source: figures derived from documents obtained during field-work [2008]

³⁴⁷ Revenue has been calculated as the export sales plus local sales [local processors]. In the figures provided by the Cocobod there is also a 'miscellaneous' income stream, however given that this is not associated with cocoa bean sales it has not been included. Therefore, the total revenue reported in this table is from sales of cocoa at the F.O.B price. As such, the breakdown of costs presented in the table may also be understood as a breakdown of the revenue derived from F.O.B sales i.e. the Cocobod's system of F.O.B sharing. The 'miscellaneous' income that is not included in this table may be derived from the Cocobod's investment activities or from financial sanctions against LBC's.

³⁴⁸ The buyer's margin presented in this table is money paid to buyers for cocoa delivered. In previous tables such as Table 2 [Laven, 2005], where the buyer's margin for 2001/02 is reported at 11%, this figure may have taken account of both payment for cocoa delivered and the cost of quality control. Buyers previously paid for quality control separately and were therefore compensated for it through their margin. In recent years this cost has been absorbed by the Cocobod thus partly explaining why the buyer's margin has reduced. It must however be acknowledged that regardless of the change in payment for quality control, the buyers margin has come down in response to increasing producers share of the F.O.B since 2002/03.

³⁴⁹ This figure is mainly discount charges on loans used to finance cocoa purchases [seed-fund], export duty and the operations of the Cocobod.

³⁵⁰ All other Cocobod costs.

³⁵¹ In this category the Cocobod include the costs of quality inspection, research, the construction of feeder roads, and subsidies for fertilisers, pesticides and fungicides.

Appendix Two - The Cocobod System of Quality Control

STAGE ONE – Farmer Practice

- Ghanaian farmers are trained to undertake specific procedures for the pre-harvest and post-harvest handling of their cocoa.
- Once cocoa is harvested farmers go through a set procedure of fermenting and drying their cocoa in order to produce high quality cocoa beans, rich in flavour and low in defects.
- Fermentation involves amassing cocoa beans in a 90-250 kg pile on top of plantain leaves. The pile must be covered with plantain leaves and avoid direct sunlight. After three days the beans within the pile should be turned and allowed to ferment for another three days.
- Drying takes place on large bamboo mats, where beans are laid out flat and left to dry for between seven to ten days³⁵².

STAGE TWO – LBC Responsibility

- LBC's have a responsibility to check the quality of cocoa purchased of farmers, making sure to remove all defect cocoa beans and check the beans are thoroughly dried. The buyer is also required to categorise beans according to size. LBC's are required to do this because on the international market cocoa beans are priced and graded according not only according to the level of bean defects, but also the size of the beans. Bean sizes are arranged according to bean count whereby a sack containing 100-120 beans per 100g of cocoa is considered light crop beans, while 80-100 beans per 100g are considered main crop beans. Main crop beans are of a higher value to light crop beans due to their superior efficiency in the grading process [Fold, 2001]. All cocoa beans shipped from Ghana are graded according to the contractual conditions set out by the Federation of Cocoa Commerce [FCC].

³⁵² Further information on fermentation and drying of cocoa can be found at the CMC's website; http://www.cocoamarketing.com/what_we_production.php.

STAGE THREE – Upcountry Checking

- The first of the Cocobod’s official checks is carried out at the district warehouse of the LBC that has purchased the cocoa from the farmer. QCD officers inspect the cocoa based on dryness, smell, colour, infestation and size consistency. Fold [2002] notes that the QCD takes samples from each pile of thirty bags of cocoa. Laven [2007] reports that the QCD officer will sample one hundred beans from each sack of cocoa.

- Beans are graded according to fixed parameters and bags of cocoa lower than grade two should not leave the district level. The four grades include;
 - Grade 1 - thoroughly dried, free of foreign matter, smokey beans and not more than 3% slate, 3% mould, 3% all other defects.
 - Grade 2 – thoroughly dried, free of foreign matter, smoky beans and with not more than 4% mould, 8% slate and 6 % all other defects.
 - Grade 3 -Sub-Standard Cocoa [double sealed and labelled ‘XS’- sub-standard beans may be re-sorted and re-conditioned to bring them up to Grade 2], and finally.
 - Grade 4 - Waste Cocoa. Beans not reaching grade 1 or 2 will not be exported and are generally used in the domestic processing industry.

Sources for grading standards - Fold [2002], M.O.F.A [2003], Laven [2007].

- Once the QCD officer is satisfied that beans are off the required standard, each bag of cocoa is individually graded and sealed, whereby the grader places his/her own individual tag on the cocoa, so that it is traceable to that grader. Equally each sack of cocoa is marked with a number, which indicates the particular buyer who has purchased the cocoa, so that again if there are any problems the cocoa is traceable to that person.

STAGE FOUR – Takeover Centre Grading

- After checking at the district level beans are transported to one of the Cocobod's three takeover points at Kaase, Takoradi and Tema, where the QCD, separate beans into four grades, and carry out a second quality check. This second quality check is known as 'check sampling'. Once accepted at this level, LBC's receive a purity certificate and no longer have responsibility for the cocoa. LBC's can use the purity certificate as a receipt to gain payment from the Cocobod.

STAGE FIVE – Final Checking

- The cocoa is then checked a third time by the CMC prior to shipment. Cocoa shipped must meet the contractual terms set for each grade of cocoa and where this does not happen buyers may seek compensation through the process of arbitration. Varangis and Schreiber [2001], however, observe that unlike many other cocoa exporters the CMC rarely fail to meet contractual conditions. Indeed, given that Ghana grade 1 cocoa is checked to a standard of no more than 3% of defects, whilst FCC contractual requirements for main cocoa is no more than 5%³⁵³ defects, it would be assumed that quality problems are rare.

³⁵³ This is the standard against which all West African cocoa is traded. The Federation of Cocoa Commerce [FCC] has two main grades for beans from West Africa – Good Fermented Beans – no more than 5% mould, 5% slate, 1.5% foreign matter, and Fair Fermented – no more than 10% mould, 10% slate, 1.5% foreign matter.

Appendix Three – LBC Market Share 1993-2008

Table A-2

| SEASON | | | | | | | | | | | | | | | | |
|--------------------|------------------|------------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| LBC's | 1993/94 | | 1996/97 | | 1999/00 | | 2002/03 | | 2004/05 | | 2005/06 | | 2006/07 | | 2007/08 | |
| | P ³⁵⁴ | MS% 355 | P | MS% |
| PBC | 203,408 | 80.0 | 219,790 | 67.0 | 190,451 | 44.4 | N/a | 34.0 | 225,358 | 37.6 | 242,472 | 32.8 | 186,046 | 30.3 | 208,482 | 30.6 |
| Olam | - | - | - | - | 20,423 | 4.8 | N/a | 11.3 | 79,004 | 13.8 | 102,669 | 13.9 | 70,483 | 11.5 | 54,071 | 7.9 |
| Aduwamapa | 1,160 | 0.4 | 10,061 | 3.1 | 31,294 | 7.3 | N/a | 10.8 | 43,401 | 7.24 | 66,265 | 8.9 | 59,909 | 5.7 | 61,411 | 9.0 |
| Akuafo Adamfo | - | - | - | - | - | - | N/a | 7.0 | 78,553 | 13.1 | 84,150 | 11.4 | 57,107 | 9.3 | 85,977 | 12.6 |
| Federated | - | - | - | - | 41,518 | 9.7 | N/a | 8.5 | 40,601 | 6.8 | 50,451 | 6.8 | 46,509 | 7.6 | 46,989 | 6.9 |
| Transroyal | - | - | - | - | 20,446 | 4.8 | N/a | 6.1 | 30,332 | 5.1 | 42,181 | 5.7 | 41,089 | 6.7 | 37,918 | 5.6 |
| Kuapa Kokoo | 1,770 | 0.5 | 7,336 | 2.3 | 29,114 | 6.8 | N/a | 10.8 | 40,734 | 6.8 | 48,956 | 6.6 | 34,264 | 5.6 | 36,024 | 5.3 |
| Armajaro | - | - | - | - | - | - | N/a | 7.6 | 32,137 | 5.4 | 36,765 | 5.0 | 31,466 | 5.1 | 46,712 | 6.9 |
| Diaby | - | - | - | - | - | - | - | - | 525 | - | 6,068 | 1.2 | 24,774 | 4.0 | 28,888 | 4.2 |
| Cocoa Merchants | - | - | - | - | 20,666 | 4.8 | N/a | 3.8 | 13,219 | 2.2 | 17,504 | 2.3 | 22,075 | 3.6 | 22,683 | 3.3 |
| Evadox | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6,359 | 0.93 |
| Dio Jean | - | - | - | - | - | - | - | - | 2,281 | 0.4 | 9,325 | 1.2 | 10,614 | 1.7 | 8,820 | 1.3 |
| Royal | - | - | - | - | 478 | - | - | - | 2,722 | 0.5 | 5,825 | 0.8 | 6,702 | 1.1 | 8,188 | 1.2 |
| Cashpro | 27,708 | 11.0 | 58,843 | 18.0 | 60,520 | 14.1 | - | - | - | - | - | - | - | - | - | - |
| Unicrop | 19,810 | 7.8 | 18,615 | 5.7 | 1,947 | 0.5 | - | - | - | - | - | - | - | - | - | - |
| Premus | - | - | - | - | 9,227 | 2.2 | - | - | - | - | - | - | - | - | - | - |
| Goldcrest | - | - | 5,543 | 1.7 | - | - | - | - | - | - | - | - | - | - | - | - |
| Others | 281 | - | 5,651 | 1.7 | 2,559 | 0.6 | N/a | 2.3 | 10,451 | 1.7 | 24,826 | 0.34 | 23,490 | 3.8 | 28,326 | 4.0 |
| Total | 254,637 | 100.0 | 325,945 | 100.0 | 428,673 | 100.0 | N/a | 100.0 | 599,318 | 100.0 | 740,457 | 100.0 | 614,532 | 100.0 | 680,779 | 100.0 |

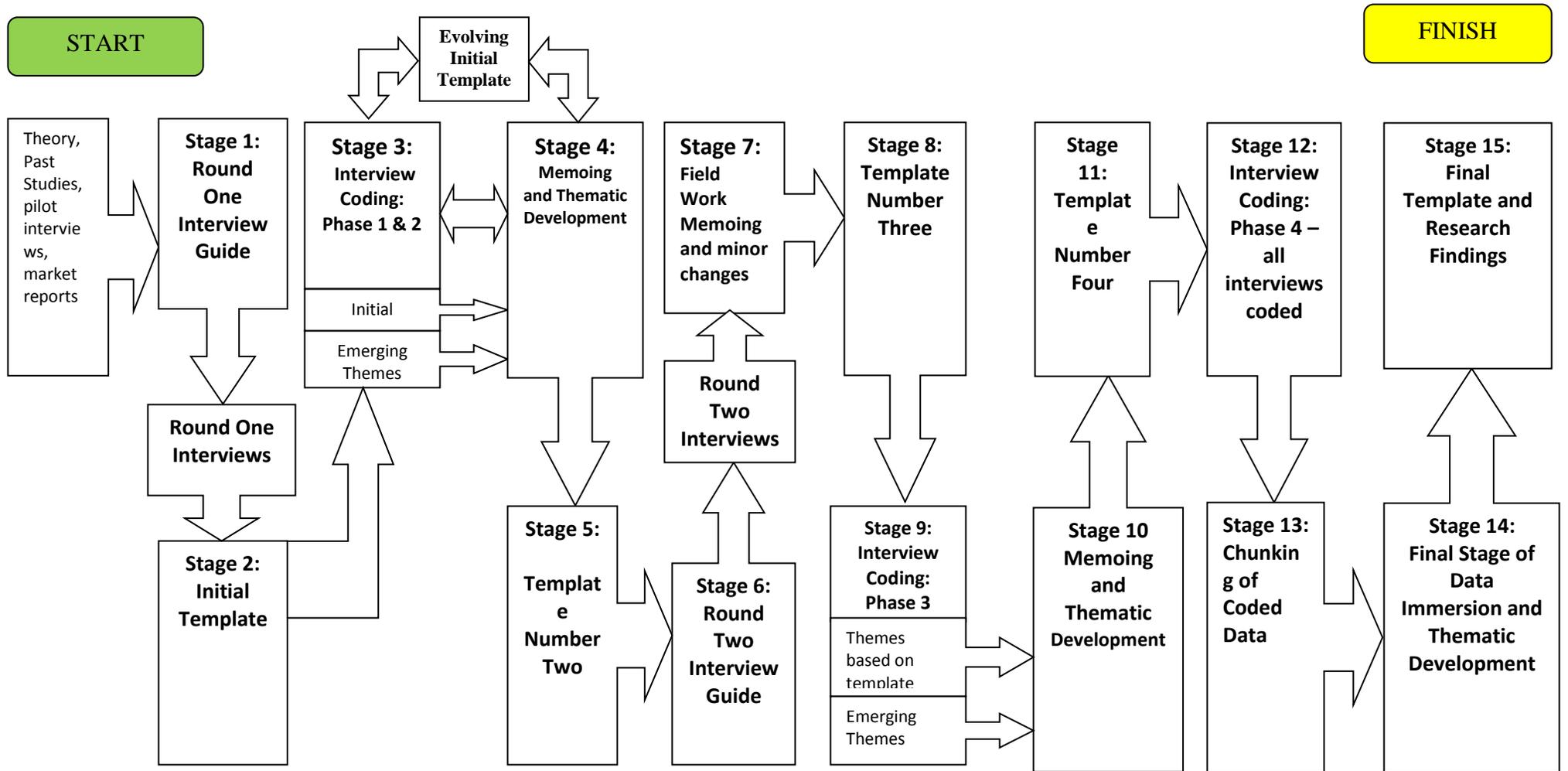
Source – figures compiled from various sources including Rottger [2000], The Bank of Ghana [2003], Cocobod [2006] and documents gained during fieldwork [2008].

³⁵⁴ P stands for tonnes of cocoa purchased.

³⁵⁵ MS stands for market share

Appendix Four – The Process of Template Analysis

Figure A - 1



Source: Author

Appendix Five - Key generative mechanisms

Round one interview guide for the Cocobod

Key

Bold writing - Denotes the section of the interview guide

- Bullet point denotes the key generative mechanisms explored in each section

1. Understanding the process of change within the Cocobod

- Attempt to understand the credibility of change by understanding the motivation towards change within the Cocobod.
- The challenge of change towards the partial model within a large public sector organisation.
- The Cocobod's perception of how change has affected market performance.

2. Functions of the Cocobod within the internal buying market.

- Quality Control
 - The way in which the Cocobod enforces quality.
 - The integration of private buyers into the quality control system.
 - Quality performance in recent years.
- Input Delivery
 - The Cocobod's justification for the delivery of farmer inputs on subsidy.
 - The level of success and coordination challenges encountered i.e. repayments or default.
- Farmer security – the Cocobod's justification for a fixed producer price.

3. The Cocobod's links with LBC's.

- The Cocobod's perception of the competition between LBC's.
- How the Cocobod has adjusted to the introduction of competition into the market.
- The nature of the relationship between Cocobod and the LBC's.
- The Cocobod's methods for enforcing regulations within the internal buying market.

4. The Cocobod's links with External Buyers.

- The nature of vertical coordination between the CMC and external buyers.
- The reputation and performance of Ghanaian cocoa on the external market.
- How the CMC has adjusted to changes within the external market in recent years.

5. The Growth of Origin Processing in Ghana

- The Cocobod's explanation for why origin processing has increased so significantly in Ghana in recent years.
- Whether the Cocobod will be able to fulfil the supply requirements of origin processors under the current supply model.
- The threat posed by the power of the big processors.

6. The Future of the Partial Liberalisation Model

- The current level of support for the partial model within the donor community
- The long term objectives of the Cocobod.
- The potential for future change and the transition of responsibility to the private sector.

Appendix Six – Cocobod Round One Interview Guide

Section 1 – The process of change towards ‘Partial Liberalisation’.

- What have been the main changes in the Cocobod’s operations in the move to partial liberalisation?
- What challenges have been encountered?
- What are the current [short-term] goals of the Cocobod?

Section 2 – The Functions of the Cocobod in the Internal Buying Market.

- The functions of the Cocobod in quality control, input and extension provision and farmer security [fixed pricing]?
- How has the way in which the Cocobod delivers these services changed over the years?

Section 3 – The linkages between Cocobod and the LBC’s.

- The function of the LBC’s?
- Regulation and sanction in the LBC market?
- The function of the Cocobod in the LBC market?
- The Cocobod’s relationship with the LBC market?

Section 4 – The linkages between the Cocobod and the external market.

- The Cocobod’s relationship with the external market?
- The response of the external market to Ghana’s quality performance?
- How changes in the external market have affected the Cocobod?

Section 5 – The growth of origin processing and the role of the Cocobod.

- The objective of increased origin processing?
- The Cocobod’s functions within the origin processing market?
- The changes in the Ghanaian market from increased origin processing?

Section 6 – The future of the partial liberalisation model.

- Donor response the partial liberalisation model and Ghana’s good performance?
- The stability of the current model?
- The long-term goals of the Cocobod?
- The challenges ahead?

Section 1 – The process of change towards the ‘Partial Liberalisation’ model.

1. In your opinion what are the fundamental aspects of the Cocobod model, which make the Ghanaian cocoa market operate as it does?
2. What have been the main effects of the move towards partial liberalisation?
3. In what areas has the Cocobod model changed the most?
4. Where has the rationalisation involved in this change been felt the most?
5. Are the Cocobod happy with the current balance of private sector and public sector in the partial liberalisation model?
6. What have been the main positives resulting from a move to this model of market organisation?
7. Has the model of partial liberalisation specifically created new challenges for the Cocobod?
8. Have unforeseen challenges emerged as a result of this model?
9. In your opinion how has the change to partial liberalisation affected the Cocobod’s reputation in the cocoa market?
10. In your opinion has the model of partial liberalisation affected the culture of the cocoa market in Ghana?

Section 2 – The Functions of the Cocobod in the Internal Buying Market.

1. Quality Control.

- What are the key factors behind Ghana’s consistent quality production?
- Have the Cocobod been able to further develop the use of quality incentives over the years?
- How responsive are farmers to changes in quality incentives?
- How do the Cocobod ensure that quality standards are maintained?
- What methods of sanction are used in the case of poor performance?
- Who has the responsibility for quality performance? – How has this changed over the years?
- How has the role of buyers in quality control changed since partial liberalisation?
- How has the Cocobod been able to adjust to changes in quality grades and standards on the external market?
- In your opinion what are the key aspects of the Cocobod’s quality control system that differentiates them from a private sector system?

2. Provision of inputs and extension services.

- How has partial liberalisation changed the Cocobod’s role in this area? [rationalisation, private input providers]
- What is the current policy on fertiliser subsidy?
 - What are the main justifications for this policy?
- In your opinion how has the importance of inputs and extension at the farmer level changed in recent years?
- What are the main challenges Cocobod faces in the operation of such a subsidy?
- What mechanisms are being used to ensure success of this policy?
 - How do they differ from those used in the past?
- What mechanisms are used to ensure the recovery of loans for fertiliser?
- Is there active coordination between the department responsible for input delivery and the department responsible for extension?
- How have conditions in the rural environment improved in recent years? [access to credit and inputs] –
 - What has been the role of the Cocobod in this area?
- Have the Cocobod been able to use the LBC function to distribute inputs/credit at the farmer level?
 - Is this something that could possibly be used more in the future?
- What is the Cocobod’s preferred method of farmer organisation?

3. Farmer Security.

- What is the main objective of the fixed price mechanism in Ghanaian cocoa?
- What actions have been taken to ensure that farmers can maintain access to markets despite increased certification requirements?

- Farmer Training – do farmers have the capacity at the local level to continue this process in absence of external assistance or are they dependent on the Cocobod in this area?

Section 3 – The linkage between Cocobod and the LBC's.

1. The LBC function and the development of the internal buying market.

- In your opinion how important are the LBC's to the Ghanaian market?
- Have you seen improved competition in the LBC market in recent years?
- In what way has this impacted upon the market/farmers?
- Have Cocobod adjusted the buying model in response to the way LBC's operate in the market?
- Have the Cocobod been able to learn from the operations of the private sector?
- What are the main reasons behind high rate of market exit with the LBC market?
- Has this steadied as the market has developed?
- What are the main incentives for buyers to become involved in the internal buying market?
- Do the Cocobod actively encourage entry?
- Have the Cocobod tried to encourage the development of Ghanaian buyers?
- Would the Cocobod like to see more foreign buyers?
- Which buyers offer the best services to farmers?
- The prospect of farmers becoming buyers?
 - Is this encouraged?
- Is there an ideal number of buyers Cocobod would like to see in the market?
- Are there restrictions on the market share any one company can hold in this market?

2. The Cocobod's relationship with the PBC.

- Is there still a strong relationship with the PBC?
- Has the reduction in market share of the PBC been a planned exercise by the Cocobod?
- How has the change in this relationship affected the Cocobod's role in the internal buying market?
- Is the Cocobod able to use the PBC in anyway to improve market performance and development, i.e. buying from more remote areas, or distribution of inputs or, credit?
- What is the future of the PBC?
 - Is its operation an important aspect of the PL model in the future?

3. Cocobod regulation of the internal buying market.

- Have licensing regulations changed over the years in response to aspects of market development?
- The reasons behind mandated physical presence at the village level.
- The importance of regulatory control over the LBC's?
- What are the main threats of looser regulation?

4. Seed Funding.

- The need – capacity of other credit sources?
- The benefit of this to both Cocobod and the buyers.
- The problems – [default?]
- Future options?

5. Cocobod sanction within the LBC market.

- Do the Cocobod face many problems with LBC's cheating farmers in the market?
- Are there still problems with LBC's buying under prepared cocoa?
- What are the main mechanisms of sanction used by the Cocobod for offending LBC's?
- Would the Cocobod worry about the possibility of increased cheating and the capacity of buyers to exploit farmers in absence of the Cocobod?
- Do Cocobod have many clashes with LBC's at a policy level?
- How do the Cocobod respond to complaints from the LBC's?

6. Communication between the LBC market and the Cocobod.

- Is there frequent communication between LBC's and the Cocobod?
- On what level does this communication commonly take place. [individual buyers, or buyer association] – Does this affect the nature of the communication?
- Has the nature of communication between Cocobod and the LBC's changed at all in recent years?

7. Distribution of responsibility based on the partial liberalisation model?

- Is there an understanding of who has responsibility for each aspect of market development?
- Has this changed at all in recent years?
- Are there problems with the balance of responsibility within the 'partial liberalisation' model?
 - If so, how could this be improved?
- Are there any aspects of the model in which the Cocobod would like to see the LBC's take on more responsibility in the coming seasons?
- How have the Cocobod been able to encourage the LBC's in these areas?
- Are there any examples where communication on these matters has led to improvement?

Section 4 – The Linkages between Cocobod and the external market [CMC].

1. The CMC and the partial liberalisation model

- In your opinion what are the main sources of Ghana's competitive advantage in the external market for Cocoa?
- How has the Cocobod's relationship with the external market changed since the move to partial liberalisation?
- Has there been any response in the external market from Ghana's move towards the partial liberalisation model?
- In the late 90's, early 2000's, there idea was raised that Ghana may liberalise 30% of cocoa exports.
 - What were the main reasons/incentives for this?
 - What were the main risks?
 - What has changed since then, such that the policy has not been implemented?

2. The CMC and global cocoa market performance.

- Can you think of any examples of the way in which the external market has responded to Ghana's increased production and consistent quality performance in recent years?
 - Is this a reflection of the increased level of supply risk coming from other producers?
- In your opinion does the market adequately value the quality of Ghanaian cocoa?
 - How has this premium changed in response to improved technology, but also declining cocoa quality in other markets?
- Is there an increased risk in pan seasonal pricing in relation to current and future supply side risks in global cocoa?
- Are buyers beginning to extend cover further in response to supply side risks?

3. The CMC and changes in cocoa market structure.

- How have the changes in the structure in the external market impacted upon the functions of the Cocobod? [Methods of transporting, bulking, purchasing, links with trade houses, contracting]

- How has the concentration that has taken place in the external market the Cocobod's relationship with the key players in the supply chain?

4. The CMC and changing cocoa standards and supply requirements.

- Does the Cocobod/CMC actively engage with the cocoa industry on aspects of the industries supply requirements? [quality grades, crop balance, sustainability, health and safety].
- How flexible is the Cocobod quality control system in response to industry needs in these areas?
- In relation to the proliferation of alternative grades and standards systems, such as organic cocoa and fair-trade etc; does the CMC consider alternative supply channels as an aspect of the Cocobod's future model?
- In relation to the Cocobod's market leadership on meeting certification requirements;
 - What are the main factors that have enabled Ghana to take leadership in this area?
 - Has the external market actively responded to the Cocobod's achievements in this area?

Section 5 – The growth of origin processing and the role of the Cocobod.

1. The main reasons behind the current surge in origin processing activities? i.e. why now?
2. The main benefits to Ghana of the growth in origin processing?
3. How has the relationship between the processing firms and the Cocobod changed since the recent surge of investments?
 - Are there any advantages to the Cocobod in this area?
4. The linkages between the Cocobod and origin processors? [communication, policy adjustments]
5. Will these investments have an impact at the farmer level?
6. The main benefits for the processing firms in Cocobod's opinion?
7. Do the Cocobod actively attract entrants into this market?
8. The capacity to learn from industrial/technological capabilities of origin processors?
9. Have any specific mechanisms been put in place to achieve industrial learning?
10. How have the Cocobod attempted to encourage the development of Ghanaian processing firms?
11. Has there been an attempt to encourage strategic alliances between Ghanaian firms and foreign firms?
12. How have the Cocobod been able to learn from the policies of the past to facilitate development in this area?
13. Increased competition for supply - have the Cocobod had to make any adjustments in their model in response to this?
14. Supply requirements – will the origin grinding firms fulfil their entire supply requirements with the Ghanaian crop?
15. Do the Cocobod have any concerns over the size and power of the companies investing in origin processing?
 - Is this something that has to be considered when screening potential investments?
16. Are there restrictions on the market share any one company can hold?

17. Do you expect origin processing to continue to grow in Ghana?

18. Is there an ideal balance between origin processing and exporting?

Section 6 – The Future of the Partial Liberalisation Model.

1. In reference to the IMF/WB pressure that the Cocobod faced in the 1990's and early 20th Century - has this period of pressure now passed?
2. As such, in its current state do you think the model of partial liberalisation is stable?
3. Is support for the current model reflected in donor level policy?
4. Is further reform a possibility?
5. Is the 70/30 export market liberalisation still a possibility?
6. What are the main goals of the Cocobod?
 - In the Short-term [1-4 years]
 - In the long term [5-10 years]
7. What challenges are expected in meeting these goals?
8. What actions are the Cocobod taking to overcome these challenges?
9. Will the current model have to be adjusted to meet these goals?

Appendix Seven – LBC Round One Interview Guide

Section 1 – The functions of the Cocobod.

Objective – ascertain how the role of the Cocobod impacts upon the operation of LBC's in the market and more specifically how the functions of the Cocobod impact upon the level of coordination and risk faced by LBC's in the market.

Section 2 – Linkages between buyers and farmers.

Objective – To establish the nature of linkages between buyers and farmers, and the incentive for buyers to invest in farmer upgrading. I am also interested in the risks buyers face when investing in farmers and the impact of the Cocobod model in shaping the relationship between buyers and farmers.

Section 3 – Linkages between buyers.

Objective – To establish the nature of competition between buyers in the market and the impact of the PBC in this area. I am also interested in the existence of buyer networks and the role of such networks at an operational and policy level.

Section 4 – The Partial Liberalisation Model.

Objective – To establish the benefits of the partial liberalisation model and the adjustments that have been made to this model in recent years. We also want to establish the major challenges, and the balance of responsibility for market development, that exist within the partial liberalisation model.

Section 5 – Linkages between buyers and the Cocobod.

Objective – To establish the level of communication between buyers and the Cocobod, both individually and collectively. I also want to explore the potential for change as a result of communication between buyers and the Cocobod, and the credibility of the Cocobod as a market regulator.

Section 6 - The future of the partial liberalisation model.

Objective – To establish the likelihood and possible direction of future change in the Cocobod model, as well as the changes necessary to meet the Cocobod's future objectives. I also want to establish the risks and opportunities that future change would present, and the likely impact of Ghana's current surge in processing investments.

Section 7 – Comparative Questions.

Objective – To establish how the model of the Cocobod impacts upon risks faced by buyers in Ghana, as opposed to buyers in other producing countries.

Section 1 – The Functions of the Cocobod.

1. Quality control and the QCD:

- What are the main advantages of quality control in the internal market?
- What is the main reason for Ghana's quality performance?
- Does the function of quality control reduce the level of risk faced by buyers?
- What is the buyer's role in the quality control function?
- Who has responsibility in the case of quality failure?
- Are there any mechanisms through which a farmer can cheat a buyer with quality?
- Is the QCD system of grading accurate?
- Are farmers appropriately rewarded for the quality they produce?
- How do changing quality requirements in the external market impact on the local buyers market?
- Would the Cocobod system [or something similar] remain intact in a private market setting?
 - What changes would be made?
 - Would the same standard of quality still be enforced?
- Do buyers recognise the link between quality control internally and the Cocobod's role within the external market?
- Declining quality?
 - If so, who is responsible?

2. Fixed Pricing:

- What are the main benefits of this for the farmer?
- Does the mechanism of fixed pricing have any advantages at the buyer level?
- In your opinion is fixed pricing justified through its impact on the farmer's quality performance?

3. Buyer licensing requirements:

- Do you recognise the reasoning behind the mandated aspects of the Cocobod buyer's model?
- Do you think that any aspects of this model are more valid than others?

4. Inputs and extension:

- By providing these functions to farmers does this increase buyers confidence in the farmer performance?
- Do they reduce the level of perceived risk in the market –
 - I.e do they reduce the services buyers need to provide to farmers, or, limit the risk of crop failure?

- Can you think of any examples where the Cocobod's provision of inputs and extension has improved the performance of the market?
 - Do you feel the training of farmers by the Cocobod greatly affects the capabilities and performance of farmers?
 - Do you think the Cocobod have an advantage in this area?
5. Seed –funding:
- Is this a necessity, or are there viable alternatives?
 - Does this affect your attitude towards the other functions of the Cocobod?
 - Sources of credit for working capital?
6. Sanction:
- Are the rules of the Cocobod actively enforced?
 - Does this increase your confidence in the market?
 - Is the threat of sanction/licence revoke ever used in an unfair manner?
7. Operating margins – how have these changed in recent years?
8. Based on the Cocobod's buying rules, what degree of freedom do buying companies have to employ their own business models and differentiate themselves from competitors in the market?
9. Can you think of any way in which the functions of the Cocobod improves the level of cohesion between the different actors in the market?

Section 2 – Linkages between buyers and farmers.

1. The relationship between buyers and farmers.
 - What is the structure of a typical trading relationship?
 - Mechanisms of communication between buyers and farmers?
 - The regularity of communication.
 - The goal of communication.
 - Do long-term trading relationships develop?
 - What are the advantages to the buyer of such relationships?
 - What mechanisms do buyers use to establish such relationships?

2. Investments at the farmer level.
 - The type of investments made at the farmer level.
 - The incentive to invest at the farmer level.
 - Do buyers use this as a mechanism to compete, or, simply make the market function?
 - How does the model of the Cocobod affect the incentive to invest at the farmer level?
 - Has this changed at all in recent years?
 - How do you choose which farmers to invest in?
 - Can LBC's easily differentiate between farmers based on performance?
 - The risk of investing in farmers – examples of opportunism?
 - Mechanisms buyers use to reduce risk, i.e. limit the risk of default?
 - Do buyers recognise a link between farmer inputs and cocoa quality?

3. Farmer organisation.
 - Preferred mode of farmer organisation?
 - Buyers capacity to effect farmer organisation?
 - Is the small-holder model suitable to the model of partial liberalisation?

4. Has there been much development of the rural environment in recent years?
 - Farmers access to credit and inputs.
 - Transport infrastructure.
 - Information systems.

5. Can you think of any way in which the Cocobod has encouraged improved linkages between buyers and farmers?
 - For example have the Cocobod ever encouraged LBC's to take on more responsibility for farmer inputs and credit?

Section 3 – Linkages between buyers.

1. Competition in the LBC market:
 - The extent of LBC competition in the market.
 - The main areas of competition.
 - The incentive to compete.
 - Market share restrictions.

2. The role of the PBC.
 - How does this impact upon the level of competition in the market?
 - How has the level of competition changed as the PBC's share of the market decreases?
 - Has the role of the Cocobod in the internal market changed since the reduction of the PBC's share of the market?
 - As a buyer of last resort does the PBC purchase cocoa in more remote areas where other buyers would not?
 - Does the PBC have preferential access to any services of the Cocobod that other buyers do not?

3. The extent of buyer networks:
 - The existence of a network between buyers.
 - The strength of linkages between buyers in the network.
 - The purpose of buyer networks.
 - The form of these linkages [formal or informal].
 - Do other networks exist outside of the main buyer's network?
 - The importance of cross networks with other companies? [parent companies, or haulage companies]
 - The role of the PBC: Is the PBC involved in LBC networks? Does the PBC affect the influence of buyer's networks?

4. The operation and function of linkages between buyers?
 - Any examples of where buyers have coordinated with impact at the farmer/operational level? [i.e. information exchange leading to sanction].

5. Any examples where buyers have coordinated with impact the Cocobod/policy level?

6. Any examples of where buyers have coordinated to establish competition policy/agreements?

7. Risk of free riding – any examples where another buyer has been able to capture the benefit of an investment made by other buyer or a group of other buyers?
8. As a buyers association would it be possible for the LBC's to provide inputs as a public good?
9. Are there better lines of communication established between the buyers who have been in the market for longer?
10. Have fluctuations in the market personnel impacted upon the ability of buyers to establish a stronger buyers association?
11. The capacity of current buyers to self regulate the market?

Section 4 – The Partial Liberalisation Model.

1. What is your opinion of the partial liberalisation model as a mode of market organisation?
2. To what extent is Ghana's improved performance in recent years attributed to the changes since partial liberalisation?
3. What improvements have been made to the partial model model in recent years?
4. Have there been any improvements in the operational efficiency of the Cocobod in recent years?
5. Have there been any recognisable changes in the market environment as the model has developed?
6. What are the major challenges that still exist within this model?
7. In what areas are buyers responsible for internal investment and upgrading of the market?
8. Are there problems defining the boundaries of responsibility based on the interaction between the private sector and the state in this model?
9. Do you feel the LBC's could take any of the Cocobod's responsibilities in the market?
 - If so, in what areas in particular and why?
10. Is the credibility of this model compromised by the role of Cocobod subsidiaries in the liberalised local buying market?
11. Is the success of the Ghanaian cocoa market dependent on the role of the Cocobod?

Section 5 – Linkages between buyers and the Cocobod

1. How would you describe your own company's relationship with the Cocobod?
2. Do you have regular communication with the Cocobod?
3. Example outcome of communication at the individual level?
4. Do some LBC's have stronger links with the Cocobod than others?
5. How are the LBC's represented at a policy level?
 - Is this effective?
 - Is it representative of the LBC's?
 - Is communication regular?
6. Change of leadership in the Cocobod – how has this changed the relationship between the Cocobod and the LBC's?
7. Earlier we were talking about the investments made by buyers in the market; does the Cocobod in anyway recognise the contribution of buyers in this area?
8. Do the Cocobod recognise the increased importance of the LBC function in the market since the increase in output?
 - Does this give the LBC's greater force to effect change?
9. In your opinion are there any areas of the Cocobod model where LBC's have a greater capacity to effect change than others?
10. Can you think of any examples where the Cocobod has taken action to encourage investment from the LBC's?
11. Have the Cocobod encouraged LBC's to invest in other aspects of the model beyond your traditional role as buyers?
12. Credibility of the Cocobod's regulation; in investments [examples]
 - Risk of policy reversal.
 - Credibility in complementary investments.
 - Risk of free riding – ability to capture the benefit of an investment made by other buyer or a group of other buyers.
 - Examples of Cocobod taking action to increase credibility.
13. In your opinion what has caused the current infrastructure deficit in the Ghanaian supply chain?

Section 6 - The Future of the Partial Liberalisation Model.

1. What would buyers prefer to see – for the state to upgrade the infrastructure of the current model? Or, for the model to change such that there is more room for the private sector to invest in upgrading?
2. What aspects of the Cocobod model would you choose to keep in the situation of further reform?
3. How do you think farmers would respond to further changes in the model?
 - Do farmers express an opinion on the role of the Cocobod in the market?
4. Do you perceive further liberalisation as a risk or an opportunity?
 - Do you think this attitude would be shared by the other LBC's?
5. What major changes are needed for the Cocobod to reach its 1,000,000 tonne objective?
 - Is this realistic in the current model?
6. In your opinion what is the most likely outcome to problems in the LBC market?
 - Increased investment by the Cocobod.
 - Private sector investment.
 - Greater incentive in for the private sector, including change in the PL model.
 - No change – what are the consequences of this?
7. Processing investments:
 - How is this likely to impact upon the internal buying market?
 - In your opinion will the requirements of origin processing lead to changes in the current Cocobod model?
 - Have you observed a different relationship between the Cocobod and processing companies, compared to the one that exists between Cocobod and the LBC's?
10. Do you think LBC's will be able to export cocoa in the future? [30/70]

Section 7 – Comparative Questions [only for Olam and Armajaro]

1. How does the partial liberalisation model compare against the alternative models used in other countries?
 - Levels of risk faced by buyers.
 - Incentives for investment.
 - Rewards available.
 - Infrastructure development.
2. How does the nature of competition in the Ghanaian internal buying market differ from the competition in other producing countries?
3. Do you consider the internal buying market in Ghana to be a liberal buying market?
4. Are the mandated requirements of the Cocobod similar to the set-up used by buyers in other countries?
5. Have you been able to learn anything from the role of the Cocobod?
6. Is the Ghanaian model dependent on the specific role of the Cocobod, or do you think the same model could be used in other countries?
7. Do farmers in Ghana demonstrate a more advanced level of skills and capacity than farmers in other countries?
8. As a global buyer as well as a local buyer do you have a greater respect/understanding of the Cocobod model, based on:
 - The Cocobod's role within the external market.
 - Experiences of buying in other countries.
9. Is there greater justification for the role of the Cocobod due to the instabilities witnessed in other cocoa producing nations in recent years?

Appendix Eight – External Buyers Round One Interview Guide

Objective 1 – Understanding **the role of the Cocobod** as the link between the national market and global actors in the cocoa supply chain.

1. The role of the Cocobod as the sole institution linking the national market with the external market for cocoa, based on three main areas:

- The Cocobod's ability to meet the current and future supply requirements of the industry.
- The Cocobod's role in engaging with, and creating a credible platform for, private sector investment.
- The ability for the external market to link 'sustainability' orientated investments into the Cocobod model at the producer level.

2. How changes in the market structure at the global level of the cocoa chain are likely to impact on the Cocobod model of market organisation.

Objective 2 – Understanding how **the model of market organisation** in Ghana affects the operations of external buyers.

1. The advantages of operating under the Ghanaian system, based on experiences in Ghana and by comparison with other cocoa producing countries.
2. The challenges posed by operating under the Ghanaian system, based on experiences in Ghana and by comparison with other producing countries.

Objective 3 – Understanding the **linkages** between external buyers and other segments of the cocoa supply chain. This segment is focused on how such linkages are affected by the role of the Cocobod in the Ghanaian market.

1. The linkages between external buyer operations in Ghana and operations in Northern segments of the cocoa supply chain.
2. The linkages between external buyers and the producer segments of the cocoa supply chain in Ghana.
3. The linkages between external buyers and the Cocobod [i.e. the level of positive dialogue and the specific mechanisms through which communication takes place].
4. The linkages between external buyers and other cocoa buyers/processors [by this I do not mean aspects of collusion, but rather the levels of competition, or, coordination affecting operational aspects i.e. buyers associations]

Section 1 - Export Buyers Supply Requirements

1. What is Ghanaian cocoa's greatest source of competitive advantage?
2. Which of these factors gives the Cocobod greatest legitimacy in the market? [i.e. which would not take place in absence of the Cocobod]
3. In your opinion what is the main source of Ghana's premium?
4. Given the current quality produced in other origins is Ghana's premium a fair reflection of the quality they produce?
 - Why might this not be the case?
5. Can Ghana's quality performance be directly attributed to the role of the Cocobod?
6. Do you think that quality would remain in absence of the Cocobod?
7. How has the premium for Ghana cocoa changed in response to improved technology, but also declining cocoa quality in other markets?
8. Does the industry have any incentive to establish a quality control system, similar to that of the Cocobod, throughout the mainstream market?
9. Is quality likely to remain a viable source of competitive advantage in the future with improved technology in cocoa processing?
10. How has the reputation of the Cocobod changed in recent years?
11. Any examples of how the industry has responded to Ghana's improved performance in recent years?
12. How have the supply requirements of the cocoa industry changed in recent years?
 - Supply Risk
 - Changing demand patterns.
 - Alternative grades and standards – Changing quality convention?
 - Improved technology.
13. Does the Cocobod/CMC actively engage with the cocoa industry on aspects of the industries supply requirements?
14. Any examples where the Cocobod has responded to the industries requirements in this area?
15. Are private grades and standards of importance to future supply arrangements in the mainstream cocoa market?
 - Do you think this will have any impact on the model of the Cocobod.

Section 2 - Investment in Origin Processing:

- What are the main incentives to setting up origin processing facilities in Ghana?
- What has been the main motivation behind the recent surge in investment activity? [state policy, supply security, technology]
- Are beans purchased at origin priced differently to beans purchased for export?
- Are processed cocoa products taxed differently than raw beans?
- What are the implications of processing premium quality beans?
- Is bean flavour an important aspect of processing at origin?
- Will processing firms fulfil their entire supply requirement from the Ghanaian crop?
- Do processing firms have the option to purchase beans from other origins to use in their Ghanaian factories?
- Do you think the growth of origin processing in Ghana will require adjustments in the Cocobod model?

Section 3 - Coordination between Cocobod and Local Processors

1. Do you have regular communication with the Cocobod?
2. Example outcome of communication at the individual level?
3. Do some processors have stronger links with the Cocobod than others?
4. How are the processors represented at a policy level?
 - Is this effective?
 - Is it representative of the processors?
 - Is communication regular?
 - Examples in this area?
5. How have the changes in the structure in the cocoa supply chain impacted upon the model of the Cocobod? [Methods of transporting, bulking, purchasing, links with trade houses, contracting]
6. Have origin processors been working with the Cocobod to facilitate learning and industrialisation in Ghanaian cocoa?
7. Do you think the environment in Ghana and the role of the Cocobod helps to facilitate this process?
8. How does the policy environment and degree of positive communication with the market regulator in Ghana, compare with that experienced in other producer countries?
9. Key differences of operating under the partial liberalisation model, compared with other producer country markets? [Comparative]
10. Do you recognise a link between the Cocobod's role as the monopoly exporter and their control of supply within the Ghanaian internal market?
11. Do you recognise the importance of the link between the role of the Cocobod and the country perspective of Ghana?
12. Changes in the Cocobod environment in recent years?
13. How has the Cocobod's regulation of the industry changed since the growth in market entry into local processing?

14. What aspects of the Cocobod model would you choose to keep in the situation of further reform?
15. What aspects of the model do you think other cocoa markets would learn from?
16. Credibility of Cocobod as a market regulator?

Possible topics -

- Risk of policy reversal/unilateral policy decisions
- Credibility in complementary investments.
- Risk of free riding – i.e. rent capture.
- Examples of Cocobod taking action to increase credibility.

Section 4 - Links between Origin Processors

1. Competition in the origin processing market in Ghana.
2. The extent of buyer networks:
 - The existence of linkages between external buyers.
 - The strength of these linkages.
 - The form of these linkages.
 - Multiple networks within the processors market.
 - The importance of cross networks with other companies? [parent companies, or haulage companies]
3. Has network activity increased since the recent surge in market entry?
4. Do buyer networks in other cocoa producing countries reflect the industries capacity to self regulate?
5. Could buyer networks work to a similar extent in Ghana in future years?

Section 5 - Links between Ghana based processors and other segments of the cocoa chain.

1. Intra-firm networks – the extent of these and how they operate?
2. How has the development of origin processing facilities benefiting from your experience of operating in the Western countries?
3. How has the development of origin processing facilities been able to benefit from your experience of operating in other developing countries?
4. Have improved transport infrastructure and information systems throughout the supply chain encouraged a growth in origin processing?
5. Has the expansion of origin processing been motivated by the increased outsourcing/supply contracts focused on the grinding segment?
6. Does this give processing firms greater security in fulfilling contracts for downstream manufacturers?
7. What is the operational capacity of grinding at origin, i.e. can they fulfil complex supply requirements?
8. What are the logistical advantages to processing at origin – does it allow you to bypass a stage in the downstream end of the chain?

Section 6 - Sustainable investments and linkages at the producer level.

1. What are the main objectives behind the growth of investment in sustainable supply chains?
2. Do the Cocobod actively engage with the industry on the best way to achieve these goals?
3. Does the example set by the Cocobod on sustainable development issues, such as child labour
 - Enhance the Cocobod's reputation in the external market?
 - Encourage increased investment in sustainability?
 - Act as a source of competitive advantage for Ghana?
 - Have contracts responded to this?
4. In your opinion what has enabled the Ghana to be more effective in this area?
5. Is the industry able to coordinate its sustainability related investments with the Cocobod program?
6. Does the role of the Cocobod in any way affect the industries level of engagement in sustainability in Ghana?

Section 7 - The Future of the Cocobod model.

1. What would you perceive as the main risks of further reform in the Ghanaian model?
2. In what areas would you like to see change?
3. Based on the current level of support for the Cocobod in the external market, do you feel the Cocobod is under any pressure to change?
4. What changes may be needed in the current model in response to:
 - Increased competition in origin grinding.
 - Supply Requirements of industry and changing quality standards.
 - Cocobod's 1,000,000 tonnes goal.
 - Challenges in the current operating environment

Appendix Nine – Cocobod Round Two Interview Guide

Section 1 – The Cocobod’s reasoning behind liberalisation

This section will attempt to understand the Cocobod’s justification for the initial liberalisation reforms in 1992. It is also important to understand the Cocobod’s concerns in relation to liberal change, and how the liberal model has performed as compared the former monopsony model.

Section 2 – The Functions of the Cocobod in the Internal Buying Market.

- The functions of the Cocobod in quality control, input and extension provision and farmer security.
- The Cocobod’s management of its subsidiary bodies.
- How has the way in which the Cocobod delivers these services changed over the years?

Section 3 – The linkages between Cocobod and the LBC’s.

- The extent and impact of LBC competition in the market?
- The distribution of seed-funding, and delivery quota?
- Regulation and sanction in the LBC market?
- The Cocobod’s relationship with Licobag?

Section 4 – The linkages between the Cocobod and Export buyers.

- The competitive advantage of Ghana cocoa and Ghana’s quality reputation?
- The CMC and the changing structure of the global cocoa chain?
- The CMC and export buyers supply requirements.

Section 5 – The growth of origin processing and the role of the Cocobod.

- The motivation behind the current surge in origin processing?
- The benefits Ghana can expect from the growth of origin processing?
- The relationship between Cocobod and origin processors?
- Competition in the origin processing market?

Section 6 – The future of the current Cocobod model.

The objective of this section is to understand if liberalisation has achieved the results that were expected at the beginning of reform, and how the objectives of reform have changed during the years since the initial liberalisation. It is also important to assess the Cocobod attitude towards change in the future, and the possible areas in which change might be of benefit.

Section 1 – The Cocobod’s motivation towards liberalisation.

1. When Ghana began the process of liberalisation in 1992, what were the main reasons for this?
2. Do you think liberalisation is something the Cocobod would have undertaken without the encouragement of the World Bank/IMF?
3. In the initial stages, how was the process of liberalisation received within the Cocobod?
4. What were the main concerns?
5. What was the Cocobod’s experience of multi-buying system prior to the 1992 reforms?
6. How did this past experience affect the Cocobod’s attitude towards 1992 reforms?
 - Does this attitude still exist?
7. What were perceived as the main benefits that would result from the 1992 reforms?
8. At this current time how does the Cocobod perceive the performance of the partial liberalisation model?
9. How does this compare with the former monopsony model?

Section 2 – The Functions of the Cocobod in the Internal Buying Market.

1. Quality Control.

- What are the key factors behind Ghana’s consistent quality production?
- How do the Cocobod ensure that quality standards are maintained?
- Where quality standards have declined, what has been the cause of this?
- Is there any particular stage of the season where quality problems occur with greater frequency?
- What methods of sanction are used in the case of poor performance? [exact]
- In your opinion who has the greatest responsibility for quality at the up country level?
 - How has this changed over the years?
- What is the buyer’s role in quality?
 - How has this changed over the years since liberalisation?
- In your opinion what are the key aspects of the Cocobod’s quality control system that differentiates it from a private sector system?

1a. QCD Credibility

- Where Cocoa is passed at the up country level and then failed at the port, why might this occur?
- What actions have been taken to ensure that cocoa grading up country is not open to manipulation?
- What actions have been taken to ensure that cocoa cannot be changed during transit by an LBC?
 - How can you detect when this has taken place?
- Would the Cocobod consider taking over cocoa up country to avoid this problem?
- Where cocoa is failed at the port, what is the process of investigation to find out why this change in quality has occurred?
 - How can you accurately determine who is at fault?
 - What sources of information are used?
- What mechanism of appeal can be used by the LBC’s?
 - How often is this used?
 - Would you consider independent arbitration?
- Where it is found that a bribe has been taken, who do you hold accountable?
 - Why do you think that greater responsibility should be borne by this party?
- Why in cases of QCD mal-practice do you only hold the individual accountable, whereas for the LBC’s management is also accountable?
- Has the problem of QCD rent seeking only occurred since the introduction of private buyers?
 - Has it been getting worse?
 - Why?

- To what extent does the Cocobod get involved in the management of subsidiaries?
- To what extent does the QCD act independently of the Cocobod?
- How does the Cocobod's management of subsidiaries differ from the way in which they manage LBC's?
- Is there variation in subsidiary management?
- Do you think that the Cocobod is justified in treating subsidiaries in a different way to LBC's? Why?
- How would you assess the current performance of the QCD?
- During the purple bean problem, how much responsibility did the QCD take for accepting beans that were then rejected on the market?
 - What was the Cocobod's response to QCD hold-up?
- Given that the accountability of QCD officers is a major concern for LBC's, what actions have been taken to eradicate the problem of bribes?
- Have you experienced many problems controlling the actions of your employees in the field?
- Have the Cocobod taken any steps to ensure that the QCD and CMC operate in the manner of a private sector organisation?

1b. Export Quality Requirements:

- How has the Cocobod been able to adjust to changes in quality grades and standards?
- The mechanisms used by the Cocobod to communicate changes in quality grades and standards – what are the main challenges faced in this area?

2. Provision of fertilisers.

- What has been the Cocobod's experience of providing fertilisers to farmers?
- Why have Cocobod changed from providing fertilisers on credit, to a subsidy program?
- What mechanisms are being used to ensure success of this policy?
 - How do they differ from those used in the past?
- What mechanisms are used to ensure the recovery of loans for fertiliser?
- In the past have the Cocobod been able to use the LBC function to distribute inputs at the farmer level?
 - What was the Cocobod's motivation for this?
 - Describe your experience with this program?
- How has this experience affected your attitude towards working with LBC's in this area in the future?
- What would have to change before you would consider working with LBC's in this area in the future?
- What has been the Cocobod's experience of working with Weinco?
- Do you consider Weinco as a possible replacement for the Cocobod's role in fertiliser provision to farmers?

2a. Mass Spraying

- What are the Cocobod's long-term plans for the mass-spraying exercise?
- Are the Cocobod happy with their current performance in this area?
- What are the main constraints to change in this area?
- Would the Cocobod ever consider private sector alternatives for this function?
- Again, would Cocobod ever consider the possibility of a greater partnership with LBC's in this area?

2b. Transition of input responsibility

- What do you think are the main constraints to LBC's becoming more involved in the provision of inputs to farmers?
- How do Cocobod plan to change the farmer attitude that all inputs should be provided by the government for free? [reward based]
- How do you think LBC's would respond if Cocobod decided to stop providing inputs for farmers?

2c. Farmer Extension

- Is there active coordination between the department responsible for input delivery and the department responsible for extension? Examples of success in this area?
- How has the change in extension services impacted upon the distribution of information developed by CRIG?
- How has the buyer's role in farmer training changed in recent years?
- How have you encouraged buyers to take on more responsibility in this area?
- Do you see buyers as a viable solution to farmer training in the long run?

3. Farmer Security.

- What is the main objective of the fixed price mechanism in Ghanaian cocoa?
- Has the smuggling problem this season caused any change of attitude on the fixed pricing mechanism?
- Who is to blame for the smuggling problems witnessed this season?

- Do the Cocobod consider the development of farmer cooperatives as a beneficial option in the future?
- In your opinion what would be the advantages of this system?
- Why have the Cocobod not encouraged cooperative development in the past?
- Who has the responsibility to lead development in this area?

Section 3 – The linkage between Cocobod and the LBC’s.

1. In your opinion how important is the role of the LBC to the functioning of the internal market?

2. To what extent is the Cocobod now dependent on the role of the LBC’s?

3. LBC Competition?

- In your opinion what are the main incentives for buyers to become involved in the internal buying market?
- Do the Cocobod actively encourage entry?
- On what basis do you evaluate applications for entry?
- How do you ensure that the market does not contain inefficient LBC’s?
- Do the Cocobod attempt to regulate the level of competition in the market?
- Are there an ideal number of buyers Cocobod would like to see in the market?
- Has the Cocobod attempted to adjust licensing requirements to achieve this?
- What do you think would be the impact of a smaller number of buyers?
- What do you think would be the impact of a larger number of buyers?
- Do you think there is a danger of making the market overly competitive?
- As the number of buyers has increased, how has this impacted upon the Cocobod’s management of the market?

- How has competition changed between LBC’s since the beginning of liberalisation?
- What have been the main positives resulting from competition?
- Are the Cocobod aware that many buyers are now retracting from the provision of services to farmers?
- How can Cocobod improve the link between farmers and buyers?
- What have been the main negatives resulting from competition?
- Was quality decline a problem during the early years of liberalisation?
 - Why has this only become a problem in recent years?
- In your opinion what is the dominant strategy pursued by most LBC’s?
- Have Cocobod had to make adjustments to their own operations based on the way in which buyers compete in the market? [I.e. speed of turnover, quality]

- Would the Cocobod like to see more foreign buyers?

- Why have Cocobod improved conditions for buyers this season?
 - How did you expect this to affect the market?

3a. The role of the PBC.

- How would you assess the current performance of the PBC?
- Do the Cocobod still have links with the PBC?

- How has this relationship changed since the PBC was privatised?
- Does the Cocobod recognise the credibility issues surrounding their relationship with the PBC?
 - How does the Cocobod plan to distance itself from the PBC in the long run?
- Do you think the PBC's reduction in market share has had a positive affect on the market?
- Why do you think it has taken the PBC so long to respond to market conditions and operate like a private sector organisation?
- Do you think the PBC could compete in the market without any additional support from the state?
- Do you think firms like the PBC & CPC should receive state support because they are not accustomed with a competitive market culture?
- Do you think the PBC performs a necessary role in the market? [buyer of last resort/hold-up]

4. Cocobod Supply Chain Management: Seed Funding, Quota and the Buyers Margin.

- To what extent do you feel that buyers are dependent on the seed-fund?
- Does seed-funding offer any benefit to the Cocobod?
- Is this a service that you will attempt to maintain in the long run? Or is it the ultimate goal to have buyers independently financed?
- On what basis do you distribute seed-funding?
- How can buyers apply for additional seed-funding? Is there a lot of competition in this area?

- On what basis do the Cocobod distribute delivery quota to LBC's?
- How can an LBC acquire additional quota?
- In the past have the Cocobod rented warehouses during periods of congestion?
- Given that congestion has been a problem for several seasons, why did it take the Cocobod until recently to update takeover centres?
- What was your main incentive to improve the takeover centres?
- Is there any incentive for Cocobod to increase the speed of cocoa turnover?
- Do the Cocobod have any plans to move away from the quota system?
 - If not, how can the Cocobod meet buyer needs in this area?
- Have the Cocobod ever considered transferring responsibility for takeover and warehousing to the private sector?
- Did the Cocobod expect LBC's to increase their speed of turnover in response to market competition?
- Do the Cocobod offer any concessions to LBC's when they have been delayed during the takeover of cocoa?
- How do you decide the buyer's margin?
- Does the margin fluctuate in response to international price changes?

5. Cocobod sanction within the LBC market.

- How has the extent of mal-practice changed since the beginning of partial liberalisation?
 - How has it changed in recent years?
 - Why have Cocobod increased the number of sanctions in recent years?
- How has this affected the relationship between Cocobod and the LBC's?
- How do the Cocobod monitor the actions of LBC's in the field?
 - Has this been affected by the change if extension services?
- How do the Cocobod investigate claims made against an LBC?
- What mechanism of appeal can be used by an LBC when they have been sanctioned?
- Do LBC's regularly employ their right to appeal?
- Buyers suggest the need for an independent arbitrator for cases of appeal, is this something that the Cocobod have ever considered?
- Where the 'agent' or PC of an LBC is found to have committed an offence, who is held accountable?
- Do you feel there is a possibility that by sanctioning LBC's so strictly, this will affect their incentive to invest in other aspects of the system e.g. farmers?

6. Operational Risk

- Why do the Cocobod enforce the model that buying agents must be registered with an LBC?
- Why can an LBC not use a third party to buy cocoa at the local level?
- Where LBC's suffer the problem of cheating from their PC's what can the Cocobod do to help eradicate this problem?
- Do you think that Akuafo Cheque is a viable long-term solution?
- Where LBC's suffer from the ant-competitive practices of other buyer, what can the Cocobod do to help eradicate this problem?

7. Cocobod and Licobag

- How would you describe the Cocobod's relationship with Licobag?
- How has the Licobag affected communication between Cocobod and the LBC's?
- How has Licobag affected the nature of the relationship between Cocobod and the LBC's?
- How regularly do the Cocobod communicate with Licobag?
- Do Cocobod communicate more regularly with LBC's on either an individual or the Licobag level?
- Can you think of any examples where communication between Cocobod and Licobag has led to positive change?
- Would the Cocobod ever consider working with Licobag to help eradicate problems of mal-practice in the field?

Section 4 – The Linkages between Cocobod and the external market.

1. In your opinion what are the main sources of Ghana's competitive advantage in the export market for cocoa?
2. What are the main factors affecting the premium paid for Ghanaian cocoa?
3. How has the premium paid for Ghanaian cocoa fluctuated in recent seasons?
4. On average what is the \$ premium paid for Ghana, as compared other West African origins?
5. Do you feel that Ghana receives a fair premium for its cocoa, based on the low quality that is being produced in other countries?
6. How do you think the premium for Ghanaian cocoa will respond to Ghana putting 1,000,000 tonnes of cocoa on the market?
7. Are you expecting an increase in global production in response to the recent high prices in global cocoa markets?
8. In your opinion how does the 'reputation' of the Cocobod impact upon the way in which Ghanaian cocoa is traded on the external market?
9. In your opinion what benefits does the Cocobod gain from this reputation?
10. Do you think that Ghana cocoa would sell for a higher price than cocoa of the same quality being sold in another origin?
11. On what basis do export buyers assess the quality of a particular batch of cocoa?
12. Do export buyer's carry out a third party check of Ghanaian cocoa before it is shipped?
13. In absence of quality control would the CMC be able to sell Ghana's cocoa through forward contracting?
14. Have the recent fluctuations in global cocoa prices raised concerns over the value of selling through forward contracts?
15. How many months in advance will the CMC sell forward?
16. Is there a risk that you cannot accurately fix prices for farmers throughout the season when prices are fluctuating by such large margins?

17. How has the concentration that has occurred in world cocoa markets affected the operations of the CMC?
18. Do the CMC have rules on the amount of cocoa that you are allowed to sell to any one buyer?
19. Why do the CMC try and spread their supply across several buyers instead of concentrating on a few large buyers?
20. Are the CMC still actively pursuing their program of market expansion?

4a - The CMC and Changing Supply Requirements. [Also for QCD and Cocobod]

1. Does the Cocobod actively engage with the cocoa industry on aspects of the industries supply requirements?
2. How flexible is the Cocobod quality control system in response to industries quality needs?
3. In relation to the proliferation of alternative grades and standards systems, such as organic cocoa and fair-trade etc; do you consider the production of alternate grades and standards as an aspect of the Cocobod's future model?
4. What are the main constraints to Cocobod pursuing these opportunities?
5. In your opinion, what are the advantages of a homogenous quality system?
6. Have the Cocobod ever considered the possibility of a greater differentiation in grades and prices of cocoa sold from Ghana?
 - What would be the advantages/disadvantages of such a system?
7. How do you think the market would respond to such changes in the Ghanaian quality control system?

4b - The CMC and the growth of origin processing in Ghana

1. How do CMC operations differ when selling cocoa at origin compared with selling cocoa on the export market?
2. What are the advantages of having buyers operating in Ghana?
3. Are you able to establish stronger relationships with buyers when they are located in Ghana?
 - How does this affect the process of buying cocoa?

4. In your opinion what are the main advantages of operating through the CMC for local processors?
5. The CMC and operational risk – problems controlling staff – see QCD questions. [only for CMC – return to this after origin grinding: section 5]

Section 5 – The growth of origin processing and the role of the Cocobod.

1. In your opinion, what is the main reason for the current surge in origin processing factories in Ghana?
2. From where did the initial motivation to increase origin grinding in Ghana come from?
3. Have the Cocobod and government taken different roles in this process?
4. To what extent were the Cocobod involved in the decision to increase origin grinding?
5. In your opinion should Ghana be processing as much 50% of their cocoa?
 - Is this position widely supported within the Cocobod?
6. Do the Cocobod currently prioritise either export market sales or sales to local processors?
 - Once origin grinding has reached the proposed stage of 50%, do you think this will change?
7. In your opinion what are the main benefits to Ghana of the current growth in origin processing?
8. In what way do you think that selling beans at origin will help support Cocobod's objectives in the export market? [keeping beans of the market]
9. Is it only the light crop beans that the Cocobod wants to keep of the market?
10. Do you not think that selling main crop beans to origin processors will put pressure on your export market premium?
11. The capacity to learn from industrial/technological capabilities of origin processors? –
 - Have any specific mechanisms been put in place to achieve this?
12. How have the Cocobod attempted to encourage the development of Ghanaian processing firms?
13. In your opinion what are the main incentives for processors to set up a processing facilities in Ghana?
14. What are the factors affecting the size of the light crop produced in Ghana?
15. What are the factors affecting the proportion of the light crop that is distributed to processors?

16. Do bean supply agreements go beyond access to light crop beans?
17. In a situation where the light crop cannot meet the processors supply allocated in the bean supply agreement, what arrangements have been put in place?
18. Will bean supply agreements have to be adjusted in response to the decreasing size of the light crop in Ghana?
19. Do processors operating at origin gain preferential access to main crop beans?
20. Do you feel any obligation to meet the supply requirements of processors once they have invested in Ghana?
21. Did the Cocobod actively try and attract investments from processors, or did processors apply to make investments?
22. What is the process of screening potential investors?
23. How would you describe the relationship between processors and the Cocobod?
24. Do you communicate regularly with processors?
25. Do all processors have the same bean supply agreements?
 - How can you reassure processors that this is the case?
26. What has the Cocobod's relationship with the CPC changed since it was privatized?
27. How would you assess the current performance of the CPC?
28. Why do you think it has taken the CPC a relatively long time to improve their performance in the market?
29. Do you think that the CPC can compete in this market without additional support from the state?
30. Do the Cocobod have any concerns over the size and power of the companies investing in origin processing?
 - Is this something that has to be considered when screening potential investments?
31. Are there restrictions on the market share any one company can hold?
32. Do you have concerns that by processing 50% of Ghana's crop at origin this could place a lot of control in the hands of a small number of companies?

33. How do you attempt to control the amount of power afforded to any one particular processor?
34. Do you expect origin processing to continue to grow in Ghana?
 - Is there an ideal balance between origin processing and exporting?
35. The option of LBC's delivering directly to processors? [debate]

Section 6 – Transition and Change

1. In your opinion has liberalisation achieved the objectives set out at the beginning of the liberalisation process?
2. How have these objectives changed during the process of liberalisation?
3. In the Cocoa sector strategy document 1999, it is stated that further liberalisation of the cocoa supply chain is required to improve efficiency and lower cost. Does the Cocobod still support this position?
4. In the late 90's, early 2000's, there idea was raised that Ghana may liberalise 30% of cocoa exports. What has changed since then, such that the policy has not been implemented?
5. In your opinion why have the reforms envisaged at the beginning of the liberalisation process not taken place?
6. How has the Cocobod's attitude towards reform changed?
7. Do you think that the Cocobod is reluctant to change the current system?
8. In your opinion what would be the benefits of further reform?
9. In your opinion what would be the risks of further reform?
 - In which areas do you think that change presents the greatest risk?
10. Where is pressure for reform most likely to come from?
11. Are there any functions in which the Cocobod would consider transferring some responsibility to the private sector?
 - Have the Cocobod considered the option of working more closely with the private sector in the areas of input provision?
12. What would have to change in order for the Cocobod to consider working more closely with LBC's in this area?
 - How could LBC's encourage this?
13. Do you think that change will be necessary for the Cocobod to meet its goals?
 - If so, in what areas do you think change is required?

Appendix Ten – LBC Round Two Interview Guide

Section 1 – The functions of the Cocobod.

The objective of this section is to understand how the Cocobod's functions in the market impact upon market performance and the operations of LBC's. In particular I will be looking at the areas of quality control, fixed pricing and margins, seed funding, control of ports and warehouses, and sanctions for malpractice.

Section 2 – Linkages between buyers and farmers.

The objective of this section is to establish both the incentive and capacity for buyers to invest in farmers. I am also interested in the role of the Cocobod in providing inputs to farmers and how this affects the incentive for buyer to become involved in this area. Farmer cooperatives are also raised as a possible solution to the problems buyers face when coordinating with farmers.

Section 3 – Competition between buyers and the role of Licobag .

The objective of this section is to establish both the level and nature of competition between LBC's in the market. The impact of competition on the operations of LBC's will also be explored. I am also interested in the current impact of Licobag in the market and the potential for Licobag to become stronger in the future.

Section 4 – Linkages between buyers and the Cocobod.

The objective of this section is to understand the extent and nature of the relationship that exists between buyers and the Cocobod. It is also important to explore the extent of LBC participation in Cocobod decision-making. Recent changes by the Cocobod affecting market conditions will also be explored.

Section 5 – Change and LBC development

The objective of this section is to understand how LBC's would respond to further liberalisation in the market. In particular I am interested in how LBC's would operate in absence of the Cocobod, and the areas in which LBC's aim to develop their capabilities in the future.

Section 6 – The potential for change and reform

The objective of this section is to understand the potential for change and reform in the market. In particular it is important to understand the attitude of LBC's towards further reform, and the areas in which change would be considered either a risk or an opportunity.

Section 1 – The functions of the Cocobod.

1. As a buyer coming in to the market, what was your expectation of the role that the Cocobod would play in the internal buying market?
 - Has the Cocobod fulfilled this role as expected?
2. Do you think that the Cocobod was committed to the process of liberal reform, or do you think it was something that they had forced on them externally?
3. Based on your expectations when entering the market, did you expect the market to have reached a more advanced stage of liberal reform?
4. Quality control and the credibility of the QCD:
 - In your opinion, what is the main reason for Ghana's quality performance?
 - What is the role of the QCD?
 - How would you assess the performance of the QCD both in terms of efficiency and the accuracy of grading and sealing?
 - What is the buyer's role in the quality control function?
 - Who has responsibility in the case of quality failure? [purple bean]
 - In your opinion what has been the cause of recent quality problems?
 - Is there any particular stage of the season where quality problems occur with greater frequency?
 - Where quality is passed upcountry and then failed at the ports, what is the main cause of this?
 - Is this a major problem? [% Of cocoa, frequency of rent seeking].
 - If this is getting worse, why do you think this is?
 - Do the Cocobod hold the QCD officer's accountable?
 - Are district managers reluctant to report rent seeking QCD officer?
 - What changes would you recommend in the quality control system in Ghana? [If removal of up country quality control, probe further about the implications of such a system and how it would work?]
 - Further recommendations related to inconsistent grading?
 - Independent arbitrator? Who could do this?
 - Monitoring of secondary evacuation?
 - Would buyers wish to hand over cocoa at the upcountry stage?
 - Do you think that the problems you have with rent seeking from QCD officers are specific to the QCD, or are they reflective of the public sector workers in general?
 - Do the problems you have with the QCD affect your attitude towards the Cocobod?
 - Where quality standards change on the external market, how does this affect the operations of local buyers?
 - What would happen to quality in absence of the QCD?

10. Fixed Pricing:

- Without fixed prices what do you think would happen to quality in Ghana?
- What are the disadvantages of the fixed pricing system?
- How did it affect LBC's when prices were revised upwards?

11. Supply Chain Management: Cost of finance and Quota allocation.

- Is seed-funding a necessity, or are there viable alternatives?
- Necessity in the long-term?
- The process of applying for additional seed-funding?
- In what way does the Cocobod affect your cost of finance?
- Are you charged interest during periods of high congestion at the ports?
- How has the lower rate of interest affected your operations this season?

- How does the Cocobod distribute the quota at the ports?
- How has the quota affected your operations as an LBC?
- The process of applying for additional quota allocation?
 - Is this effective?
 - What are the factors affecting the Cocobod's decision?
 - Is this a credible process?
- What alternative options have been put forward by buyers?
- In your opinion what incentive does the Cocobod have to improve the efficiency of supply chain operations?
- Have there been any improvements in the operational efficiency of the Cocobod in recent years?
- How has efficiency been affected by supply chain improvements this season?
- Are 2.2 turnovers now achievable?

- What do you think would be the main differences in the functions of quality control and the takeover centres if they were controlled by the private sector?
- Do you think that congestion problems would exist if the private sector controlled the ports and warehouses?

- On what basis does the Cocobod set the buyers margin?

12. Sanction:

- How would you describe the Cocobod's enforcement of sanctions in the market?
- Is there a clear understanding of what actions are prohibited in the market?
- In your opinion, are the Cocobod's sanctions effective in reducing mal-practice in the field?
 - Why is this?
- How do the Cocobod gather information regarding a sanction?

- Under what circumstances can you appeal a sanction of the Cocobod?
- Is the process of investigating an appeal credible?
 - How does this your motivation to use the appeal process?
- Under what circumstances might an LBC have their licence revoked?
 - Do you feel that this restricts LBC's when confronting the Cocobod?

Section 2 – Linkages between buyers and farmers.

1. Investments at the farmer level:

- What is your experience of providing services, such as input on credit, or an end of season reward to farmers?
- What type of services have you provided in the past?
- How did u structure these arrangements?
- Do you find that in recent seasons you have been more reluctant to provide services for farmers?
 - To what extent have you retracted?
 - Why is this?
- Is this trend common across the LBC market?

- What are the main incentives to invest at the farmer level?
- What are the different factors affecting which incentives to use in order to attract farmers?
- Do buyers use this as a mechanism to compete, or, simply make the market function?
- How do you choose which farmers to invest in?
- What are the factors affecting the level of risk presented by a particular farmer?
- How has the relationship between the buyer and farmer changed in recent years?
- Do farmers have a negative attitude towards private buyers?
- What % of your farmers do you consider to be loyal?
- How can you attempt to develop loyal relationships?
- What mechanisms can buyers use to reduce risk, i.e. limit the risk of default?
 - Is this something that LBC's will actively pursue at the farmer level, or does this always take place through the PC?
- What can you do in response to a farmer defaulting?
- Is it a common for a farmer to give a PC cocoa on trust?
- How often do farmers switch between buyers?

- How does the model of the Cocobod affect the incentive to invest at the farmer level?
- Do you think that the practice of buyers investing in farmers will return again in the future?
- What are the factors affecting this?
- How do you think price-competition would affect the relationship between buyers and farmers?
- Why do you think that Weinco have been relatively more successful in providing inputs on credit as compared buyers?

2. Inputs and extension:

- How does Cocobod providing these functions to farmers affect your confidence to invest in the internal market?
- How would assess the Cocobod's performance in the provision of fertilisers?
- How would you assess the Cocobod's performance in the provision of mass spraying?
- How does the Cocobod's role in this area affect your motivation to provide inputs to farmers?
- How would the LBC's respond if the Cocobod were to completely withdraw from providing inputs to farmers?
- How have the Cocobod attempted to involve LBC's in the provision of fertilisers [or pesticides] in the past?
 - What were the problems with this?
- How could the Cocobod encourage the private sector to become more involved in future?
- Would you consider the Cocobod a credible partner in this area?
- Do you think that if the state fully retracted from this area, this would lead to a change in the farmer's attitude towards repayment?
- What alternative options could the Cocobod consider in the delivery of inputs to farmers?

- Who has the responsibility for farmer training?
- Under what circumstances do you provide training for farmers? How does the risk of farmers changing buyer affect your decision in this area?
- Do you think the Cocobod have an advantage in this area?
- What would happen to farmer training in absence of the Cocobod?

3. Farmer organisation?

- How do you think that the development of farmer Cooperatives would affect the operations of LBC's?
- In your opinion what are the advantages of this system?
- Do you feel that this would reduce the risk of investment at the farmer level?
- Do you have the necessary incentive to develop farmer co-ops? - Who's responsibility should this be?
- Do you think that cooperatives will develop in the future?

Section 3 – LBC competition and Licobag

1. Competition

- How has the ‘level’ of competition between buyers changed since you entered the market? [market share figure]
- How has this change in competition impacted upon the operations of LBC’s?
- How has the ‘nature’ of competition between buyers changed since you entered the buyer’s market?
- How have your profit margins changed in recent season? [figure]
- Why do you think that so many LBC’s want to enter the market if the margins are so small? The Cocobod argue that this is reflective of profitability...
- In your opinion what is the dominant strategy for an LBC to pursue in the market?
- Do you think that each LBC is able to strategically differentiate itself from the competition?
- What changes could the Cocobod make to enable LBC’s greater freedom in this area?
- Earlier we spoke about the congestion and inefficiencies along the supply chain. Does this affect your own incentive to improve your speed of turnover?

2. Competition and Quality

- In your opinion, how has competition in the internal buying market in Ghana impacted upon quality?
 - Do you suffer less quality problems in areas where there is less competition?
 - Does the farmer have a responsibility to produce quality?
 - If so how can the buyer enforce this?
 - How has the farmer’s attitude towards quality changed?
 - What has caused this?
 - Do buyers have an incentive to search for high quality?
 - How important is this to your overall strategy?
 - In certain circumstances is the buyer forced to sacrifice quality?
 - Do any LBC’s actively pursue lower quality to gain greater market share?
 - Has the buyer’s inability to reject cocoa only occurred recently?
 - Or is the greater incidence of quality failure due to farmers producing lower quality?
 - When PC’s accept lower quality cocoa what are the main reasons for this?
 - Do you think that the PC has less regard for quality than the LBC?
 - In cases where quality is failed at the port is it possible to hold the PC accountable? Do you think this affects the PC’s regard for quality?
 - Have lower finance charges translated into less of a rush to buy cocoa?
 - Do you think that some LBC’s try and buy more cocoa than are capable of handling?
- Do you think that the role of the QCD is justified based on the impact which competition has on quality?

- How do you think that a system of differential pricing, would affect the buyers attitude towards quality?

3. Organisational Risk

- How do you recruit your PC's?
- How common is it for the PC to buy for more than one LBC?
- Do you think that your PC's are pursuing their own individual strategy?
- Do PC's continue to pre-finance against your wishes?
 - Why?
 - Is it necessary for the market to function?
- How does the PC attempt to monitor/control the farmer to avoid default?
- Where a PC pre-finances how does this affect quality?
- What is the main reason for using an 'agent' to buy in the field?
- How can you reduce the level of risk created by the PC system?
- Why do buyers not try and create a greater attachment for the PC by offering a salary?
- Have buyers ever experimented through different types of PC contract?
- Do you attempt to prosecute cheating PC's?
 - Is the court system improving?
- If a PC is found cheating how easy is it for him to move to a different LBC?
- Where a PC cheats and you do not feel it is fair to hold the LBC responsible?
- What sort of cheating is taking place when you do not accept responsibility?
- Where a PC is found to be selling cocoa to a rival buyer, who do you hold responsible the PC or your rival buyer?

- To what extent are DM's held accountable for problems with PC's?
- To what extent do you suffer problems with district managers cheating?
- How do you attempt to control the risk of cheating DM's?

- How do you control the distribution of finances to reduce the level of risk at the district level?

- If you could control risk at the PC level would this enable you to offer credit to farmers with less risk?
- What could the Cocobod do to help control this problem?
- How do you think this problem will develop in the future?

4. Buyer Networks.

- What is the main incentive for buyers to work together in the association? When and why did this develop?

- Within Licobag is there an awareness of the results that can be achieved if buyers work together?
- Do buyers associate recent market improvements with Licobag?
- In your opinion what are the main constraints to Licobag improving its performance?
- Why can buyers not work together to eradicate the problems of PC's cheating in the field?
- If an agreement was made regarding competitive practices in the field, do you think that it could be credibly enforced?
 - Why is this?
- EXAMPLE - Could you conceive of a situation where a buyer could give a farmer a loan without the threat of another buyer trying to buy that farmer's cocoa?
- Do you see consider farmer side-selling to be the result of aggressive and predatory buying practices from your competitors?
- What is stated in the Licobag code? Are these rules that all buyers are aware of and attempt to maintain?
- Do you feel that certain LBC's have different objectives in the market?
- Which LBC's display the greatest commitment to the Licobag? Why is this?
- If there were a smaller number of buyers in the market how do you think this would affect the performance of Licobag?
- Do you feel that all members of the Licobag have a common goal in what they want to achieve through the association?
- Do you think that the Licobag would be more effective if it focused on a smaller number of issues?
- What are you able to achieve through your relationships with other buyers outside of the Licobag?
 - Do you feel that overtime such relationships will develop in Licobag?
- Has the Licobag made any attempts towards developing its infrastructure this season?

- In your opinion what can realistically be achieved through the Licobag?
- Do you feel that the Licobag could be used to help regulate the market in absence of the Cocobod?

5. The PBC

- How does the PBC affect competition in the LBC market?
- Do you think that the PBC has an unfair advantage in the market?
- Do the PBC get any preferential access in the areas of quota, seed-fund, inputs.
- Why do you think it has taken the PBC several seasons to respond to market conditions and operate like a private sector organisation?
- Do you think that the PBC could compete in the market without any additional support from the state?

- If the PBC were not in the market would cocoa buying die out in marginalized areas?
- As a competitor do you feel that you are able to compete for the PBC's market share?
 - What are the major constraints in this area?
- If the Cocobod were not on the PBC's board, how would this affect your opinion of them?
- To what extent is the PBC involved in Licobag?
- On what issues might the PBC not be fully committed?
 - For example, how did the PBC respond when buyers stopped buying cocoa during the purple bean problem?
- Where the PBC is committed do you feel this increases the Licobag's chances of success?
- Does the nature of the PBC's involvement effect your own, and other buyer's motivation towards Licobag?

6. Market Concentration.

- As the number of buyers in the internal market has increased how has this affected market performance and the operations of LBC's?
- How do you think it would affect market performance if there were a smaller number of buyers in the market?
- Is there a feeling that Cocobod have allowed too many buyers to enter the internal buying market?
- How do you think the market would be structured in absence of the Cocobod's involvement?

Section 4 – Linkages between buyers and the Cocobod.

1. How would you describe your own company's relationship with the Cocobod?
2. Do you have regular communication with the Cocobod?
3. Do some LBC's have stronger links with the Cocobod than others?
4. Change of leadership in the Cocobod – has the continued to have a positive effect on the relationship between LBC's and the Cocobod?
5. Have the changes at the top of the Cocobod encouraged change throughout the entire organisation?
6. What level of participation do LBC's now have in Cocobod decision-making?
7. Do you feel that the Cocobod are increasingly recognising the importance of the LBC function in the market?
 - Why is this?
8. In your opinion are there any areas of the Cocobod model where LBC's have a greater capacity to effect change than others?
9. How has your attitude towards the Cocobod changed since the changes at the start of the season?
10. In your opinion what motivated the Cocobod to improve the conditions for LBC's at the start of the season?
11. How have the improved margins offered by the Cocobod affected LBC operations? Where have the additional funds been directed?
12. Do you have to expend many resources competing in areas such as quota allocation at the ports and seed-funding?
13. How would you assess the Cocobod's credibility as a regulator?
 - Subsidiary management this season.
 - Can you make investments with the confidence that policy will not change?
 - Examples of Cocobod taking action to increase credibility.
14. How would you assess the Cocobod's reaction to the problem of congestion along the supply chain?
 - What caused this?
 - Is this reflective of the Cocobod's overall regulation?

Section 5 – Change and LBC development

1. As an LBC, what would be your main fear resulting from the removal of the Cocobod?
2. Do you feel that you could compete in completely liberalised market?
3. How would you feel about the opportunity to manage your own risk in areas such as finance and cocoa pricing? [explore]
4. Do you think that this is an attitude that would be shared by other LBC's in the market?
5. In what areas would you like to further your capabilities in the future?
6. Example - Would you consider the development of your own haulage capabilities as an opportunity in the future? What are the major constraints to LBC's developing such a capability?
7. Do you feel that the Cocobod constrains your opportunities to develop?
8. In absence of the Cocobod do you think that LBC's in Ghana would have the possibility to form linkages with international exporters?
 - In your opinion what would be the benefits of this?
9. As LBC's develop greater capabilities in the coming years, how do you think this will affect your attitude towards the Cocobod's role in the market?
10. Would you like the opportunity to export cocoa in the future?
 - Do you think LBC's will be able to export cocoa in the future?

Section 6 – Change and the future of the partial liberalisation model.

1. How would you describe the Cocobod's attitude towards change?
2. In your opinion has there been any difference in the Cocobod's attitude towards change in recent years?
3. What do you think are the main constraints to change facing the Cocobod?
4. In your opinion will further liberal reform in the Cocobod model take place in the next ten years?
5. Would you perceive further liberalisation to be a risk or an opportunity?
 - Do you think this attitude would be shared by the other LBC's?
6. In what areas would you encourage reform?
7. Do you think there are certain functions, which should remain the role of the Cocobod in the long run?
8. Example - Earlier we spoke about the Cocobod's bias treatment of their subsidiaries i.e. the QCD, CMC and PBC. To what extent do you think the Cocobod is justified in favouring these organisations, based on the important role which cocoa plays in Ghanaian development?
9. Without making any major changes, where would you like to see the Cocobod improve its current operations?
10. Do you think that the Cocobod is aware of the need to improve in these areas?
11. Do you think that the Cocobod will attempt to involve LBC's more actively in future changes?
12. How do you think a change in government will affect the cocoa market?
13. How do you think the growth of the oil market in Ghana will affect cocoa?

Section 7 – Comparative Questions [Olam and Armajaro only]

1. How does the partial liberalisation model compare against the alternative models used in other countries?
 - Levels of risk faced by buyers.
 - Incentives for investment.
 - Rewards available.
 - Infrastructure development.
2. How does the nature of competition in the Ghanaian internal buying market differ from the competition in other producing countries?
3. Do the congestion problems associated with Ghana, occur in the supply chains of other West African Cocoa producers?
4. Who could act as an independent arbitrator in issues of dispute, between LBC's and Cocobod? Does such a system exist in other markets?
5. How does the policy environment and degree of positive communication with the market regulator in Ghana, compare with that experienced in other producer countries?
6. Is the Ghanaian model dependent on the specific role of the Cocobod, or do you think the same model could be used in other countries?
7. Do farmers in Ghana demonstrate a more advanced level of skills and capacity than farmers in other countries?
8. As a global buyer as well as a local buyer do you have a greater respect and understanding of the Cocobod model, based on:
 - The Cocobod's role within the external market.
 - Experiences of buying in other countries.
9. Is there greater justification for the role of the Cocobod due to the instabilities witnessed in other cocoa producing nations in recent years?

Appendix Eleven – External Buyers Round Two Interview Guide

Section 1 – Export Market Supply Requirements

The objective of this section is to understand the extent of Ghana’s competitive advantage in the export market for cocoa. It is also important to understand how cocoa buyer’s quality requirements have changed in recent years and the capacity for the Cocobod to fulfil such requirements. Finally, this section will also explore both the challenge of achieving quality in absence of state intervention, and also the challenge of fulfilling niche market requirements within the Ghanaian system.

Section 2 – The Incentive for Processing in Ghana

The objective of this section is to explore the incentive of origin processing in Ghana. In particular this section will focus on quality requirements when processing at origin and the value of semi-processed products produced in Ghana. The logistical implications of origin processing will also be explored.

Section 3 – Bean Supply Requirements

This section will explore both the advantages and disadvantages in terms of bean supply arrangements when processing at origin. The value and security of bean supply agreements will also be explored, alongside the implications of growing competition in the processing segment. The implications of purchasing cocoa through the CMC as opposed to local buyers will also be examined.

Section 4 – Ghanaian Support for Origin Grinding

The objective of this section is to understand the extent of Cocobod and government support for processing, as well as the potential benefits available to Ghana from processing 50% of their crop at origin. The Cocobod’s response to processors concerns over bean supply will also be explored.

Section 5 – Competition and Buyer Networks

This section will examine the extent of competition in the origin grinding segment in Ghana, and the potential for competitors to form a buyer’s association/network.

Section 6 – Local Level Linkages

This section will look at alternatively supply option for local processors in Ghana, with a specific emphasis on links with LBC’s.

Section 7 – The Future of the Cocobod Model

This section will look at the risks and opportunities resulting from change in the Cocobod model. Processors expectancy of change and the extent of processor support towards change will also be examined.

Section 1 – Export Market Supply Requirements

1. What are the main advantages of buying Ghanaian cocoa?
2. Which of these factors could not take place in absence of the Cocobod?
3. Can Ghana's quality performance be directly attributed to the role of the Cocobod?
4. How does the CMC reduce the supply risk faced by cocoa buyers?
5. How do market price fluctuations affect the incentive to trade through forward contracts?
6. How has the Cocobod's reputation changed in recent years?
7. In your opinion what are the main sources of Ghana's premium?
8. Given the current quality produced in other origins is Ghana's premium a fair reflection of the quality they produce?
 - Why might this not be the case?
9. If the same quality of cocoa was produced in the Ivory Coast, would industry pay the same for that quality as they do for Ghana?
 - Would industry still pay Ghana a premium if quality went up in Ivory Coast?
10. Has the standard of Ghana's cocoa changed in recent years?
11. Without quality control would the CMC be able to operate through forward contracts?
12. Do external buyers have to carry out a third party check to verify the quality of Ghanaian beans?
13. How have the cocoa industries quality requirements changed in recent years?
14. To what extent is the industry now dependent on Ghanaian quality, as result of quality decline in other origins?
15. Do external buyers play close attention to changes in Ghana's quality control system?
 - How would the market perceive any changes?
16. Why have industry not attempted to put in place a rigorous quality control system within other producing countries?

17. Do you think that industry would make the required investments to maintain the quality of Ghana's cocoa in absence of the Cocobod?
18. What is your experience of trying to establish sourcing arrangements for quality cocoa in other origins?
 - Does this normally entail the establishment of a farmer cooperative?
19. Is it possible to source quality from other origins at an acceptable cost?
20. In this regard is the cost of Ghana's quality lower than the cost of sourcing individually from an alternative origin?
21. Why has it not been possible for the industry to replicate Ghana's quality performance in other origins?
22. To what extent does the industry support the production of quality in other origins?
23. Is the homogeneity of Ghana's quality seen as an advantage from industries viewpoint?
 - Would the production of a greater variety of grades and standards be preferred?
24. Is quality likely to remain a viable source of competitive advantage in the future?
25. Would the industry maintain the QCD in absence of the Cocobod?
26. Are private grades and standards of importance to future supply arrangements in the mainstream cocoa market?
27. Do the Cocobod/CMC actively engage with the cocoa industry on aspects of the industries supply requirements?
28. Do you think the Cocobod is justified to maintain its focus on homogenous quality cocoa?

Section 2 – The incentive for processing in Ghana.

1. What are the main incentives to setting up origin processing facilities in Ghana?
2. What has been the main motivation behind the recent surge in investment activity?
[State policy, supply security, technology, competition]
3. What level of discount do processors receive on beans sold at origin?
4. What are the factors affecting any fluctuation in this area?
5. Are processed cocoa products taxed differently than raw beans?
6. How do your quality requirements differ if you are processing at origin compared with if you are processing in Europe?
7. Are there any advantages in processing premium quality beans at origin?
8. Why is it desirable to process premium quality beans in Europe, but not in Ghana?
9. How does your quality requirement depend on the product you are producing i.e. liquor, butter, or powder?
10. Do you receive a premium on semi-finished products produced using only Ghanaian quality beans?
 - Is this considered an advantage of processing in Ghana?
11. Does a semi-processed product from Ghana carry a similar quality reputation as raw beans from Ghana?
 - Or is this based more on the processing factory?
12. How have improved transport infrastructure and information systems throughout the supply chain affected the incentive to process at origin in origin processing?
13. Do semi-processed goods from Ghana traditionally get delivered straight to the client, or are they sent to a factory in Europe for blending?
14. How does grinding at origin affect the efficiency of your supply chain?
15. How has the increased importance of traceability affected the incentive for origin grinding?

Section 3 - Bean Supply

1. Is the increase in origin grinding in Ghana reflective of the way in which processors now control their bean supply arrangements?
2. To what extent has increased origin grinding been motivated by the growth in outsourcing from chocolate manufacturers?
3. At what scale can origin grinders achieve economies of scale? Is it your objective to reach that scale in Ghana?
4. What assurances are grinders given that once they have invested they will be able to fulfil their bean supply requirements in Ghana?
5. What are the factors affecting the volume of discounted beans made available to origin grinders?
6. What do processors do for bean supply outside of the light crop season?
7. How will bean supply agreements adjust to the possibility of a decreasing light crop in the coming seasons?
8. How can processors know the amount of light crop that is produced each season?
9. Do bean supply agreements go beyond the distribution of light crop beans?
10. Beyond your bean supply agreements, is it easier to gain access to Ghanaian beans on the open market when you are operating at origin?
11. Are the buyers for your Ghanaian factories actually located in Ghana?
12. By locating in Ghana does this offer you the chance to form a relationship with the CMC?
13. Can this enhance your capacity to get beans?
14. When buying at origin, what are the advantages of buying through the CMC?
15. Are these advantages less pronounced than when you are buying on the export market?
16. Do the CMC demonstrate the same 'reliability' in delivering on bean supply agreements, as they do when selling forward on the export market?

Section 4 - Ghanaian Support for Origin Grinding

1. In your opinion what are the main benefits Ghana can expect to gain from increased origin processing?
2. Do you think the government and Cocobod fully understand the implications of processing 50% of their crop at origin?
3. Did you receive greater encouragement from the government or from the Cocobod to invest in a processing plant in Ghana?
4. Do you communicate more regularly with the Cocobod or with the government?
5. Do you think that Cocobod are fully committed to origin processing?
6. In your opinion who's responsibility is it to ensure that your supply requirements are fulfilled after investing in Ghana?
7. Has the rate of market entry into the Ghanaian processing market been a surprise to you?
8. Do you think the Cocobod fully understand the requirements of processors operating at origin?
9. Have you been surprised by the Cocobod's response to your concerns in this area?
10. Have you been able to communicate regularly with the Cocobod over your concerns with bean supply?
11. Do the Cocobod communicate with you before enacting any policy changes in this area?
12. In your opinion has this current supply issue affected the Cocobod's credibility?
13. Is the level of uncertainty that you have experienced over this issue something you are not accustomed with?
 - How does this compare with the risk of sourcing cocoa in the Ivory Coast?
14. How concerned were you about the possibility of under capacity in Ghana's light crop before investing in Ghana?
15. How concerned were you about the Cocobod's credibility in bean supply arrangements prior to investing in Ghana? i.e. Wamco.
16. To what extent was your decision to set up a factory in Ghana, based on the Cocobod's stated objective of reaching 1,000,000 tonnes?

17. Do you think your company would have still invested in Ghana, even if all Ghanaian beans were being sold at the export market price?
18. If the current supply issue remains for sometime will you continue to operate your factory in Ghana?
 - Will you continue to operate in Ghana at a loss?
19. If the Cocobod do not offer a discount on main crop beans, do you think this will change the level of support external buyers have for the quality system in Ghana?
20. Do you think Ghana's premium will hold in response to the Cocobod placing 1,000,000 tonnes on the market?
21. Do you understand the Cocobod's logic of increasing the level of origin processing in order to keep their beans of the market?
22. If a large amount of Ghana grade 1 is processed at origin do you think this will reduce the demand for Ghana grade 1 on the export market?
23. To what extent do processors differentiate between semi-processed products made using Ghana grade 1 at origin, and the semi-processed products made using Ghana grade 1 in Europe?

Section 5 - Competition

1. How would you describe competition amongst origin grinders in Ghana? [market share figures for each grinder]
2. To what extent do origin grinders compete for beans in the Ghanaian market?
3. Origin grinding as a 'strategic investment'?
4. Do you have concerns that some of your competitors may have more favourable bean supply agreements than you?
5. What assurances do the Cocobod give you that all processors are treated the same?
6. Given concerns over transparency, would buyers actually want to reveal their bean supply agreements to competitors?
 - How could the Cocobod improve transparency without doing this?
7. To what extent do you think the CPC still receives support from the Cocobod?
8. Without the support of the Cocobod do you think that the CPC can compete in this market?
9. In what ways can the large processors manage risk more effectively than the smaller processors?
10. Have the origin grinders in Ghana considered the formation of an association?
11. In your opinion what would be the advantages of this?
12. What are the main constraints to network activity amongst grinders?
13. How effective have buyer networks proven in other producing countries?

Section 6 - Local Level Linkages

1. Have you ever considered the possibility of forming linkages with firms with LBC's in Ghana?
2. Do you think this could be developed as a potential solution to the supply problem facing processors?
3. In your opinion what would be the advantages of this for grinding companies?
4. What would be the advantages for LBC's?
5. What would be the risks of buying of local buyers?
 - Would this risk outweigh the potential efficiency benefits of skipping out the CMC?
 - Do you consider the CMC to be a necessity?
6. Have you ever discussed this option with the Cocobod?
7. How do you think that such a linkage would affect your incentive to make investments at the farmer level?
8. Could this stimulate the development of farmer cooperatives as seen in other countries?
9. Without this link, what is the likelihood of grinding firms making investments towards the sustainability of production in the Ghanaian cocoa chain?
10. Have the Cocobod tried to engage with industry to encourage these investments?

Section 7 - The Future of the Cocobod model.

1. In a future reform scenario what aspects of the Cocobod model what you not wish to change?
2. From your perspective what would be the major risks resulting from change in the Cocobod model?
3. In what areas would you like to see change?
4. In your opinion what is the likelihood of change in these areas?
5. Are you expecting change in the current supply arrangements for local processors?
6. In your opinion who/what has the potential to influence change in the Cocobod?
7. What do you think are the major constraints to change in the Cocobod?
8. How do you think a change in government will affect the Cocoa market?
9. How do you think the growth of the oil market in Ghana will affect cocoa?

Appendix Twelve – District Managers Round Two Interview Guide

1. Quality Control and QCD credibility

- In your opinion, what is the main reason for Ghana's quality performance?
- What is the role of the QCD?
- What is the buyer's role in the quality control function?
- What sort of relationship do you have the QCD officers that grade your cocoa?
- Do you experience many delays waiting for the QCD to grade and seal?
- Do you have many disagreements with the QCD over quality grading?
- Where quality is passed upcountry and then failed at the ports, what is the main cause of this?
- Where this problem occurs who is held responsible?
 - Under what circumstances will the district manager be blamed for this problem?
- From your experience do QCD officers attempt to solicit bribes?
- Do you report QCD officers when they engage in this activity?
- In your opinion, do the Cocobod hold the QCD officer's accountable for poor performance?
- What changes would you recommend in the quality control system in Ghana?

2. Competition

- How has the 'level' of competition between buyers changed since you entered the market?
- How has this change in competition impacted upon the operations of buyers?
- How has the 'nature' of competition between buyers changed since you entered the buyer's market?
- What is considered unhealthy competition at this level?
 - Does this sort of practice occur regularly?
- Under what circumstances is it acceptable for your PC to sell cocoa to a rival buyer?
- In your opinion what is the dominant strategy for an LBC to pursue in the market?

3. Quality Decline and Competition

- In your opinion what are the main reasons behind the quality decline experienced in recent seasons?
- In your opinion, how has competition in the internal buying market impacted upon quality? [*]
- Do you suffer less quality problems in areas where there is less competition?
- Does the farmer have a responsibility to produce quality? If so how can the buyer enforce this?

- How has the farmer's attitude towards quality changed? What has caused this?
 - Do buyers have an incentive to search for high quality? How important is this to your overall strategy?
 - To what extent can the PC check quality at the local level?
 - In certain circumstances is the buyer forced to sacrifice quality?
 - Do any LBC's actively pursue lower quality to gain greater market share?
 - Has the buyer's inability to reject cocoa only occurred recently? [when]
 - When PC's accept lower quality cocoa what are the main reasons for this?
 - Do you think that the PC has less regard for quality than the LBC?
-
- Is there any particular stage of the season where quality problems occur with greater frequency?
 - What impact do you think increasing production will have on quality?
 - What would happen to quality in absence of the QCD?
-
- Without fixed prices what do you think would happen to quality in Ghana?
 - What are the disadvantages of the fixed pricing system?
 - How did it affect LBC's when prices were revised upwards? [planning]

4. Organisational Risk

- How do you recruit your PC's?
 - Do PC's continue to pre-finance against your wishes? Why?
 - Is pre-financing necessary for the market to function?
 - Can you compete without pre-financing?
 - Are farmers dependent on pre-finance?
 - Where a PC has pre-financed, how do they attempt to monitor/control the farmer to avoid default?
 - Where a PC pre-finances how does this affect quality?
-
- How common is it for the PC to buy for more than one LBC?
 - Do you think that your PC's are pursuing their own individual strategy independent of the LBC?
 - From experience do you think PC's are more concerned with maintaining good links with farmers, than following orders from the LBC?
 - How do you monitor the actions of your PC's?
 - How can you attempt to control the actions of your PC's?
 - How can you encourage your PC's to be loyal to the LBC?
 - Do you attempt to prosecute cheating PC's? Is the court system improving?
 - If a PC is found cheating how easy is it for him to move to a different LBC?
 - If a PC moves to another LBC will the farmers move also?
 - Do you try and develop good relationships with farmers yourself?
-
- To what extent are you held accountable for problems with PC's?

- If you could control risk at the PC level would this enable the LBC to offer credit to farmers with less risk?
- What could the Cocobod do to help control this problem?
- How do you think this problem will develop in the future?

- How would you describe your relationship with the company you work for?
- How often do you communicate with top management?

- How do you think it would affect market performance if there were a smaller number of buyers in the market?

5. Buyer Service Provision and Competition

- What is your experience of providing services, such as input on credit, or an end of season reward to farmers?
- What type of services have you provided in the past? How did u structure these arrangements?
- Do you find that in recent seasons you have been more reluctant to provide services for farmers? To what extent have you retracted? Why is this?
- Is this trend common across the LBC market?

- What are the main incentives to invest at the farmer level?
- What are the different factors affecting your choice of incentives for farmers?
- Do buyers use this as a mechanism to compete, or, simply make the market function?
- How do you choose which farmers to invest in? What are the factors affecting the level of risk presented by a particular farmer?
- How has the relationship between the buyer and farmer changed in recent years? Do farmers have a negative attitude towards private buyers?
- What % of your farmers do you consider to be loyal?
- How can you attempt to develop loyal relationships?
- What mechanisms can buyers use to reduce risk, i.e. limit the risk of default? Is this something that LBC's will actively pursue at the farmer level, or does this always take place through the PC?
- What can you do in response to a farmer defaulting?
- Is it a common for a farmer to give a PC cocoa on trust?
- How often do farmers switch between buyers?

6. Buyer Networks

- What is the extent of communication between managers at the district level?
- Do managers in this district work together in a network/association?
- In your opinion how strong is this network?
- What are the objectives of working together at this level?

- What has been achieved through past network activity? [cheating PC's]

7. The PBC

- In your opinion how do the PBC affect competition in the LBC market?
- Do the PBC have an advantage over other competitors?
- In your opinion do the PBC gain any additional assistance from the Cocobod?
- To what extent do the PBC participate in local level buyer networks?

8. Market Regulation

- How would you describe the Cocobod's enforcement of sanctions in the market?
- Is there a clear understanding of what actions are prohibited in the market?
- In your opinion, are the Cocobod's sanctions effective in reducing mal-practice in the field? Why is this?

9. Cocobod Input Provision

- How would assess the Cocobod's performance in the provision of fertilisers? [Current subsidy program – LBC participation]
- How would you assess the Cocobod's performance in the provision of mass spraying? [pbc access]
- How does the Cocobod's role in this area affect your motivation to provide inputs to farmers?
- How would the LBC's respond if the Cocobod were to completely withdraw from providing inputs to farmers?
- How have the Cocobod attempted to involve LBC's in the provision of fertilisers [or pesticides] in the past? What were the problems with this?

- Who has the responsibility for farmer training?
- Under what circumstances do you provide training for farmers? How does the risk of farmers changing buyer affect your decision in this area?
- Do you think the Cocobod have an advantage in this area?
- What would happen to farmer training in absence of the Cocobod?

10. Farmer organisation

- How do you think that the development of farmer Cooperatives would affect the operations of LBC's?
- In your opinion what are the advantages of this system?
- Do you feel that this would reduce the risk of investment at the farmer level?
- Do you think that cooperatives will develop in the future?

11. Change

- In your opinion how has the Cocobod changed in recent years?
- What has been the impact of improved market conditions this season?
- In your opinion what aspects of the Cocobod model are in greatest need of change?
- What do you think would be the opportunities resulting from change?
- In your opinion what aspects of the Cocobod model should not change?
- What do you think would be the risks resulting from change in this model?
- In your opinion what are the main constraints to change in the Cocobod model?

Appendix Thirteen – Purchasing Clerk Round Two Interview Guide

1. Competition and Quality

- How has the 'level' of competition between PC's changed since you entered the market?
- How has this change in competition impacted upon the operations of PC's?
- How has the 'nature' of competition between PC's changed since you entered the buyer's market?
- What is considered unhealthy competition at this level?
 - Does this sort of practice occur regularly?
- Under what circumstances is it acceptable for your PC to sell cocoa to a rival buyer?

- In your opinion what are the main reasons behind the quality decline experienced in recent seasons?
- In your opinion, how has competition in the internal buying market impacted upon quality?
- Do you suffer less quality problems in areas where there is less competition?
- Is there any particular stage of the season where quality problems occur with greater frequency?
- Does the farmer have a responsibility to produce quality?
 - If so how can the buyer enforce this?
- How has the farmer's attitude towards quality changed?
 - What has caused this?
- Do buyers have an incentive to search for high quality?
 - How important is this to your overall strategy?
- To what extent can the PC check quality at the local level?
- When PC's accept lower quality cocoa what are the main reasons for this?
- Do any PC's actively pursue lower quality to gain greater market share?
- Has the PC's inability to reject cocoa only occurred recently?
- Do you think that the PC has less regard for quality than LBC management?

- What would happen to quality in absence of the QCD?
- Without fixed prices what do you think would happen to quality in Ghana?

2. Organisational Risk

- How would you describe your relationship with the company you work for?
- As a PC do you feel that you are working as an individual or do you feel that you are part of the LBC?
- How often do you switch between LBC's?
- What would cause you to switch to a different LBC?
- Are you encouraged to join other LBC's?
- What can the LBC do to help you stay loyal to them?

- Do you buy for more than one LBC? - Is this common practice amongst PC's?
- Under what circumstances might you sell cocoa to a different LBC, i.e. not the LBC you normally supply?
- In your opinion what is the dominant strategy for a PC to pursue in the market?
- As a PC are you more concerned with maintaining your farmers, or satisfying the demands of the LBC you sell to?
- If you move to another LBC will your farmers move also?
- How often do farmers switch to a different purchasing PC?
- Why might a farmer switch?
- What is the best method to compete for farmers?
- How do you try and maintain a good relationship with your farmers?
- Do you pre-finance your farmers?
- How do you choose which farmers to pre-finance?
- Is this practice supported by the LBC that you sell to?
 - If not why do you continue to pre-finance?
- How does pre-financing affect quality?
- Can you compete without pre-financing?
- Are farmers dependent on pre-financing?
- Where do you gain the money to pre-finance your farmers?
- Do you experience many problems with farmers defaulting on loans?
- How can you attempt to control this risk?
- What can you do in response to a farmer defaulting?
- To what extent are you held accountable for any losses that occur whilst pre-financing?
- If you are fired, how easy is it to then find a new job with another LBC?
- To what extent do PC's work together at the local level?

3. Cocobod Input Provision/Extension

- How would assess the Cocobod's performance in the provision of fertilisers? [Current subsidy program – LBC participation]
- How would you assess the Cocobod's performance in the provision of mass spraying?
- Who has the responsibility for farmer training?
- Under what circumstances do you provide training for farmers? How does the risk of farmers changing buyer affect your decision in this area?
- How do you think that the development of farmer Cooperatives would affect the operations of PC's?

4. Change

- What has been the impact of improved market conditions this season?
- In your opinion what aspects of the Cocobod model are in greatest need of change?
- What do you think would be the opportunities resulting from change?
- In your opinion what aspects of the Cocobod model should not change?
- What do you think would be the risks resulting from change in this model?

Appendix Fourteen – Template Analysis Example

Building on the conceptual diagram developed in Appendix four the following eleven stages represent a detailed example of the coding, memoing and template development that took place for all themes developed in this study. The final four stages [12-15] have not been included as they are largely analytical and therefore difficult to demonstrate by example. These stages are, however, described in full within the main body of the methodology chapter.

For the purpose of this example the theme of ‘Governance and Power’ has been selected to demonstrate how themes are developed and refined throughout the template analysis process. As discussed earlier the template approach has been closely integrated with the development of interview guides, enabling the process of data collection to develop alongside the process of data analysis. Indeed, the iterative nature of the research process is clearly evident within the following example.

Stage One: External Buyers Round 1 Interview Guide

Below there are two sections of the round one interview guide for external buyers. These sections have been selected based on the relevance to the theme of governance and power, which will be developed throughout this appendix. In each of the two interview guide sections below, the text box at the end of each question signals the 'initial theme' had been identified a priori of round one research. These themes also make up the 'initial template' which follows the interview guide.

Section 1: Foreign Direct Investment - Origin Grinding

- | | |
|---|--|
| 1. What are the main incentives to setting up origin processing facilities in Ghana? | Logic of Vertical Integration |
| 2. What has been the main motivation behind the recent surge in investment activity? | Logic of Vertical Integration |
| 3. Are beans purchased at origin priced differently to beans purchased for export? | Logic of Vertical Integration - government incentives |
| 4. Are processed cocoa products taxed differently than raw beans? | Logic of Vertical Integration - government incentives |
| 5. What are the implications of processing premium quality beans? | Local Processor Supply Needs – price/quality |
| 6. Is bean flavour an important aspect of processing at origin? | Local Processor Supply Needs - quality |
| 7. Will processing firms fulfil their entire supply requirement from the Ghanaian crop? | Local Processor Supply Needs – supply deficit |
| 8. Do processing firms have the option to purchase beans from other origins to use in the Ghanaian factories? | Local Processor Supply Needs – supply deficit |

9. Do you think the growth of origin processing in Ghana will require adjustments in the Cocobod model?

Buyer Power

Government Governance –
credibility of government
action

Section 2: Coordination: Cocobod and local processors

1. Do you have regular communication with the Cocobod?

Government Governance -
communication

2. Example outcome of communication at the individual level?

3. Do some processors have stronger links with the Cocobod than others?

Government Governance –
communication and credibility

4. How are the processors represented at a policy level?

- Is this effective?
- Is it representative of the processors?
- Is communication regular?
- Examples in this area?

Buyer Power

Government Governance -
communication

5. How have the changes in the structure in the cocoa supply chain impacted upon the model of the Cocobod? [Methods of transporting, bulking, purchasing, links with trade houses, contracting]

Power – buyer power

6. Have origin grinders been working with the Cocobod to facilitate learning and industrialisation in Ghanaian cocoa? – Examples.

Government Governance –
functional upgrading

7. Do you think the environment in Ghana and the role of the Cocobod helps to facilitate this process? Examples.

Government Governance –
functional upgrading

8. How does the policy environment and degree of positive communication with the market regulator in Ghana, compare with that experienced in other producer countries?

Government Governance

9. Key differences of processing in Ghana, as compared other producer country markets?

Logic of Vertical Integration in Ghana

10. Do you recognise a link between the Cocobod's role as the monopoly exporter and the supply performance of the Ghanaian internal market?

Quality Control and the Role of the government

11. Do you recognise the importance of the link between the role of the Cocobod and the country perspective of Ghana?

Power – Cocobod power

12. Changes in the Cocobod environment in recent years?

13. How has the Cocobod's regulation of the industry changed since the growth in market entry?

Government Governance - credibility

14. What aspects of the Cocobod model would you choose to keep in the situation of further reform?

Power – Cocobod power

15. What aspects of the model do you think other cocoa markets would learn from?

16. Credibility of Cocobod as a market regulator?

Government governance - credibility.

Possible topics -

- Risk of policy reversal/unilateral policy decisions
- Credibility in complementary investments.
- Risk of free riding – i.e. rent capture.
- Examples of Cocobod taking action to increase credibility.

Stage 2: Initial Template: Governance and Power

- Logic of Vertical Integration
 - Control Supply Risk
 - Market Control
 - Processing Incentives
- Local Processor Supply Needs
 - Quality
 - Efficiency
 - Local processing supply deficit
- Government Governance
 - Functional Upgrading
 - Credibility of Government Action
 - Communication
- Power
 - Buyer Power
 - Cocobod Power
 - Power Struggle

Key

- Primary Theme
 - Secondary Theme
 - Sub-level theme

Stage 3: Round One Coded Processor Interview

In the passage below the themes that are present within the initial template will be highlighted in black, whilst the themes that have 'emerged' during the process of coding will be highlighted in red.

.....

[R]Over the years how has the Cocobod engaged with industry on its different supply requirements?

[P] I'm not sure that the Cocobod fully understands the economics of cocoa processing, they still view it theoretically that we want to add value to our crop...we want the value rather than the European man...for them to fully understand that in today's competitive world your factory must run twenty- four-seven they find it hard...this chief executive is flamboyant, aggressive and direct, a very fine communicator and he's following the government line of let's move towards fifty percent...you don't process Ghana main crop at a profit, you can only process Ghana light crop at a profit and there are some fundamental economics in there, that I think the Cocobod has got to take on board as they are allowing too many people in.

Government Governance
– functional upgrading -
this issue is raised twice,
implication that the
Ghanaian government is
aggressively pursuing
growth without
recognising the supply
needs of local processors
– light crop shortage

Bean Specifications –
need for light crop

[R] As a player within the industry do you see that as Cocobod's responsibility to make your investment economically viable?

[P] No, no...I think they should have said we only have 200,000 tonnes of light crop and therefore we are going to restrict our processing capacity to that tonnage.

[R] Do you think they have overshot?

[P] I think so.

Government Governance –
development policy – light
crop shortage

[R] What are the implications of this for processors and for the Cocobod?

[P] For the processors my worry is that there are too many relatively smaller people in, the big boys will survive in this world because the big boys control their risk very carefully, the smaller grinders around don't do that and I suspect they are not funded well enough to carry big stocks, so there will come a day when some of the smaller boys will begin to hit the wall, which will cause political rumps.

Power – Buyer Power

Supply Needs – risk of supply deficit.

[R] Is that because some of the smaller boys are Ghanaian companies?

[P]...and then the playing field may stop being level, and there will be trouble and that will distort the whole thing, people will begin to move away...presently we now know there is a level playing field, or relatively...it would worry Cocobod greatly if CPC at Tema went down.

Government
Governance – **credibility of bean supply agreements**

[R] Does industry have much room to negotiate with Cocobod on bean supply agreements?

[P] Not once have a supply agreement in place.

[R] Is that understood across industry?

[P] Yes.

[R] What are the main incentives for setting up a processing facility in Ghana?

[P] Access to the light crop...processors can take light crop beans, which are slightly smaller, it doesn't trouble the major processors if beans are smaller...they [cocobod] are selling that at a significant discount, as they don't want to sell it on the outside market, as it takes away from the premium to the main crop...I can understand that, it's like a second grade, and they want to keep the second grade at home, however, it's still good quality cocoa, there's no problem there...so the industry can see the opportunity to get that at a significant discount, the intrinsic value of that cocoa is probably higher than the industry is paying, for example if it was exported buyers in London could afford to pay a little bit more than what we are getting it for...therefore it is an incentive given to industry...one, processors get the light crop, two, that's good value, and three, there are financial tax breaks from being around.

Supply Priority – emphasised as the key reason for investment

Logic of vertical integration – processors gain preferential access to quality supply at good value

[R] What assurances do processors have that the light crop will be kept for them?

Logic of vertical integration – tax incentive

[P] I don't know what everybody's supply agreement is but my understanding is that light crop will be offered first to local industry.

Logic of vertical integration – **bean supply agreements**

[R] Are there any grey areas in that?

[P] I think is some of the agreements there is a grey area.

Government Governance – **credibility of bean supply agreements**

Stage 4: Round one Memoing - Key Points

Processors Supply Priority – Throughout round one of data collection access to supply emerged very strongly not only as the main reason behind the recent surge of investment into Ghanaian cocoa processing, but also as an issue which has huge strategic relevance within the global processing industry. As such the primary theme of ‘processors supply priority’ was developed to emphasise the importance processors place on this issue. In turn ‘the logic of vertical integration’ and ‘local processor supply needs’ have become secondary themes under the more encompassing and prevalent theme of ‘processors supply priority’.

Bean Supply Agreements – During round one of research this theme emerged as one of the main reasons behind vertical integration into local processing in Ghana. In the initial template ‘control supply risk’ was seen as one of the main justifications for integration, and to some extent bean supply agreements fulfil this role in the Ghanaian cocoa processing industry.

CMC Relationship – During round one of research this theme emerged as a potential reason why Ghanaian processors may be able to access supply more easily than processors located outside of Ghana. Within interviews respondents noted that personal relationships were very important within cocoa trading in order to establish trust and understanding. In light of this, the theme of ‘CMC relationship’ merited further investigation in round two of research.

Credibility of Bean Supply Agreements – Throughout round one of research, all respondents made implicit reference to issues surrounding the credibility of bean supply agreements. This theme is therefore considered a secondary theme, because of its great significance in reference to the issues of supply security and public sector governance. Indeed, this theme has replaced ‘the credibility of government action’, as during round one of research it emerged that cocoa supply is the only area where government action greatly affects the operations of the local processors.

CMC Legitimacy – Whilst it was never explicitly referenced within any processor interview, based on round one research it was clear that from a vertical coordination perspective, the role played by the CMC is of less benefit to local processors as compared foreign export buyers. Indeed, to a large extent the role of the CMC essentially stops local processors from integrating further down the chain as they have done in the Ivory Coast. As such, the theme of CMC legitimacy requires further exploration in round two of research.

Stage 5: Template Two - Governance and Power

- **Processors Supply Priority**
 - Logic of Vertical Integration
 - **Bean Supply Agreements**
 - **CMC Relationship**
 - Bean Specifications
 - Local Processing Supply Deficit
 - Processing Incentives

- Government Governance
 - Functional Upgrading
 - **Credibility of bean supply agreements**
 - Communication

- Power
 - Buyer Power
 - Cocobod Power
 - Power Struggle
 - **CMC legitimacy**

| |
|--|
| <p>Key</p> <ul style="list-style-type: none">• Primary Theme<ul style="list-style-type: none">○ Secondary Theme<ul style="list-style-type: none">▪ Sub-level theme <p>Emergent theme</p> |
|--|

Stage 6: External Processors Round 2 Interview Guide

Below there are three sections of the round two interview guide for external buyers. Again, these sections have been selected based on the relevance to the theme of governance and power. Three sections have been selected, as compared the two sections chosen from round one, in order to highlight the greater focus in questioning throughout round two of research. Text boxes at the end of each question highlight the theme, or themes, that were targeted with each question.

Section 1: The incentive for processing in Ghana

1. What are the main incentives to setting up origin processing facilities in Ghana?
2. What has been the main motivation behind the recent surge in investment activity?
3. What level of discount do processors receive on beans sold at origin?
4. What are the factors affecting any fluctuation in this area?
5. Are processed cocoa products taxed differently than raw beans?
6. How do your quality requirements differ if you are processing at origin compared with if you are processing in Europe?
7. Are there any advantages in processing premium quality beans at origin?
8. Why is it desirable to process premium quality beans in Europe, but not in Ghana?

Logic of vertical integration

Processors supply priority & Functional upgrading

Bean supply agreements

Credibility of bean supply agreements

Processing incentives

Bean specifications

Bean specifications

Bean specifications

9. How does your quality requirement depend on the product you are producing i.e. liquor, butter, or powder?

Bean Specifications

10. Do you receive a premium on semi-finished products produced using only Ghanaian quality beans? Is this considered an advantage of processing in Ghana?

Bean specifications

11. Does a semi-processed product from Ghana carry a similar quality reputation as raw beans from Ghana? Or is this based more on the processing factory?

Bean specifications

12. How have improved transport infrastructure and information systems throughout the supply chain affected the incentive to process at origin in origin processing?

Logic of Vertical Integration

13. Do semi-processed goods from Ghana traditionally get delivered straight to the client, or are they sent to a factory in Europe for blending?

Logic of Vertical Integration

14. How does grinding at origin affect the efficiency of your supply chain?

Logic of Vertical Integration

15. How has the increased importance of traceability affected the incentive for origin grinding?

Exploratory Question

Section 2: Bean Supply

1. Is the increase in origin grinding in Ghana reflective of the way in which processors now control their bean supply arrangements?

Processors supply priority

2. To what extent has increased origin grinding been motivated by the growth in outsourcing from chocolate manufacturers?

Processors supply priority

3. At what scale can origin grinders achieve economies of scale?
Is it your objective to reach that scale in Ghana? Supply Priority
4. What assurances are grinders given that once they have invested they will be able to fulfil their bean supply requirements in Ghana? Processors supply priority & Bean supply agreements
5. What are the factors affecting the volume of discounted beans made available to origin grinders? Light crop shortage & Credibility of bean supply agreements
6. What do processors do for bean supply outside of the light crop season? Bean specifications
7. How will bean supply agreements adjust to the possibility of a decreasing light crop in the coming seasons? Light Crop Shortage
8. How can processors know the amount of light crop that is produced each season? Credibility of bean supply agreements
9. Do bean supply agreements go beyond the distribution of light crop beans? Bean supply agreements
10. Beyond your bean supply agreements, is it easier to gain access to Ghanaian beans on the open market when you are operating at origin? CMC relationship
11. Do the buyers for your Ghanaian factories actually located in Ghana? CMC relationship
12. By locating in Ghana does this offer you the chance to form a relationship with the CMC? CMC relationship
13. Can this enhance your capacity to get beans? CMC relationship
14. When buying at origin, what are the advantages of buying through the CMC? CMC legitimacy

17. Are these advantages less pronounced than when you are buying on the export market?

CMC legitimacy

18. Do the CMC demonstrate the same 'reliability' in delivering on bean supply agreements, as they do when selling forward on the export market?

Credibility of bean supply agreements

Section 3: Ghanaian Support for Origin Grinding

1. In your opinion what are the main benefits Ghana can expect to gain from increased origin processing?

Functional upgrading

2. Do you think the government and Cocobod fully understand the implications of processing 50% of their crop at origin?

Functional upgrading

3. Did you receive greater encouragement from the government or from the Cocobod to invest in a processing plant in Ghana?

Functional upgrading

4. Do you communicate more regularly with the Cocobod or with the government?

government governance

5. Do you think that Cocobod are fully committed to origin processing?

government governance

6. In your opinion whose responsibility is it to ensure that your supply requirements are fulfilled after investing in Ghana?

Processors supply priority & government governance

7. Has the rate of market entry into the Ghanaian processing market been a surprise to you?

government governance

8. Do you think the Cocobod fully understand the requirements of processors operating at origin?

government governance

9. Have you been surprised by the Cocobod's response to your concerns in this area? government governance
10. Have you been able to communicate regularly with the Cocobod over your concerns with bean supply? government governance – communication
11. Do the Cocobod communicate with you before enacting any policy changes in this area?...or indeed any other areas related to origin processing? government governance - communication
12. In your opinion has this current supply issue affected the Cocobod's credibility? Power struggle
13. Is the level of uncertainty that you have experienced over this issue something you are not accustomed with? - For example how does this compare with the risk of sourcing cocoa in the Ivory Coast? government governance
14. How concerned were you about the possibility of under capacity in Ghana's light crop before investing in Ghana? Processors supply priority
15. How concerned were you about the Cocobod's credibility in bean supply arrangements prior to investing in Ghana? i.e. Wamco. Credibility of bean supply agreements
16. To what extent was your decision to set up a factory in Ghana, based on the Cocobod's stated objective of reaching 1,000,000 tonnes? Processors supply priority & Cocobod power
17. Do you think your company would have still invested in Ghana, even if all Ghanaian beans were being sold at the export market price? Logic of vertical integration – bean supply agreements
18. Will grinders continue to operate in Ghana at a loss? Buyer power
19. If the Cocobod do not offer a discount on main crop beans, do you think this will change the level of support external buyers have for the quality system in Ghana? Buyer power & Supply Requirements

20. Do you think Ghana's premium will hold in response to the Cocobod placing 1,000,000 tonnes on the market?

Cocobod power

21. Do you understand the Cocobod's logic of increasing the level of origin processing in order to keep their beans of the market?

Functional Upgrading

22. If a large amount of Ghana grade 1 is processed at origin do you think this will reduce the demand for Ghana grade 1 on the export market?

Bean specifications

23. To what extent do processors differentiate between semi-processed products made using Ghana grade 1 at origin, and the semi-processed products made using Ghana grade 1 in Europe?

Bean specifications

Stage 7: Minor adjustments made post round 2 data collection

The following minor adjustments were made to the template prior to stage two coding. These adjustments were based on the analysis and memoing that took place during round two of data collection.

CMC Relationship – This theme was removed based on the observation that despite some very minor gains in personal relationships with the CMC, this is not taken into consideration when deciding whether or not to vertically integrate. For two out of the three major processors interviewed, all trading with the CMC is carried out from their trading desks in Europe.

Further Vertical Integration – During stage two field the possibility of processors vertically integrating with LBC's was explored as a means of reducing the level of supply risk facing processors. Whilst it is not in the original interview guide, local processors and key informants were asked questions on this issue and therefore the theme of processor vertical integration has been included in template three.

Stage 8: Template Three - Governance and Power

- Processors Supply Priority
 - The Logic of Vertical Integration
 - Bean Supply Agreements
 - Bean Specifications
 - Light crop shortage
 - Processing Incentives

- Public Sector Governance
 - Functional Upgrading
 - Credibility of Bean Supply Agreements
 - Communication

- Power
 - Buyer Power
 - Cocobod Power
 - Power Struggle
 - CMC Legitimacy
 - Further Vertical Integration

Key

- Primary Theme
 - Secondary Theme
 - Sub-level theme

Emergent theme

Stage 9: Round Two Coded Processor Interview

In the passage below the themes that are present within the template number three will be highlighted in black, whilst the themes that have ‘emerged’ during the process of coding will be highlighted in red.

.....

[R] What guarantee’s are the Cocobod able to offer you in the current bean supply arrangements?

[P] The contract says they will share the light crop between all local processors based on used capacity, so that everyone gets the same share of light crop...but off course Cocobod should have seen the inefficiencies in the system, they should have talked to the incumbent local processors to see how much local processing to attract, in order to maintain a viable economic environment.

government governance – reckless pursuit of functional upgrading?

Cocobod Adaptability

[R] That isn’t something they discussed with you?

Government Governance

[P] No they just want as much as possible.

[R] So you were surprised?

[P] We were assuming off course, that potential new entrants would make their own calculations and based on that they would say that it doesn’t make sense to invest, so normally even without Cocobod talking to us the market should have played its role, but I think what has happened is that a few of the companies coming in are not very experienced in cocoa processing and they just copied a successful example without thinking of their own business plan.

Government governance – should the regulator have played a more active role in screening investments?

[R] Obviously the larger processors would have realised the situation, why do you think that they came in?

Buyer power – Strategic investments

[P] For them it will be a strategic decision, maybe it is not the most financially attractive investment, but given that Barry Callebaut, Cargill and ADM are the top three processors in the world you can probably not afford to be present in the second largest producer...it is more a strategic decision in case there are problems with bean supply in the next three, four, five years...if

Processor supply priority

you are in the second biggest producer you probably stand a better chance of getting access to beans.

Processors supply priority –
Logic of vertical integration

[R] You talked about Ghana overselling on the export market and making up the difference on main crop contracts with light crop, is that a major problem?

[P] Yes that is a very important issue...it was a major problem last years when there was only very limited light crop available, our estimate show's that they have sold about half of the light crop for export, and kept half for local processors, which has created a situation where over the last six months a lot of local factories have had to shut down due to the lack of beans.

Credibility of bean supply
agreements

Cocobod Adaptability

[R] So you have your own forecasts to judge this?

[P] There is a lot of market intelligence available if you look at the press releases, news articles, you will see breakdowns of grading and sealing, so based on that you can see

Credibility of bean supply
agreements – processors have
market intelligence

[R] Will they ever tell you that they have exported light crop?

[P] They try to avoid the subject.

Cocobod Adaptability

[R] What is their justification for the diminishing size of the light crop in Ghana?

[P] It is difficult to forecast the total crop, particularly in an environment where smuggling happens both ways...but it is even more difficult to forecast the bean count in a crop, it is very difficult to anticipate how much light crop there will be next year and the variability can be very very high....

Credibility of bean supply
agreements – perhaps
Cocobod have not sold light
crop externally, there is some
element of doubt

[R] Beyond access to light crop to you gain preferential access to main crop as compared Ghana's export clients, if you are prepared to pay the same price?

[P] Not at the moment and that is something they have to change, they have to structure their forward selling strategy to make sure the local processors are first served before they start selling for export...but it is not something that is currently done.

Credibility of bean supply
agreements

[R] So even if you sign a supply agreement there is no guarantee they will give you that quantity?

[P] That is possible...

Credibility of bean supply
agreements

Stage 10: Round Two Memoing - Key Points

Cocobod Adaptability – In this final template, the theme of adaptability has replaced that of communication, due to the Cocobod’s seeming inability to adapt their mode of operation to address the needs of the processors. Indeed, the escalation in the supply problem facing local processors in round two is further evidence of this. During round one of research, processors appeared to feel that improved communication between themselves and the Cocobod would lead to the supply problem being solved. However, during round two both processor and Cocobod responses indicated the problem went beyond the issue of communication, and instead it seemed the Cocobod were not willing to make any compromise that may lead to the problem being solved.

Buyer Power – The theme of buyer power has been promoted to primary importance within the final template in light of the growing level of unrest in the local processing industry and the subsequent indications that the power of the larger processors may soon be observed within the market. This may not involve direct action against the Cocobod, however, power will still be implicitly observed through the massive economies of scale held by the large companies, enabling them to outperform their smaller rivals. Buyer power, itself is a challenging theme to observe through interview data alone and at the current time the larger buyers are not acting in a way which reflects their significant power advantage. However both within the processor and key informant interviews from round two there was an implicit recognition that the power of the larger buyers may be seen more visibly in the coming seasons.

Strategic Investments – the concept of strategic investments emerged very strongly in the second round of research in response to a number of factors including a] the current level of global supply risk b] the recent investments made by ADM and Cargill in Ghana, and c] the growing recognition that losses in the local processing industry will be endured in the short term, in order to achieve greater supply security in the long term. In reality only the most powerful buyers have the financial strength to support such investments and it therefore considered an example of buyer power.

CMC Legitimacy – the removal of CMC legitimacy as a theme for analysis has come about in response to the recognition that despite processors concerns over supply, the Cocobod remains a very powerful organisation. In effect the theme of CMC legitimacy has been eclipsed by that of Cocobod power, and the potential of the CMC being removed does not appear realistic based on evidence gathered. This is also reflected in the removal of the theme **power struggle**, as although there was tension between the Cocobod and processors in round two research, there was little evidence to suggest that the processors will threaten the Cocobod’s dominance in the coming seasons.

Further Vertical Integration - the prospect of further vertical integration was ruled out in round two, unless a situation of complete liberalisation was to emerge. Given that this appeared very unlikely based on research findings, the theme of further integration was removed from the template.

Stage 11: Template Four³⁵⁶ - Governance and Power

- Processors Supply Priority
 - The Logic of Vertical Integration
 - Bean Supply Agreements
 - Bean Specifications
 - Light Crop Shortage
 - Processing Incentives
- Public Sector Governance
 - The Benefits of Functional Upgrading
 - The Credibility of Bean Supply Agreements
 - **Cocobod Adaptability**
- Buyer Power
 - **Strategic Investments**
 - Cocobod Power

³⁵⁶ In the case of Governance and Power the final stages of ‘chunking’ and ‘data immersion’ did not produce any changes in the organisation of the template and therefore template four is the same as the final template. As described in the section on ‘chunking and immersion’ in the methodology this was a relatively common occurrence across several templates, where the previous eleven stages had exhausted all relevant changes in the template. When this was the case the final stages were simply used to deepen the analysis of the themes in template four.

Appendix Fifteen – Cocoa Contacts E-mail

Private Sector Participants

Dear Sir/Madam,

My name is Michael Granleese and I am a PhD student at the University of Bournemouth; Institute of Business and Law. I have been awarded a studentship for my PhD proposal analysing the role of market organisation in commodity market development, using the Ghanaian Cocoa industry as the focus of the study.

At this early stage, I am particularly interested in the development of a competitive internal purchasing market in Ghanaian cocoa and the role of foreign investors in the development of Ghanaian cocoa. Occupying a crucial position in the world market for cocoa products *company x* have a crucial role to play in the future development of the global cocoa market.

I feel Ghanaian cocoa research will be off specific value, not only by adding to the current research on commodity chains, but also by helping to understand the future role of the private sector in Ghana's successful cocoa sector. Furthermore, having received some negative press in recent years, the growing interest of the private sector in cocoa market sustainability has created the environment where a much more facilitative and positive engagement between producer countries and the cocoa industry.

My background includes a first class MA in International Business from the University of Edinburgh and post graduation I spent around 19 months working on and leading rural development projects throughout Africa. I have around 9 months experience of working in Ghana.

I will be travelling to Ghana in the summer and then again in 2008 to carry out my research. Before I travel to Ghana it is my intention to carry out interviews in the UK and Europe. Through achieving an understanding of the development objectives at both the international, as well as the local level it should be possible to achieve greater consistency in project activity, thus aiming towards the 'sustainability' objective widely commented on in the current period.

I truly hope your company can take an interest in this study as they obviously have a key role to play in the future development of this important market. I look forward to hearing from you soon.

Kind Regards,

Mike Granleese

Appendix 16: Data Collection Round One - 22/08/07 – 19/09/07

| | | |
|---|--|---|
| <p align="center">22-23 Aug 07</p> <ul style="list-style-type: none"> • Travel to Ghana • Prepare for interviews • Begin setting up interviews and making contacts | <p align="center">24 Aug 07</p> <ul style="list-style-type: none"> • Interview with Mr Tei Quarley – Chief Executives Office – Cocobod. • Interview with Mr Moussa Lenboni – Senior trader CMC – Cocobod | <p align="center">25 Aug 07</p> <ul style="list-style-type: none"> • Transcribe first interviews • Make any required adjustments to interview guides. |
| <p align="center">26 Aug 07</p> <ul style="list-style-type: none"> • Informal discussion with Mr Nelson Kpodo-Tay – operations manager Armajaro. | <p align="center">27 Aug 07</p> <ul style="list-style-type: none"> • Interview – Akuafio Adamfo office Accra - participant wished to remain anonymous. | <p align="center">31 Aug 07</p> <ul style="list-style-type: none"> • Completion of interview with Mr Tei Quarley – Cocobod. • Interview – Mr Charles Boateng – Deputy Managing Director PBC. |
| <p align="center">29 Aug 07</p> <ul style="list-style-type: none"> • Informal discussion with Mr Charles Kukah – Senior research manager – Cocobod. • Interview – Mr Gorkeh-Sekyim – Deputy Executive Director QCD – Cocobod | <p align="center">30 Aug 07</p> <ul style="list-style-type: none"> • Day at the University of Ghana • Key informant interview – Professor Daniel Sarpong – Department head – Agricultural Economics. • Key informant interview – Dr Isaac Ossei-Atoke. | |

| | | |
|---|---|---|
| <p style="text-align: center;">1 Sept 07</p> <ul style="list-style-type: none"> Planned interview with Mr Sona Ebai [Copal] – cancelled. | <p style="text-align: center;">2 Sept 07</p> <ul style="list-style-type: none"> Completion of interview with Mr Charles Boateng – PBC – cancelled | <p style="text-align: center;">3 Sept 07</p> <ul style="list-style-type: none"> Interview – Mr Koffi Addo – Analyst - Barry Callebaut Completion of Interview – Mr Charles Boateng - PBC Interview – local processor - participant wished to remain anonymous |
| <p style="text-align: center;">4 Sept 07</p> <ul style="list-style-type: none"> Travel to Kumasi Interview Mr Pascal Bouvery – Managing Director – Armajaro Ghana. Interview Mr Damon Otto – Financial Manager – Armajaro Ghana | <p style="text-align: center;">5 Sept 07</p> <ul style="list-style-type: none"> Interview – Mr Kofi Asare – Managing Director – Diaby Interview – Mr Kwabena Ohemeng-Tinyase – Managing Director – Kuapa Kokoo | <p style="text-align: center;">6 Sept 07</p> <ul style="list-style-type: none"> Interview – Mr Ali Basma – managing director – Akuafu Adamfo Interview – Completion of interview with Mr Kwabena Ohemeng-Tinyase – Kuapa Kokoo |
| <p style="text-align: center;">7 Sept 07</p> <ul style="list-style-type: none"> Interview – Mr Guarav Trivedi – General Manger of Cocoa – Olam Ghana. Completion of interviews with Mr Damon Otto & Mr Pascal Bouvery – Armajaro Ghana Travel back to Accra | <p style="text-align: center;">8 Sept 07</p> <ul style="list-style-type: none"> Rest | <p style="text-align: center;">9 Sept 07</p> <ul style="list-style-type: none"> Interview – Mr Nelson Kpodo-Tay – Operations manager – Armajaro Ghana |

| | | |
|--|---|--|
| <p style="text-align: center;">10 Sept 07</p> <ul style="list-style-type: none"> • Key informant interview –Mr Francois Ruf – CIRAD • Key informant interview – Mr Colin Taylor - Nestle | <p style="text-align: center;">11 Sept 07</p> <ul style="list-style-type: none"> • Interview –Local processor - participant wished to remain anonymous • Interview – Mr Yaw Chei – Managing Director Transroyal | <p style="text-align: center;">12 Sept 07</p> <ul style="list-style-type: none"> • Key informant interview – Mr Isaac Gyamfi - STCP • Key Informant Interview – Mr Shashidhara Kolavalli – senior research fellow – IFPRI |
| <p style="text-align: center;">13 Sept 07</p> <ul style="list-style-type: none"> • Interview – Mr Lawrence Ayisi-Botwe – Operations Manager – Cocoa Merchants • Interview – Mr Ali Issaka – General Manager – Adwamapa Buyers | <p style="text-align: center;">14 Sept 07</p> <ul style="list-style-type: none"> • Field Trip to Suhum District – research assistant – Mr Eric Doe. • Interview – Suhum district manager – Akafo Adamfo. • Interviews with two purchasing clerks – Akafo Adamfo | <p style="text-align: center;">15 -16 Sept 07</p> <ul style="list-style-type: none"> • Rest |
| <p style="text-align: center;">17 Sept 07</p> <ul style="list-style-type: none"> • Interview – Mr Charles Kukah – Senior research manager - Cocobod | <p style="text-align: center;">18 Sept 07</p> <ul style="list-style-type: none"> • Interview – Mr Taco Terheijden – Commercial Director – Cargill Ghana | <p style="text-align: center;">19 Sept 07</p> <ul style="list-style-type: none"> • Completion of interview with Mr Isaac Gyamfi – STCP • Travel back to UK. |

Appendix 17 – Data Collection Round Two – 21/04/08 – 19/05/08

| | | |
|--|--|---|
| <p align="center">21 April 08</p> <ul style="list-style-type: none"> • Travel to Ghana | <p align="center">22 April 08</p> <ul style="list-style-type: none"> • Visit Cocobod headquarters • Informal discussions with Mr Tei Quartey – deputy director of research & Mr Charles Kukah – senior research manager | <p align="center">23 April 08</p> <ul style="list-style-type: none"> • Interview – Mr Joseph Asiamah – director of finance –Fedco. • Interview – Mr Nicholas Akpebu – managing director – Fedco • Interview – Mr Charles Boateng – deputy managing director - PBC |
| <p align="center">24 April 08</p> <ul style="list-style-type: none"> • Interview – Mr Lawrence Ayisi-Botwe – Operations manager – Cocoa Merchants | <p align="center">25 April 08</p> <ul style="list-style-type: none"> • Interview – local processor – participant wished to remain anonymous. | <p align="center">26-27 April 08</p> <ul style="list-style-type: none"> • Rest |
| <p align="center">28 April 08</p> <ul style="list-style-type: none"> • Interview – Mr Tei Quartey – Deputy Director of research – Cocobod. • Key Informant interview – Mr Kwasi Kpodo – Rueters | <p align="center">29 April 08</p> <ul style="list-style-type: none"> • Interview – Mr Kofi Addo – Analyst – Barry Callebaut • Interview – Local processor – participant wished to remain anonymous. | <p align="center">30 April 08</p> <ul style="list-style-type: none"> • Interview – Mr Gorkeh-Sekyim – Deputy Executive Director – QCD [Cocobod]. • Interview – Mr Joe Forson – Principle Trader – CMC [Cocobod] |

| | | |
|---|---|--|
| <p style="text-align: center;">1 May 08</p> <ul style="list-style-type: none"> • Ghana Public Holiday – Rest | <p style="text-align: center;">2 May 08</p> <ul style="list-style-type: none"> • Interview – Mr Nana Amo Adade Boamah – Managing Director – Cocoa Merchants • Interview - Mr Yaw Chei – Managing Director – Transroyal | <p style="text-align: center;">3 May 08</p> <ul style="list-style-type: none"> • Rest |
| <p style="text-align: center;">4 May 08</p> <ul style="list-style-type: none"> • Interview – Mr Nelson Kpodotay – Operations Manager – Armajaro Ghana | <p style="text-align: center;">5 May 08</p> <ul style="list-style-type: none"> • Travel to Kumasi • Interview – Mr Ali Issaka – General Manager – Aduwamapa Buyers | <p style="text-align: center;">6 May 08</p> <ul style="list-style-type: none"> • Interview – Mr Ali Basma – Managing Director – Akuafio Adamfo. |
| <p style="text-align: center;">7 May 08</p> <ul style="list-style-type: none"> • Interview – Mr Rahul Gopinath Nair – General Manager Cocoa – Olam • Interview – Mr Kofi Asare – Managing Director – Diaby | <p style="text-align: center;">8 May 08</p> <ul style="list-style-type: none"> • Interview – Mr Samuel Yeboah – Finance Manager – Evadox | <p style="text-align: center;">9 May 08</p> <ul style="list-style-type: none"> • Interview – Mr Pascal Bouvery Managing Director - & Mr Dammon Otto – Finance Manager – Armajaro Ghana. • Interview – Ms Mary Mabel Tagoe – Research Department – Kuapa Kokoo |

| | | |
|--|--|---|
| <p style="text-align: center;">10 -11 May 08</p> <ul style="list-style-type: none"> • Travel back to Accra • Rest | <p style="text-align: center;">12 May 08</p> <ul style="list-style-type: none"> • Key informant interview – Mr Isaac Gyamfi – STCP | <p style="text-align: center;">13 May 08</p> <ul style="list-style-type: none"> • Interview – Mr Charles Ntim – Deputy Chief Executive – Cocobod • Interview – Mr Francis Osei-Owusu – Deputy Director of Research – Cocobod |
| <p style="text-align: center;">14 May 08</p> <ul style="list-style-type: none"> • Key informant interview – Shashidhara Kolavalli – Senior Research Fellow - IFPRI | <p style="text-align: center;">15 May 08</p> <ul style="list-style-type: none"> • Field Trip – Suhum District – Research Assistant Eric Doe. • Interview – Aduse Sannie - District Manager Suhum – Transroyal • PC interviews – 6 in total | <p style="text-align: center;">16 May 08</p> <ul style="list-style-type: none"> • Interview – Kwame Obaug Adjinala – National Coordinator – Codepac [Cocobod] • Interview – Taco Terheijden – Commercial Director Cargill |
| <p style="text-align: center;">17-18 May 08</p> <ul style="list-style-type: none"> • Rest | <p style="text-align: center;">19 May 08</p> <ul style="list-style-type: none"> • Interview – local processor – respondent wished to remain anonymous. • Travel back to the UK. | |

Appendix Eighteen – Interview Participants

Pilot Interviews and Meetings*

- Dr Julie Flood, Dr Mike Rutherford, Mr Mark Holderness - Cabi Commodities UK - 21/02/07
- Mr Nicko Debenham [EB**]- Armajaro Trading – Director -28/02/07
- Mr Sona Ebai [EB]– Cocoa Producers Alliance – Secretary General - 24/04/07
- Ms Anna Laven - University of Amsterdam – 21-22/05/07
- WCF Amsterdam Conference – 23-24/05/07
- Emmanuel Ohene Afoakwa – University of Strathclyde – Ghanaian Crop Scientist - 12/06/07
- Anonymous Cocoa Exporter [EB]- 30/07/07

*All Pilot Interviews were carried out in the UK.

** [EB] stands for expert in the external buying market. In total there are seven pilot interviewees and key informants with the acronym [EB]. These particular key informants have been highlighted as they have been highly useful in formulating the response to research question number five. Please see footnote 259 in section 7.5 for further explanation of the importance of these interviewees.

Research Sample

Seventy in-depth interviews were carried out throughout rounds one and two of data collection. In the sections below participants are organised within their appropriate unit of analysis and listed in chronological order.

Round One: 22/08/07 – 19/09/07**Cocobod Participants**

- Mr Tei Quartey✓☞ - Chief Executives Office – 24/08/07 - 31/08/07
- Mr Moussa Lenboni ☞ - Senior trader CMC -24/08/07
- Mr Gorkeh-Sekyim✓ – Deputy Executive Director QCD – 29/08/07
- Mr Charles Kukah✓☞ – Senior Manager – Dept of Research, Monitoring and Evaluation – 17/09/07

✓ In reference to footnote 213 five in section 7.1, the symbol ✓ denotes those Cocobod respondents who were asked to comment on Cocobod’s role across the domestic supply chain.

☞ In reference to footnote 261 in section 7.5, the symbol ☞ denotes the Cocobod respondents who were asked to comment on the Cocobod’s role in the external market.

LBC Participants

- Akuafo Adamfo Office Accra - participant wished to remain anonymous - 27/08/07
- Mr Joseph Asiamah – Federated Commodities [Fedco] - Finance Director – 28/08/07
- Mr Charles Boateng – Produce Buying Company [PBC] – Deputy Managing Director – 31/08/07 – 3/09/07
- Mr Pascal Bouvery – Armajaro Ghana – Managing Director – 4/09/07 – 7/09/07
- Mr Damon Otto – Armajaro Ghana – Director of Finance – 4/09/07 – 7/09/07
- Mr Kofi Asare – Diaby – Managing Director – 5/09/07
- Mr Kwabena Ohemeng-Tinyase – Kuapa Kokoo - Managing Director – 5/09/07 – 6/09/07
- Mr Ali Basma – Akuafo Adamfo – Managing Director – 6/09/07
- Mr Guarav Trivedi – Olam - General Manger of Cocoa – 7/09/07

- Mr Nelson Kpodo-Tay – Armajaro Ghana - Operations manager – 9/09/07
- Mr Yaw Chei – Transroyal – Managing Director – 11/09/07
- Mr Lawrence Ayisi-Botwe – Cocoa Merchants – Operations Manager – 13/09/07
- Mr Ali Issaka – Adwamapa Buyers – General Manager – 13/09/07

Local Processors [external buyers]

- Mr Kofi Addo – Barry Callebaut – Commodity Analyst - 3/09/07
- Anonymous Local Processor – 3/09/07
- Anonymous Local Processor – 11/09/07
- Taco Terheijden – Cargill – Commercial Director – 18/09/07

Key Informants

- Mr Surabah Mehra [EB] – Olam Coco Trader - 13/07/07
- Mr Colin Taylor [EB] - Nestle – 10/09/07
- Mr Chris Jackson – The World Bank – 28/08/07
- Professor Daniel Sarpong – The University of Ghana Department head; Agricultural Economics.
- Dr Isaac Ossei-Atoke – The University of Ghana – ISSER
- Mr Francois Ruf – CIRAD – 10/09/07
- Mr Isaac Gyamfi - STCP – Country Manager – 12/09/07 – 19/09/07
- Mr Shashidhara Kolavalli – IFPRI - Senior research fellow - 12/09/07

Rural Participants

- 14/09/08 – Field Trip No.1 to Suhum district – Respondents included; four farmers*, the district manager for Akuafu Adamfo, and, two purchasing clerks for Akuafu Adamfo.

* The farmer study was only a pilot study and therefore these participants are not included in the research sample.

Round Two: 21/4/08 – 19/05/08**Cocobod Participants**

- Mr Tei Quartey✓☞ – Deputy Director of Research, Monitoring and Evaluation – 28/04/08
- Mr Gorkeh-Sekyim✓ – Deputy Executive Director –QCD – 30/04/08
- Mr Joe Forson☞ – Principle Trader – CMC – 30/04/08
- Mr Charles Ntim✓☞ – Deputy Chief Executive – 13/05/08
- Mr Francis Osei-Owusu✓☞ – Deputy Director of Research of Research Monitoring and Evaluation – 13/05/08
- Mr Kwame Obaug Adjinala – National Coordinator of the Codepac program – 16/05/08

✓ In reference to footnote 213 five in section 7.1, the symbol ✓ denotes those Cocobod respondents who were asked to comment on Cocobod’s role across the domestic supply chain.

☞ In reference to footnote 261 in section 7.5 the symbol ☞ denotes those Cocobod respondents who were asked to comment on the Cocobod’s role in the external market.

LBC Participants

- Mr Joseph Asiamah – Federated Commodities [Fedco] – Director of Finance – 23/04/08
- Mr Nicholas Akpebu – Federated Commodities [Fedco] – Managing Director – 23/04/08
- Mr Charles Boateng – Produce Buying Company [PBC] – Deputy Managing Director – 23/04/08
- Mr Lawrence Ayisi-Botwe – Cocoa Merchants – Operations Manger – 24/04/08
- Mr Nana Amo Adade Boamah – Cocoa Merchants – Managing Director – 2/05/08

- Mr Yaw Chei – Transroyal – Managing Director – 2/05/08
- Mr Nelson Kpodo-Tay – Armajaro Ghana – Operations Manager - 4/05/08
- Mr Ali Issaka – Aduwamapa Buyers – General Manager – 5/05/08
- Mr Ali Basma – Akuafu Adamfo – Managing Director – 6/05/08
- Mr Rahul Gopinath Nair – Olam - General Manager Cocoa – 7/05/08
- Mr Kofi Asare – Diaby - Managing Director – 7/05/08
- Mr Samuel Yeboah – Evadox – Finance Director – 8/05/08
- Mr Pascal Bouvery – Armajaro Ghana - Managing Director – 9/05/08
- Mr Damon Otto – Armajaro Ghana – Director of Finance – 9/05/08
- Ms Mary Mabel Tagoe – Kuapa Kokoo – Research Manager – 9/05/08

Local Processors [external buyers]

- Anonymous Local Processor – 25/04/08
- Mr Kofi Addo – Barry Callebaut – Commodity Analyst – 29/04/08
- Anonymous Local Processor – 29/04/08
- Mr Taco Terheijden – Cargill - Commercial Director – 16/05/08
- Anonymous Local Processor – 19/05/08

Key Informant Interviews

- Mr Sona Ebai* [EB] – Cocoa Producers Alliance – Secretary General – 15/01/08
- Mr Philip Sigley* [EB] – Federation of Cocoa Commerce – Chief Executive – 8/10/08
- Mr Kwasi Kpodo – Reuters – Journalist – 28/04/08
- Mr Isaac Gyamfi – STCP – Country Manager – 12/05/08
- Mr Shashidhara Kolavalli – IFPRI - Senior Research Fellow – 14/05/08

*Mr Sona Ebai and Mr Sigley were both interviewed in the UK.

Rural Participants

- 15/05/08 – Field Trip No.2 to Suhum district – Respondents included; the district manager for Transroyal, three purchasing clerks from PBC, one purchasing clerk from Aduwamapa, one purchasing clerk from Akuafu Adamfo, and, one purchasing clerk from Kuapa Kokoo.

Appendix Nineteen – Consent Form



CONSENT FORM

The Business School
University of Bournemouth

Dear Participant,

This study is for my PhD and is designed to explore the organisation of the cocoa market in Ghana. My main objective is to understand how the organisation of the cocoa market in Ghana differs from other cocoa markets in the world, and what lessons can be learnt from this. In order to do this I am carrying out a series of interviews with market participants. The information that you provide in this interview is for the purpose of academic study. **Where requested the content of this interview will be kept confidential.** Therefore, if at any time you wish for information to remain confidential, then please request for this to be the case. If you have any other requests or concerns regarding confidentiality then please express them. You are also free to withdraw at any time.

PhD student: Michael Granleese.
(Under the supervision of Professor Philip Hardwick)

I understand the nature and purpose of this study and am willing to give informed consent to participate.

Signed:

Dated:

Appendix 20 – Cocobod Letter of Consent

Please turn over to see the letter of consent granted by the Cocobod for 2007 fieldwork.



GHANA COCOA BOARD

COCOA HOUSE
P. O. BOX 933
ACCRA
GHANA.

TEL: 233-21-661912 / 661752 / 661872 /
661757 / 6789916 / 678972
FAX: 233-21-667104
E-mail: cocobod@africaonline.com.gh
CABLE: COCOBOD, ACCRA.

IN YOUR REPLY
PLEASE QUOTE:

DIR.ME| GEN|V.15/56

DATE: 17-09-07

**MICHAEL GRANLEESE MA,
BOURNEMOUTH UNIVERSITY,
UK**

RE-REQUEST FOR INFORMATION.

We refer to your letter dated August 24, 2007 on the above subject and attach, herewith, the requested information.

You can count on our co-operation.

**J. A. ASAMOAH
DIRECTOR, RESEARCH, MONITORING AND EVALUATION**

CC: CHIEF EXECUTIVE

Appendix Twenty Two – Letter of Recommendation

Please turn over to see the official letter of recommendation granted by my supervisor prior to fieldwork in 2007.



TO WHOM IT MAY CONCERN

14th August 2007

Mr Michael Granleese

Michael Granleese is a full-time PhD student in the Business School at Bournemouth University, under my supervision. He is conducting important, and potentially very useful, research into the Ghanaian cocoa industry.

You can be assured that Mike is a completely trustworthy person engaged in academic research, and any advice or other assistance that you can give him will be greatly appreciated.

Yours sincerely

A handwritten signature in blue ink that reads 'Philip Hardwick'.

Professor Philip Hardwick
Chair of Economics
Email: phardwic@bournemouth.ac.uk

Appendix Twenty Two – Amended Round One Cocobod
Interview Guide

Please turn over to see the original round one Cocobod interview guide that was amended throughout the course of fieldwork in 2007.

① Reason behind move to liberalise the internal market.

Section 1 – The process of change towards the ‘Partial Liberalisation’ model.

1. In your opinion what are the fundamental aspects of the Cocobod model, which make the Ghanaian cocoa market operate as it does?
2. What have been the main effects of the move towards partial liberalisation?
- ⑤ 3. In what areas has the Cocobod model changed the most?
- ⑥ 4. Where has the rationalisation involved in this change been felt the most?
- ② 5. Are the Cocobod happy with the current balance of private sector and public sector in the partial liberalisation model?
- ③ 6. What have been the main positives resulting from a move to this model of market organisation?
- ④ 7. Has the model of partial liberalisation specifically created new challenges for the Cocobod?
8. Have unforeseen challenges emerged as a result of this model?
9. In your opinion how has the change to partial liberalisation affected the Cocobod’s reputation in the cocoa market?
10. In your opinion has the model of partial liberalisation affected the culture of the cocoa market in Ghana?

11. How has the environment of the Cocobod changed in recent years?
12. Have there been any noticeable changes as a result of this?

> linkages between QCA and the Ghana Standards Board?

Section 2 - The Functions of the Cocobod in the Internal Buying Market.

1. Quality Control. (not too long)

Market
signals?

- What are the key factors behind Ghana's consistent quality production?
- Have the Cocobod been able to further develop the use of quality incentives over the years?
- How responsive are farmers to changes in quality incentives?
- ① • How do the Cocobod ensure that quality standards are maintained? > decide level?
- What methods of sanction are used in the case of poor performance?
- ② • Who has the responsibility for quality performance? - How has this changed over the years?
- ③ • How has the role of buyers in quality control changed since partial liberalisation? > how do you decide who to blame?
- ④ • How has the Cocobod been able to adjust to changes in quality grades and standards on the external market? > purple beer?
- In your opinion what are the key aspects of the Cocobod's quality control system that differentiates them from a private sector system?
- 2 stages of quality > Passed at district, failed at the port < how do you decide who to blame?

2. Provision of inputs and extension services.

- ① • How has partial liberalisation changed the Cocobod's role in this area? [rationalisation, private input providers] • mass spraying → reasons? problems?
- ② • What is the current policy on fertiliser subsidy?
 - What are the main justifications for this policy?
- In your opinion how has the importance of inputs and extension at the farmer level changed in recent years?
- What are the main challenges Cocobod faces in the operation of such a subsidy? Do you offer credit on this?
- * • What mechanisms are being used to ensure success of this policy?
 - How do they differ from those used in the past?
- * • What mechanisms are used to ensure the recovery of loans for fertiliser?
- Is there active coordination between the department responsible for input delivery and the department responsible for extension?
- How have conditions in the rural environment improved in recent years? [access to credit and inputs] -
 - What has been the role of the Cocobod in this area?
- * • Have the Cocobod been able to use the LBC function to distribute inputs/credit at the farmer level?
 - Is this something that could possibly be used more in the future?
- What is the Cocobod's preferred method of farmer organisation?
- > Is there a perception amongst farmers that their loans are for free? why?

3. Farmer Security.

* • Why have looked increased the farmers f.o.b price in recent years?

- What is the main objective of the fixed price mechanism in Ghanaian cocoa? > have you ever considered differential price
- What actions have been taken to ensure that farmers can maintain access to markets despite increased certification requirements?
- ✓ * Farmer Training - do farmers have the capacity at the local level to continue this process in absence of external assistance or are they dependent on the Cocobod in this area?

* Farmer education? Is there a program?

✓ (5) Control of the Ports and warehouses

- > Cocobods role in this area?
- > why control it?
- > Problems?
- > Improvements?
 - ↳ why slow to invest?
- > future investment

Section 3 – The linkage between Cocobod and the LBC's.

1. The LBC function and the development of the internal buying market.

- ② Changes in the market?
- ① • In your opinion how important are the LBC's to the Ghanaian market?
 - Have you seen improved competition in the LBC market in recent years?
 - In what way has this impacted upon the market/farmers?
 - ③ • Have Cocobod adjusted the buying model in response to the way LBC's operate in the market? *show? mixed signals?*
 - Have the Cocobod been able to learn from the operations of the private sector? *ie efficiency focus, regulatory response?*
 - What are the main reasons behind high rate of market exit with the LBC market?
 - Has this steadied as the market has developed?
 - ④ • What are the main incentives for buyers to become involved in the internal buying market?
 - ⑤ • Do the Cocobod actively encourage entry?
 - ⑥ • Have the Cocobod tried to encourage the development of Ghanaian buyers?
 - ⑦ • Would the Cocobod like to see more foreign buyers? *why → better probe.*
 - Which buyers offer the best services to farmers?
 - The prospect of farmers becoming buyers?
 - Is this encouraged?
 - ⑧ • Is there an ideal number of buyers Cocobod would like to see in the market?
 - Are there restrictions on the market share any one company can hold in this market?
 - How have Ghanaian buyers learnt from foreign buyers? *exports in future?*

2. The Cocobod's relationship with the PBC.

- ① • Is there still a strong relationship with the PBC?
- Has the reduction in market share of the PBC been a planned exercise by the Cocobod?
- ② • How has the change in this relationship affected the Cocobod's role in the internal buying market?
- ③ • Is the Cocobod able to use the PBC in anyway to improve market performance and development, i.e. buying from more remote area's, or distribution of inputs or, credit? *→ Are farmers encouraged to call to PBC?*
- ④ • What is the future of the PBC?
 - Is its operation an important aspect of the PL model in the future?
 - PBC Performance?

3. Cocobod regulation of the internal buying market.

- ① • Have licensing regulations changed over the years in response to aspects of market development?
- ② • The reasons behind mandated physical presence at the village level.

↳ Organizational Risk.
↳ explore.

Transition

Why could you not use the LBC's to do things such as warehousing etc?

- The importance of regulatory control over the LBC's?
 - What are the main threats of looser regulation?
- * Margin → how do you calculate the buyers margin?

4. Seed Funding.

- The need – capacity of other credit sources?
- The benefit of this to both Cocobod and the buyers.
- The problems – [default?]
- Future options?

→ how do you decide when to distribute more credit & when to recall?

5. Cocobod sanction within the LBC market

① How do you decide what sanctions to put in place?

- Do the Cocobod face many problems with LBC's cheating farmers in the market?

- Are there still problems with LBC's buying under prepared cocoa?

② What are the main mechanisms of sanction used by the Cocobod for offending LBC's?

- Would the Cocobod worry about the possibility of increased cheating and the capacity of buyers to exploit farmers in absence of the Cocobod?

③ Do Cocobod have many clashes with LBC's at a policy level?

④ How do the Cocobod respond to complaints from the LBC's? → Arbitration?

⑤ Regulation of anti-competitive behaviour?

6. Communication between the LBC market and the Cocobod.

- Is there frequent communication between LBC's and the Cocobod?

- On what level does this communication commonly take place. [individual buyers, or buyer association] – Does this affect the nature of the communication? what is your attitude towards bribery?

- Has the nature of communication between Cocobod and the LBC's changed at all in recent years?

• Do you have a better relationship with certain LBC's?

7. Distribution of responsibility based on the partial liberalisation model?

→ warehousing up country?

- Is there an understanding of who has responsibility for each aspect of market development?

- Has this changed at all in recent years?

- Are there problems with the balance of responsibility within the 'partial liberalisation' model?

○ If so, how could this be improved?

* Are there any aspects of the model in which the Cocobod would like to see the LBC's take on more responsibility in the coming seasons?

+ How have the Cocobod been able to encourage the LBC's in these areas?

- Are there any examples where communication on these matters has led to improvement?

Transition

- * How do you decide the quota at the ports.
↳ why has there been congestion.

Appendix Twenty Three

Coded Interview Section – The accountability of the QCD

[R] – Researcher

[LBC] – LBC participant

Question related to inconsistent grading.

[R] Last time we talked about the problem that had been occurring where quality would be given one grade upcountry and then given a different grade when it reaches the port. As you see it what is the main cause of that problem?

Information asymmetry caused by subjectivity.

Room for moral hazard?

[LBC] The main cause is the subjectivity, individuals, there isn't any scientific way of determining this, so it is by visual examination that the QCD determines the quality in this respect, so off course once you have two different people examining this they may have two different opinions about what causes this and for me that is what gives rise to it.

[R] Is there anything that has been done to improve upon this? Is it getting better or worse, has there been any change?

Credibility of reform – clearly a source of tension and limited response of 'institutional change' from Cocobod

[LBC] That is a situation we have been fighting with the authorities all along, I wouldn't say the situation has improved but we hope that it will improve in the future.

[R] Has this problem become worse as more buyers have come into the market?

Competition and Quality [Key theme 7.3] – before the introduction of private buyers it was easier for the PBC to achieve quality under the monopsony system.

Private companies more efficient and cost conscious than former government buying company

LBC's taking responsibility for quality.

[LBC] Well, one argument thinks like you are saying, but I think that is not really the case, the past when we have had a unitary buying system it was only one company buying and off course whatever you wanted them to do you could get them to do it if they needed to be compensated in terms of helping them to bear the cost, that was easy to do, again, it was a government organisation so they could understand themselves much better, now that we have private organisations all of these things will have to be costed so if you needed to get something done which is not the norm you need to look at the cost of this, but generally I think that all companies would wish that quality improves by the day.

[R] When you have different grades between upcountry and the port do the Cocobod hold the QCD accountable for that?

Accountability of Subsidiaries
Sanction – underperforming graders are not held accountable

Arbitration - buyers have no recourse at all.

Arbitration - suggestion of an arbitration institution.

[LBC] Unfortunately that is where the buyers argument has been, why for the same organisation, if they under-grade or over-grade at that end why should they not be held accountable, why should the buyers not have any recourse and this is something that we are still talking about, we hope that one way of getting this resolved is to also maybe introduce competition in that area, the other thing for us is to also make sure that an institution like the Ghana standards board or another standards organisation could arbitrate the case of dispute, but as it stands now, the QCD is the one that

Good Governance –
the LBC's have no
way of having a fair
hearing

grades up country when the grade changes at the other end you have nothing but to say thank you and yes I will do it back to them.

[R] What do you think would happen if they brought competition into the upcountry grading, would that cause problems or would it create improvements?

Supports
competition

Associates the
private sector with
efficiency.

[LBC] From the buyers perspective we don't think that it will create any problems, because if the standards are clear then any standards agency should be able to take what the specifications are and then match it with the produce and come up with a grade, so for us we don't think that it will create any problems rather we think that it will bring efficiency.

[R] You mentioned the problem of subjectivity, do you think that would be increased if you had different graders?

Accountability -
Lack of
accountability has
led to behavioural
problems in the
QCD

[LBC] I don't think so, I think that now the QCD has monopoly they can do whatever they want to do and go about without question, there isn't any specific system that you can appeal to, that is why we have this situation.

[R] The problems that you have with the QCD are they specific only to the QCD or are they reflective of problems that you have working with the Cocobod in general?

Accountability of subsidiaries – links with Cocobod reduces credibility and fairness.

If the QCD were independent of Cocobod then buyers would view them differently.

[LBC] The QCD is a division of the Cocobod and so if they would be granted the autonomy to operate then you could deal with them as buyers and a service provider, but as it is Cocobod is the regulator and a division of the regulatory body is the one that is doing it, so the fairness for us it is not seen.

Appendix Twenty Four

Coded Interview Section – The Quota System

[R] I understand you are given a quota for the amount of trucks you are allowed to send to the ports...if during the course of the season you decide you want to expand purchases can you gain the additional quota you need to fulfil that?

Restrictive Environment – no formal system to increase.

LBC Growth

Incentive to build market share? – Have to accept inefficiencies

[LBC] The quota system is something which came up four or five years back but this has primarily been to restrict the inflows and help Cocobod manage stocks, but it has affected LBC's in a slightly adverse manner, there is no direct recourse for increasing quota during the season off course you can apply for a quota increase and based on certain parameters being met which is not revealed to the LBC but it is an internal discussion by the Cocobod the quota gets increased but it is not a very common feature, so let's say if you have a ten truck quota but you are able to offload twelve trucks you might actually have to live with that, so that is one inefficiency the Cocobod has currently in their port operations.

[R] What is the alternative to the quota system? Is it only to expand warehousing space or are there other alternatives you can perceive?

Infrastructural Limitations – improvement here is the key.

Public Sector management – Change – need to modernise the takeover centres.

[LBC] I believe the quota has come in because the warehousing has not caught up with the tonnage produced by the country so if they would increase the warehousing and improve the efficiency of offloading at the port, currently port offloading is very labour intensive...which means that when you have labour strikes you have problems offloading, when you have shipment issues you will have problems of offloading because the same gangs will be going for the shipment while offloading happens...if they were able to do a larger amount of bulk storage then it would help, but bulk

storage also means that you are losing all of the traceability of the cocoa, the moment you start cutting out the bags and taking the cocoa out into a large heap you would be able to channel it easier, but you would not be able to trace it back to the purchasing clerk level which currently Cocobod has.

[R] In your opinion why has the Cocobod been relatively slow in upgrading the ports to increase efficiency?

Public Sector
Management – Change
– Cocobod constraints
– labour issues.

[LBC] I would say labour itself is an issue they have been trying to handle over the last couple of months they have had multiple strikes by the labour at the port causing delays at Takoradi and at Tema, so it is not easy to change, to lay off all the labour gangs and take in machines...but they are trying to do that, I believe that one of things that has been in the pipeline recently is putting on weigh bridges, so manual weighing of cocoa over a scale is going to stop...half of the rejections that currently happen at the port are because of weight issues and the moment you cut down on those weight issues offloading will become faster.

Weigh bridges -
modernisation would
bring significant
benefits in terms of
both efficiency and
cocoa rejections.

[R] So you are expecting change?

Public Sector
Management –
expectations of change
have not been met.

[LBC] I am expecting change but I have not seen anything on the ground yet.

[R] Have there been any efficiency improvements in takeover this season?

Public Sector
Management – civil
servant motivation –
significant delays in
takeover.

Public Sector
Management – civil
servant motivation –
Cocobod encourages
staff towards caution
rather than efficiency.

[LBC] Though efficiency has improved in terms of their offloading, the efficiency has decreased in terms of the rest of the chain...you need to have a cash to cash cycle when you talk about a private company like ours, so we get our stocks offloaded, but beyond the stocks offloading, collecting the CTO's [receipt for payment], and getting the payment for that has actually reduced this year, that again is due to issues that they have had with their staff, they have had a couple of issues in the last year, they had a couple of scams that got caught at the beginning of the year and as a result of this they have tried to tighten their systems of control and when you tighten

your systems of control in terms of people you will surely have a fall in efficiency.

Appendix Twenty Five

Coded Interview Section – Supply Chain Infrastructure and Privatisation

[R] Have there been any efficiency improvements at the port this season?

Signs of change?

Western region has the worst congestion – Takoradi port.

Privatisation – raises this issue of topic, shows his feeling in this area.

[LBC] When this current CEO came, I believe he supervised the building of a few more warehouses at Tema, and that has eased the problem at Tema a little, but at Takoradi you will realise that most of the cocoa is coming from the Western Region of Ghana and Takoradi is close by so all that cocoa goes to Takoradi and I believe that Takoradi is where we have to get a lot more sheds but I believe that if they through the challenge to the private sector then I believe they would be able to solve that problem.

[R] Why in particular do you think the private sector would be better?

Privatisation - high-powered incentives.

Private sector willing to make investments.

[LBC] Yeah! people want business, they want money, they do business for money...currently they are hiring some storage facilities from some individuals, but I believe the capacity is quite small but I believe that if people know the Cocobod is ready to hire a lot more people will put up.

[R] Would the private sector have a different attitude?

Public Sector Management – different attitude to the private sector.

He believes that Cocobod do not recognise the financial gains from change.

[LBC] Yeah! People are business like, they like business, Cocobod is...it is not Cocobod's business to do business, so I believe that they are not very much concerned about it, but I believe that if the private sector knows that we can have business in this storage kind of thing, I believe it will work for them, it will work for Cocobod.

Appendix Twenty Six

Coded Interview Section – The Link between Competition and Quality

[R] In your opinion how has competition amongst LBC's impacted upon quality at the farmer level?

Quality Decline

Buyer Practices.

Farmers are aware of that they can sell bad quality cocoa.

Buyers regularly accept bad quality.

[LBC] I don't think it is very positive, because there are so many companies operating, if like I said earlier if a farmer sends his cocoa to one company and it is not bought, he can easily send it to someone else to buy, because people are scrambling for the cocoa beans, they are tempted to buy beans which are not of very good quality, if it is not thoroughly dried it is not good quality cocoa and many times people buy cocoa which is not thoroughly dried.

[R] Last time you were saying that you could not reject cocoa from a farmer, is this still the case?

Buyer responsibility for quality?

Quality Control appears to be taking effect, the same buyer said no rejection in round one.

However, buyer is inconsistent

[LBC] At the purchasing clerk level they do reject some of the farmers cocoa, the reason is that if you bring cocoa to the purchasing clerk to purchase and he finds much foreign matter in it I don't think he will buy it, and we advise them not to buy poor quality cocoa...it is illegal to buy poor quality cocoa.

[R] In any circumstances do you think the purchasing clerk would sacrifice quality?

Quality Decline – buyer practices

Quality Decline – organisational risk.

[LBC] Sometimes...some buy poor quality cocoa for financial gains, like the cocoa from the Ivory Coast it is cheap but it is not of a good quality, in the past like I told you earlier the quality of cocoa in Ghana has reduced, thirty years ago if the cocoa past here in the last thirty minutes you would still

Quality Decline

smell the aroma, these days its not like that because of the fermentation, because of the problems with fermentation.

[R] Why do you think the farmer's attitude has changed?

Farmer attitude – motivated to sell early and competition allows him to do this

[LBC] Because of the competition he wants to sell quickly, because previously farmers were fermenting cocoa for seven days, now the maximum is about four days.

[R] Do you think the purchasing clerk has less regard for quality than the LBC?

Quality Decline - Organisational Risk

Quality Control – LBC management afraid of QCD sanction.

[LBC] Yeah, the LBC's would want to purchase quality cocoa because then we would not have any problems at the port, but it is not the same for the purchasing clerk.

[R] Where cocoa is failed at the port do you trace it back to the purchasing clerk?

Organisational Risk – holding the PC accountable for poor quality is difficult once cocoa leaves the upcountry level.

[LBC] Well are supposed to do that but it is sometimes difficult, because the longer the cocoa stays with you the more you lose, so we attempt to work on it quickly at then send it back [to takeover], sometimes you send the cost back to the district manager to pay so that the district manager will take it from the purchasing clerk, but it is sometimes difficult, they don't pay and it becomes a cost to the LBC.

[R] Do you think that any purchasing clerks would deliberately be buying low quality cocoa just to build market share?

Organisational Risk – the PC achieves financial gain by passing of low quality cocoa as high quality cocoa.

[LBC] Yes, but not even to increase your market share, just for financial gains, you buy low quality cocoa at a lower price, especially those at the border areas, you buy at a lower price and sell to you the company at a higher price.

Appendix Twenty Seven

Coded interview segment – Interlocking Risk

[R] What is your experience of providing inputs to farmers on credit?

Strategic Default – farmer credit does not work.

Competition has increased the opportunity for default.

[LBC] I wouldn't want to talk about that, it doesn't work, because I think that farmers loyalty to individual companies is very minimal so it is difficult, when PBC was the sole buyer it was possible for them to do anything because they were buying cocoa alone so you could be sure that if you don't play ball nobody will buy your cocoa, but under the current system it is very difficult...you can get two out of ten farmers who will be very genuine and honest, but I afraid to say I wouldn't want to balance my home on it.

[R] Do you find that if you had the money then investing in farmers rewards is that a worthwhile investment?

LBC interface – competitive strategy – credit good for building relationships

Highlights risk of default.

[LBC] No if I were to have the money it is okay, it is good, when you are trying to build a relationship with them, particularly when you give them soft loans, especially when the schools are opening during the critical period if you can organise some things for them then it is good, but the only thing is you cannot be sure whether they will reciprocate your gesture.

[R] So in balance do you think it is worthwhile?

LBC interface – competitive strategy

[LBC] I believe it is still good helping to build the loyalty, like I said you can get two out of ten who are very genuine, so why don't you encourage the two so if you will continue to do that the two will grow to three and four, it

is a gradual process, but we are not doing it because we are in financial stress.

[R] What can you do if a farmer defaults?

Strategic Default –
LBC's have very little
security against default
due to the risk of
damaging their
reputation.

Negative farmer
attitude towards
repayment reinforced
by zero accountability

[LBC] That is also the problem, you do it if he defaults, if you resort to the police you will create a bad name for yourself and that will even work against you more, look at that company they have arranged for the police to pick two or three farmers and it will do more harm than the good name you have tried to build for yourself.

Appendix Twenty Eight

Coded Interview Section – LBC input provision

[R] But at the current time are you still providing that service to farmers?

Public Private Partnership
LBC constraints – strategic default

[LBC] As we speak Cocobod has some inputs that they even want the LBC's to be the channel of distribution and that is under consideration at all LBC's, but the difficulty like I said is the recovery of credit.

[R] Before we talk about the new program...what is your experience of Cocobod trying to involve LBC's in the past?

Public private partnership - strategic default – farmer attitude is a big constraint
Farmer attitude embedded

[LBC] It was nothing to write home about, the default rate was very very high, and there is a certain perception that whatever comes to the farmer from Cocobod or from us is perceived to be for free, and this is something that we are gradually getting out of the minds of farmers, but we haven't been successful.

[R] In the past program, what did Cocobod do that made the farmers think the inputs were for free?

Partnership – the government not acting as a credible partner?
Link with government creates negative farmer attitude and high default rates.

[LBC] I wouldn't say Cocobod per say, but for instance it was alleged in some circles that government officials went into certain localities and when farmers raised the input issue they said they should get worried as eventually the recovery will stop, so once it comes from government officials it goes into the farmers mind and they are reluctant to pay.

[R] With the new program how will you try to change the farmer's attitude?

Public Private Partnership – the main constrain remains strategic default.
Nothing much has changed?

[LBC] Well it's a big challenge and that is why I said it is for various companies to determine their participation, because for me nothing seriously has changed,

rather the repayment period has shortened and so for an LBC this is a big risk if farmers default.

[R] Is this something you seriously considering?

LBC interface – despite the risk they are considering it, shows the strategic value of this program.

[LBC] We as a company are, they wrote to us...giving us two days and we have responded and want certain clarifications to be made, if they respond and make certain clarifications then we could make a firm decision.

[R] And what sort of things do you want clarified?

Partner Credibility – bad planning by Cocobod, not providing very basic information.

[LBC] The repayment period, the price they will give to LBC's, these are very basic issues.

[R] If the government was prepared to offer you good repayment period and a subsidised input price would you be willing to get involved?

LBC interface – ready to help farmers- competitive advantage

Partner Credibility – this is a risky decision for LBC's to take. Cocobod have not given them the opportunity to make the necessary plans.

[LBC] We are ready to help farmers, and like I said earlier we in our own small ways also help them, but we don't want a big burden on us, so before we make a firm decision on this we need to make sure that we are ready to manage and manage it well.

Appendix Twenty Nine

Coded Interview Section – Quality Control and the CMC

Key

[R] Researcher

[P] Processor

[R] Dealing with the CMC, what are the advantages of this system above and beyond the guaranteeing of contracts?

CMC role – creates quality security through link with QCD.

Emphasis on security: reduce supply risk

Global quality decline: Ivory Coast

[P] Well CMC is part of Cocobod and Cocobod has within its compass the QCD as well, CMC, QCD etc etc, and QCD ensures quality, the system is as such that you should get a quality bean out of a Cocobod contract, so dealing with the CMC you will have a quality aspect that is not certain out of a private a trader... that's not to say that if you could in fact buy of the LBC's they could also guarantee you quality as well, however the whole thing about the Cocobod at the moment is that Cocobod through the QCD and selling through the CMC is putting a quality product on the table, that's really the security you are getting as opposed to what is happened in the Ivory Coast where this year the quality has been dreadful and or certain other places.

[R] Do you see the QCD and CMC as having a symbiotic relationship?

Liberalised market - difficult to enforce quality.

CMC link with QCD.

[P] Whenever you ask Cocobod about their long term plans they will say they will always have the QCD, that will always make Ghana premium cocoa, in theory the QCD could still operate with private buyers and private sellers, it would be very much more difficult to enforce, I think that the two are interlinked in a way that they both go to support Cocobod and Cocobod

Market Demand – external support for Cocobod

at this period of time is still fairly well perceived by the international powers that be i.e. the world bank and such like.

[R] Have you seen much fluctuation in Ghana's premium?

Market demand – Ghana premium is increasing.

[P] From what I understand it has hardened due to the appalling quality problems in the Ivory Coast.

[R] Last time you said that Ghana was not getting as much of a premium as they should, has that now changed?

Ghana quality is that much above the rest that even the current premium does not reflect its superiority

[P] I don't think so, the premium might have gone up but this is due to reasons of poorer quality somewhere else.

[R] If the Ivory Coast produced the same quality as Ghana would they get the same price?

Quality Reputation - consistency is a factor in the premium.

CMC role – contributes to premium

[P] Quality is one factor, the CMC's good standing for contractual interface is another, punctuality is another, but if the qualities got to an equivalent level and this happened overtime the prices may converge, with a small premium to Ghana for contract sustainability.

[R] Has the quality of Ghana's cocoa changed at all in recent years?

Reputation – quality consistency.

Professionalism of the QCD and CMC

[P] Generally it has been fairly constant, they are beginning to look at it so carefully that they are beginning to see seasonal fluctuations in size...so they are talking about super mains and special lights, maybe you know these things evolve.

[R] Without the QCD would the CMC be able to sell forward on the market?

[P] They would be able to sell forward...yeah they would be able to sell forward but it would be much more difficult to enforce quality standards

Reputation -
Forward sales based
on consistent
quality consistency.

Difficult to maintain
this in a liberalised
market.

and if quality standards began to slip then people would begin to move away from the forward market, what happened in the Ivory Coast is that when it liberalised and became a melting pot, it then became a spot market.

[R] At the moment do buyers carry out a third party check on Ghana cocoa before it is shipped?

CMC Role – ease of
coordination due to
buyer confidence.

[P] No because it is traded on a good contract...if Ghana's cocoa comes in inferior to the contract then there is a claim.

[R] Has there been any change in the industries quality requirements in recent years?

Market Demand –
industry did not
want quality to
decline, however
rather than enforce
quality they have
adapted to using
low quality.

[P] Left to their own devices I don't think the industry would have varied their quality requirements, they might have done for residues etc, but in terms of sheer quality of the cocoa I don't think they would have, but at the same time you see industry being forced to use quantities of poorer quality cocoa coming out of the Ivory Coast...if you put current Ivorian cocoa in front of buyers ten to fifteen years ago they would have said they weren't taking it, gradually speaking the baseline is moving down.

Appendix Thirty

Coded interview Segment: The Incentive to Process in Ghana

[R] What are the main incentives to set up a processing facility in Ghana?

Processors Supply Priority -Focus on bean supply as the main reasons to come to Ghana. Quality and efficiency aspects both advantages.

Light crop shortage – concerns in this area.

Light crop shortage – driven by market entry – need 66% to be financially viable.

Implies that the light crop is a 'big' incentive – it was 'formally' sufficient.

Processing Incentive – 'sub-optimal localisation' – processing at origin leads to inefficiencies in the supply chain.

Incentive required to compensate for this.

Implication that light crop was the main incentive.

Buyer Power – lobbying the government

I would say there are probably four reasons why you would come to Ghana to set up a processing factory, the first thing is the availability of quality beans, the second thing is the fact that you can get a discount on the light crop, but this is an issue now, we will come back on that one, the third is the political stability and the fourth is the reliable counter party of the CMC and the fifth one if you like is that most of these processors sell for export so they can set up a free-zones company which is fiscally advantageous, so lets say that these are the five reasons that would bring you to Ghana. The second one that I mentioned the discount on the light crop was sufficient reason in the past to come to Ghana but as it works today it is not at all sufficient because there are way too many processors and there is not enough light crop, we think that you should be able to process about two thirds of light crop in your factory to have a very financially viable set up. Why do you need this big incentive...because for us from a logistics point of view it is much better to process your end product close to the end consumer and for us the consumer is in Europe and not in Ghana. So you bring in some inefficiencies in the process if you have to process your cocoa liquor here because you have to solidify it for the transport process and then you have to melt it again at the other side. Solidifying means additional investment in equipment, additional energy consumption, additional manpower, and at the other side to melt it you have the same, so to overcome this you need an incentive, an incentive which compensates for a sub-optimal localisation worldwide, this incentive used to be a discount on light crop, but if you only have twenty, thirty or forty percent then the incentive isn't big enough, so we are now trying to lobby with the government a little bit to see if we can change the incentive system a little bit so that it remains attractive as an investment.

[R] You said that solidifying and re-melting the liquor is a major efficiency loss, are there any efficiency gains from being in Ghana?

[P] An advantage is that you can put twenty-five tonnes of beans in a forty foot container, if you transport liquor you can put twenty four tonnes of beans in a twenty foot container, which corresponds to thirty tonnes of beans.

[R] Is that the only gain, what about lead times to market?

[P] That is a disadvantage of being here, it is much easier to transport your beans ahead of time and then process them just in time for your customer, also storing in this environment is much more difficult from a quality point of view and in terms of pest and disease than storing in the climates of Europe, the other disadvantage of setting up here is electricity supply is not reliable, gas supply is not reliable, telecom's are very unreliable, water is not always available, so you have to overcome all these problems.

Processing Incentive
- required to
compensate for the
logistical
disadvantage of being
at origin.

European climate
advantage.

Ghana infrastructural
problems.

Appendix Thirty One

Coded interview segment: Government Governance

[R] Do you think Cocobod understood the implications of bringing 350,000 tonnes of processing into Ghana?

Cocobod Adaptability – poor communication.

Negative attitude towards the private sector?

Cocobod Adaptability – not listening – they don't appreciate the significance.

Em...no...we are trying to start a conversation with the Cocobod and the Ministry of Finance, but so far we haven't managed, we even brought the processors together to organise an open forum to discuss the issues, I think they are still looking at us as trying to make money out of Ghana and they don't believe the signals that we have been giving them now for more than a year that it is not viable if we don't get enough light crop, so we still have a long way to go.

[R] But do you think they understood what they were doing when they allowed so many processors to come into the country?

Government Governance – poor industrial policy.

Cocobod Adaptability – they don't understand processing.

Processing incentive required at origin.

[P] I think they don't, they don't understand the dynamics of the industry, the disadvantage that you create by being so far away from the consumer in a difficult environment when it comes to energy and so on and so on, they haven't fully grasped that the system as it is today cannot continue to work.

[R] Do you think they are fully committed to trying to find a solution?

Processor bankruptcies would greatly affect Cocobod credibility.

Potential to affect the future of the local processing industry.

[P] Yes I think so, because now in the next few years if some of these companies were to go bankrupt it would create a very very bad image for Ghana as a place to invest.

[R] Are they listening to your concerns?

Cocobod Adaptability – again highlights poor communication on an issue of great importance.

[P] At the moment they seem to be having other priorities so the dialogue isn't there.

[R] Has that been a surprise to you?

Cocobod Adaptability – he expected more from them.

[P] It is a surprise to me.

[R] Is that because you feel this is an issue that has the potential to affect their credibility?

Government governance – poor industrial policy
– Cocobod Adaptability - failure to act will cause bankruptcies.

[P] It is a pity, they don't seem to be willing to plan ahead of time, they seem to be taking a position, let's wait and see, if the companies go bankrupt, let's do something.