THE IMPACT OF TAX AND GOVERNANCE ON PROFITABILITY INWARD FOREIGN DIRECT INVESTMENT IN ASIA COUNTRIES

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ABSTRACT

This study examines the effect of taxes and regulatory environment on underlying profitability of inward investment as well as the volume of investment. The aim of this research has three main objectives. The first objective is to understand how indirect taxes combine with direct taxes to affect the underlying potential returns to different economic activities and, hence, the attractiveness of different sector inward investors. The second objective is to examine the role of direct contact between government and business through taxation and regulation in affecting the overall volume of inward investment relative to other determinants. The third objective is to investigate the view that tax and governance (bureaucracy) affect firm performance and, by so doing, impact on efficiency seeking motives for inward investment.

To address the first objective is analysed using a net incentive effect (NIE) approach. NIEs use I-O data to measure or simulate the combined effect of different taxes and different measures on underlying profit. The finding revealed that, for some sectors, indirect taxes represent a substantially larger loss of revenues to investors than do direct taxes on profits. The findings also show that, unlike profit taxes, the burden of indirect taxation varies considerably between one sector and another. This distorts the returns to investment in one sector relative to another. To achieve second objective it follows a similar approach to much empirical research by using regression analysis to estimate the effects of various different locational determinants, including tax and bureaucracy, on overall stocks and flows of inward investment. For this objective this study uses country level data and two variants of regression analysis to investigate the governance effect on inward investment – OLS and panel-fixed effects.

A Chow test is used for parameter constancy to establish whether it was valid to combine higher income and lower income countries into a single sample for Asia. The finding showed regulatory efficiency was consistently found to have a positive and statistically significant effect on inward FDI. For other governance variables the results tended to vary according to estimator. Taking the panel fixed effects estimator (as less prone to omitted variable bias) good governance was found to have a positive and statistically significant effect on inward FDI stocks for higher income countries but not for flows or stocks in lower income countries. The total tax rate was found to have a

statistically significant effect on FDI inflows in lower income countries but not on inflows for higher income countries.

Lastly, the third objective also employed regression techniques: in this case OLS and the LSDV estimators. Although the regression analysis is a useful first step some limitations are apparent. One key limitation is the role of firm heterogeneity. To address these limitations a propensity score matching approach is also used. The finding suggests that, for most specifications, neither taxes nor bureaucracy had a statistically significant effect on firm performance for the pooled sample of all three countries. This applies both to all firms (domestic and foreign) and to foreign firms only. However, repetition of the analysis on a country by country basis yielded some perverse results which suggest a positive relationship between tax and firm performance (Indonesia) or a positive relationship between bureaucracy and firm performance (Philippines and Vietnam). These findings raise doubts about the possibility of dual causality and bias with the regression estimates.

Propensity score matching was used to provide a check on the findings of the regression analysis, which also extended the number of performance indicators to four. The results of the matching analysis were clear. For the pooled sample (all firms and all three countries), the sample of foreign owned firms and the sample of all firms for each individual country the results were the same: neither governance nor taxes had any statistically significant effect on firm performance.

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DECLARATION

I declare that this thesis contains no material that has been accepted for the award of any other degree of diploma in any institution or university. This thesis is based on my original work except for quotations and citations which have been acknowledged accordingly. I also declare that this thesis has not been previously or simultaneously submitted, either partially or wholly, for any other qualification at any university or institution.

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CHAPTER I: INTRODUCTION

1.1. OVERVIEW

This thesis examines the role of taxes and governance (bureaucracy) in affecting inward foreign direct investment (FDI) in a number of Asian countries. It analyses the effects of indirect taxes on the potential profitability of different sectors in three different countries. At the country level it provides regression analysis for a larger sample of countries of the impact of tax and bureaucracy, amongst other determinants, on aggregate inward FDI. Finally, for another three countries it analyses the effect of tax and governance (bureaucracy) on the performance of both domestic and foreign firms.

1.2. BACKGROUND

Foreign direct investment (FDI) flows into Asian countries have increased in the last 2 decades. Despite economic crises in the 1990s and 2000s, Asia has become an even more important potential location in receiving FDI. It has drawn attention from economists, researchers and policy makers, for example, on the relationship between economic growth and foreign investment in developing countries. The interest in such relationships increased since the significant turning point for Asia countries during 1980s to 1990s as FDI jumped from 20 percent to 40 percent. China has been the largest developing country recipient of FDI of 35 percent since 1992. South, East and Southeast Asia received two thirds of FDI into the region, equivalent to 30 percent of the total. According to GATT/WTO (WTO, 1996) total FDI flows to developing countries have increased nine fold between 1982 and 1993. This significant increase in inward investment created increased diversification in the composition of the major FDI recipients. This has been reflected from a wide variety of location specific advantages such as natural resources. As the fastest growing economy in the world China become the most popular recipient of investment, leaving opportunities in other Asian countries such South Asian comparatively unexplored (UNCTAD, 2010).

To encourage FDI, with its potential for economic growth, it is necessary to create a supportive and encouraging policy environment. Neo classical growth models of the Solow (1956), claimed that FDI can only effect on growth in short run. Nevertheless, FDI also affects endogenous growth as it generates increasing returns in production via externalities and productivity spillovers (Romer, et al., 1995). Developing countries are of particular interest to this study for two reasons. First, they are dependent upon interactions with the global economy and at the same time have internal weaknesses. Past experience (when South East Asia was hit badly hard by the economic crisis in 1997) shows that direct investment could be of substantial benefit to the economic development for those countries which tried to recover from the crisis. Countries such as Thailand, Indonesia, Malaysia and The Philippines, who were the most affected, decided to provide balanced treatment for foreign investors in order to restore their confidence (Thomsen, 1999).

Secondly, developing economies face problems with poverty and infrastructure. FDI has positive impact on the economy that offers a potentially important contribution to addressing both (Van and Sam, 2009). In order to service inward investment infrastructure is improved and this better enables the poor to better participate in the modern economy. In addition both the investment and the supporting infrastructure provide jobs in the modern, industrialised part of the economy.

An important debate in the literature concerns the potential benefits and costs of inward FDI from the host country perspective. This can be seen from the recent survey of the literature (de Mello, 1997, 1999; Fan 2002; Lim, 2001). Most of these studies find positive effects of FDI on long-run economic growth through capital accumulation and technical or knowledge transfer especially under open trade regimes (e.g. Basu, Chakraborty, & Reagle, 2003). However, some studies indicate that these positive effects may be insignificant or negative (Carkovic & Levine, 2005) as FDI carries a risk of crowding-out for domestic investment as result of loss competitiveness. Despite pros and cons of the impact of FDI on host country growth, it has been highlighted that political and economics are the significant factors for foreign investor to weight the risk.

There is considerable diversity within the Asian region. Within the continent, the East and Southeast region is dynamic and rapidly growing. This region includes the newly industrialized economies (NIEs) of Hong Kong SAR, the Republic of Korea, Singapore,

Taiwan, the ASEAN countries and the People's Republic of China. The economic integration and development of these economies is more advanced than in other parts of Asia. The global crisis disrupted financial markets in the US and Europe but affected Asian markets less. The GDP growth rate of the Asian economy was 7.4 percent in 2007 (UNCTAD, 1996). GDP in Asia, especially emerging Asia, exceeded expectations. (Kas, 2011). China was the most rapidly growing of the emerging economies (EMEs) of Asia, growing at more than percent.

Important sources of FDI inflows into developing countries in recent years have been the foreign acquisition of domestic firms in the process of privatisation, the globalisation of production, and increased economic and financial integration (UNCTAD, 1996). FDI is a viable alternative for financing development. It helps countries, especially developing countries, to boost their economies without creating debt. It also has inherent advantages for risk sharing, market discipline export orientation and the transfer of technology and managerial expertise (Birdsall, et all., 1995). Given the current and potential importance of FDI for Asia, particularly South East Asia, this study investigates the determinants of inward FDI in the region. It focuses on the effects of tax and governance in host countries.

Disdier and Mayer (2004) documented that institutional factors have greater and more significant impact on affiliate performance in emerging economies compared to more mature economies. According to other studies (Child, Chung and Davis, 2003; Meyer, 2001, 2004; Hayo and Uhlenbrock, 2000), institutional factors such as political risk, government regulations, financial incentives, and environmental specific factors are more important in emerging economies because institutional immaturity raises transaction costs and risks. Developing countries tend to provide more incentives for instance lower tax to attract foreign investment. Szanyi (2001, p.30) states "investment incentives can play an additional role in motivating foreign direct investor". Loree and Guisinger (1995) claim that the host country tax rate has an important effect on US outward FDI. In addition, international business scholars has recognized the importance of country specific differences in political and institutional factors as determinants of foreign direct investment. Thus, the regulatory environment (especially taxes and governance) are the main focus of this thesis. The study investigates the effect of taxes and regulatory environment on the underlying profitability of inward investment as well as on the volume of investment. The underlying reasoning is that the government can

affect the returns to investment through its regulatory and tax regime and by the quality of its governance.

1.3. RESEARCH AIMS AND OBJECTIVES; KEY RESEARCH QUESTIONS

1.3.1 The aims and objectives of the research are:

1. To understand how indirect taxes combine with direct taxes to affect the underlying potential returns to different economic activities and, hence, the attractiveness of different sectors to inward investors.
2. To examine the role of direct contact between government and business through taxation and regulation in affecting the overall volume of inward investment relative to other determinants.
3. To investigate the view that tax and governance (bureaucracy) affect firm performance and, by so doing, impact on efficiency seeking motives for inward investment.

1.3.2. The key research questions are:

1. How important are indirect taxes, in relation to direct taxes, in affecting the potential profitability of inward investment in Asia? (addressed in Chapter V)
2. Do these distortions tend to provide unintentional incentives to invest in one sector rather than another? (Chapter V)
3. To what extent are aggregate flows and stocks of inward FDI in Asian economies influenced by tax and governance issues? (Chapter VI)
4. To what extent do taxes and governance affect firm performance and provide efficiency seeking reasons to locate inward investment in Asia? (Chapter VII).
5. Do the effects of tax and governance affect domestic and foreign owned firms in the same measure or do they affect foreign owned firms differently? (Chapter VII)

1.4. SCOPE OF THE THESIS

1. Chapter II provides a more detailed background to the study. This is intended to set the context for the research.
2. Chapter III is the review of literature. This seeks, firstly, to provide the theoretical foundations for the research. It also reviews previous empirical research with the

intent of informing both the methodological approach of this research and provides the means to put key findings within a wider research context.

3. Chapter IV gives details of methodology and data. The key methodological approaches covered are:
   - Input-output tables
   - Regression analysis; ordinary least squares (OLS), panel fixed effects and the least squares dummy variable (LSDV) model.
   - Propensity score matching.
5. Chapter V is the first analytical chapter. Its objective is to analyse how taxes, direct and indirect, affect underlying profit incentives for inward FDI in selected Asian countries. This first analyses the effects of indirect taxes on underlying profitability at the sector level. Both taxes, direct and indirect, will be, using a net incentive effect (NIE) approach. NIEs use I-O data to measure or simulate the combined effect of different taxes and different measures on underlying profit. Examples of studies of this type include Bond and Guisinger (1985), Guisinger (1989), Miller and Webster (2009).
6. Chapter VI examines the extent to which taxes and other regulatory policies (bureaucracy) affect the volume of inward investment in Asian countries. It follows a similar approach to much empirical research by using regression analysis to estimate the effects of various different locational determinants, including tax and bureaucracy, on overall stocks and flows of inward investment. For this objective this study uses country level data and two variants of regression analysis to investigate the governance effect on inward investment – OLS and panel-fixed effects. A Chow test is used for parameter constancy to establish whether it was valid to combine higher income and lower income countries into a single sample for Asia.
7. Chapter VII provides a detailed analysis of the effects of tax and bureaucracy on firm performance for three different Asian countries in 2009. It seeks to assess whether or not these government (governance) aspects have an impact on efficiency seeking motives to locate direct investment in these countries. The analysis is again by means of regression techniques: in this case OLS and the LSDV estimators. Although the regression analysis is a useful first step some limitations are apparent. One key limitation is the role of firm heterogeneity. To address these limitations a propensity score matching approach is also used.

1.5. CONTRIBUTION OF THE STUDY

The contributions of this study to knowledge are in the following areas:

- There have been very few previous studies on taxes of FDI in ASIA (with the exception of China). This study therefore contributes to understanding of inward direct investment in Asia more widely.
- The role of direct taxes (on corporate income) on inward FDI has been well explored in the literature but there has been much less attention devoted to the impact of indirect taxes, none specifically dealing with Asia. The contribution is not just to cover an under-researched topic: the analysis shows that ignoring indirect taxes is a potentially serious omission.
- Many studies on inward FDI are conducted at country level. Indirect taxes such as import tariffs operate at the sector level. This study provides insights as to how indirect taxes alter incentives to invest in one sector rather than another.
- Although there are a significant number of country level regression studies of the determinants of inward FDI which include tax very few focus on Asia specifically. Likewise only a small number of such studies consider governance as a determinant. The focus on Asia and the use of both tax and bureaucracy as determinants is a contribution of this study
- Within the FDI literature the effects of tax and bureaucracy on firm performance have been under explored. In consequence there is not a strong body of evidence to confirm or reject the view that tax and bureaucracy act as deterrents to efficiency seeking investment. Such evidence is more scarce for Asia. This study provides such evidence.

1.6. KEY FINDINGS

In the sector analysis the results suggest that the effect of indirect tax is broadly equivalent to introducing a ‘profit’ tax which varies by economic sector. The indicates the existence of a substantial potential distortionary effect on the pattern of South Korea’s, Indonesia’s and China’s inward FDI, resulting from the impact on relative profit incentives arising from indirect taxes. They provide significant profit incentives for investors to divert resources and hence, future production from one sector to another.

The country level analysis presented in this study provides evidence that governance affects inward FDI at the country level. The evidence suggests that lower income and higher income countries in Asia are behaviourally different with respect to key determinants of inward FDI. The analysis does not consider the effects of governance on FDI in isolation but as part of a wider set of determinants of the location of FDI. It suggests that treating governance in this way is important that to exclude other determinants might create biased and misleading results. With some limitations the general finding was that good governance has a positive effect on inward FDI in Asia. There is also evidence that taxes have a negative effect on inward FDI.

In the analysis using firm level data, the result suggest that taxes and governance have did not have a significant impact on firms performance for three Asian economies (Indonesia, the Philippines and Vietnam). This implies that bureaucracy and taxes are not significant deterrents to efficiency seeking investment in any of those three countries. This supports the work of Ayyagari Emirgüç-Kunt and Maksimovic (2006) who reported the constraint of taxes and regulations are found to be unimportant relative to maintaining policy stability, keeping crime under control, and undertaking financial sector reforms to improve access to finance.

CHAPTER II: BACKGROUND

2.1. FDI AND ASIA ECONOMIES

Foreign direct investment (FDI) flow in developing countries increased dramatically in the 1990s (World Bank, 1995). The volume and type of FDI inflows are influenced by scale factors affecting the absorptive capacity such as size of domestic market, in conjunction with the growth of prospects of the host country (Bhasin et al., 1994). The impact of FDI on developing countries economic growth has been widely debated in literature. The 'traditional' argument is that an inflow of FDI improves economic growth by increasing the capital stock, whereas the recent literature points to the role of FDI as the transfer of know-how (Lensink and Morrissey, 2001; Dunning, 2009).

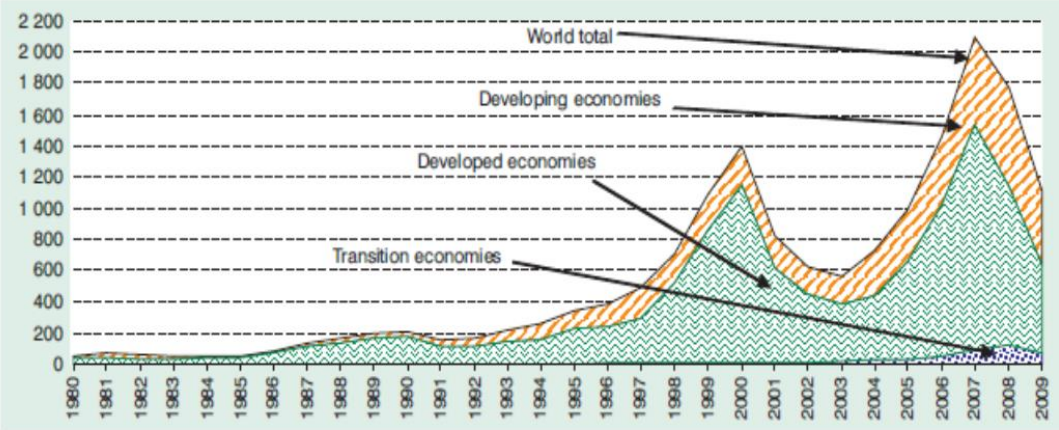
International investor categorised countries around the world based on their level of economic development. It is measured based on a number of economic and social criteria, ranging from income per capita to life expectancy to literacy rates and developing countries are those with lower rating using this statistical measurement. In most cases in developing countries experience a shortfall between savings and the desired level of investment. This can be solved by capital inflows from several sources. Traditionally, countries seek external financing from official development assistance (ODA). This type of funding is provided by organisations such as the United Nations (UN) or the International Monetary Fund (IMF). However, Asia seems to aim for FDI. This can be seen from the extreme movement of capital inflow from FDI since the 1980s and it has become a phenomenon in Asian economies. FDI is different from other major types of external private flows into recipient countries because it is motivated largely by investors' long term prospects of making profits from production activities that they control (Amerasinghe & Modesto, 2006).

During the period 1981-2000 world FDI inflows rose faster than world Gross Domestic Product (GDP) and world exports. It increased almost five times as compared to the previous periods of 1970 and the 1980s (4.5 fold). As yet, most FDI shares have gone to the developed world; however it began slowly merging with developing

economies in 2010. As a result FDI is becoming a more important part of economic activity.

Asia has overtaken Europe and North America as a location for FDI inflows and now it is the largest destination. Existing literature (Bandera and White, 1968; Root and Ahmed, 1979; Torrisi, 1985; Schneider and Frey, 1985; Morrisey and Rai, 1995; Antoine, 1979; Lim, 2008; Cheng and Tang, 1986) explains the reasons behind the concentration of FDI in certain locations: market size, the existence of suitable infrastructure, good institutions, good legal frameworks, consistent policy frameworks and good growth prospects. In Asia, aside from China, due to its accession to the World Trade Organisation (WTO), according to the World Bank (World Investment Report, 2010), the most popular countries for investment are the Republic of Korea and Singapore. Nonetheless, other regions in Asia have been receiving significant inflows of inward investment over the last two decades.

Figure 12.1 FDI inflows, globally by groups of economies, 1980-2009



Source: UNCTAD, based on annex table 1 and the FDI/TNC database (http://www.unctad.org/fdistatistics).

2.2 FDI IN DEVELOPING ECONOMIES - ASIAN COUNTRIES

2.2.1 Trends

Foreign direct investment is important for developing countries for several reasons. Not only does FDI add possible resources and capital formation, but also production technology, technical skills, innovative capacity and managerial/ organisational skills to the host country as well as access to internal markets. Lall (1978)

and Aggrawal (1980) outlined the basic case for expecting economic gains from inward investment and production relocation, including general types of collaborative ventures.

Because of the impact of the global crisis 2008/2009, all aspects of economic activities have suffered including FDI. FDI inflows have declined in all three major groupings of countries – developed, developing and transition economies. Although inflows gradually improved back in 2010, it was interesting to note that the decline in developed countries was higher than in developing countries and transition economies. FDI inflows in developing countries declined by 24 percent but still were better than in developed countries which suffered a decline of 44 percent. The recovery in developing countries also is expected to be faster due the economies' growth and reform as well as their increased openness to FDI and international production (UNCTAD, 2010). Recently, statistics also show that FDI flows in ASEAN countries are increasingly more diversified. ASEAN countries as traditionally hosts rather than sources for inward investment have upgraded their technology, and gained more experience to emerge as outward investors, especially at a regional level.

FDI by sector and industry

According to an United Nations Conference on Trade and Development (UNCTAD) report, (UNCTAD, 2010) markets and prices in Asia have gradually risen since the global crisis. This has encouraged major companies to continue to have better financial positions and to maintain ambitious investment programmes. For example there has been an extensive investment programme by TOTAL, a French oil company (Harris, 2009). Manufacturing industries such as agribusiness or pharmaceuticals that rely on fast-growing markets have recovered from the crisis quickly. The manufacturing industries which were affected the most by the crisis, such as the automotive sector, are now recovering and are rebuilding their investment plans. However, other manufacturing activities which were more sensitive to the crisis continue to face a weak recovery.

International investment in the service sector is expected to grow faster compared to manufacturing according to multinational enterprises' (MNE) response to the World Investment Prospect Survey (WIPS) (UNCTAD, 2010). This may be because medium-term prospects for services are generally superior to those for the manufacturing sector. In addition, many services MNEs, were focussed on the home market, and are now expanding to the international market involving ambitious investment abroad.

FDI by host country

EU and North America remain in the top rank of FDI destinations. However FDI inflows also focus on developing and transition economies, especially East and South East Asia. Developing Asian countries are becoming increasingly attractive relative to other regions as can be seen from the chart below. For FDI inflows in developing countries as a whole, Africa is still at the bottom of future destinations for investment. However the movement of FDI inflows to tax haven economies are expected to decline further due to a higher standard of transparency and required information exchange on tax evasion. In addition, there are some improvements in the application of national treatment of domestic as well as foreign investment, also reducing incentives for round-tripping.

Multinational firms' growing interest in developing and transition economies is not related only to cheap labour costs but also to large and/or fast- growing local markets. FDI inflows to developing and transition economies are not and will not only focus on labour intensive activities but it also in some cases may focus on innovative and technology intensive activities. The international trade literature (e.g. Batra and Ramachandran, 1980; Bhagwati and Srinavasan, 1983; Grossman and Helpman, 1991) focuses on the allocation aspects of FDI, cross border production. In the context of multinational enterprises (MNE), FDI is considered to be a corporate strategy and profit-maximising facing world-wide competition. Regarding this concept scholars have identified four types of foreign based MNEs activity (Dunning, 1993): market seeking, resource seeking, efficiency seeking, and strategic asset seeking. The table below is adopted from Dunning's theory of motive FDI seeking which is summarised by Nihal Amerasinghe and Justin Modusta (2006).

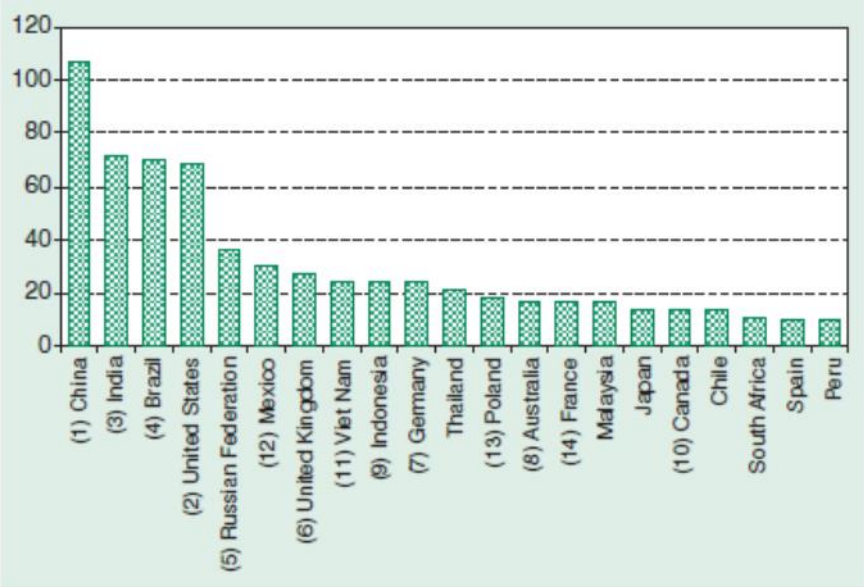
Table 1: Motive FDI seeking (Nihal Amerasinghe and Justin Modusta, 2006)

Type of FDI (classified by motives of firms)	Host country determinant	Principal economic determinants for MNE
Market seeking	-Economic, political, and social stability. -Rules regarding entry and operations -Policies on functioning and structure of markets (competition, mergers and acquisitions -International agreements on FDI -Privatization policy -Trade policy (tariffs and non-tariff barriers) and coherence of FDI and trade. Tax policy	-Market size and per capita income -Market growth -Access to regional and global markets -Country-specific consumer preferences - Structure markets
Resource/Asset seeking	-Raw materials -Low-cost unskilled labour -Skilled labour -Technology, innovative, and other created assets (e.g. brand names). -Physical infrastructure (ports, roads, power telecommunications)	-Raw materials -Low-cost unskilled labour -Skilled labour -Technology, innovative, and other created assets (e.g. brand names). -Physical infrastructure (ports, roads, power telecommunications)
Efficiency seeking	-Investment promotion (including image, building, investment, generating activities, and investment facilitation services. -Hassle cost (related to corruption and administrative efficiency) -Social amenities (e.g. bilingual schools, quality of life) -After-investment service.	-Cost of resources and assets, adjusted for labour productivity -Other input costs, such as transport and communication costs to/ from and within host economy and other intermediate products. -Membership of a regional integration agreement to the establishment of regional corporate networks.
Strategic asset seeking	-Policy to control -Competition	-Technology, marketing and management expertise

2.2.2. Business climate

Although ASEAN never fully recovered from the 1997 crisis, they have continued to appear to have rising levels of both investment and employment by foreign investors. In Indonesia for example, FDI inflows reached historical levels in 2010, at a time when global flows were still heavily impacted by the crisis. Of the top 20 host countries around the world, developing/ transition economies such as China, India and Singapore are among those top 20. In fact, China is the second largest (figure 2).

Figure 2.2 Top host economies for FDI in 2009 (Number of items the country is mentioned as top priority by respondents)



Source: UNCTAD, forthcoming a.

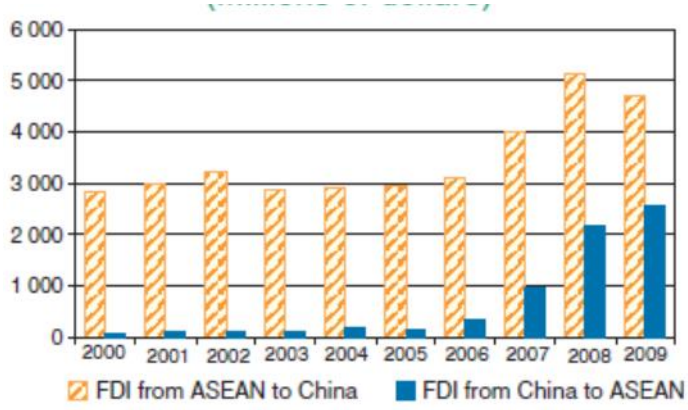
Note: Rankings in the survey conducted in 2009 are given in parentheses before the name of selected countries.

2.2.3. Politics and economies in selected Asian countries - History

China

China is the strongest competitor in South East Asian countries in terms of FDI destinations in Asia. Since the early 1990s FDI inflows to China have exceeded by a wide margin compare to those which are flowing into its neighbour ASEAN countries ASEAN as shown in figure 2.3.

Figure 3(2.3): FDI flows between ASEAN and China, 2000-2009 (million dollars)



Source: UNCTAD, based on Chinese FDI data from MOFCOM (China, Ministry of Commerce).

Note: In 2009, Chinese FDI in non-financial sectors in ASEAN was $2.3 billion (*Source*: MOFCOM).The total amount ($2.8 billion) is based on UNCTAD estimates.

China formally opened its door to foreign direct investment in 1979. Over time the FDI inflow gain momentum, a significant flow come from overseas Chinese mainly Hong Kong followed by Taiwan as they are largely ethnic Chinese, geographically close origins which means fewer costs and similar culture. Other determinant factors attractive for multinationals are China's huge market size, liberalized FDI regime and improving infrastructure (Zhang, 2001). FDI flows into ASEAN countries also increased since 2002 with the top investor in 2006 was Japan and for the Organisation for Economic Co-operation and Development (OECD) investor, the spread to both regions (China and ASEAN) were synchronised until 2007. (Figure 2.3, FDI flows to countries in ASIA by OECD, page 10).

The success of China in attracting OECD investors helps ASEAN (and other Asian countries) by attracting complementary FDI (Cheong and Plummer, 2009, P.14). As argued in Thomsen (2004, p.28), "FDI is not a zero sum game, with one country gaining at the expense of all others. Investment in China can stimulate greater FDI throughout East Asia, acting like a regional magnet for investors much as Singapore has done within ASEAN." Both ASEAN and China share a global network of MNEs, which are complementary to each other to attract investment projects. The success of China to shift towards a more domestic demand-driven economic model and increased domestic wage may create new opportunities for ASEAN in terms of both attracting global FDI flows and investing in China. In order to bring these opportunities to fruition, ASEAN may need to adjust their economic policies and develop beneficial linkages between MNEs and local enterprises. Korea, as one of the closest countries to ASEAN, becomes the third largest investment partner after China and the United States. The relationship

between Korea and ASEAN helped to trigger increased interest by Korean investors in ASEAN countries. Traditionally, Korean investors focus on labour-intensive manufacturing and the primary sectors (60 percent) of total FDI from Korea to ASEAN in 2008 are diversified to more sectors such as real estate, services (finance and insurance, information technology services) and construction (UNCTAD, 2010). It means Korean companies are now interested in market-seeking investment in ASEAN countries.

South East Asia

South East Asian countries' growth path is export-oriented like most other Asian Countries. However they adopted less substantial industrial policies in transition to export compared to Korea and Taiwan. Not only that, but bureaucracy appears unclear and governments are pressured by political matters. Despite these problems, South East Asian countries such as Indonesia, Thailand and Malaysia have maintained stable monetary and fiscal policies over two decades, especially the Philippines under the Marcos government (Sachs, 1985). Malaysia, Thailand and Philippine geographically are neighbours and also member of regional intergovernmental organisation called Association of South East Asian Nation (ASEAN), however they have different industrial policy regime that can be described by the nature of relationship between the business and state (government). In Thailand, government favour to business until 1980s then, businesses were relatively weak and private business did not have institutional access to the government unless they have patron-client relations. Despite negative factors in Thailand that could affect businesses such as tight policy process by government, corruption, and the emergence of business-government corporation on East Asia lines in other sectors, There has no evidence those factors has encouraged both foreign and local investment in export-oriented manufacturing (Doner, 1991a).

In Malaysia and Indonesia, ethnic politics is important. The government makes different distinctions in their relationship with Chinese and native people (Malaysia, Bumiputra; Indonesia, Pribumi). The governments in these two countries appear to have conflict control over Chinese business in order to 'protect' native business interests. It is conflictual because politics often control its activities in order to favour the native business interest rather than being fair for all businesses including Chinese. In Indonesia the goal of advancing Pribumi (native) has been the political theme that have vote support and politics channel did not exist for private sector to articulate its demand. Similar in Malaysia, where the party system pressure government to support Malay (local)

entrepreneurs. As result the business was done through informal and personal network rather than formal and follow the rules. The conflict relationship between government and Chinese capital has been mitigated as it develops mutual relationship through politic support provided by Chinese enterprise through political funds.

Particularly in Indonesia, subsidies and protection of the 'native' segment of the private sectors in import-substituting and non-traded goods have been disturbed by corruption ties with Chinese business. Both Indonesia and Malaysia try to replace the 'weakness' of the native local private sector with government-owned enterprises, which in turn have become centres of power, patronage and corruption (Haggard, 1998). A similar environment exists in the Philippines. The relationship between government and business is very close, but under conditions of an economically-powerful and diversified oligarchy, policy makers make little distinction between public and private roles, and weak institutions for structuring the business-government connection in an efficient and growth-promoting way. Instead the result has been an ineffective industry policy dominated by cronyism (Haggard, 1998).

Thailand

Thailand has a relatively stable history of macroeconomic and non-interventionist policy at industry level. The government has limited intervention in the market as domestic performance has been considerably strong. This is because the domestic environment has a combination of business links to a highly competitive export sector, a relatively small manufacturing sector, and a highly institutionalised culture of traditional Thai polity that minimise or stop a rent-seeking and import-substitution coalition.

Thailand had a period of greater government levels of involvement in the early 1950s. The involvement came from a military that created state-owned enterprise with the intention of limiting the power of Chinese entrepreneurs (Noah, 1985). Although under the military regime, the government did not intervene and gave substantial independence to Sino-Thai business. The reform did not eliminate the clientele and corruption but its negative consequences were tackled by a centralized budgetary policy, the independence of a central bank, and the competency of a good economic bureaucracy. Different leaders had different styles. During 1981-1984, through a Joint Public Private Consultative Committee (JPPCC), the government tried to be directly involved in the

private sector. JPPCC served government as a channel business demand on government but also provided a base for government to have both political liberalization and economic reform (Laothamtas, 1992). During the first half of the 1980s, business operated in a political and institutional context, government having full control over the overall economic policy agenda.

A study by Laothamtas (1992, 1994) and Christensen (1992) argues that business had more success in penetrating government through two events; first, trade liberalisation measures were blocked (1980s) and second, subsidies to exporters were increased. Such polices should be fine if they are not excessive and may assist the transition of competitive firms into world markets.

The limits on the ability of political parties to raise funds and the common practice of vote-buying (wealthy entrepreneur buy vote for particular party to win the election) which is increase the closer relationship between politicians and private sector supporters. This mutual benefit relationship creates an economic policy characterised to a greater extent by corruption and rent-seeking.

Malaysia

In contrast to Thailand, Malaysia and Indonesia have similarly hostile policies towards the Chinese minority. Thailand has accommodated this interest since the 1960s but not Indonesia and Malaysia. This political fact is added to all aspects of economic policy. Malaysian economic policy can be understood through the relationship between the main political party (UMNO- United Malays National Organisation) and the allied Malayan Civil Service (which together exercised monopoly control over the government since independence), and the Chinese business community (Jesudason, 1989; Bowie, 1991; Koon, 1997). Malaysia experienced a deficit in the 1970s but its high domestic saving rates and benefits from trade taxes enabled it to finance the country without inflation. The openness of the Malaysian economy helps to maintain low inflation and consistent exchange rate policies.

Industrial policy has placed Malaysian the authorities in a dilemma between two imperatives: the political interest which responds to the Malay political base and the promotion of the Chinese private sector and foreign investors in the name of economic growth. The British inherited Malaysian institutional system with its political insulation and conservative orientation, plays a key role in understanding how to solve this dilemma.

With this this type of political influence and its openness have created both incentives and opportunities for rent-seeking. Prior to the1960s, Malaysia had a strong bureaucratic system which dominated the formulation of policy and pursued a course which enabled Chinese capital to flourish. The government concentrated on agriculture and neglected the importance of infrastructure. The protection was relatively low (Lim, 1992). Malaysia's dualistic strategy is similar to the Korean-Taiwan economic model in the late 1980s. On the one hand, government strategy was to encourage foreign investment in offshore processing industries so that Malaysia could capture more than just its share of Japanese investment (Jesudason, 1989: ch6). On the other hand Malaysian strategy was to have essential state involvement in the economy such as state-owned and other government bodies owned by entrepreneurs. The Malaysian problem was not in bureaucracy, as it has a highly competent cadre of British-trained higher civil servants (Leigh, 1992;118). It was the political structure which increasingly limited the bureaucracy in defining a coherent policy course.

The Malaysian government created instruments to limit Chinese entrepreneur movement in the economy through protection, licensing, quotas and government contracts. As government prioritised the state-owned entrepreneur in their policies, it then gradually became a political empire for the ruling party. Bowie (1994) analysis shows the consequences of Malaysian policy which unfairly supported state-owned business were inefficiencies and losses in particular projects and erratic growth. Not until the early 1990s, when the government realised they faced significantly deteriorating economic performance, did they start to re- address their policies toward liberalization. The timing of the policy change could not have been better as despite the domestic shake-out among a number of politically-connected groups, Japanese foreign investment boomed.

Indonesia

Indonesia and Malaysia share similarities in the political dynamics of their business-government relations. Political structure and political power changed over times but one factor is consistent; the link to the power of Chinese-Indonesian capital. Similar to Malaysia, the ruling coalition's central dilemma was the relative economic weakness of the 'indigenous' Indonesian private sector alternative (Robinson, 1986; MacIntrye, 1991). This economic preference led to government intervention and to the fostering of Indonesian local businesses. The dominant political party (Golkar) did not act as a mediator for business interests. Using political power, it directly favoured state elites

(managers of state-owned enterprise, the military, and the president's family and, ironically, the very large Chinese firms) that government's policy was normally designed to contain. Business-government in Indonesia has been through several stages. Initially, after democracy, independence created a set linkage between indigenous people and the Chinese through party politicians, bureaucrats and the segment of local capital (Robinson, 1986). During Soekarno's (first Indonesia president) power (1940s), the government applied a strategy called Guided Economy. Under this strategy the focus of rent- seeking and backing moved away from parties towards senior civil servants and the military. In addition, government focus shifted in a decidedly more statist direction and the stated-owned firms grew fast. Guided Economy was found unsuitable in the early 1960s as it caused a deficit. Technocrats attempted to reform, but the bureaucracy, army, and Soekarno military policy disrupted the program.

Indonesian stabilization started under the Soeharto regime (second president who was in power for 20 years) in the 1966 Soeharto was assisted by a group of western-trained economists who designed a stabilisation plan that included a constitutional provision that expenditure could not exceed revenue. This new regime under the Soeharto Government increased its intervention in the economy. It was built on an explicitly corporatist model in which the parties -including the one in power -were involved in favour of vertical, state-sponsored interest organisations, including for the businesses of the Chinese capitalists (MacIntyre, 1991).

The political structure in Indonesia exhibits greater intervention in domestic economy compared to Malaysia. In the 1980s, the new form 'states' enterprise was mostly owned by the Soeharto family. The Indonesian political economy played a crucial role by its impact on the swings in oil price (MacIntyre, 1993). Yet MacIntyre (1992) argues that secular trends in the Indonesian political economy may come to play a more important role in supporting the trend toward liberalization as the private sector begins to organize and to press its claim on the government. While business interest varies by sectors, his assessment is that their demands are not necessarily limited to rent seeking; rather, their interest increasingly lies in rationalising government regulation of business, limiting gross cronyism and promoting a more consistent and predictable framework (it is not quote). Their concerns provide a good sense of the lingering weakness of the Indonesian industrial policy system.

The Philippines

In the 1950s, The Philippines had a greater economic potential compared to the other countries in the South East Asia region. By the 1980s, The Philippines could not keep their economic performance steady; in fact, the government was forced to fight with the most challenging adjustment crisis in the region. This poor economic performance was as a result of the government adopting the outward-oriented policies at the behest of the World Bank and IMF (Bello et. al., 1982). However this criticism is not true as domestic structure contributes more to poor economic performance than international pressure, particularly a combination of a deeply-entrenched class structure and weak political institutions, which have prevented the government from adopting more open and export-oriented policies.

The problems were not only because of government support for businesses or poor public administrators (Hutchcroft, 1994). The main problem was that the country has proven incapable of providing the basic legal and administrative structure for a market economy to function. The Philippines economic characteristics could be traced back to the nature of its business-government relations. Business organisations, mostly facilitated by the highly concentrated nature of family groups, concentrated more on manufacturing and service instead of agriculture as the basis of extensive countrywide protection.

The democratic institutions adopted from the United States during the colonial period provided opportunities for rent-seeking. In the late 1960s, the country was run by Marcos, during which the government attempted to develop a more centralized industrial policy capacity, particularly around the board of investments (Doner, 1991a). However it was not welcomed by the powerful oligarchy groups which tended to diversify the economy towards import-substituting activities. With the announcement of martial law, the social politic was no longer ruled by elected politicians. On this occasion the Marcos government in charge could build a new a base for foreign support but the real centre of decision- making power resided with the Marcoses. As a result a range of projects were handled by the Marcos family. The transition to new a democracy changed the government relationship with the private sector. The Marcos family and cronies had significantly reduced access to government and as a result the private sector non-crony opposition gained influence. However, the dominant family Marcos could still get access to government indirectly through their support for political candidates. Under the Aquino

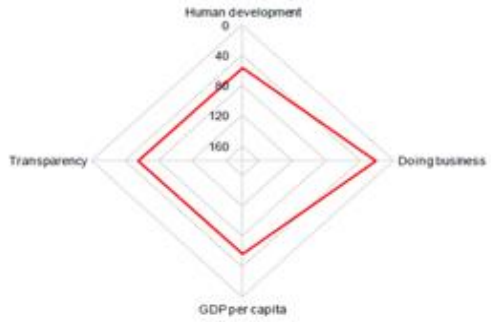
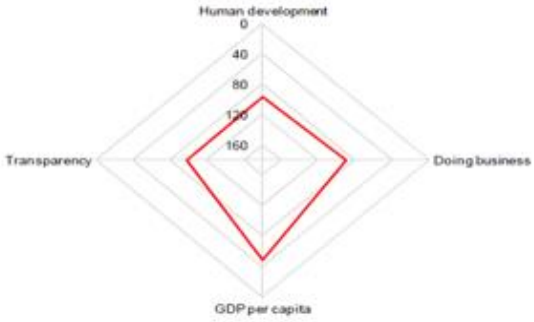
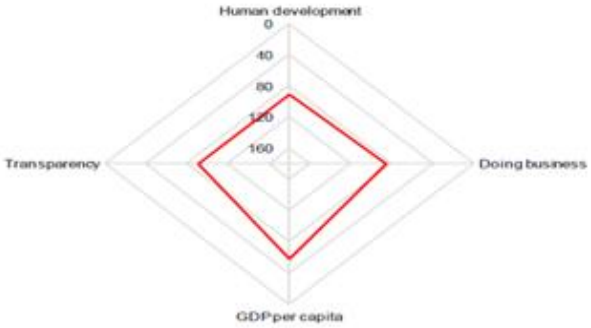
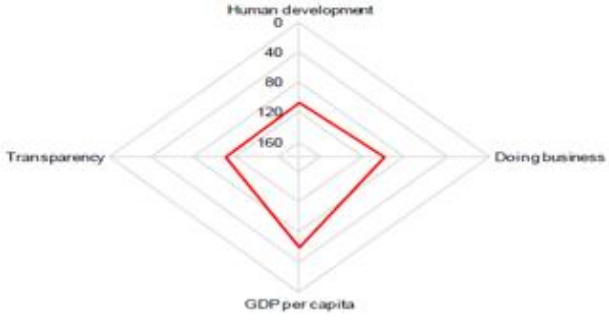
administrator, the political will was not strong enough to reform the relationship with the private sector until Fidel Ramos was in power.

2.2.4 Summary

South East Asian has increasingly nominated become the largest defence market in the world for the next few years. This prediction arise from the apparent retreat of political authoritarianism over 25 years in this region. Although democracy picture is still not the same as UK or US countries have been framed but countries like Indonesia, Malaysia, Thailand and Philippine, claim by some, are dictatorship in many ways tried their hardest to copy "democracies". In another way to understand the political dynamics in South East Asian is to focus on how elites role across the region in participating to regulate political conflict. This rising urban middle classes are taking a part in democracy only if it is in their favour or suit their interests. The other factors also important in shaping the region politic dynamic are religion, ethnic and the power of monarchy. The ethnic factor was rather strong in Indonesia and Malaysia as they have similarly hostile policies towards the Chinese minority in contrast to Thailand and Philippine.

South East Asia's openness to trade and investment is important for the world economy as many of its countries moving from inward-looking economies dominated by agriculture production, to industrialised, outward looking open to trade and capital flows. In addition the political system works also has significant influence on how open the countries toward investment. It shows below Malaysia was the most favourite place accessed of doing business (the chart shows ranking against 180 countries, with '0'being the top/most favourably assed country, Asian Development Bank, 2009).

Table 2(2.2) : Table summary

Country	Key Rankings
MALAYSIA	
THE PHILIPPINES	
THAILAND	
INDONESIA	

Malaysia economy has been described very open, with gross export roughly equal to GDP and net trade (export less import) worth 20% of economic output. This openness led the country to have the best growth rate in the region during 1980s and 90s (Asian Development Bank, 2009). However the openness of country toward investor did not make the country become the most favourite place of doing business. Like Malaysia, Thailand was quite open to international trade but it was one of the least accessed country for doing business. The chart made it clear that Transparency is more likely that factor which support for companies prefer place of doing business. Another example from Philippine, although foreign capital flows increase, the environment of long term-investment was not favourable and transparency among other reason such as shifting regulation, and corruption are the reason of Thailand was in the low rank of accessed place for doing business.

CHAPTER III: LITERATURE REVIEW

3.1. INTRODUCTION

Multinational enterprises (MNEs) that contemplate foreign direct investment (FDI) have to take the host country's characteristics into account, including the quality of institutions such as government, and the taxes that potentially affect the cost of MNE activity within the country. Government factors such as policies, bureaucracy, and regulation in host country, has changed in the attitudes towards FDI along with the ongoing process of integration of the world economy. The attitude is no longer one of control, or of placing restrictions on entry and the operation of foreign owned firms; these are being replaced by encouraging policies and conducive environments for FDI inflow (Kirkpatrick et al., 2006). This attitude of encouragement also means that the cost of doing business in a host country is lower due to attractive taxes.

The aim of this chapter is to review the theories of FDI and its determinants to provide a framework for an empirical investigation of the impact of government factors and taxes, among other FDI determinants. This study concentrates on the inward FDI that flows into host countries, therefore the review focuses on empirical studies, beginning with the location determinants of FDI, especially Dunning's paradigm, then narrowing to the role of government and taxes (direct and indirect) as determinant at both country and firm level. The final section of this chapter identifies the gaps in the existing literature and summarizes the contribution of the study.

The theoretical variety of approaches on FDI determinants requires categorisation of the theories by their common threads (Dunning, 1973; Cantwell, 1991). Some theories may be viewed as static and some as dynamic. Static theories only focus on factors that lead to the decision in favour of FDI, while dynamic theories consider more factors, such as the interaction with host industries or host countries. The FDI literature is growing rapidly since firms evolve into multinational organisations. Hymer (1960) was the first to systematically explain matters relating to the advantages of large multinationals, imperfect markets, and control. The issues were whether firms are better off locating

production in a foreign country rather than licensing or exporting. Vernon (1966) developed a theory on technological advantages, using it as the strategic market implication of the product life cycle. He then in the later study (Vernon, 1979) reassessed his own theory, emphasizing that multinational firms are now more geographically dispersed than the product cycle itself and that cycle has considerably shortened. Later on, a different aspect of FDI was analysed by scholars including Buckley and Casson (1976) and Caves (1982). However, Dunning (1973, 1981) was the first to provide a more comprehensive analysis of the advantage of ownership, location and internalisation (OLI) of FDI, although he received criticism for being repetitive, as will be explained in the next section. Nonetheless OLI theory provides a structure for a wide variety of variables that are believed to be important. The OLI framework has been widely used in empirical studies to investigate the locational determinants of FDI and will be reviewed further in the next section.

3.2. FDI THEORY

3.2.1. OLI theory – Ownership (necessary condition) and Internalisation (sufficient condition)

Dunning discovered that ownership and location advantages are the factors that explain why US affiliates were not as productive as their parent companies, but were more productive than their local competitors in the UK. He explored this finding whilst working towards his PhD in the 1950s. In the 1970s, Dunning wrote about ownership and location. This time he included the Removal of the European Common Market agreement (ECM) in the discussion. This removal would cause some realignment of the location economic activity in the ECM. It would also be likely to affect the competitive position of firms of different national origin and, in consequence, the ownership of production in the ECM (Dunning, 1993b).

The eclectic or OLI paradigm has remained the dominant analytical framework for explaining a variety of operationally variable determinants of FDIs and the foreign activities of multinational enterprises, as described in Caves (1982, 1996) and Dunning (1993). The comprehensive analysis by Dunning of eclectic paradigms explains three sets of independent variables as motives for foreign production undertaken by MNEs (Dunning, 1993). These three components comprise three sub-paradigms. First, competitive advantages of enterprises which conduct activities to engage in FDI (or

increase their existing FDI), and which are specific to the ownership of the investing enterprises. In the eclectic paradigm these are represented as O-ownership advantages. Assuming that all things are equal, ownership creates greater comparative advantage for investing firms, especially when compared to local enterprises. The second sub-paradigm is locational attraction (L). Enterprises choose alternative countries or regions to conduct MNEs' value added production activities. The more immobile the resources or created endowment which firms need to use jointly with their competitive advantages (beneficial in a foreign rather than a domestic sense), the more firms will exploit the O advantages by engaging with FDI. The third sub-paradigm of OLI theory is a framework to explain alternative ways in which firms may organise the creation or exploitation of their core competitive advantages, given the locational attraction of other countries or regions. With internalisation, firms will be able to provide a variety of inter-firm non-agreement by buying and selling goods and services and integrating intermediate product markets.

Similarly to internalisation theory (Buckley and Casson, 1976, 1985, 1998; Hennart, 1982, 1989; Rugman, 1982, 1996), the eclectic paradigm believes the greater the net benefits of internalising cross-border intermediate product markets, the more firms are likely to engage with FDI rather than licensing or franchise agreements with a foreign firm. In FDI activities, ownership is a necessary condition for a firm, as ownership advantages give essential rights and internalisation advantages in order that FDI activities have sufficient impact. Given the advantages of ownership, location advantages are believed to have additional value for a firm, whether through internalising its intermediate product market within its own home or in a foreign country.

This study specifically focuses on determinants of FDI location, however in theory it would be profitable for a firm to locate outside its home country if ownership and internalisation are achieved, and therefore it is necessary to review the other two factors in depth.

Ownership

The growth of international production has been assessed by economic and business theory as dependent on the uniqueness of firms' sustainable competitive advantage in relation to their foreign competitors (Dunning, 2000). Traditional neoclassical theory argues that FDI is impossible as all firms have equal access to the same resources within their own countries and also have access to immobile resources in

other countries. The eclectic paradigm, put forward in 1977, argued that Ownership (O) specific advantages reflected the capabilities of the home countries firms to invest (access to resources) and FDI would occur when the benefit of exploiting these advantages offset the opportunity cost of doing so (Dunning, 1988).

The extant literature on ownership recognised three main O specific advantages:

a. Advantages related to the possession and exploitation of monopoly power. These advantages are able to create some kind of barrier to other firms' entry to final product markets (Bain, 1956; Hymer, 1960; Caves, 1971, 1982; Porter, 1980, 1985).

b. Advantages of having a bundle of scarce, unique resources or capabilities. This gives other firms which do not have such advantages entry to factor or intermediate product markets (Dunning, 1985; Brash, 1966; Safarian, 1966). These identified advantages are a contribution from resource-based and evolutionary theories of the firm (Barney, 1991; Conner, 1991; Conner and Prahalad, 1996; Cantwell, 1994; Dosi, Freeman, Nelson, Silverberg and Soete, 1988; Foss, Knudsen and Montgomery, 1995; Saviotti and Metcalfe, 1991). See also the writings of Teece (1981, 1984, 1992) and of Teece, Pisano and Shuen (1997).

c. Advantages relating to competencies of the managers to identify evaluate and organise resources and capabilities from other countries or regions, and to coordinate with their existing resources for long-term benefit under their jurisdiction, including transaction costs, learning and accumulated knowledge.

In the last decade O specific advantages have changed, with greater emphasis on'their capabilities to access and organise knowledge intensive assets from around the world. In order to integrate this, firms need to engage not only with their existing competitive advantages but also with other firms in complementary value-added activities. Hence, the importance of alliance capitalism, and the need for firms to undertake FDI to protect as well as to exploit, their existing O specific advantages (Dunning, 1995). As a result, multinationality has expanded as an intangible asset in its own right. In response to this, MNEs have changed their orientation, leading to a relative decline in market-seeking (MS) and resource-seeking (RS) FDI, both of which exhibit more of the static O advantages of investing firms. Such movements (MS and RS) still remain, helping to explain a major part of first-time FDI, especially in developing countries (Dunning, 1999). However, the decline of static O advantages is followed by an increase in dynamic O advantages, which are efficiency-seeking (ES) and strategic-asset-seeking (SAS). In order for ES to be achievable: (a) the investing firm must already

be producing in at least one foreign country, and (b), both for intermediate and final products, trade must not be constrained by natural or artificial cross-border barriers. SAS FDI focuses on having intellectual capital located in more than one country, and on it being economically preferable for firms to acquire this outside, rather than within their home countries. In order for these four motives (MS, RS, ES and SAS) to be successfully explained by FDI theories related to O advantages, each of the motives needs modification.

According to Eirik Furubotn and Svejotar Pejovich, (1974) there are three types of ownership: the right to use, the right to enjoy an income flow generated by an asset, and the right to change an asset's form and substance. Related to foreign ownership, firms will choose to retain full control over their foreign operations and the right to change the form and substance of the asset. Some studies argue that ownership is not important in the presence of sufficient competition (Caves and Christensen, 1980; Borcherding et al., 1982; Millward, 1988). A study by Chibber and Majumdar (1999) using data from Indian firms supports the view that, after allowing for a number of critical firm and environment-specific factors, different categories of foreign ownership have varying impacts on a firm's performance. This study suggests that if foreign investors wish to enjoy relatively superior returns in a host country, they should think in terms of investing at levels that will provide them with control.

Internalisation

Studies of foreign direct investment often focus on internalisation advantages as an explanation for firms investing abroad. For instance, a study by Dunning (1979) and Rugman (1980) suggests that, in some industries high transaction costs induce firms to 'internalise' their foreign activities via FDI rather than export or employ a contract mechanism. The modern theory of multinational enterprise applies an internalisation approach in two main ways: (1) firms choose the least cost location for each activity they perform, (2) firms grow by internalising the market up to the point where the benefits of further internalisation are more than the costs (Buckley, 1988). Neither of these propositions is independent as the internalisation of markets will interact with the least cost location.

Dunning in his eclectic paradigm, included ownership advantages in his FDI analysis which according to Buckley is double counting with internalisation. The concept

of internalisation is to maximise profit as a strategic move. Buckley and Casson (1976) adopted internalisation of markets initially to develop a model of growth of the firm but this has often been abandoned by later scholars who take factors such as technology capability and/or marketing skill and/or management skills as given (Buckley, 1983a).

Some earlier studies have highlighted the reasons firms decide to invest abroad (Buckley and Casson, 1976; Casson, 1979; Caves, 1971; Coase, 1973; McManus, 1972), however Dunning's eclectic Theory (1979) and Rugman's internalisation approach (1980) have become the dominant paradigms that explain those decisions. The eclectic theory and internalisation approach are similar in the way they explain the existence of firm-specific or 'ownership' and country-specific advantages or 'location' advantages as the most important factors. However, both studies are agreed that this is not sufficient without 'internalisation' advantages. Moreover, these two theories fundamentally differ in that Dunning (1997) proposes that each of the advantages has to be satisfied individually for FDI to occur. In contrast, Rugman's (1980) internalisation approach, concentrates on the existence of firms' internalizing advantage as he argues that the other two advantages (ownership and location) are assumed to be already embodied in the firm's production function.

Generally, if an imperfect market exists, internalisation advantage will be essential. It is difficult to measure the importance of internalisation advantage; so many works and empirical tests have been done to distinguish where the ownership advantage ends and the internalisation advantage begins. The common parameter used in some studies is an industry's research and development (R&D) intensity (Horst, 1972; Dunning, 1980, 1988; Grubaugh, 1987; Kumar, 1987; Ray, 1989 Yu, 1990). R&D is thought to capture the firm-specific assets so that if the market mechanism breaks down, an internalisation advantage is created. Another variable that a number of authors have also used is a firm's advertising/sales ratio (Grubaugh, 1987; Kumar, 1987; Yu, 1990), which assumes that money spent on advertising and marketing generates firm-specific assets through brand recognition and product differentiation. Although the OLI paradigm is the theory applied by this study to investigate factors that influence the inflow of foreign direct investment in host countries, however, location (L) factors are the main focus to be measured as part of the FDI determinant.

3.2.2. Location

For the most part, neither economics nor business literature has given much attention to the role of location in the emergence and growth of cross-border activities. Location-related theories were initially designed to explain location production within a nation. However, in the last decade, interest in location-related theories has been shown by various experts. These include: economists (Audretsch, 1998; Krugman, 1991, 1993; Venables, 1998) and industrial geographers (Scott, 1996; Storper, 1995; Storper and Scott, 1995) in the spatial concentration and clustering of economic activity; economists concerning the role of exchange rates in affecting the extent, geography and timing of FDI (Cushman, 1985; Froot and Stein, 1991; Rangan, 1998); and business scholars (Porter, 1994, 1996; Enright, 1991, 1998) in relation to the idea that an optimum locational portfolio of assets is a competitive advantage in its own right.

Other theories such as international theory recognised locational advantage as an independent factor of transference resource. The OLI paradigm has always acknowledged the importance of countries' locational advantages as a key determinant factor of MNEs' foreign production (Dunning, 1998). There have been numerous studies on the geographical distribution of FDI and the location of the particular value-added activities of firms (Vernon, 1966; Knickerbocker, 1973; Rugman, 1979). There have been many empirical studies of where to locate FDI (Dunning, 1993; Caves, 1996); most studies on location produce different explanatory variables which depend on the motives of FDI, the sectoral composition, the home and host country of the investing firms, and other specific considerations. In other words, scholars have extended rather than replaced standard theories of location to explain cross-border value-added activities. In addition, some studies have embraced new locational variables; e.g. exchange rate and political risks, the regulation and policies of super-national entities (Brewer and Young, 1999), different cultures, and the different values between domestic and international location choices (wage level, demand pattern, policy related variables, supply capabilities and infrastructure).

The importance of the knowledge-based global economy and asset augmenting FDI leads scholars to take a more dynamic approach to both the logistics of the location of firms' activities, and to the competitive advantages of nations or regions. In the previous case, firms need to consider not only the cost of: traditional factors endowments,

transport costs, current demand levels and patterns, and type of agglomeration economies (Marshall, 1920), but also of related distance transaction costs (Storper & Scott, 1995), dynamic externalities, knowledge accumulation, interactive learning (Enright 1991, 1998; Florida, 1995; Malmberg, Solvell & Zander, 1996), spatially related innovation and technological standards (Antonelli, 1998; Solvell & Zander, 1998), increasing dispersion of created assets, and of the need to conclude cross-border asset augmenting and/or asset exploiting alliances (Dunning, 1995, 1998). Dunning (1977) established a concept of investment development paths, which he alleged explain the relationship between the levels of inward and outward FDI of particular countries and their stages of economic development. Dunning concluded that countries at an early stage of development attract inward investment because of their L (Location) advantages (e.g. their possession of natural resources and/or of low-cost labour), and at later stages, more efficiency- seeking related advantages.

Most literature reviews on MNE activity during the 1970s and 1980s focus on decisions to export from a home country and a foreign base (Hirsch, 1976; Johanson & Vahlne, 1977; Buckley & Pearce, 1979; Davidson, 1980; Dunning, 1980; Horst, 1972; Kravis & Lipsey, 1982; Moxon, 1975; Root & Ahmed, 1978; Schneider & Frey, 1985; Vernon, 1974). Once a decision is made to produce outside the home country then a location is chosen as the next step. By the 1980s, from MNE activities literature, it has become clear that MNEs heavily depend on three motives for their foreign value-added activities (market, natural resource and efficiency seeking), and Dunning (2009) posits that the increase in the new form of cross-border FDI creates another motive for FDI- the strategic asset motive.

Resource/Labour-seeking motives

The main purpose of firms which engage in resource/labour-seeking FDI is to obtain specific resources in a host country at lower real cost than their home country (Dunning, 1993). In traditional theory, these factors of production are assumed to be immobile among nations (locations), therefore they become comparative advantages for nations (locations). Firms that possess firm-specific advantages employ these advantages to operate abroad to seek low-cost natural resources or labour forces. In principle, firms would engage in resource-seeking FDI when they successfully produce or process technology with low-cost labour to make delivered cost in the host country, or other markets, lower than the cost of exports to the host country (Hymer, 1976).

Market-seeking motives

Dunning (1993) recognised that firms seek market expansion for a variety of reasons, such as to: expand existing domestic buyer-supplier relationships in host countries; obstruct or avoid being obstructed by rivals' entry into a particular host country; produce products close to local markets; lower transportation costs; and, to benefit from investment incentives. Some studies investigated whether market-seeking FDI would be more likely to occur in developed than developing countries (Lecraw, 1991; Kumar, 1998; Van Hoesel, 1999).

Efficiency-seeking motives

The motivation of efficiency-seeking FDI is designed to rationalise the structure of resource-based or market-seeking FDI. Efficiency-seeking is characterised by supply-oriented variables, especially related to the comparative advantages of immobile assets, e.g. labour, land and infrastructure (Hoover, 1948; Hotelling, 1929; Isard, 1956; Losch, 1954; Lloyd and Dicken, 1990). There are two types of efficiency-seeking FDI. The first is designed to take advantage of differences in availability and relative cost of factor endowments in different countries. The second takes advantage of economies of scale and scope and of differences in consumer tastes and supply capabilities (Dunning & Lundan, 2008).

Strategic asset motives

With strategic asset motives, firms intend to source advanced technology, marketing and management expertise. They are more likely to invest in developed countries than less developed countries because most advanced strategic assets and sophisticated customer segments tend to be concentrated in developed countries (Kumar 1998; Dunning, 1998). Recent studies have noted that firms invest in foreign countries not only to exploit but also to develop their specific advantages or acquire the necessary strategic assets in the host country (Almeida, 1996; Chang, 1995; Dunning, 1993, 1995; Frost, 2001; Shan and Song, 1997; Teece, 1992). This is supported by Kogut and Chang (1991), who found that Japanese firms tended to form a joint venture (JV) with US firms to source US technology. Another study that recognises Japanese firms' FDI in the US found that it was motivated mainly by capability development (Chang, 1995). For the last two decades, the movement of FDI has tended to be strategic and has made location the most considered aspect. To find the right location, firms require technical knowledge,

learning experience, management expertise and organisational competence. This statement is supported by scholars such as Bandera and White (1968), Scaperlanda and Mauer (1969), Vernon (1966, 1974) and Wells (1972). The OLI paradigm is arguably still the dominant theory used by foreign direct investment studies scholars, however it is not free from criticism as will be highlighted below.

3.2.3. Recent criticisms of OLI

Ownership advantages reflect when superior productivity is transferable within the organisation at national or international level. For instance, subsidiaries should perform better or at least as well as their parent organisation, and considerably better than their local competitors. Thus, when the subsidiaries perform the same or worse than their local competitors, and hence, much less well than their parent companies, this could be due to the non-transferable characteristics of the host economy or location-specific factors (Dunning, 1993).

Dunning extended his research on factors other than ownership (O) and location (L) by explaining that a firm's activity abroad related to the way in which it organised the generation and use of the resources and capabilities within its jurisdiction. This factor, termed internalisation (I), fully explained the extent and pattern of the foreign value-added activities of firms. It could also explain why such firms chose to generate and/or exploit their O specific advantages internally over acquiring or selling these, or their rights, through the open market. These three factors form a paradigm which explains the scope and geography of value-added activities by MNEs.

Proposition of the eclectic paradigm:

1. Firms of certain nationalities hold competitive advantage over other nationalities in supplying any particular market or set of markets. These advantages may come from the privilege of ownership or access to asset-generating income.
2. The advantages of internalising the markets for value-added reasons.
3. The extent to which firms choose to locate these value-adding activities outside their national boundaries.

As the person behind the concept of the eclectic paradigm, Dunning believes that this paradigm is best regarded as a framework for analysing the determinants of international production rather than as a predictive theory of the MNE.

The eclectic paradigm was presented by Dunning for the first time in 1976. It has been criticised on the basis that this paradigm is broader than other theories of internalisation; such us the Uppsala model (1975, 1977), the transaction cost theory (1975) and the Proterian framework of the 1970s. In theory, internalisation is built from a combination of firms' internal and external factors and the eclectic paradigm combines exogenous factors such as location and internal factors raised from ownership and internalisation. The OLI concept emerged from Dunning's thesis on the comparative advantages of US subsidiaries in the UK in the 1950s. He investigated whether firm's productivity due to the more proficient way US managers organised their resources. Dunning stated that the different productivity levels were partly explained by location (L) and partly by ownership (O). A specific characteristic of the outcome was that US subsidiaries were more productive than the local UK competitor (O) but less productive than the parent companies (L).

Criticism of the variables of OLI

It has been claimed that the explanatory variables in OLI are so numerous that the value each produces is almost equal to zero or extremely small. With regard to this argument, Dunning made three important points. The first was that every variable presented by OLI is well- grounded in economic or organisational theory. For instance, variables in location (L) include labour cost, tariff barrier, the presence of competitors and agglomerative economics which are contextually related to location theory. Internalisation (I) has the same root as the location variables which all relate to the costs and benefits of the different modalities of coordinating multiple economic activities. These two paradigms emphasise a similar argument to those underlined by the Coasian, Willimasonian and Penrosian theories of firms, that the higher the net innovation, production and transaction costs, the greater will be the incentive for firms to engage in FDI. The second important point of this criticism is that Dunning emphasised that the 'eclectic paradigm does not offer a full explanation of all kinds of international production but rather points to a methodology and a basic set of variables which contain the ingredients necessary for any satisfactory explanation of particular types of foreign value-added activity' (Dunning, 2001). The third point is that most criticism is directed towards general FDI and MNE activities, whereas general or partial theories like eclectic paradigm only explain some kinds of FDI and, the product cycle theory has little relevance to resource-based FDI.

Similar to Dunning, Knickerbocker's (1973) oligopolistic interaction approach is entirely dependent on the existence of a particular type of market structure. Kojima's (1971) normative macro-economic theory cannot easily incorporate intra-industry investment. Aliber's theory (1970, 1971) is only relevant for explaining multinational activity in different currency areas, and the risk diversification thesis by Rugman (1980, 1997) cannot simply explain much about strategic asset-seeking FDI. So if the studies above apply to different aspects of FDI and MNE activity, so does the eclectic paradigm. Dunning also emphasised that the OLI paradigm is a triumvirate, each element of which supports the others. For instance a firm's response to its exogenous location factors might also be because the firm itself influences its ownership advantages, including its ability and willingness to internalise markets. He also underlines that over time the separate identity of the variables becomes more difficult to justify.

Conclusion on OLI

The eclectic paradigm has an interest in explaining the international production of all firms from a particular country or group of countries, so that Dunning underlines that it is not for comparison with other international theories of the firm. Dunning admitted that ownership has direct links to internalisation, although he has emphasised that the OLI paradigm factors are not independent factors. In order to prove why internalisation is not under ownership he states that internalisation puts the internalising firms at an advantage relative to non-internalising firms.

Dunning responds to the criticism about the factors that determine the wave of M&As (Merger & Acquisition) or Greenfield investments which can only be explained by a reconfiguration of traditional OLI variables. The theory of asset acquisition (asset augmentation) seems to challenge research for long time and some insight into this have been presented by scholars such as Tom Wesson (1993, 1997, and 2001) and Shige Makino (1998). Dunning, linking this with O advantages, admitted that it is difficult to deny that the variables determining the wave of M&As are the same as those determining inbound greenfield or acquisition M&As. From this perspective, the eclectic paradigm can only be explained by a reconfiguration of traditional OLI variables.

Despite some of the criticisms on the eclectic paradigm, this theory is still extensively used by scholars to explain FDI for these reasons (Dunning, 1988):

1. The main focus of the eclectic paradigm is on explaining the international production of all firms from a particular country or group of countries, not of the individual firm, so that this theory is not appropriate for comparing the advantages and disadvantages of the paradigm with other international theories.
2. Although some O-specific advantages can be the direct result of firms internalising the market for their intermediate products across borders, because this internalisation gave the internalising firms relative advantages compared to non-internalising firms, it is appropriate to refer to internalising as a specific advantage.
3. Traditional eclectic paradigms may be uncomfortable dealing with the dynamics of international production. However, this theory can help to explain why an industry's or country's international investments may be different at two points in time. This can be explained by introducing changes in the exogenous or endogenous variables.
4. The eclectic paradigm has an add-on dynamic component as an extension of its constituent parts to embrace asset-augmenting FDI and cross-border non-equity ventures. In addition, it has a clearer acknowledgement of the increasing role of the access to ownership of resources and capabilities which positions this paradigm as the dominant analytical framework for examining the determinants of MNE activity.

This study focuses on factors that determinant FDI, and especially on location. Although factor L (location) from the OLI paradigm is the main reference, it is necessary to cite and explore the role of the other two factors, ownership and internalisation, in the decision to choose FDI over export. This study explores the effect of location factors on foreign direct investment in three separate chapter analyses at the industry (chapter V), country (chaper VI) and firm level (chapter VII) in several South East Asian countries. The industry analysis will emphasise the role of taxes (direct and indirect) as a determinant factor in some South East Asian countries plus China; the country analysis will focus on governance and corporate tax, using wider country data sets in South East Asia; and finally, the firm level analysis chapter will focus on the regulatory environment, including foreign ownership and tax, that impacts upon a firm's performance. The reminder of this literature chapter will therefore be structured around these three topics.

3.2.4. The effect of tax on the profitability of inward FDI

The theoretical literature on FDI and tax is extensive. There are three main streams of literature, coming respectively from the fields of international trade theory (Brander and Spencer, 1987; Dixit, 1984; Ethier, 1986; Ethier and Horn, 1990; Helpman, 1984; Hillman and Ursprung, 1993; Horstman and Markusen, 1987, 1992; Katrak, 1977; Lahiri and Ono, 1997, 1998; Motta, 1992; Ono, 1990; Smith, 1980), public finance (Devereux and Griffith, 1998; Keen, 1991; Janeba, 1995; Wildasin, 1989), and international business organisation (Casson and Pearce, 1987; Dunning, 1993). The impact of international tax differences on FDI is of increasing focus in theoretical analyses (Fuest, Huber and Mintz, 2005). The multinational's preference of location choice is the starting point of empirical analysis (Dunning, 1981). The eclectic paradigm (Dunning, 1981) identifies three advantages which need to be present for multinationals to decide to invest abroad, one of which is the advantage of location (L) offered by a host country. Multinational firms should be able to realise their firm-specific advantages compared to local enterprises to compensate for the cost of setting up activities in a foreign country. This broad perspective on FDI gives room for scholars to consider other factors which influence the decision. Besides the type of investment (horizontal and vertical), the theoretical perspective on the multinational's investment in a world of international tax differences underlines the importance of other factors influencing FDI, such as tax competition and tax incentives, on both income (direct) and non-income taxes (indirect). Direct income tax is a portion of individual or business income that is directly paid to government. This tax is also known as statutory tax and is imposed at different rates in different countries; for instance, Indonesia has a 20 percent corporate tax rate and China 25 percent. Indirect tax, on the other hand is less clear, as it is part of goods and services that are initially paid to the government by an intermediary, who then adds the amount of the tax paid to the value of products or services and passes on the total amount to the end user. Unlike direct taxes, indirect tax rates vary across industry.

In relation to the attraction of FDI (competition in FDI) in recent years, there has been a growth in tax competition literature (mainly in the field of public finance). To avoid a 'race to the bottom', coordination and harmonisation of tax rates have been of political interest in Europe for more than 45 years (Neumark 1963). Theoretical studies in public economies suggest that tax competition is harmful and tax coordination useful (Wilson, 1999; Feld, 2000; Wilson and Wildasin, 2004; Fuest, Huber and Mintz, 2005).

Tax competition (race to the bottom) is potentially harmful as it would erode tax revenue and cause tax distortion. It forces governments either to reduce expenditure or to raise other taxes that lead to a reduction in welfare. Empirical literature on tax competition has vastly increased in recent years resulting in arguments that are as diverse as the theoretical analyses (Hines, 1997, 1999; Devereux 2006). The literature supports the view that there is a constant association between tax and FDI which has developed somewhat over the years. This study investigates this same principle, the association between taxes and FDI, with emphasis on less obvious factors, such as indirect taxes, which potentially affect profitability. Although this study does not focus on tax competition and tax incentives, however, the literature needs to be explored and included due to the fact that lower taxes are more attractive.

Tax competition

The logical assumption is that, if other factors are constant, producers will move to whichever country has the lowest tax rates. But this is not necessarily the case, as countries with generous welfare states can offer capital, the advantages of an established infrastructure, accumulated experience, and have the ability to hold on to mobile factors of production, even levying higher tax rates. Wilson (1999) writes: "A central message of the tax competition literature is that independent governments engage in wasteful competition for scarce capital through reductions in tax rates and public expenditure levels."

A study by Baldwin and Krugman (2004) looked at the impact of tighter goods market integration on international tax harmonisation and tax competition when agglomeration economies are significant. Becker et al. (2012) explored the tax competition across German municipalities since tax is levied at national level and has a negative impact on attracting MNEs, employment, and fixed assets invested. The host country's government intervention on taxes (tariffs, quotas, tax holidays and training grants) would have substantial effects on the profitability of FDI, as posited by Guisinger (1995) who stated that effective protections significantly reduce the burden of taxation.

Before analysing the impact of tax on FDI it is important to identify the variables which determine cross-border investment activities, according to the OLI framework by Dunning (1977, 1981). Location becomes significant when transport costs are high and market size and prices are lower in the home country (Markusen, 1995). Most empirical

studies looked at country or company levels of data to explore the impact of tax on investment, but not many did so at the sector level. A study by Stowhase (2002) investigated whether in the primary sector, investment is mostly resource-driven so that tax rates and other economic parameters become irrelevant. He found that in Germany and the UK investment in agriculture and mining was not driven by tax incentives, unlike the tertiary sector which reacts very sensitively to tax rate changes.

Tax incentives

Governments award incentives to enterprises through their policies to attract investment. The inducements are designed to be measurable in order to increase the rate of return of a particular FDI undertaking or reduce cost or risk (UNCTAD, 2000). A study by Morriset and Pirnia (2001) reports that tax havens will attract FDI and a host country needs to understand how the taxes affect the composition of FDI. Another study by Coyne (1994) suggests that small investors are generally more responsive than larger ones to tax incentives. It because small companies have a limited budget and human resource, so that host countries with better tax incentive would be more attractive. This is related to the cost structure of small companies with a limited budget and human resources,

The advantages and disadvantages of tax incentives are relatively difficult to measure, but it is still important to take them into consideration, as countries need to realise that the market is imperfect. According to UNCTAD (2000), a regular review of the incentives regime will provide significant benefit for government in order to avoid revenue leakage. It can be done by eliminating excessive incentive or unnecessary tax breaks for investors. With this regular review of their policy, government could design incentive that will attract investment. A very early study by Barlow and Wender (1995), that surveyed 247 US companies, found that only 10 percent of companies listed taxes as their foreign investment strategy. They also found that 11 percent mentioned the host government. Although these numbers appear to be quite low, these factors are more attractive than other factors such as currency convertibility, guarantee expropriation, and host country politics.

Sectoral investments offer an attractive exemption from import duties on capital goods, equipment, material parts and inputs related to the production process (UNCTAD, 2000). From a slightly different perspective, a study by Robinson (1961), using panel data at firm level, surveyed 205 companies to identify differences of opinion between

government and the business community related to the major factors influencing a company's decision to invest. Most studies completed in 1984 used only US examples. Accountable institutions, such as Ernst & Young (1994) and Fortune/Deloitte & Touche (1997) found that in developing countries the effectiveness of tax is still of considerable importance to FDI.

Competition between countries trying to attract investors can be intense. Investors normally make a short list of targeted locations, especially if the potential host countries have a similar demographic. For instance, in a study by Charlton (2003) based on a General Motors case for investment in Asia in 1996, the shortlist was reduced right down to the Philippines and Thailand. Using tax as an incentive, the competition was fierce. Thailand was the most attractive location as it not only matched incentives offered by the Philippines, but also added a 100% tax refund on exporting car raw materials and a $15 million grant for a General Motors training institute.

Tax incentives would be seen differently in different types of companies. The impact of tax rates for example will generally be higher in export-oriented companies than in domestic- seeking markets or location advantages – see Reuber (1973) and Guisinger (1985) – and a start-up company would prefer incentives that reduce initial expense while existing companies would target profit (Rolfe, 1993). Some interesting studies into companies' behaviour towards tax incentives also made by Hartman (1984) and Boskin and Gale (1987) found that host tax regimes impact differently on company finances, such as equity or debt. The study is supported by Hubbard (1990) and Grubert (1998) pointed out that US companies use debt to finance foreign investment in host countries which have higher tax regimes, and equity where tax regimes are lower. This is because the debt generates interest deductions for the subsidiary which reduces taxable income. In emerging markets, a popular form of tax incentive is to reduce corporate income tax with a tax holiday or temporary rebates. For example, some Asian investment tax codes have included tax holidays but have different rebates and periods of abatement depending on the government's objectives (Morriset and Pirnia, 2001).

These types of incentives may not provide help for unprofitable companies but governments can use other tax instruments. Following existing literature, the focus here is on indirect tax and the role of governance, especially corporate governance, in making good decisions regarding strategic investment. Although incentives for indirect tax such

as exemption from custom duties have been restricted in most international and bilateral trade treaties, they do still exist. This study does not explore in detail the technicality of how tax rates are set but rather focuses on the influence of taxes (formulated by the authorities/government) on the inflow of FDI. However, it is important to distinguish between income taxes and non-income taxes.

The effect of Income and non-income tax (indirect tax) on FDI

Desai Hines's (2001) study investigated the impact of multiple tax instruments on host country tax systems. One of tax instruments is income tax, this instrument that the home country (the US) can claim as a tax credit on foreign income but it does not apply to non-income tax such as property tax, labour income tax or personal income tax. Different elements of the literature argue about taxation and FDI, and especially about the impact of host country taxes on the probability that a multinational will choose a particular location for investment. Bartik (1985) found that a significantly negative elasticity statutory corporation tax influenced new plant in 50 US states. In a similar study, Papke (1991) reported that for newly established firms in US (explored in 50 states), different industries respond differently toward effective tax rates. Devereux and Griffith (1998) also found a significant adverse impact of the average effective tax rate on the probability of US firms locating in France, Germany or the UK. Nonetheless, most of the literature mentioned above highlighted the association between FDI and corporate income tax rather than non-income tax (indirect tax), although indirect tax could be large and had significant impact on FDI (Desai, Foley and Hines, 2003; Slemrod, 1995).

The effect of tax on corporate income has been discussed and analysed in traditional literature concerning investment. This has highlighted that not only the tax rate but also the depreciation allowance and tax burden will differ for different sources of finance. The role of corporation tax for production and investment decisions should rely on a broader set of tax components rather than only on statutory corporate tax rates (Devereux and Griffith, 2002). A study by Egger and Loretz (2006) suggested applying both unilateral and bilateral effective tax rates among OECD economies using effective marginal tax rate (EMTR) and effective average tax rate (EATR) to explore the impact of corporate tax on the production and location decisions among OECD economies.

Buettner and Wamser (2006) support Desai and Hines's (2004) view that there is a significant effect, not only from direct tax but also indirect tax on capital invested in

property, plant and equipment. In that study (Buettner and Wamser, 2006) the results for corporation income tax are consistent with the traditional view that their impact is due to an increase in cost of capital. Tax other than income tax, such as taxes on goods and services used as inputs, might have a substitution effect on capital, dependent on whether the input sources (land, property or labour) are supplied elastically. Import duties would have the same consequences for goods and services if the foreign subsidiary relies on imports of intermediate inputs.

Most studies of FDI and tax explore types of fiscal incentive trends which offer full or partial tax holidays or rate reductions (Overesch and Rincke, 2008). One similarity when looking at a variety of taxes and other measures is that they all vary considerably between one sector of the economy and another. This is important as it implies distortion in the allocation of resources. The Bureau of Economics in the US analysed the data of multinational US firms in 1982, 1989, 1994 with regard to their FDI activities and the result indicated that indirect tax influences the location of profit-generating business activities (Desai et al., 2004). Associated with one of the study objectives is a need to consider more of the underlying profit incentives for inward FDI in Asian economies. Developing countries are interesting to look at in this study as they still depend on world economic movement and have vulnerable internal matters. From past experience when South East Asia was hit hard by the economic crisis of 1997, direct investment could be of substantial benefit to the economic development of those countries which tried to recover from the crisis. Countries such as Thailand, Indonesia, Malaysia and the Philippines, that were the most affected, decided to provide balanced treatment for foreign investors in order to restore their confidence (Thomsen, 1999).

It is part of foreign corporations' strategy to search for favourable tax treatment, and in response to that, governments create a special scheme to attract multinational activities. But this could be exploited by firms that legally avoid tax and leave governments with a loss of potential revenue (Devereux, Griffith, Klemm, 2002). In order to counter this situation governments started to look into solutions other than income tax. As mentioned in Desai, Foley and Hines's (2004) studies, indirect tax in the US is usually greater than income tax. From a general perspective, taxes affect capital invested in production. Recent FDI activities seem to adjust inputs to combine with output decisions (Grubert and Mutti, 1991) thus the choice of locations for production is important. The location decision based on the expected profit of an investment in each alternative

location serves not only to compare the tax but also sales and market conditions for the product (McFadden, 1974).

Location decisions might be affected in different ways by direct and indirect taxes on production, depending on the tax structure. Income tax puts pressure on output only through its effect on the cost of capital. There are two ways capital input could be affected by taxes; the first is related to the possibilities of substituting input in production and the second is related to the output effects. If the input (goods or services) is elastically supplied, tax raised would have no impact upon the cost of capital, and thus no impact on the location decision. On the other hand, if the input does not come originally from suppliers it might increase the prices thus affecting location choice (Egger and Merlo, 2011). The study by Buettner and Wamser (2006) is consistent with the conventional view that the impact of corporation income taxes is due to an increase in the cost of capital but other non-income taxes such as sales and skilled labour taxes have an adverse effect on investment.

An obvious hypothesis is that higher taxes discourage FDI (De Mooji and Ederveen, 2003). However, Hartman's papers (1984; 1985) were the first to highlight a way in which certain types of FDI may surprisingly not be very sensitive to tax. Several studies, including Hartman (1984, 1985) and Slemrod (1990), point out that the effect of taxes on FDI can vary considerably depending on the type of tax, measurement of FDI activity, and tax treatment in the host and parent countries. The main discussion in most literature is about how the policies to deal with double taxation may affect tax responsiveness. To protect MNEs from double taxation, two standard treatments are commonly offered by the home country: a credit or a deduction of foreign tax payment made by the MNE. The findings of Scholes and Wolfson (1989) with regard to this statement are counterintuitive; they show that US FDI comes from MNEs which under a worldwide system would be likely to increase when US tax rates increase. This is because, under a credit system (in the US) a domestic investor will bear full of the added US tax and MNEs under a worldwide taxation system would not see any increase.

Swenson (1994) investigated the differential impact the US 1986 tax reform would have on FDI across industries and found that FDI did indeed increase with greater average tax rates, but not using effective tax rates. Hines (1996) and Coughlin et al. (1991) examined whether state level taxes affect the location of US inward FDI as MNEs may

differ in their responses based on whether they face a territorial-tax or worldwide-tax system in their parent country. The evidence from literature seems convincing that a credit system to deal with foreign taxes from an MNE makes taxes in the host country relatively insignificant.

There are still some gaps in the literature as most evidence uses average tax rates as the variable interest which has clear errors-in-variable issues, and whether average or effective tax rates are preferred as a measurement of tax liability is rarely discussed. Only recently has the literature begun to examine other related corporation taxes. For instance, Desai et al. (2004b) provided evidence that indirect business taxes have an effect on FDI in the same way as corporate taxes. In relation to studies in Asia, Lucas (1993) emphasised an interesting finding on taxes in Asia and South East Asia, that FDI inflows are estimated to be less elastic with respect to the cost capital (including taxes) than wages. An interesting study by Chantasasawat et al. (2004), investigated the role of China in diverting inflowing FDI away from other Asian economies, in this case eight East and South East Asian countries. Although some evidence does show the movement of FDI inflows in China has had an effect upon the rest of the Asian economies, lower corporate taxes and higher degrees of openness play a larger role in attracting investment.

Investment along with location decisions can be affected by various taxes. Of these, the effects of direct and indirect tax depend on the details of the tax, the production technologies and on the market conditions under which the firm operates on its input and output sides. According to Hartman (1984), in the last decade most countries, especially OECD countries, have competed to reduce their company tax rates to improve their investment climate for foreign companies. A few subsequent papers have extended, modified or criticised Hartman's paper, including Boskin and Gale (1987), Newlon (1987), Young (1988), and Murthy (1989). Most previous empirical studies focused on corporate taxation and FDI employ statutory corporate tax rates for reasons of data availability (Hines, 1997, 1999; Mutti and Grubert, 2004). However, tax treatment of FDI is generally a complex issue therefore using the statutory rates can be misleading. An effective tax rate could capture the interaction of various tax rules within the investment. Scholes and Wolfson (1989) argue that the strong inflow of FDI in the US after the Tax Reform Act 1986 increased average tax. This is because of the existence of other general equilibrium effects of taxes such as good infrastructure. Grubert and Mutti (2000) used

more than 500 US tax returns to construct an aggregate data set on average tax rates and investment in plant and equipment by US multinationals in 60 locations.

The effect of taxes on FDI has been a topic of discussion in many studies as mentioned above, but the effect of indirect tax, particularly on FDI roles, has not really been established. A paper by Desai and Hines (2001) used US outward investment and found that both direct and indirect taxes have an impact on FDI. Research into indirect tax is still relatively limited; the most recent paper was by Buettner and Wamser (2009) who looked at the effects of indirect and trade taxes in a sample of host countries for German outward FDI.

3.2.5. Governance and FDI: A focus on South East Asia

Asian economies increasingly became a topic in FDI literature as their rapid growth relative to other world regions after the mid-1980s meant they became the most dynamic region in the world. Following this success, scholars tried to examine these countries' dynamic phase and sought to reduce their heterogeneity in the process of estimation (Nair-Reichert and Weinhold, 2000). Using different methods with the same location or vice versa, some studies produce different arguments concerning what influences FDI activities. Hsiao and Hsiao (2006) used panel data and time series to examine the Granger causality relations between GDP, exports and FDI in eight Asian countries and found that panel data causality analysis produces superior results to time-series causality analysis. Studies of FDI in Asia are very limited, especially with regard to taxes as the determinant factor.

FDI literature tries to explain variations in FDI inflow and what country-specific features encourage or discourage such flow. Singh and Jun (1995) and Caves and Blognigen (2005) provide comprehensive reviews of the features that have been identified by both theoretical and empirical literature. Determinant factors for investment in a location have been suggested in numerous empirical studies in developed countries (Culem, 1988; Friedman, Gerlowski & Silberman, 1991; Head, Ries & Swenson, 1995; Nachum & Wymbs, 2005; Shaver, 1998; Shaver & Flayer, 2000). Not until early 2000 did FDI determinants of location focus on transition economies (Boudier-Bensebaa, 2005; Campos & Kinoshita, 2003; Cieslik & Ryan, 2005; Deichmann, 2001 , 2003, 2007).

Factors that influence foreign investment by one country differ from those that would influence another; some regions even differ from other regions within a country. Childlow et al. (2009), using a multinomial logit model to examine location-determinant FDI, show that knowledge seeking factors alongside market and agglomeration factors are the main ones that influence inflowing FDI in one part of a region of Poland (Mazowieckie, including Warsaw), while other areas are influenced by efficiency and geographical factors.

For some countries, FDI plays an important role, including saving them from financial crisis. Some Asian countries (especially in 1997/1998) see FDI as a vital source during crises, especially in the export sector. Their openness towards foreign investors depends on their established policy. In most developing countries, the legal system is still not strong enough to put policy in place. For instance, in China, although the country has established a comprehensive environmental regulatory framework with a range of laws, regulations and standards, the strength and the enforcement are much weaker than in developed countries. One might argue that some developed countries relocate their 'dirty' activities to take advantage of less strict environmental regulations (Pearson, 1987; Dean, 1992; Copeland and Taylor, 1994).

The magnitude of the effect of government policies on FDI in a country depends on the other countries' (especially in the same region) policies. The Asian financial crisis in 1997 and the current world financial crisis are viewed by many as an opportunity to implement regulatory and institutional reform to attract more FDI. Investor confidence will increase investor activity (Bremner, Thornton, Prasso & Foust, 1997; Magnusson, 1997). Good governance, in place as part of government policy, is important for developing countries, as mentioned in a study by Globerman and Shapiro (2002). This study uses the authors' own composite index to examine the effects of governance infrastructure on FDI for developed and developing countries from 1995 to 1997.

An earlier similar discussion concluded that there was no confidence to invest between ASEAN neighbour countries (Indonesia to the Philippines and vice versa) because of a poor institutional environment (Huang, Morck and Yeung, 2004). Also, it was believed that there was no increase in FDI between ASEAN countries because of governments' slow recovery from the crisis of 1997. After the crisis, ASEAN countries such as Indonesia, Singapore, Malaysia, Thailand and the Philippines created reforms to

recover. For instance, Singapore rebuilt internal reforms and created restrictions on international competitiveness (Chia, 1998). Malaysia focused on its banking system (Athukorala, 1998), while Indonesia and Thailand focused on implementing political, institutional and regulatory reforms (Chowdhury, 1999 & Poon, 2001) but still failed to attract FDI (ASEAN, 2004). One of the reasons why there was no increase in inward FDI between ASEAN countries was perhaps because other non-ASEAN countries took the opportunity to fill in for the lack of FDI activity. Since the crisis, many studies have explored what the ASEAN countries needed to prioritise. Lopez-de Silanes, Shleifer and Vishny (1997, 1998, 2000) believed that good governance and legal systems are important for economic growth and this was supported by Levine (1998, 1999).

Asian countries, as newly industrialised economies, need to pay more attention to good governance, especially the separation of control from ownership. The agency problem between controlling and outside shareholders is potentially serious, particularly for large firms with many subsidiaries (Bertrand, Mehta, and Mullainathan, 2000; Claessens et al., 1999; Johnson et al., 2000; Nam, 2001a, 2001b). Kaplan, in a study in 1997, mentioned that corporate governance regulation by Stock Exchange Commission (SEC) 1992 influenced the structure of US corporate governance in the 1990s. In that regulation, there were two significant changes. One was the lowering of shareholder's costs against underperforming management whilst loosening the rules for shareholder communication. The other regulation demanded that public companies provide more detailed disclosure regarding top executive compensation and its relation to the firm's stock performance. This study is supported by Alba, Park and Wang (2009) who hold that the reshaping of US corporate governance in 1992 had a negative impact on Japanese M&A FDI into the US.

Although since the recent global financial crisis Asian economies are considered still to be growing but with a lagged development of their legal systems, there are still social problems such as corruption. Corruption has been recognized as a challenge in most countries in Asia, including China, Indonesia, the Philippines, Thailand, and Korea. FDI determinant modelling is complex. A study by Wei (2000) mentioned that the 'popular press and policy circles seem to believe that corruption does reduce inward FDI, but this to not always the case when evidence shows that Indonesia, Thailand, and China still attract large FDI in spite of their perceived high record of corruption. This is supported in studies by Wheeler and Mody (1992) and Hines (1995), who found no

negative impact on FDI from corruption. However, some more recent analyses have reported a statistically significant negative impact of corruption on FDI (Wei, 2000; Smarzynska and Wei, 2000).

Institutions are expected to be an important determinant of FDI activity, especially for less-developed countries. Poor institutional activity will give poor legal protection of assets, increase the cost of doing business and finally lead to poor infrastructure and expected profitability falls. Estimating the significance of the effect of institutions on FDI is difficult as there are no accurate measurements of institutions. The common measures are a composite index of a country's political, legal and economic institutions, developed from survey responses from officials or businessmen familiar with the country. Wei's papers (2000a,b) show that a variety of corruption indices are strongly and negatively correlated with FDI, though this contradicts the finding by Wheeler and Moody (1992) who did not find such evidence. Hines (1995) anticipates a negative impact from applying the 1977 US foreign Corrupt Practice Act which postulated penalties for US multinational firms found to be bribing foreign officials with respect to US FDI. This study provides hope of even more convincing evidence in the future.

In theory, the encouragement of inward investment can be explained in terms of compensation for externalities by the host government. As mentioned earlier, Dunning (1996) identified four motives for MNE activity: resource-seeking, efficiency-seeking, market-seeking and strategic asset-seeking. UNCTAD (1998) added two other FDI determinants, namely, the host country's policy framework and the capacity for business facilitation. Business facilitation capacity refers to the provision of a healthy government conducive to foreign investors. The movement of capital motivates governments to create a desirable tax policy for FDI and provides pressure to harmonize the local tax system with the international system, especially for indirect tax which can be unclear. This government motives (capital movement), in competing to attract investors, extend this study to explore other policies, especially in Asian countries, such as their regulations and related measures, particularly with respect to government policies (bureaucracy) which have similar effects on the profitability (potential and actual) of inward investment. Most investors, especially those who are risk averse, would be cynical about issues such as weak of corporate governance, legal systems, and human rights records which are known to be common in most Asian countries. FDI expects to have a positive relationship with good governance, including bureaucracy, however previous studies on the

determinants of increasing or decreasing FDI concentrate more on other factors, like the size of the host country, macroeconomics such as inflation, exchange rates, labour costs, and the host country's risk profile, but not many look at bureaucracy (Froot and Stein, 1991).

Tax policies on FDI are different in each country. In some countries, policies not only reflect differences in their economic structure but also historical relationships with investing countries. Based on income, lower income countries rely on tax holidays and import duty exemption, whereas higher income countries offer investment allowances or accelerated depreciation but tax in general would impact the net return on capital. As it influences capital movements between countries, the tax effect would be one of the priority considerations for each country's policymakers. Thus, this research will also evaluate how tax and other policy or regulatory problems affect multinational companies.

This study will also examine the extent to which other policies, regulations and related measures, have similar effects on the profitability, either potential or actual, of inward investment in Asian countries. Theories predict that foreign investment has a positive effect on the governance of a country (Shleifer and Vishny, 1986). In addition, as foreign corporate practices are more likely to be superior to those prevailing in the host economy; foreign ownership participation may provide information and encourage the adoption of superior practices in areas such as information disclosure, internal checks and balances, and accounting standards (OECD, 2002).

The other important issue is to conduct an appraisal of the extent to which these distortions in underlying profitability have influenced observed FDI flows. The final objective for this research will be to use the information gained to identify policy implications for governments towards inward FDI, with particular reference to selected Asian countries (Indonesia, the Philippines, China and South Korea). Many studies have been done which identify the influencing factors of FDI, namely the advantages and disadvantages for the host country. This research will explore a new angle on the aspects related to specific tax instruments and government (bureaucracy).

Location advantage as a source of market imperfection has been highlighted on the FDI operation by Dunning's third explanatory condition of FDI, and hence the government policies run by host countries are increasingly important. Several studies

argue that countries with government policies that support exchange rates, corporate taxes and FDI incentives, will contribute to a more favourable institutional environment and are more likely to have a positive impact on affiliate performance in host countries (Child et al., 2003; Dhanaraj & Beamish, 2004; Lee & Caves, 1998; Luo, 2003; Luo & Peng, 1999; Pangarkar & Lim, 2003).

FDI movements vary according to the nature of FDI strategy. For instance, the entry mode of export or import-oriented capital source (Guisinger, 1985; Root, 1982). Government regulation also has an important impact on this strategy as government policies on subsidies and restrictions could increase market imperfection. Internationalisation literature provides no explicit details of the impact of government policies on FDI, however it does implicitly expose the possible deterrent to FDI; foreign firms' lack of familiarity with host government policies (Bhagwati, 1988).

Government policies on trade protection should make firms more likely to substitute affiliate production for exports to avoid the costs of trade production. This is commonly named tariff-jumping FDI. Comparatively few studies test this hypothesis, perhaps because the theory is fairly simple and general. Grubert and Mutti (1991), Kogut and Chang (1996), and Blognigen (1997) examine this using industry-level measures. As pointed out by Buckley and Casson (1981), one can think of exports as involving lower fixed costs, but higher variable costs of transportation and trade barriers. This suggests the transition from exports to FDI once the foreign market's demand for the MNE's products is large enough (Markusen, 1984). Blognigen (2001) considers that trade flow may be either in finished products or intermediate products. He examines product-level trade and FDI data for the Japanese 10-digit Harmonized Tariff System (HTS) and finds that new FDI in the US by Japanese firms increases Japanese exports of related intermediate inputs for these products, whereas it leads to a decline in Japanese exports of the same finished products.

In numerous studies, the host countries' economic location includes market size as indicated by Gross Net Production (GNP), Gross Domestic Product (GDP), or growth rates as indicators of macroeconomic conditions which have frequently been found to be positively correlated to FDI (Contractor, 1991). Some may argue that market size does not explain the cost reduction strategy of FDI and how foreign firms compete with local markets. Nevertheless, it explains the importance of government policies in at least two

ways. First, fiscal and monetary policies that stimulate or deter growth are important for market size and growth rates for all goods and services in the economy. Second, government budgets are important for market size and growth rates as they have a direct or indirect effect on some sectors of the economy. The other important government policy on internationalization is its role in the determination of exchange rates, especially when currencies are overvalued or undervalued by purchasing power parity (Contractor, 1991). The common hypotheses relating to FDI is FDI flows in to the host country's which has lower currency than home country's (Aliber, 1970, 1971; Froot and Stein, 1989; Caves, 1988).

Brewer (1993) investigated the impact of government policies and market imperfection on FDI. Market imperfection occurs when the perfect market assumptions are violated; for instance, foreign-made cars are more expensive when bought from countries that do not have a manufacturing base. Market imperfection can be decreased/increased by government policies and also applies to FDI. Internalisation theory views government policies as creators of market imperfection, making FDI less attractive.

Government policies that are relevant:

- Monetary policies (money supply, foreign exchange rates, and interest rates). These policies potentially improve firms' competitive position by enabling them to export to foreign countries from an under-valued currency to an over-valued currency (Aliber, 1970, 1971; Caves, 1988; Froot and Stein, 1989).
- Capital controls and other restrictions on the transfer of international funds. Both policies directly affect capital controls which restrict outbound FDI and fund transfers. For instance, remittances of profits that affect inbound FDI (Bruck and Lees, 1968; Itagaki, 1989).
- Transfer pricing policies. This type of policy restricts firms in terms of the pricing of the goods and services that are transferred internationally between related firms within the corporation group. This policy aims to protect domestic firms but discourages FDI as a consequence. There is extensive literature on the economic and legal aspects of transfer-pricing (Booth and Jensen, 1977; Copithorne, 1971; Hirschleifer, 1976; Lall, 1973; Lessard, 1979; Mathewson and Quiirin, 1979; Nieckles, 1976; Prusa, 1990; Rugman and Eden, 1985). Transfer-pricing is closely related to tax-issues (Boskin and Gale, 1987; Caves, 1982; Hartman, 1984; Jun, 1990; Root and Ahmed, 1978; Slemrod, 1989; Young, 1988).

- Competition policies potentially discourage foreign firms from undertaking FDI projects. This type of policy is usually absent in developing countries or applied ineffectively (Brewer, 1993).
- Labour relations policies. One aspect of FDI strategy is low cost labour, so government policy on a minimum wage or holiday leave can potentially deter inbound FDI in host countries and encourage outbound FDI (Bewer, 1993).
- Intellectual property rights and other government licensing policies (patents, trademarks, copyright and licensing agreements). This type of government rule can affect the relative attractiveness of FDI (Bewer, 1993).

Firms need to analyse the host country's government regulation from a comparative cross-national perspective. Individual national policies will not impact FDI; rather, the effects of one government's regulations are dependent on their features compared to another government's regulations. In a bilateral host-home relationship, policies can either offset or reinforce the effect of one another's policies on FDI. The home country can adopt subsidies on inbound FDI and restrict outbound FDI while the bilateral partner (host country) does the opposite (Contractor, 1991; Guisinger, 1985). The effects of government policies on FDI depend on the changes in policy as well as the difference in the levels of policies of one country compared to those of others. For instance, developing countries tend to liberalise their policies towards FDI, and this affects inbound FDI in a country dependent on the relative scale of that country's policies compared to other countries' changes. FDI is a multidimensional, evolutionary process. Government policy effects differ across FDI decisions and flows (inbound or outbound), it depends on the types of FDI such as new establish FDI, reinvestment of earnings, funded by long-term or short-term debt. In addition to that, timing when the FDI was conducted is also important. . The table below (Table 3.1) summarises how policies affect host and home countries' FDI:

Table 3(3.1): Policy impact on FDI

Increase	Host country (Inbound FDI)	- Some protectionist import policies - Weak enforcement of intellectual property, protection - Subsidies on inbound FDI - Undervalued currency - Weak antitrust (competition policy) measures against acquisitions by foreign-owned firms - Government procurement policies that discriminate against foreign firms, but not against foreign-owned domestic firms - Technical standards setting processes that exclude access by firms that are not domestic firms, whether domestically owned or foreign owned
	Home country (Outbound FDI)	- Overvalued currency - Subsidies on outbound FDI - Export control - Price control
Decrease	Host country (Inbound FDI)	- Overvalued currency - Increased restrictions on inbound FDI - Price controls - Some import restrictions on inputs to FDI projects - Export controls on outputs of FDI projects - Restrictions on remittances of profits from subsidiaries to parents
	Home country (outbound FDI)	- Undervalued currency - Wage controls - Export subsidies

Source: Government policy effect on FDI (Brewer, 1993)

Froot and Stein (1991) provide evidence using imperfect market conditions to analyse why a currency appreciation may increase FDI by a firm. This is because appreciation of the currency leads to increased wealth and provides the firm with more low-cost funds to invest relative to the firm's counterparts in foreign countries that experience devaluation of their currency. However, Klein and Rosengren (1994) provide evidence that exchange rate depreciation increases FDI using various samples of US FDI disaggregated by country source and type of FDI. Another study that supports the effect

of exchange rates on FDI is by Blonigen (1997) who, using industry-level data on Japanese merger and acquisition FDI into the US, finds a strong hypothesis that exchange rates increased inward US acquisition FDI by Japanese firm. Similar studies were also conducted by Grubert and Mutti (1991), Swenson (1994), and Kogut and Chang (1996). Lipsey (2001) and Desai (2004) examine the effect of large sudden exchange rate swings during the financial crisis of the late 1990s and find that FDI flows are stable. Due to uncertainty and expectations about future exchange rate movements, Cushman (1985) investigated this unpredictable movement. He finds evidence that an expected real appreciation of the home currency increases FDI, while the current level of exchange rate has no consistent significant impact. Studies by scholars such as Campa (1993), Goldberg and Kolstad (1995), and Tomlin (2000) had similar findings that exchange rate uncertainty will increase FDI by risk-averse MNEs if such uncertainty is correlated with export demand shocks in the markets they intend to serve.

FDI, in terms of capital-scarce developing economies, implies access to not only capital, but also advanced technology and know-how, managerial expertise, global marketing networks and best-practice management systems of corporate governance. As a result of globalisation, increasing multinational enterprise production movement networks increase several functions from one location dispersed over multiple countries, in order to maximise the benefits offered by different locations. Some East Asian countries/locations, such as Hong Kong, Korea, Taiwan and Singapore, experience developments which have stronger advantages for attracting FDI compared to other countries on the same continent, such as Indonesia, Malaysia, the Philippines, and Thailand (Guha and Ray, 2004). The initial advantage was mainly to exploit cheap labour, however rising wages are likely to have thinned this advantage over time. So if China, Hong Kong, Korea, Taiwan and Singapore continue to attract high FDI, Indonesia, Malaysia, the Philippines and Thailand must have some dynamic source advantage other than low labour costs.

The movement of FDI flows varies from more advanced countries to less advanced countries. Hattari and Rajan (2009) investigate trends and drivers of intra-Asian FDI flows, using the gravity model to test fourteen developing Asian countries for the period 1990-2005. This study indicates that intra-regional activity between emerging Asian economies is driven by economic factors such as market size (host country), export intensity, real exchange rate changes, financial depth, institutional factors (political risk

and legal system), and openness. Herzer et al. (2007) re-examined the FDI-led growth hypothesis for 28 developing countries in Latin America, Asia and Africa, and found there was no clear association between the growth impact of FDI and the level of per-capita income, the level of education, the degree of openness and the level of financial markets in these countries. The study further explained the reasons for the failure to find a relationship, which might simply be because FDI as a share of GDP during the data period (1970s and 1980s), was rather small, so too marginal to have a serious growth impact. Also, the paper does not consider the range of possible factors that may affect the FDI-growth relationship, such as the difference between countries and types of FDI and the destination sector.

For countries with developing economies – most countries in Asia – FDI has become increasingly important as a source of funding to help in debt crisis and to balance loan and equity capital in private foreign capital inflows (Chuhan, Perez-Quiros & Popper, 1996). In addition, FDI for those countries' governments can also be a medium for acquiring skills, technology, organisational and managerial practices and access to markets. Noorbakshs, Paloni and Youssef (2001) evaluated the argument that developing countries might enhance their attractiveness as locations for FDI by pursuing policies that raise the level of local skill and build up human resource capabilities and they found that these factors (skill and human capital) were significant determinants of FDI inflows and increasingly so through time.

Only a few studies have been conducted on heterogeneous firms and their decisions concerning foreign activities, this is partly because of a limited availability of micro data. Most studies on determinants of FDI have been undertaken based on aggregate (country-level) data. Dunning et al. have provided macro (country) level data demonstrating the increased internalisation of many nations over the past decade. Rugman and Verbeke (2004a) argued that the country-level data gathered by Dunning et al. broadly supported the idea that regions matter, however it was not highlighted enough of the significance. Meanwhile, firm-level data refutes any simplistic notion of global integration and its benefits.

Firm-level data on FDI is usually used to analyse firms' performance and has been adopted in many empirical studies (Guisinger et al., 1989; Sullivan, 1994; Contractor et al., 2003; Lu and Beamish, 2004; Hennart, 2007). Firm level data can capture individual

strategic decisions made by corporations that seek to compete and look for paths of international expansion. The importance of firm-level studies has increased in discussions aimed at understanding the underlying forces that motivate FDI; for instance, how multinational activity affects national labour market requirements. Yet access to empirical evidence is mostly based on aggregated data, as firm-level data has so far been available for only a limited number of source countries.

3.2.6. The Firm level impact of ownership, taxation and the regulatory environment on firm performance

Literature on performance differences among firms is a dominant issue in the field of strategy management (Hawawini, Subramanian and Verdin, 2003). In industrial organisational tradition, industry structure is the dominant factor of firm performance (Porter, 1985), however recent strategic management studies have made a significant contribution to explaining that firm specific-factors are the main determinant on firm performance (Rumelt et al., 1994; McGahan and Porter, 1997). Most empirical studies on performance use the banking industry as a sample, while this study uses manufacture companies sample based on sectors e.g. food or textile. Some of the literature on ownership effect on firms' performance is influenced by the property rights hypothesis (Galbreath, 2005; Pradeep and Majumdar, 1999), which emphasises that foreign ownership displays relatively superior performance.

Some studies have argued that ownership is not important in the presence of sufficient competition (Caves and Christensen, 1980; Borcherding et al., 1982; Millward, 1988). The article written by Dollar et al. (2005) investigated investment climate and firm performance through profit and rewards (worker wage). The study used the assumption that greater productivity means greater rewards under fairly general (product market) conditions and with two different data sets (local firm and all firms), drew the conclusion that investment climate matters for productivity levels, wages, profit and growth rates.

A study by Hallward-Dremier et al. (2006) revealed that both ownership and investment climate matter to measures of investment, productivity and growth. This is because they found evidence that firm performance in the banking sector has a positive correlation with foreign and private ownership, light regulatory burdens, limited corruption, technological infrastructure and labour market flexibility. A poor investment

climate will have an influence at both firm and industry levels. At the firm level it tends to impact on the cost of production. Meanwhile, at the industry level, it relates to market structure and competition. Manufacturing and high-value service sectors will most likely have the most impact as they require more intensive use of 'inputs' of logistics, infrastructure, and regulation (Collier, 2000). Early studies used industry-level (or even country-level) data to examine macroeconomic factors such as exchange rates, taxes and tariffs as determinant factors of FDI, while more recent work has used firm and plant data to explore these hypotheses.

A later chapter of this study firm performance is measured based on the sale and profit made by the firm. These factors could be influenced by external factors such as market structure or internal factors such as efficiency and effectiveness in business. In the strategic management literature, there are two streams that influence a firm's performance. They are Structure-Conduct-Performance (SCP) and the Efficiency Paradigm (EP). SCP implies that a structured market is more important than a competitive advantage (Buzzell, Gale & Sultan, 1975; Miller, 1986; Miller & Freisen, 1986; Smith, Gutherie & Chen, 1989), while EP supports unit business activities through their competitive advantage (Wernerfetl, 1984; Rumelt, 1984; Hamel & Prahalad, 1990; Barney, 1991; Conner, 1991; Harrison, Hitt, Hoskisson & Ireland, 1991). Although the two paradigms have slightly different views, both SCP and EP have identified the factors that influence a firm's performance. SCP literature focuses on industry factors which link directly between industry structure and performance through the activities of buyers and sellers (Scherer, 1980), whereas EP focuses on unit business activities (unique resources). Supporters of EP do not believe there is a link between performance and industry structure. EP assumes all private industries (non-government regulated), regardless of their structure, are competitive (Demzet, 1973).

In the Industrial Organization Economics literature, the main argument for SCP was that an industry's characteristics are a firm's determinant factor' (Porter, 1980). Another study by Scherer (1980) also investigated the consistent differences in performance between industries. Theoretical frameworks from the SCP model highlighted the existence of a deterministic relationship between market structure and profitability. The SCP model constrains the behaviour of its component firms, which leads to industry-specific performance differentials between firms (Mason, 1939). An important line of research within this stream is the role of a firm's size as a factor in

explaining performance through profitability (Baumol, 1967; Hall and Weiss, 1967). The presence of barriers in firms prevents mobility and competition between industries (Caves and Porter, 1977; McGee and Thomas, 1986) and reduces the resources available to a firm.

Schmalensee's 1985 study was the initial investigation to find the contribution of industry and firm factors to overall profitability using market share to measure heterogeneity among firms. The study reported that industry membership accounted for around 20 percent of observed variance, and that market share accounted for a negligible amount. This left a total of 80 percent of variance unexplained. To respond to Schmalensee's study, Rumelt (1991) tried to explain the remaining 80 percent with further investigation. He extended the data to four years from one year and added more terms to measure inter-temporal persistence in industry effects, year effects, corporate effects, and effects from corporate/industry interaction. The results showed that industry membership explains 9 percent of the performance and 44 percent was explained by business unit activities, which raises the debate on the relevance of industry, business unit factors and diversification as determinants of profitability. Research tends to lead to the assumption that the relationship between market share and performance is ambiguous (Prescott et al., 1986), so EP appears to challenge the interpretation of SCP through the relationship between market structure and the performance of firms' efficiency.

EP views a return above average as effective competition (Brozen, 1979; Demsetz, 1973; Schumpeter, 1942) and firms can achieve that through satisfying demand with lowering costs which over time will increase their share of the market. Unlike SCP, EP analyses the dynamic environment by understanding and predicting the result of a process. Dierickx and Cool (1989) applied a process approach to explain that unique resources are not traded but can be developed over time to enhance reputation.

The SCP paradigm takes competition into consideration but only focuses on how firms compete with known rivals in a familiar industry structure. EP allows firms to develop broader competition through unique resources and satisfies current and future customers. This concept assumes that an industry is heterogeneous and emphasizes the relationship between a high concentration industry and profitability and a high concentration industry and entry barriers. An article by Jacobsen (1988) finds that concentration has an insignificant effect on profitability when other factors are controlled. Rumelt (1991) stated that the most important rents (profit) are generated by resources or

market position as units of business rather than membership of a group of industries. Most studies which support EP should focus on a unique resource as a firm determinant of performance (Wernerfetl, 1984; Rumelt,1984; Prahalad & Hamel, 1990; Barney, 1991; Conner, 1991; Harrison, Hitt, Hoskisson & Ireland, 1991), not on the industry alone (Porter, 1979, 1980, 1985, 1987; White, 1986; Miller, 1986; Miller & Freisen, 1986; Smith, Gutherie & Chen, 1989).

Factors that influence a firm's performance

Of the two paradigms, SCP concentrates on industry variables and EP concentrates on a firm's characteristic variables. Investigating the determinant factor using a firm's level data is similar to an approach used by some authors in the macroeconomics (Knack and Keefer, 1995; Acemoglu, Johnson and Robinson, 2001) or social infrastructure literature (Levine and Renelt, 1992; Rodriguez and Rodrik, 2000; Dollar and Kraay, 2003). This study specifically follows Dollar, Hallaward-Dremier and Mengistae's (2005) investigation of firms' determinants of performance that focus on the investment climate (infrastructure, role government, and regulation) and ownership. Hallaward-Dremier et al. (2006) revealed that both ownership and investment climate measure the attraction of investment, productivity and growth as they found evidence that firm performance has a positive correlation with foreign and private ownership, light regulatory burdens, limited corruption, technological infrastructure and labour market flexibility. From studies above, it is clear that the factors which influence firm's performance come from outside and inside of the firm.

<u>External factors</u>

- Investment climate

An article written by Dollar et al. (2005) investigates investment climate and firm performance through profit and rewards (worker wages). The study used the assumption that greater productivity brings greater rewards under fairly general (product market) conditions. Using two different data sets (local firm and all firms), the study concluded that a government's role in providing an effective regulatory framework for infrastructure (telephone lines, power), open access to international competition and finance seems more important than general issues such as governance and corruption.

- Competitive condition

Firms which have export-oriented strategies are more conducive to superior microeconomic performance. Harvey Leibenstein (1976), stated that firms that have a relatively greater level of export sales face competitive pressure from firms in overseas

markets. Imported finished products will also affect the competition for domestic industry. However, there is no evidence of how this will impact on firm performance. The study by Bastos and Nasir, (2004) suggests that competitive pressure is the most important factor driving productivity levels in Eastern Europe and Central Asia compared to government regulation and infrastructure.

- Government and regulatory policies

The role of government in firm performance has been discussed in a number of fields amongst them interest group pluralism, class theory, public choice, organisation theory and business politics strategy (Shaffer, 1995). The public choice model underlines that firms can negotiate in order to gain government favours, such as sanctioned entry barriers and favourable subsidies. Strategic management scholars focus on the effect of government regulation between industries and try to control the political agenda for their competitive gain.

Internal factors

- Organisational factors

A firm's size can influence performance for several reasons. The bigger the firm, the better its capability to diversify and its ability to exploit economies of scale. Although large firms have the potential to generate larger returns on assets or sales, they also have the potential to be less efficient because of the loss of control by top managers over strategic and operational activities within the firm (Williamson, 1967). The size of the firm can also influence the capture of market power since some data cannot include controls for market structure that are important drivers of economic performance. Some studies include a firm's age as a control variable which suggests that older firms are more experienced so they benefit from learning and enjoy a superior performance compared to newcomers (Gold, 1981). The other organisational factor which can influence performance is diversity. Related diversification is one way to exploit a firm's excess capacity (Penrose, 1959) which may lead to better performance (Rumelt, 1974).

- Heterogeneity

Variables under this category are advertising, marketing and distribution. Firms spend significant amounts on advertising, marketing and distribution activities with the expectation that they will achieve potentially greater profitability. Advertising can lead to product differentiation, while marketing leads to more information about a firm's product availability and distribution and widens the physical range of coverage in the heterogeneity market. A wide breadth of literature has found that there is a positive

relationship between advertising and firm-level performance (Comanor & Wilson, 1974). Evidence also indicates that firms with greater ownership are more capital intensive compared to domestic firms (Agarwal, 1979). Fixed assets are the item which should be used to measure the intensity of a firm's operation in order to capture this factor.

- Dynamic disturbances

General business conditions have a strong impact on performance. Richard Caves, (1992) captured this using inventory and sales growth variables.

- Top management cohesion

Top management cohesion is one of the important determinant performance factors. It has been highlighted by resources-based viewpoint (RBV) group studies which support that resources and capabilities as the main drivers of sustainable competitive advantage, especially to those resources which are valuable, rare, difficult and costly to imitate and are not substitutable (Barney, 1991b). Strategy literature describes the resource-based view as giving superior industry returns (SIR) (Mauri & Micheals, 1998). Barney (1991a) defines resources as 'all assets, capabilities, organizational processes, attributes, information, knowledge etc. controlled by a firm that enable a firm to conceive of and implement strategies that improve its efficiency and effectiveness' (p.101). Top management's control of the direction and performance of the firm probably means (Smith et al., 1994) that RBV is a logical concept which points out that key intangible resources can be a strategic asset to the firm's top management team. A study by Mullen and Copper (1994) found that cohesion is positively associated with team performance, provided that the team adopts norms of high performance. Michel and Hambrick (1992) and Smith et al. (1994) found a positive relationship but neither established cohesion as an intangible strategic asset (SA).

Top management team cohesion (TMTC) qualifies as an SA characteristic which is rare, difficult and costly to imitate for several reasons. First, there is a similarity of background, experience and values (Hogg, 1992). Second, TMTC has unique historical conditions so that it is rare and difficult to imitate (Barney, 1991b). Third, it is a socially complex phenomenon as it has the unique attributes of team members and their attraction to one another and the team (Barney & McEwing, 1996). Fourth, TMTC has invisible resources, making it hard to imitate (Godfrey & Hill, 1995). Fifth, even if a competitor could imitate the team, the result could be ambiguous (Reed & DeFillippi, 1990). Sixth, it is very costly; if a competitor tried to replicate the model, they would have to change the entire top management team. In order to explore the internal factors that contribute to

firm performance, the strategy literature provides a wide range of studies, and it is necessary to include management role as part of company strategy.

Foreign firm performance in developing countries

The common characteristics inherent in a developing country are incomplete markets and various forms of market failure; most cases experience this on market takeover. The reasons behind the weakness of the market for corporate control and enterprise performance in developing countries are that there is no information about true company performance, the cost transaction of a takeover is high and the regulation in such countries is very rigid because of often-justified fears of monopoly and foreign exploitation. Governments in developing countries tend to have a big influence on market takeovers so that the success or failure in the takeover process is dependent to a large extent on the ability of a potential raider to garner government support. Based on these weaknesses characteristic ownership will not matter significantly in developing countries (Sarkar, 1998). Empirical studies which highlight the relationship of ownership-performance within the institutional specifics of a developing country are investigated by Kim (1981), Hill (1982), and Mohamed (1992), although the result is still not clear.

Industry factor vs. firm-specific factors' determinant

Industry theories of industry factors, and RBV, favour firm specific factors when considering which one influences performance. Initial work on this concept was by Schmalensee (1985) and Rumelt (1991) followed by a number of empirical studies examining the relative importance of these two factors.

Industry

In industrial organisational economics literature, the main arguments concerned the structural characteristics of industries as primary determinants of performance (Porter, 1980). Other studies such as Scherer (1980) investigated the consistent differences in performance between industries. The theoretical framework from industrial organisational economics is the SCP model, which highlighted the existence of a deterministic relationship between market structure and profitability. This model constrains the behaviour of its component firms, which leads to industry-specific-performance differentials between firms (Mason, 1939). An important line of research within this stream is the role of firm size as a factor explaining performance through profitability (Baumol, 1967; Hall, 1967; Weiss, 1967). The presence of barriers to

mobility for firms within a group of industries (Caves and Porter, 1977), the dimension of competition between industries (McGee and Thomas, 1986) and a resource- based view of the firm influence firms' performance between industries. Research tends to lead to the assumption that the relationship between market share and performance is ambiguous (Prescott et al., 1986), and this is supported by Schmalensee (1985), whose study results show that market share actually has a negligible impact on performance.

Firm-specific factor

Firms have specific intangible assets such as technologies and managerial skills which enable them to have multiple plants. The potential for market failure connected with these assets leads MNEs to engage in FDI activity through internalization. Early theories on this concept include Williams's work on transaction costs and the development of the OLI paradigm by Rugman (1980) and Dunning (2001). FDI literature suggests that R&D is almost constantly proved to have a positive correlation with firms becoming multinational. Morck and Yeung (1992) found that publicly-traded US firms, announcing foreign acquisitions, experienced positive abnormal returns to their stock only if they had a significant level of R&D and advertising intensity. However, some evidence provided by Kogut and Chang (1991) and Blonigen (1997) showed that firms that are lacking R&D or innovation relative to their industry competitors are the ones most likely to engage in FDI.

Human capital (training and education) has a direct impact on productivity through workers, better decisions, and organisation of work or supervision (Rosen, 1982; Gemmel, 1997). Technology capital (value of patents, accumulated R&D expenditure) also has an effect on productivity as a source of innovation, and consequently contributes added value. Microeconomic literature focuses on the static effect of human capital in the form of training that has a significant rate of return on investment (Bartel, 1992). A later study by Black and Lynch (1996) proved the opposite – that training expenditure had a significant rate of return for the year 1990 but not for the later year sample of 1993.

Conclusion

Governance and taxes are not unique variables in determining the flow of foreign direct investment, however their impact is less explored in Asian countries. The magnitude of the impact depends on the country's condition, policies, and also its history. Despite their complicated and dysfunctional bureaucracy, Asian economies increasingly

became a topic in the FDI literature as their rapid growth relative to other world regions after the mid-1980s meant they became the most dynamic region in the world. Although these economies are considered to be growing following the recent global financial crisis, albeit with a lagging development of their legal systems, they still suffer from social problems such as corruption.

The theoretical variety of approaches on FDI determinants requires categorisation of the theories by their common threads (Dunning, 1973; Cantwell, 1991) in which location is one of the most common determinants. Location advantage as a source of market imperfection has been highlighted on FDI operation by Dunning's third explanatory condition of FDI, and hence the government policies of host countries, including their tax and bureaucracy are increasingly important. Despite criticism, Dunning's OLI theory has been used extensively in empirical studies to investigate locational determinants of FDI. The eclectic paradigm sets out to explain the international production of all firms from a particular country or group of countries, so Dunning underlines that it should not be compared with other international theories of the firm. Dunning admitted that ownership has direct links to internalisation, although he emphasized that the OLI paradigm factors are not independent. Both taxes and government bureaucracy are among the set of determinant factors of FDI location that have vastly increased and need to be explored.

The impact of international tax differences on FDI is of increasing focus in theoretical analyses (Fuest, Huber and Mintz, 2005). The multinational's preference of location choice is the starting point of empirical analysis (Dunning, 1981). The eclectic paradigm (Dunning, 1981) identifies three advantages that must be present for multinationals to decide to invest abroad, one of which is the advantage of location (L) offered by a host (investment destination) country.

CHAPTER IV: METHODOLOGY AND DATA

4.1. INTRODUCTION

The general approach of this thesis is based on the OLI paradigm associated with Dunning (1977, 1993). The particular focus is on the location aspects of this body of theory. This is a theoretical foundation and not an empirical methodology. It has given rise to an extensive empirical literature on the determinants on inward FDI covered in the review of literature The methodology employed here is in the same tradition, applied to a number of different Asian countries.

Asian economies have heterogeneous backgrounds with respect to their political and legal systems, socio-cultural differences, development stages, and the degree of economic dynamism, which are expected to affect the location choice of the investor. Dunning (1977, 1993) developed a comprehensive explanation through an eclectic paradigm on FDI activities. Location advantages can be investigated through host country specific variables, while both ownership and internalisation advantages can be investigated through firms' specific factors. This study tries to capture the three advantages through country data analysis to examine location advantages and firm data analysis to examine ownership and internalisation advantages.

Looking at the concept of economic efficiency, the eclectic paradigm suggests that foreign firms are motivated to exploit location specific advantages provided by a host country through internalising their firm specific advantages. Dunning (1977, 1993) formulates four primary motivations for FDI as a location choice, namely market-seeking, nature-resource seeking, efficiency-seeking and strategic asset seeking and these motives are tested in this study as part of determinant factors. An institutional approach however emphasizes that foreign firms also require institutional legitimacy in order to survive and succeed in challenging foreign environments (Kostova & Zaheer, 1999). The crucial difference between these two approaches in addressing the issue of location FDI lies in the primary criterion for selecting a location. The eclectic paradigm focuses on economic efficiency as the determinant of location choice, so that the ability of institutions to reduce

costs in uncertain environments such as MNE investment strategy is the form of similarity of the institutional approach to an MNE investment strategy (Hoskisson, Eden, Lau, & Wright, 2000). On the other hand, the institutional approach regards institutional legitimacy as the primary criterion (Zukin & Dimaggio, 1990).

In the case of this study, I examine the impact of the uncertain environment factors as a result of government regulation of FDI and how tax policies interact with the other four motivation factors suggested by Dunning on FDI inflows. Based on institutional environment support, regulative system will influence future behaviour (Trevino, Thomas, and Cullen, 2008). In order to gauge the impact of taxes and government regulations on FDI, this study applies the quantitative method. This research will be based on data and information from secondary sources. The data is acquired from sources such as Input-Output (I-O) tables from each Asian country, World Investment United Nations conference of Trade Development (UNCTAD), and World Government Indicators. Different levels of data will be analysed using pluralistic approaches to be able to gain detailed knowledge about the data (Creswell, 2009). This study examines the causality using an econometric model and tests it with three type of regression (OLS, fixed effect and Propensity score matching).

This study analyses the interaction of taxes and governance on inward FDI in section. It starts with exploring taxes by sector (Chapter V), using I-O tables to access three pieces of information: 1. to measure the different capacity of tax of the business sector in selected Asian countries; 2. to identify business sectors most affected by taxes; 3. to access how far differences in taxation between Asian countries have led to differences in patterns of firms' performance by industry. The next analysis to be discussed in Chapter VI uses country level data to explore and investigate determinants of governance on FDI location. This part of the analysis applies a model which specifies using a panel regression analysis and three different panel estimation techniques (pooled ordinary least square, fixed effect and score matching analysis) in this study. The last part of the analysis in this study uses firm level data to explore how taxes and governance variables impact firms' performance. On this last section of analysis, OLS, panel fixed effect and propensity score matching are used to measure the impact of government and tax on firms' performance.

4.2. RESEARCH PHILOSOPHY

For the purpose of this research study, a philosophy of positivism was adopted. Due to the nature of study, which explores the impact of tax and governance, it is crucial to 'observe and describe reality from an objective viewpoint' (Saunders et al.2014). As the research uses secondary data during data collection, this philosophy allows for an emphatic stance to be adapted and the opportunity to 'observe, discover, derive and test theories in objective way' (Saunders et al. 2014). Unlike the philosophy of interpretivism, which has stance of a social science, the philosophy of positivism has a stance of a natural science (Saunders et al. 2012). This enables the research study to become more reliable and objectives, rather than rely on certain object viewpoints. As stated by Beck (1979) (cited by Cohen et al., 2011) " All genuine knowledge is based on sense experience and can only be advanced by means observation and experiment" , which relates to the research topic of exploring the impact of tax and governance on FDI. Pragmatism was another philosophy that was deemed unsuitable for this research study, as like interpretivism, it "relates to social study" (Saunders et al. 2012). Moreover, Saunders et al. (2012) states that positivism is highly appropriate in economics research.

4.3. RESEARCH APPROACH

An inductive research approach works from specific to general. It starts from observations, finds patterns, creates hypotheses and finally forms a theory from these hypotheses (Saunders et al. 2012). A deductive approach works from general to specific. It starts from developing a theory (out of previous findings), derives hypotheses from this theory, make observations and finally uses these to reject or to accept the hypothesis.
In this instance, the research approach is focus on inductive method as it does not involve formulation of hypotheses and this study tries to answer research questions, aims and objectives.

4.4 RESEARCH STRATEGY

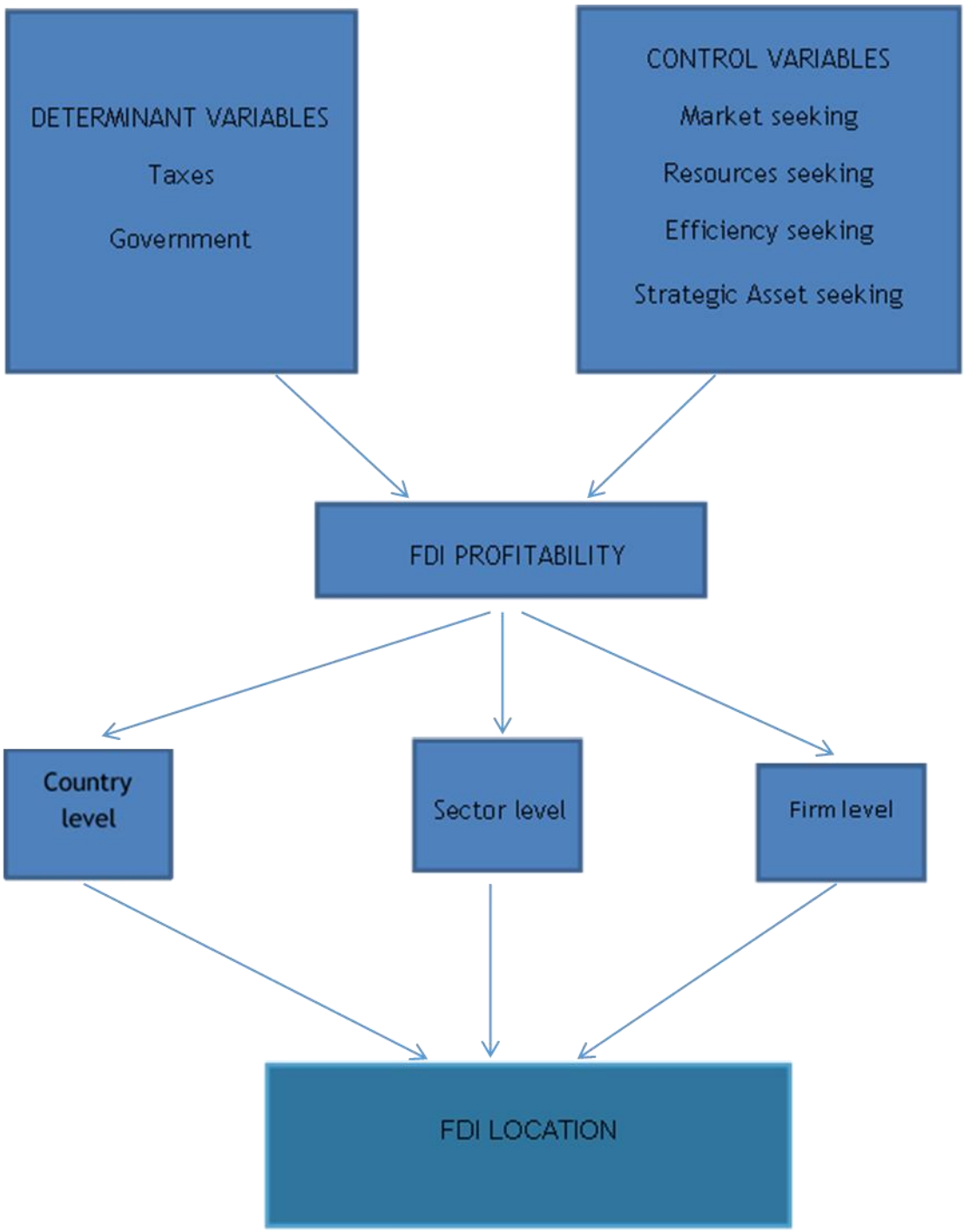
This study applies deductive approach which it was to use secondary data to test various key hypotheses about the role of tax and governance as determinants of inward

FDI in selected Asian economies. These issues are explored at three different levels: country, industry and firm.

4.5. MODEL SPECIFICATION AND HYPOTHESIS

As discussed earlier the approach of this study is to seek to assess the effect taxes and governance have on inward FDI in selected Asian countries. In order to investigate the impact of these two main variables, this study creates three different objectives and analyses.

Figure 4(4.1): Model specification and hypothesis



4.6. OVERVIEW OF METHODOLOGY AND DATA ANALYSIS

A wide empirical literature has evolved concerning the determinants of the location of FDI with a special focus on the effect of tax and governance on FDI allocation. It can be classified along three dimensions: the type of data used (time series, cross-section, panel data), the level of aggregation, and the stage of transnational investment decisions analysed in the relevant studies (Deveruex, 2006).

Aggregate time series data are used by many scholars (Hartmant, 1984; Boskin & Gale, 1978; Young, 1988; Murthy, 1989; Slemrod, 1990; Cassou, 1997; Grubert & Mutti, 1991; Hines & Rice, 1994; Hines, 1996) and it has been a pioneer in FDI research. On empirical tax studies, the early approach by Hartman (1984) has been selected by researchers, which used longer time series and varied the underlying data as well as the specification (Boskin and Gale, 1987; Newlon, 1987; Young, 1988; Murthy, 1989). However, the panel data analysis of aggregate FDI is the one that found that location choice is indeed affected by taxation (Senson, 1994; Billington, 1999; Broekman and van Vliet, 2001).

Like many empirical studies the foundation is the locational aspects of OLI theory. The preferred location of FDI is closely related to the comparative advantages of the countries and industries provided the FDI enters a tradable sector of the economy. Foreign investors would not enter countries or industries with no advantages and with low returns on their investments. In this study the model commences with sector analysis and continues with country level and then firms' level analysis. Each stage of analysis are presented in the following chapters.

4.6.1. Industry sector analysis

In this part of the analysis, this study investigates the effects of indirect taxes on profitability by sector between selected Asian countries. This section uses input-output (I-O) tables for three Asian countries (Indonesia, China and South Korea) to investigate the effects of indirect tax on underlying profitability. This chapter presents estimates by industry of the importance of indirect taxes in relation to gross operating surplus using an average effective tax rate to measure the actual expenditure by each sector in each country. Input-Output tables for individual countries provide details of their specific production structure. The table describes the inter-related and mutually dependent

relationship between industries. The tables can be used to identify taxes paid by business on production. This study will look closely at the significance of these taxes in relation to profits.

I-O tables have been increasingly used to analyze production costs and policies. There is wide body of literature which uses I-O tables in various applications. One such study is by Chamberlain who used traditional techniques using I-O tables to access household burdens and the economic impact of US government policy.

The data sources used were Input-Output Supply Use table 2005 Industries Intermediate Consumption in 2005 called the 'Combined Use' matrix. The 'Combined Use' matrix provides detailed analysis of the production account for all three selected Asian economies, on an annual basis at current prices. The Input-Output Supply-Use table is supplemented with information contained in sectors statistics for China, South Korea and Indonesia regions datasets from the Department of Statistics of each country.

I-O analysis is applied to domestic industry Supply-Use (SU) data to estimate energy and emissions resulting from each sector. I-O tables are compiled using data from national accounts as well as other national economic sources to show economic transactions between all product sectors of the national economy (Acquaye and Duffy, 2009).

To identify the indirect taxes paid by sectors, the I-O analysis method quantifies the interrelationships amongst the sectors of each of the selected Asian economies. An I-O table describes the flow of goods and services between all individual sectors of a national economy over a stated period of time, say, a year (Leontief, 1986, p.19-20). Each sector's production structure describes, quantitatively, the inputs it uses and the outputs it produces (Lin and Francis, 2004). Breaking the economy down to display transactions of all goods and services between industries and final consumers (Lin and Francis, 2004), the I-O table used here describes the three selected Asian national economies.

The structure of I-O SUTs used here is as follows:

Table 4(4.1): Input Output table

SUPPLY							USE									
Industry							Industry		Final demand at purchaser's prices							
PRODUCT	Domestic supply at basic prices	Imports goods and services	Distributor's trading margins	Taxes –subs prod.	TOTAL SUPPLY	PRODUCT	Int. demand at purchasers prices	Total int. demand	households	NPISHs	General govt	Gross fixed capital	valuables	Change in invntrs	Exprts goods/serv.	total demand
							Total int. con.									
							Taxes-subs. Prod									
							Employee compens.									
							GOS									
	TOTAL OUTPUT						TOTAL OUTPUT									

The I-O model can be divided into four quadrants. The first quadrant of the I-O model is the exchange of goods and services which are both produced and consumed in the process of current production. This is usually referred to as the inter-industry flows or intermediate demand/intermediate consumption. The second quadrant is the final demand for the output of each producing sector. Final demand is the demand, use or consumption of products and services by, say, households. In the third quadrant primary inputs to the productive sectors are represented. These are not part of the output of current production as defined by the first quadrant. These are the taxes, subsidies, employee compensation etc. The fourth quadrant represents the primary inputs that go directly to the final demand sectors. In an I-O table the total value of output for each productive sector i.e. the row total, is always equal to its total expenditure on inputs i.e. the column total (O'Connor and Henry, 1975). However, no such equality is imposed on final demand sectors or on the primary input sectors (Ciaschini, 1988; O'Connor and Henry, 1975; Leontief, 1986).

4.6.2. Country level analysis

The country level analysis more closely follows the empirical literature on the determinants of inward FDI based on the predictions of OLI theory. The relevant chapter analyses the effects of tax and government regulation on inward FDI at the country level. This is estimated as part of a wider specification of the determinants of the location of FDI. The main interest variables influencing FDI in this section will be national tax and regulation. The other control variables are established from the OLI concept of motives FDI (market size, resources, efficiency, and strategic asset seeking). For this part of the analysis, economic regressions are applied (OLS and fixed effect) to 23 countries during the period 2002-2020 (nine annual observations for each). The data are collected from several sources such as UNCTAD (FDI measures), World Development Indicators (market size, natural resources and other control variables), and World Bank Governance Indicators. The data for the country level analysis were taken from the *World Development Indicators* database produced by the World Bank. The sample comprised 22 different Asian countries which are divided to two categories, higher income and lower income country (see table below).

Table 5(4.2): Lower and Higher income countries in ASIA

SAMPLE OF COUNTRIES	
Lower Income Countries	**Higher income countries**
Bangladesh	Brunei Darussalam
Bhutan	China
Cambodia	Hong Kong SAR, China
India	Japan
Indonesia	Korea, Rep.
Lao PDR	Macao SAR, China
Mongolia	Malaysia
Nepal	Maldives
Pakistan	Philippines
Sri Lanka	Singapore
Vietnam	Thailand

The firm level analysis used data from the World Bank Enterprise Surveys of Indonesia, the Philippines and Vietnam conducted in 2009. The study focuses on firm performance as reflected in the questionnaire responses given by firms in host countries. Only Indonesia, Vietnam and Philippine had directly comparable questionnaires so that only these three countries in South East Asia could be used.

4.6.3. Firm level analysis

In this part of the analysis, the study will explore the effect of government and taxes on firms' performance in three Asian countries Indonesia, the Philippines and Vietnam. Using data for both domestic and foreign owned firms, it addresses how firm performance is affected by governance and tax in a host country whilst achieving overall profitability objectives. This part of the study uses a regression approach. The regression models used in this section are *OLS* and a cross-sectional least squares dummy variable (LSDV) model. The data were taken from World Bank enterprise surveys for each of a number of Asian countries. These surveys are conducted based upon a standardised questionnaire however the questionnaire actually employed in any one country can vary quite significantly between one country and another. At best this creates a time consuming task of matching replies to the same question set in different questionnaires and at worst it creates problems of compatibility which prevent some countries being combined into the same sample. For details of World Bank enterprise surveys see: http://www.enterprisesurveys.org/

CHAPTER V: THE EFFECT OF TAXES ON THE PROFITABILITY OF INWARD FDI: A SECTOR LEVEL ANALYSIS

5.1. INTRODUCTION

The key objective of this analysis is to examine the effect of taxes on inward investment. In particular it considers the effect of indirect taxes, which are rarely considered in the context of FDI. It assumes that the fundamental motivation of companies is profit maximisation, so (all other things being equal) that the lowest tax on profit is the most attractive option. This is possibly why some locations are more attractive than others for foreign investors. This chapter also highlighted of applying the effective tax rates rather than simply comparing statutory tax rates imposed by selecting Asian countries, as part of investigation of the possible impact of taxes on foreign direct investment.

Recent research has tended to focus on effective rather than statutory tax rates. Effective rates vary in a more arbitrary and unpredictable way than statutory rates. With indirect taxes it is even more likely that effects will vary between one industry and another. For example, taxes on energy or labour can be expected to affect energy intensive or labour intensive industries much more than others. There have been very few previous studies on taxes of FDI in ASIA (with the exception of China). This chapter therefore contributes to understanding of inward direct investment in Asia more widely. The role of direct taxes (on corporate income) on inward FDI has been well explored in the literature but there has been much less attention devoted to the impact of indirect taxes, none specifically dealing with Asia. The contribution is not just to cover an under-researched topic: the analysis shows that ignoring indirect taxes is a potentially serious omission. Many studies on inward FDI are conducted at country level. Indirect taxes such as import tariffs operate at the sector level. This chapter also provides insights as to how indirect taxes alter incentives to invest in one sector rather than another.

The measurement of indirect taxes is complex. In most cases there are numerous taxes, levied on a variety of different tax bases. Calculation of average effective rates in

relation to the tax base is not the most satisfactory way to assess the impact on FDI, which is more likely to be related to expected profits than, say, energy costs in isolation. To overcome this, this study does not use average effective tax rates in the normal way but calculate a similar measure in which the total expenditure on a number of indirect taxes is expressed as a proportion of gross operating surplus. In effect, this calculates a package of indirect taxes as an average effective profit tax 'equivalent'. A study by Desai et al (2004) which investigated the impact of taxes, direct or indirect, on foreign direct investment found that there was a strong association between the three. The evidence indicates that direct and indirect tax affect American multinational firms in the allocation of their assets, and this is something from which host countries could learn when competing for foreign investors. This study analyses the direct and indirect taxation of selected Asian host countries and how this affects them relative to international competition.

In an ideal situation it would be possible to construct a sample comprising a time series, not just for a sample of industries in a single country, but for a number of countries. This study attempted to do this, but the data are only available for a single year in some Asian countries. To establish the difference between countries in the burden of tax in different sectors, this study uses an input-output methodology to consider how national taxes affect current and potential profitability in different sectors of an individual economy. The underlying reason for such an examination is to analyse how national taxes currently affect and have affected the underlying profit incentives to undertake investment in one country and in one sector rather than another. Although no specific distinction is made in the analysis between domestic and foreign investment the analysis is particularly relevant for the location of inward foreign direct investment where firms can choose the most favourable location.

Indirect as well as direct taxes have the potential to significantly affect the underlying profit incentives for investment. This effect can vary considerably by sector and by country. This chapter analyses the effect of taxes on sectors; the effect on countries is analysed in a separate chapter. The aim of this chapter is to understand whether or not, and if so to what extent the underline profit incentives for FDI in different sectors are changed by the taxes, both direct and indirect, of the chosen host countries. So the focus here is to determine how taxes affect the underlying profit incentives for inward FDI in the Asian economies of Indonesia, China and South Korea. Using these countries' data,

this chapter presents estimates from industry of the importance of indirect taxes in relation to gross operating surplus using average effective tax rates to measure the actual expenditure by each sector in each country.

5.2. TAXES AND FDI

There has been considerably research on FDI flows in Asian economies. In line with the growth of inward FDI across different sectors, foreign investors have realised the importance of the Asian markets in terms of their size, fast economic growth, and the low labour costs for their operation and investment. The huge Asian population can be one of the big attractions as there are more potential customers. Most of the studies on FDI have focused on looking at which are the main investors and recipient countries but little has been written about the role played by production cost differentials and taxes in attracting FDI at a sectoral level. Vu, Gangnes and Noy (2008) have shown that FDI inflows are not uniformly distributed across production sectors in China and Vietnam because of government policy and tax treatment.

Many studies have found that variables such as Research and Development (R&D), factor cost differences, advertising expenditure, wages, trade costs, market size and taxation attract FDI in developed countries (Carr, Markusen & Maskus, 2001; Disdier & Mayer, 2004; Hanson, Mataloni & Slaughter, 2001; Yeaple, 2003). However, these are not necessarily the most important factors in developing countries given the existence of a deficient infrastructure, high financing constraints, weak institutions, and a lack of skilled labor. Most of these variables will be discussed in later chapters.

Taxes should influence investor decisions with regard to location of their investment. However, some studies have found that taxes have no impact at all; some have found a negative robust impact and a few studies have found a positive impact (Carlton, 1983; Moore, Steece & Swenson, 1987; Hines, 1996; Ondrich & Wasylenko, 1993; Papke, 1991). By the 1980s, MNEs focused heavily on motives such as market-seeking, resource-seeking, efficiency-seeking and strategic asset-seeking for their foreign value-added activities (Berhman, 1972; Dunning, 1986). More recently this analysis has been extended to include other influences, such as institutional factors, which have included entry, performance and exit requirements imposed on FDI, degree of corruption,

competition policy, innovatory and tax systems, environmental regulations, and human rights (Trebbi, 2002; Glaeser, La Porta, Lopez-de-Silanes & Shleifer, 2004; World Bank, 2006).

In international business studies, researchers have identified the essential factors for foreign investors when choosing a location in which to invest. Mayer (2004) has found that institutional factors have a far greater and more significant impact on affiliate performance in emerging economies compared to more mature economies. According to other studies (Child, Chung & Davis, 2003; Meyer, 2001, 2004; Uhlenbreck, 2004), institutional factors such as political risk, government regulations, financial incentives, and environmental specific factors are more important in emerging economies because institutional immaturity raises transaction costs and risks. Developing countries tend to provide more incentives for inward foreign investment than others with the intention of increasing the transfer of know-how through employment Szanyi (2001, p.30) states that "investment incentives can play an additional role in motivating foreign direct investors". Advanced countries tend to have a more stable infrastructure and system in place which attracts foreign investors. However, the subject of taxes is always mired in debate. Loree and Guisinger (1995) claim that the host country tax rate has an important effect on US outward FDI due to double tax charges.

In recognition of the importance of taxes in FDI, countries have often used taxation policy incentives as a competitive tool for attracting more FDI. A UNCTAD (2000) survey reports that 85 per cent of countries in Asia have offered tax incentives such as tax holidays and tax tariff reductions as a way of attracting investors. Public finance-based studies have found evidence that the location of FDI is sensitive to tax policies (Wilson, 1987; Janeba, 1995; Huizinga & Nielsen, 1997; Haufler & Wooton, 1999; Wilson, 1999; Ludema & Wooton, 2000; Davies, 2003, 2005; Devereux & Hubbard, 2003; Baldwin & Krugman, 2004; Raff, 2004; Borck & Pfuger, 2006; Bucovetsky & Haufler, 2008). The effects of taxes on FDI have been discussed by both international and public economists. A noticeable hypothesis is that higher tax discourages FDI (De Mooji & Ederveen, 2003). However, some articles in the literature have highlighted why such a hypothesis may be misleading. The effects of taxes on FDI can vary depending on the type of tax, measurement of FDI activity, and tax treatment in the host and parent countries.

Studies on tax and FDI mostly explore the impact of direct income or corporate tax on FDI in multi-country samples. Nonetheless such studies are rare in developing countries. Available studies in developing countries have, to a large extent, concentrated on the impact of direct taxes on FDI (Cheng & Kwan, 2000). This study aims to investigate the effects of taxes, and indirect taxes in particular, on FDI. The focus is on establishing how indirect taxes may distort and deter patterns of inward investment in ways that are not really intended by the host governments.

This particular section investigates the effect of direct and indirect taxes on the profitability of inward investment in several Asian countries. This study uses a measure similar to the average effective indirect tax rate but in relation to gross profit surplus rather than tax bases for a large sample of industries. To establish the difference in the patterns of tax implications in the selected Asian countries, it uses an I-O methodology to consider how national taxes affect current and potential profitability in the different sectors of an individual economy. The underlying reason for such an examination is to analyse how national taxes currently affect, and have affected, the underlying profit incentives to undertake investment in one country, and in one sector rather than in another. Although no specific distinction is made in the analysis between domestic and foreign investment, the analysis is particularly relevant to the location of inward FDI where firms can choose the most favourable location. This approach enables further simulations to be conducted to assess the extent to which different tax policies create differences between countries in terms of the effects of taxes on underlying profits, and the extent to which different production conditions create varying effects on profitability from essentially similar rates of taxation. The analysis focuses on taxes as normally applied rather than on any specific tax incentives for inward foreign investment. Some consideration is given to such special tax incentives but this is not the main focus of the study. Indirect taxes are at least as important as direct taxes in their effects on corporate income.

To assess the effect of taxes on the underlying profit of inward investment, this study uses I-O tables for several Asian countries. The use of I-O tables to analyse the impact of tax is in line with prior studies on US tax policy (Guisinger, 1989), where Guisinger investigated how home country taxes have influenced firms' decisions to invest in another country. This chapter made use of the data per sector produced and used by industry in Indonesia, South Korea and China. Each country uses a different format for

sector data, so it is necessary for that data to be made uniform and categorized using the same coding standard found in the North American Industry Classification System (NAICS). The data is interacted with this study main variables of interest (Government and tax) but at this stage, only taxes have been taken into account in order to observe the difference in patterns of tax imposed on each sector of the industry.

5.3. SAMPLE, DATA AND METHODOLOGY

This section uses I-O tables for three Asian countries (Indonesia, China and South Korea) as an initial means of investigating the effect of indirect tax on profitability. Input-Output tables for individual countries provide details of their specific production structure. The table describes the inter-related and mutually dependent relationship between industries. The tables can be used to identify taxes paid by business on production. This study will look closely at the significance of these taxes in relation to profits.

I-O tables have been increasingly used to analyze production costs and policies. There is wide body of literature which uses I-O tables in various applications. One such study is by Chamberlain (1995) who used traditional techniques using I-O tables to access household burdens and the economic impact of US government policy.

The data sources used were Input-Output Supply Use table 2005 Industries Intermediate Consumption in 2005 called the 'Combined Use' matrix. The 'Combined Use' matrix provides detailed analysis of the production account for all three selected Asian economies, on an annual basis at current prices. The Input-Output Supply-Use table is supplemented with information contained in sectors statistics for China, South Korea and Indonesia regions datasets from the Department of Statistics of each country. I-O analysis is applied to domestic industry Supply-Use (SU) data to estimate energy and emissions resulting from each sector. I-O tables are compiled using data from national accounts as well as other national economic sources to show economic transactions between all product sectors of the national economy (Acquaye and Duffy, 2009).

To identify the indirect taxes paid by sectors, the I-O analysis method quantifies the interrelationships amongst the sectors of each of the selected Asian economies. An I-O table describes the flow of goods and services between all individual sectors of a

national economy over a stated period of time, say, a year (Leontief, 1986, p.19-20). Each sector's production structure describes, quantitatively, the inputs it uses and the outputs it produces (Lin and Francis, 2004). Breaking the economy down to display transactions of all goods and services between industries and final consumers (Lin and Francis, 2004), the I-O table used here describes the three selected Asian national economies.

The industry analysis of environmental taxes is primarily based on information compiled for the annual I-O SUTs (Input-Output Supply-Use Tables). Information on the use of products is generally used as a proxy for allocating the environmental tax payments (Lin and Francis, 2004). Although the inter-sectoral flow as represented by an I-O table can be thought of as being measured in physical units, in practice most I-O tables are constructed in value terms i.e. £ million. Such I-O tables expressed in value terms can be interpreted as a system of national accounts (Leontief, 1986, p.21).
The structure of I-O SUTs used here is as follows:

Table 6(5.1): Input Output table

SUPPLY							USE									
Industry							Industry		Final demand at purchaser's prices							
PRODUCT	Domestic supply at basic prices	Imports goods and services	Distributor's trading margins	Taxes –subs prod.	TOTAL SUPPLY	PRODUCT	Int. demand at purchasers prices	Total int. demand	households	NPISHs	General govt	Gross fixed capital	valuables	Change in invntrs	Exprts goods/serv.	total demand
							Total int. con.									
							Taxes-subs. Prod									
							Employee compens.									
							GOS									
	TOTAL OUTPUT						TOTAL OUTPUT									

The I-O model can be divided into four quadrants. The first quadrant of the I-O model is the exchange of goods and services which are both produced and consumed in the process of current production. This is usually referred to as the inter-industry flows or intermediate demand/intermediate consumption. The second quadrant is the final demand for the output of each producing sector. Final demand is the demand, use or consumption of products and services by, say, households. In the third quadrant primary

inputs to the productive sectors are represented. These are not part of the output of current production as defined by the first quadrant. These are the taxes, subsidies, employee compensation etc. The fourth quadrant represents the primary inputs that go directly to the final demand sectors. In an I-O table the total value of output for each productive sector i.e. the row total, is always equal to its total expenditure on inputs i.e. the column total (O'Connor and Henry, 1975). However, no such equality is imposed on final demand sectors or on the primary input sectors (Ciaschini, 1988; O'Connor and Henry, 1975; Leontief, 1986).

Research methods require data, analysis and interpretation (Creswell, 2009). This study uses a quantitative method in which the data for inward FDI is collected from a variety of sources including the US Bureau of Economic Analysis, UNCTAD, ASEAN and the OECD. Suitable I-O tables are hard to find and the Asian economies sample will consist only of those tables that are available. Part of a future program of work could be to identify further such tables. Each country produces its industry segregation in a different format. In order to standardize the data and to compare the same sectors in different countries, data belonging to similar sectors will be allocated the same codes in this sample a two-digit sector classification has been used resulting in 77 sectors in each country.

The data used at this stage has been derived from the latest I-O tables (Indonesia 2008, China 2007, and South Korea 2005). None of these countries produces new I-O data unless there are significant changes in their trade. The data represents the intermediate industry consumption in those years structured or arranged in the 'Combined Use' matrix. The 'Combined Use' matrix provides a detailed analysis of the production account for each country's economy, on an annual basis at the current prices. I-O analysis is applied to domestic industry Supply-Use (SU) data to estimate tax rates imposed in each sector. I-O tables are compiled using data from national accounts as well as other national economic sources to show economic transactions between all product sectors of the national economy (Acquaye & Duffy, 2009).

To identify the taxes paid by producers, the I-O analysis method quantifies the interrelationships between the sectors of the selected Asian countries. An I-O table describes the flow of goods and services between all individual sectors of a national

economy over a stated period of time, for example, a year or five years (Leontief, 1986, p.19-20). Each sector's production structure describes, quantitatively, the inputs it uses and the outputs it produces (Lin & Francis, 2004). Industry analysis of indirect taxes is primarily based on information compiled for the annual I-O SUTs (Input-Output Supply-Use Tables). At the time of writing, the latest available I-O SUTs cover the following periods: China 2007, South Korea 2005, and Indonesia 2008. Although the inter sectoral flow, as represented by an I-O table, can be thought of as measured in physical units, in practice most I-O tables are constructed in value terms such as million US dollars. An I-O table expressed in value terms can be interpreted as a system of national accounts (Leontief, 1986, p.21).

Direct tax

Direct tax on income or profits is borne entirely by the individuals or groups who pay it. Unlike indirect tax, direct tax is based on the ability to pay principle, which for individuals can sometimes work as a disincentive (the more they earn the more tax they need to pay, although ways can be found to minimize their direct tax legally. However, this dissertation does not discuss in detail the accounting side of direct tax, but uses the information on tax rates applied in the sample countries (Indonesia, South Korea and China). The rate of direct tax is announced by the government at the beginning of a financial year. Some countries apply progressive tax rates, when tax rates increase as the taxable base amount increases. Unlike income tax, corporate tax applies a flat rate and it is measured by statutory tax, which is widely used in comparing taxes across countries.

A study by Devereux and Sorensen (2005) analysed the substantial tax rate change over the years in OECD countries. In the 1980s, 15 out of 19 countries had very high tax rates in excess of 40%), and by 2004 none of those countries' tax rates were more than 40%. Over the years, there has been a continuous fall in tax rates due to competitive pressure. Since there are factors such as inflation and depreciation allowance which change the base of taxable amounts, the statutory tax rate is not the sole reason for an investment decision. Hence, more importantly the effective Average Tax Rate (i.e. combination of the tax rate and the tax rate is used to measure the impact of tax as a significant factor in inward FDI location decisions and capital flows. Income tax on a business's profits will increase the effective cost of business capital, and hence will cause a re-allocation of capital from the high income tax rates sectors to those with lower

income tax rates. In this study direct tax is included only for comparison to show the importance of indirect tax to underlying profit.

Indirect tax

The nature of indirect tax, which shifts the burden of tax on production and the sale of commodities and services, could cause distortion. This is due to the fact that indirect tax is added to the sales price of the taxed good without touching purchasing power in the first place. Numerous empirical studies have explored the degree of influence of tax in FDI decisions. Many of them examine this from an outward investor perspective, while only a few concentrate on inward investment. From a location perspective, the theories and studies underline the same concerns; it is the perspective that differs. In considering factors which influence FDI, this study is by no means different from the majority of the literature from the home countries' point of view but differs slightly in terms of perspective. This study examines how tax overall, especially indirect tax, and governance factors, can have an impact on the profitability of inward investment in selected countries in Asia, and how these countries respond to open economics in a competitive environment.

The majority of existing studies on tax and FDI relate to corporate income from FDI in different locations. Only a few consider indirect tax and governance using industry-level data. So far, none of them have combined the effects of both in a single study in the selected Asian countries of Indonesia, China and South Korea. In view of this, this study seeks to investigate how both direct and indirect taxes, coupled with host country regulations, affect the patterns of FDI and FDI's overall profitability in particular sectors in each of the countries under study. For example, in Indonesia and China, corporate tax rates are the same but the treatment of each business sector (e.g. agriculture and oil) is different, whilst the agriculture sector in Indonesia is highly subsidised compared to its Chinese counterpart (see Table 5.2). In addition, other forms of indirect taxation, like property tax and employers' national insurance, which are applicable in the various business sectors of each country, differ significantly. Hence, these differences affect the overall profitability of FDI and influence inward FDI location decisions.

Using I-O analysis to estimate the indirect taxes imposed on each industry sector each of the selected countries has different categories of industry. China has 150 sectors, Indonesia has 178, and South Korea 78 sectors. In order to compare these three countries,

this study segregates the sectors based on NAIC codes so that every country has the same categories (77 industry sectors). In this examination, the focus is the net tax on production which was paid by the producer in each sector. Based on I-O tables, this section will investigate the way in which high or low tax rates are imposed in each sector by calculating the operating surplus, and the net production on tax and subsidies (vertical column).

Indirect taxes by industry

This section (Table 5.2) presents the estimates, by industry, of the importance of indirect taxes in relation to gross operating surplus. In many respects these are similar to average effective tax rates in that they measure the actual expenditure by businesses on a range of different taxes, net of subsidies. However, they are not average effective rates in a strict sense as these net taxes are measured in relation to gross operating surplus not in relation to their tax base. By definition, the tax base for these indirect taxes would normally be different. These measures are intended to be, in effect, a profit tax equivalent – to assess the effect of a package of indirect taxes on profits. This measure (tj) is calculated for industry j as:

$$t_j = (T_j/GOS_j).100 \qquad (5.1)$$

where T_j are total taxes, net of subsidies, for industry j (production and imports) and where GOS_j is the gross operating surplus for industry j. Data for both were taken from the Annual Input-Output Accounts data (published on-line and in hard copy by each country). It should also be noted that this measure of indirect taxes is net of subsidies, and can be negative in the rare circumstances where payments received exceed the taxes paid. Of the sample of industries covered in Table 1 this occurs in several industries (minus sign).

The taxes included in these calculations comprise federal excise taxes and customs duties, state and local sales taxes, property taxes (including residential real estate taxes where applicable), motor vehicle licenses, severance taxes and other taxes on business production. Subsidies are the monetary grants paid by the government to private business or to other government enterprises ("A Guide to NIPAs" http://www.bea.gov/national/pdf/nipaguid.pdf). The taxes excluded from these calculations are taxes on corporate income, whether paid to the Indonesian, Chinese or

South Korean Internal Revenue Service, state governments or governments of other countries.

5.4. RESULTS

The results presented in Table 5.2 suggest considerable variation between one industry and another with regard to the effects of indirect taxes relative to gross operating surplus. A number of industries exhibit rates of indirect taxation which are consistently high in relation to gross surplus in all sample countries, for example, tobacco and beverages.

Table 7(5.2): Comparison of average effective indirect tax rates by sector

COMPARISON OF AVERAGE EFFECTIVE INDIRECT TAX RATES BY SECTOR				
(total indirect taxes paid by producers as a % of gross operating surplus)				
		Average Effective Tax Rates (1) Indirect taxes paid by producers		
Code	Name of Sector	South Korea	Indonesia	China
	CORPORATE TAX RATE (LISTED)	22%	25%	25%
0001	Crops	2.43%	1.74%	n/a
0002	Animals	2.49%	3.17%	n/a
0003	Forest products	65.08%	6.05%	n/a
0004	Fishery products	2.79%	1.58%	n/a
0005	Agriculture, forestry and fishing related services	2.13%	3.41%	n/a
0006	Mining of coal, crude petroleum and natural gas	-90.57%	5.20%	64.59%
0007	Metal ores	3.27%	5.55%	45.48%
0008	Non-metallic minerals	2.38%	11.41%	57.03%
0009	Meat and dairy products	123.52%	5.25%	131.37%
0010	Processed seafood products	35.28%	12.78%	n/a
0011	Polished grains, flour and milled cereals	8.76%	3.33%	87.29%
0012	Other food products	119.39%	6.64%	58.57%
0013	Beverages	560.88%	78.99%	93.11%
0014	Prepared livestock feeds	11.53%	11.32%	78.18%
0015	Tobacco products	498.00%	262.22%	489.88%
0016	Fiber yarn and fabrics	2.74%	4.66%	78.16%
0017	Apparels and other textiles	106.09%	4.59%	83.24%
0018	Leather and fur products	808.20%	10.10%	66.60%
0019	Wood and wooden products	16.98%	5.01%	58.64%
0020	Pulp and paper	44.54%	5.08%	80.26%
0021	Printing and reproduction of recorded media	50.17%	3.11%	85.11%
0022	Coke and hard-coal	-97.99%	n/a	n/a
0023	Refined petroleum products	819.25%	-38.31%	n/a
0024	Basic chemical products	10.51%	25.43%	79.64%
0025	Synthetic resins and synthetic rubber	4.20%	9.40%	47.47%
0026	Chemical fibers	3.06%	n/a	52.47%
0027	Fertilizers and agricultural chemicals	2.19%	-17.83%	31.45%
0028	Drugs, cosmetics, and soap	84.33%	19.84%	39.72%
0029	Other chemical products	12.54%	7.59%	88.46%
0030	Plastic products	22.75%	11.54%	35.74%
0031	Rubber products	7.06%	10.99%	52.36%
0032	Glass products	3.24%	4.57%	78.33%
0033	Ceramic ware	29.61%	8.40%	104.20%
0034	Cement and concrete products	4.43%	13.88%	74.10%
0035	Other nonmetallic mineral products	15.04%	n/a	66.61%
0036	Pig iron and crude steel	2.05%	5.38%	68.62%
0037	Primary iron and steel products	2.23%	7.81%	86.93%
0038	Nonferrous metal ingots and primary nonferrous r	3.67%	n/a	78.67%
0039	Fabricated metal products except machinery and f	8.11%	8.67%	58.80%
0040	Machinery and equipment of general purpose	15.56%	14.52%	61.65%
0041	Machinery and equipment of special purpose	31.67%	7.76%	61.61%
0042	Electrical equipment, and supplies	8.68%	8.65%	46.93%
0043	Electronic components and accessories	3.03%	7.02%	102.80%
0044	Audio, video and communications equipment	26.67%	6.58%	56.55%
0045	Computer and office equipment	-1024.20%	n/a	44.04%
0046	Household electrical appliances	249.36%	n/a	61.58%

Continue

COMPARISON OF AVERAGE EFFECTIVE INDIRECT TAX RATES BY SECTOR				
(total indirect taxes paid by producers as a % of gross operating surplus)				
		Average Effective Tax Rates (1)		
		Indirect taxes paid by producers		
Code	Name of Sector	South Korea	Indonesia	China
	CORPORATE TAX RATE (LISTED)	22%	25%	25%
0047	Precision instruments	43.48%	39.02%	57.84%
0048	Motor vehicles and parts	129.21%	6.03%	113.95%
0049	Ship building and repairing	4.43%	6.63%	63.76%
0050	Other transportation equipment	59.65%	5.54%	119.72%
0051	Furniture	255.32%	n/a	73.90%
0052	Other manufactured products	89.18%	10.12%	82.02%
0053	Electric utilities	-104.52%	-54.41%	64.22%
0054	Gas and water supply	-75.69%	n/a	159.39%
0055	Building construction and repair	104.10%	5.89%	39.73%
0056	Civil engineering	70.24%	9.04%	19.82%
0057	Wholesale and retail trade	1.58%	6.12%	54.55%
0058	Accommodation and food services	95.74%	7.52%	21.38%
0059	Land transport	-35.88%	8.97%	n/a
0060	Water and air transport	8.50%	4.02%	26.19%
0061	Strorage and support activities for transport	7.53%	1.20%	17.00%
0062	Communications services	46.12%	0.31%	17.61%
0063	Broadcasting	7.85%	n/a	n/a
0064	Finance and insurance	14.29%	3.39%	18.42%
0065	Real estate	32.47%	9.20%	70.71%
0066	Research and development	368.64%	n/a	9.53%
0067	Business services	10.89%	0.00%	31.06%
0068	Other business services	10.80%	n/a	53.50%
0070	Education	2.70%	5.37%	26.29%
0071	Medical and health services	3.63%	23.78%	17.47%
0072	Social work activities	0.00%	11.09%	8.73%
0073	Sanitary services	-25.40%	n/a	17.94%
0074	Publishing and cultural services	53.17%	n/a	n/a
0075	Amusement and sports activities	132.02%	9.22%	36.84%
0076	Social organizations	37.41%	n/a	33.31%
0077	Other services	0.00%	7.53%	11.01%
	Average	53.66%	11.18%	66.87%
	minimum	-1024.20%	-54.41%	8.73%
	maximum	819.25%	262.22%	489.88%
	standard deviation	1843.45%	316.63%	481.15%

In this section (table 5.2), I present estimation by industry of the importance of indirect taxes in relation to gross operating surplus. In many respects these are similar to average effective tax rates. This table measure the actual expenditure by Indonesia, China and South Korea businesses on a range of different taxes, net of subsidies. As these net taxes are measured in relation to gross surplus not in relation to their tax bases, as result some of the rates are very high.

The result presented in table 5.2 suggest considerable variation between one industry and another in the effects of indirect taxes relative to gross operating surplus. A number of industries exhibit rates of indirect taxes which are very high more than 800 % of gross operating surplus. The magnitude of the numbers as result of the effect of indirect taxes as percentage of the gross operating surplus. For instance, if you raised price 10 dollar and the profit on the product is 10 cent, anything affecting prices or total cost is going to have very big impact because it is much larger than profit. Also profit is very sensitive to intervention because what is left from the total revenue after total cost very often is very small percentage, for example the percentage on the corporate tax (income tax). In other words anything that affect revenue and cost is quite powerful and it is part of the investigation. Government policy on taxes often only focus on profit incentive rather than total cost or revenue. It appears tax rates on corporate income (statutionay) do not have much impact on profitability but it does in theory using input output table which it shows the taxes sectors actually paid and indicate significant distortions to profit percentage. This impact does not apply in a country which have tax holiday policies.

It is only those services in education and social sectors which are persistently very low across all three countries. With this variation in the importance of indirect taxes to industry earnings there are some plausible grounds for suggesting that the allocation of inward investment might affect not only one industry rather than another but also one country rather than another. It is clear that for at least some of the taxes included in this calculation the incidence of taxation may not fall wholly on the firm or even fall on the firm at all. For example, it is clearly possible that either all or part of the burden of sales taxes will be transferred to consumers. Likewise it is possible that firms might pass on the burden of other taxes to their workers in the form of lower wages. It is also worth noting that it is not just indirect taxes which determine this ratio but also fluctuations in gross operating surplus. To assure data accuracy, the high rates are experiences in all across three countries. It is noticeable that South Korea has much more industries with high indirect tax rates compare the rest of the sample countries. This perhaps as reflection of the macro-economic downturn on gross operating surplus.

The concern of this study is whether indirect taxes may have affected the pattern of inward FDI, by industry sector, in these three countries. It does not directly measure flows or stocks of FDI but considers the effects of taxes on the underlying incentives to

invest. Issues of the incidence of taxation are, therefore, only of indirect concern. Should this analysis find that indirect taxes have little effect on inward FDI it may be reasonable to question whether firms bear any of the burdens of indirect taxes. Conversely, a finding that indirect taxes do have a significant effect on the pattern of inward FDI, by industry, would suggest that at least some of the tax falls upon firms. The table below is a summary of equivalent indirect tax paid by producers which is net tax on production of each sector divided by operating surplus. Net tax on production refers to various taxes, extra charges, and fees levied on the production units on their production, sale and business activities or land and labour use.

Table 8(5.3); Summary average effective tax rates

		Average Effective Tax Rates (1)		
		Indirect taxes paid by producers		
Code	Name of Sector	South Korea	Indonesia	China
	CORPORATE TAX RATE (LISTED)	22%	25%	25%
	minimum	-1024.20%	-54.41%	8.73%
	maximum	819.25%	262.22%	489.88%
	standard deviation	1843.45%	316.63%	481.15%

The table above presents a summary of 77 sectors. The average indirect tax rate imposed on producers in China and South Korea (52.24 percent and 66.19 percent) is higher than their listed corporate tax rate (22 percent and 25 percent). This could be an indication that the investor should look for further substitution of available resources rather than rely on the attractiveness of the host country's direct tax rate. This is in line with a study by Desay, Foley, and Hines (2004) which documented that indirect tax payments in some countries are much larger than income tax or corporate tax. The Indonesian indirect tax rate is 11.27 per cent on average which is lower than its corporate tax rate at 25 per cent. Although taxes will not be the only parameters of destination attraction in this study, a simple comparison of taxes across sectors in each selected Asian county is an interesting starting point. Later on in the study, tax variables will be tested further using a regression model, and this will show how they interact with other factors related to the country's stability, such as governance and corruption.

Apart from the average effective tax rates, the standard deviation indicates the dispersion among sectors. South Korea has a significantly high standard deviation compared to the other two countries (Indonesia and China). This could be because one

particular sector in the country has extremely low indirect tax (-1024.20 percent) possibly due to high subsidies. On the other hand South Korea's petroleum sectors have the highest indirect tax at 819.25 per cent which highlights distortion arising from lack of subsidies.

The table above shows a list of average effective indirect tax rates paid by producers in various sectors. In each country, some sectors indicate lower rates than others. The findings show that undoubtedly, indirect taxes on producers provide significant profit incentives for investors to divert resources, thereby necessitating future production moves from one sector to another. This aims for foreign investor that choosing which industry to invest based on the attractiveness taxes (indirect taxes) impose on each industry. In contrast, although investors generally look at the corporate taxes in a particular economy as a measure of investment attractiveness, this study's preliminary findings show that, across the sampled countries, corporate taxes are fairly similar, with both Indonesia and China reporting 25 per cent while South Korea recorded 22 per cent. This study results indicate that the effects of indirect taxes on the profits of each sector are significantly different across countries, as shown in Table 5.2 above. For example, overall, the metal ores sector has the lowest indirect tax rates with South Korea having the lowest rate at 3.27 percent compared to both China (45.48 percent) and Indonesia (5.55 percent), while the tobacco sector has the highest indirect tax rates in which Indonesia's rates are comparatively lower than those of South Korea and China. The comparison above shows that each country has potential investment location benefits either for Asian investor or for countries outside Asia, and that distance, and any related costs such as transport, mean that intra-Asian investment can be attractive.

5.5. INTRA-ASIAN COMPARISON

FDI flows between Asian countries are not small; a rough estimation shows that, in 2004, they accounted for 40 per cent of Asia's total inflows (Kwan & Cheung 2006; UN conference on trade and development (UNCTAD) 2006: Chapter 2).

Table 9(5.4): Comparison indirect tax intra Asian country

Sector	Indirect tax		
	South Korea	China	Indonesia
Agriculture, forestry and fishing	4.56%	n/a	2.11%
Mining and quarrying	-12.41%	61.45%	5.67%
Food and Baverage	276.44%	132.83%	34.73%
Textile and apparel	76.34%	77.71%	5.28%
Wood and paper products	37.58%	71.26%	5.04%
Printing and reproduction of recorded	50.17%	85.11%	3.11%
Petroleum and coal products	775.38%	n/a	-38.31%
Chemicals, drugs and medicines	29.47%	52.60%	5.20%
Non-metallic mineral products	6.42%	71.24%	9.32%
Basic metal products	2.35%	78.96%	8.85%
Fabricated metal products except machinery and funiture	8.11%	58.80%	8.67%
General machinery and equipment	21.67%	61.64%	10.47%
Electronic and electrical equipment	17.71%	56.18%	8.45%
Precision instruments	43.48%	57.84%	39.02%
Transportation equipment	54.06%	106.99%	5.77%
Furniture and other manufactured products	136.01%	78.42%	10.12%
Electrictity, gas, steam and water supply	-91.62%	67.16%	-54.41%
Construction	89.50%	30.87%	7.15%
Wholesale and retail trade	1.58%	54.55%	6.12%
Accommodation and food services	95.74%	21.38%	7.52%
Transportation	-17.06%	21.60%	4.18%
Communications and broadcasting	43.48%	17.61%	0.31%
Finance and insurance	14.29%	18.42%	3.39%
Real estate and business services	27.14%	54.89%	n/a
Public administration and defense	n/a	n/a	n/a
Education, health and social work	1.90%	20.92%	5.51%
Other services	93.04%	18.47%	8.02%
Minimum	-91.62%	20.92%	-54.41%
Maximum	775.38%	132.83%	39.02%
Mean	28.30%	58.32%	5.77%
Standar Deviation	155.34%	28.88%	17.45%

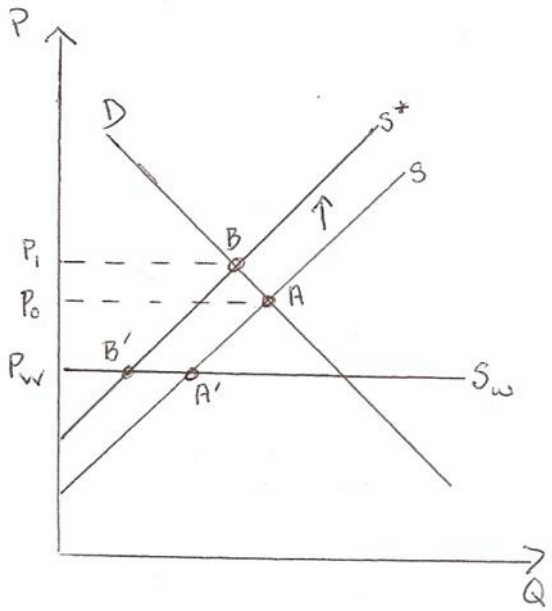
Table 5.4 is aggregate sector from input output table South Korea, China and Indonesia, the table presents a summary of indirect taxation, to enable any of the selected countries to assess the potential for bilateral FDI with the other two countries. So for instance, for

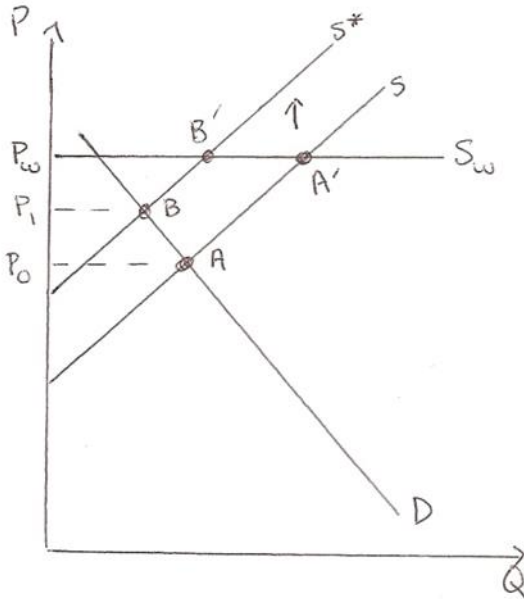
South Korea, Indonesian taxation would be more positive for most industries compared to Chinese taxation, particularly for the petroleum and coal product sectors; South Korea would be better off investing in this sector in Indonesia than in China; whilst for China it would be a good move to invest in either South Korea or Indonesia as most sectors show positive signs. Although, for China, Indonesia seems overall to be the better option for investment, for one sector (no.17), Electricity, gas, steam and water supply, South Korea offers a better rate.

5.6. PRICE TAKING ASSUMPTIONS

In this study, the findings also rest on the assumption that the tax burden paid by sectors will not be passed on to customers in the form of higher prices because the countries are price takers in the world market. For an import and export competing sector, taxes will affect the supply and demand of products in the sector as described below (Chamberlain, 1995).

Figure 5(5.1): Supply and demand (Chamberlain, 1995)





Using the assumption, it could means that China, Indonesia and South Korea could fall in category country who are price taker if a) that a significant proportion of economic sectors in these countries are open to international trade; and b) that each

country has a sufficiently small share of global markets that it is unlikely to affect world prices. So that, table 5.4 and 5.5 are created to see the proportion of these countries trade share in the world and using the same input output table (South Korea 2005, China 2007 and Indonesia 2008) through their export to sale ratio and import penetration.

The table below (table 5.5 & 5.6) shown here presents two standard indicators of the importance of trade to any individual sector. First is import penetration which measures the percentage of domestic consumption accounted for by imports. Under these assumptions prices do not change as a result of tax because domestic taxes do not change international prices. Secondly, the export to sales ratio measures the percentage of domestic production which is exported. The implication of this assumption is to change the incidence of the tax. From these two assumptions this study will try to identify how indirect tax affects the cost, and therefore the profit, to domestic producers which will attract foreign direct investment attention; that is, whether a certain product can advantageously be produced in certain locations or whether investment in that particular sector would be wise. Table 5.4. demonstrates significant variation in indirect tax rates among the three selected Asian countries. While there are minor differences in corporation tax among the countries, the variation in indirect tax proportions could arguably affect the overall profit to corporations. As conclusion, the initial findings of the study suggest that the effect of indirect taxes on profit incentives vary considerably and in an arbitrary.

In Chamberlain's analysis the tax shifts the supply curve inward to S* therefore raising prices from Po to P1 in each case. Where this study differs is that it introduces a world supply curve Sw that is perfectly elastic. In international economies this is known as the small country assumption; that domestic prices are determined in relation to given world prices. This description is misleading since the country does not need to be 'small' in any normal sense. It is only necessary that the country faces given world prices for the world supply curve to be horizontal.

Table 10(5.5): Indicators of trability by sector

Indicators of tradability by sector of selected ASIA countries						
Input-output sector	Export to sale ratio%			Import Penetration%		
Mean	South Korea	Indonesia	China	South Korea	Indonesia	China
Leather and fur products	18.84%	46.09%	26.80%	37.60%	12.00%	26.23%
Fertilizers and agricultural chemicals	16.67%	23.56%	7.97%	26.03%	41.13%	n/a
Drugs, cosmetics, and soap	14.81%	11.55%	9.12%	32.20%	39.26%	189.97%
Meat and dairy products	0.62%	1.83%	3.25%	16.43%	15.36%	8.42%
Plastic products	11.72%	17.45%	11.62%	11.79	11.03%	241.85%
Tobacco products	10.67%	4.28%	0.48%	5.41%	2.99%	0.74%
Fibre yarn and fabrics	46.38%	48.85%	30.87%	25.52%	15.59%	203.10%

Source: Input-output table (China 2007, Indonesia 2008, and South Korea 2005)

Table 5.5 above presents the tradability of sectors in each country sample compare to the rest of the world. It is not necessary for both indicators to be substantial for a good to be regarded as 'traded'. Much trade theory would predict that goods tend to be either exported or imported, not both. The results in Table 5.5. above shows that almost all goods sectors in the selected Asian countries are substantially traded and, in many cases, are highly exposed to international trade.

The next issue to address is the extent to which Asian countries face given world prices. Ideally these questions would be directly addressed by an analysis of prices, but such analysis is lengthy and subject to data limitations and conceptual difficulties, so here we adopt an alternative approach. For a sample of 77 commodities, we measure the share of these three countries in total world exports. The sample consists exclusively of goods, not services, for reasons of data availability. As can be seen here (table 5.6), for the vast majority of the sample, the share of each country in total mean world exports and imports is relatively small at less than 3%, except for China which achieves almost 10% although this is still considered low in terms of world trade. Taken overall, the findings support the working assumption that world prices are not likely to respond in the short or medium term to national taxes imposed by these countries.

Table 11(5.6): Share in total world export/import of selected products

Share in total world export/import of selected products						
Input-output sector	**Import**			**Export**		
	South Korea	**Indonesia**	**China**	**South Korea**	**Indonesia**	**China**
Total mean (world)	**2.62%**	**1.00%**	**8.42%**	**2.20%**	**1.91%**	**9.79%**
Leather and fur products	1.94%	1.31%	16.47%	3.64%	0.67%	5.69%
Fertilizers and agricultural chemicals	0.92%	2.54%	4.38%	1.00%	0.46%	7.87%
Drugs, cosmetics, and soap	0.83%	0.14%	1.54%	0.27%	0.06%	2.14%
Meat and dairy products	0.27%	2.54%	1.02	0.01%	0.29%	2.77%
Plastic products	1.33%	1.25%	17.61%	7.56%	0.45%	3.16%
Tobacco products	1.00%	1.19%	2.32%	1.52%	1.82%	2.71%
Fibre yarn and fabrics	2.07%	1.70%	6.56%	4.67%	1.69%	30.92%
Highest	10.33%	4.70%	41.07%	13.96%	22.68%	38.40%
Lowest	0.27%	0.17%	0.55%	0.01%	0.03%	0.07%

5.6. CONCLUSION

The focus of this chapter is the effects of indirect taxation on the industrial composition of inward direct investment in selected Asian countries (South Korea, Indonesia and China). The measure of indirect taxes (in relation to gross operating surplus) presented in Table 5.2 shows that the total value of indirect taxes is sufficiently large that the (ex ante) possibility exists that taxes might have substantially affected profit incentives and can be significant. The variation between one sector and another also confirms the possibility that profit incentives for one sector relative to another cannot be ignored without further analysis.

The main finding of this chapter is that this significant difference between indirect taxes could become the starting point from which to investigate further the effect of taxes on the profitability of inward FDI. This could help to confirm the existence of a potential distortionary effect on the pattern of South Korea's, Indonesia's and China's inward FDI

by sector, resulting from the impact on relative profit incentives arising from indirect taxes. Some of the indirect taxes included in the comparison are sales and excise taxes, for which one might expect the tax burden to be passed on to the consumer. Desai, 2004 examined the impact of indirect taxes on US foreign affiliate, it has shown evidence that the higher the local indirect tax rates associate with reducing of US affiliate foreign assets in that location. This chapter is working toward similar path using different countries and focus on different industries as the object to compare the effect of the indirect tax rates. In addition, this chapter examines a package of indirect taxes rather than the effect of any individual tax.

As some of researcher previously (Carlton, 1983; Moore, Steece & Swenson, 1987; Hines, 1996; Ondrich & Wasylenko, 1993; Papke, 1991) emphasize that taxes should influence investor decisions with regard to location of their investment. Nonetheless, this finding is of considerable importance as a foundation from which to investigate the effect of taxes on inward FDI at sector level. The implication of assuming that the sector concerned is a) traded and b) faces given world prices is to change the incidence of the tax. Under these assumptions, prices do not change as a result of tax because domestic taxes do not change prices. Output falls by a larger amount than where there is no international trade because prices do not rise and the incidence of the tax falls only on firms, who cannot pass on the increased costs in higher prices. In summary open trade at given world price implies that taxes affect profit not price.

CHAPTER VI: COUNTRY LEVEL ANALYSIS OF TAX AND GOVERNANCE EFFECTS ON INWARD INVESTMENT

6.1. INTRODUCTION

In recent times, the discussion on the importance of FDI has moved from whether developing countries should attract FDI, to how developing countries can attract FDI (Asiedu and Lien, 2011). Asian countries have adopted several policies that are aimed at attracting FDI. For instance, due to the financial crisis of 1998, to rebuild the confidence to invite foreign activities, they have sought to restore and maintain macroeconomic stability through, amongst others, an improved regulatory framework for FDI by: strengthening the rule of law; engaging in trade liberalisation; and improving legal institutions, telecommunications and transportation infrastructure (UNTACD, 1999).

Many studies have examined the reasons why investors preferred FDI to exporting. One reason is the relative cost of exporting, for example, transport costs, and evidently, such that engaging in FDI is more profitable than exporting. Host countries which see FDI as having the potential to help their economy will be interested to know what the factors that attract FDI are. If they know what factors determine FDI location, the host country may be able to concentrate on these factors. This particular chapter is centered on the role of governance in selected Asian countries as host economies. Previous empirical studies have considered a variety of host countries both developed and developing (Wheeler and Mody, 1992; Loree and Guisinger, 1995; Papanastassiou and Pearce, 1994; Mudambi, 1995). The findings from this chapter will contribute to the links between governance and FDI in Asian countries some of which have lower income and some, higher income.

Over the years, there has been vast change in host country attitudes to and policies towards FDI, especially when the host countries believe that FDI activities add to gross capital formation and the balance of payments without the risk associated with additional loan repayment. The host country also expects to have the benefit from foreign investment to increase competition and give rise to positive technological externalities and spillovers. Any of these latter effects encourage governments to create an effective business climate

environment for the investors. Frequently, various grounds for pessimism have been expressed regarding investment in most countries in Asia due factors associated with government such us complexity, bureaucracy or regulations. Thus it is important to build a reputation for having good regulations that are controlled by government (Stein & Daude, 2007; Disdier & Mayer, 2004; Du, Lu, & Tao, 2007; Urata & Kawai 2000; Wei, 2000). Despite various academic studies on the advantages or disadvantages of FDI, the vast majority of policy-makers tend to believe that FDI could play a positive role in economic development. Among the various policy instruments designed to attract FDI, a key role is played by investment benefits as broadly understood, which may impact the size, location or sector of a FDI project (OECD 2003, p.12 and pp. 17-20; WTO, 2006, pp. 48-49). Usually the most attractive instruments among the policies consist of financial incentives (mostly subsidies and tax allowances). Although there are a significant number of country level regression studies of the determinants of inward FDI which include tax very few focus on Asia specifically. Likewise only a small number of such studies consider governance as a determinant. The focus on Asia and the use of both tax and bureaucracy as determinants is a contribution of this chapter.

In this chapter, the focus is governance role as a determinant factor that affects FDI inflows and stocks and it will be investigated and analysed on a country level basis. The analysis will be conducted using two models: FDI inflows and stock as dependent variables. To examine the effect of governance and regulation in selected Asian countries this study will follow the OLI framework by Dunning and the determinant of FDI as theoretical foundation. The link between governance and FDI spans two sets of influences – country level and firm level. Since governance is predominantly national it makes sense to consider variations in both FDI and governance at the country level. That is, variations in governance are predominantly a country-level phenomenon. They result from actions, practices and institutions of predominantly national governments. Analysing the process at country level, therefore, makes considerable sense. However, if governance is predominantly a country-level issue, its consequences are not. The effects of governance on FDI are felt at the level of individual firms or even individual investment projects. To analyse these effects requires firm level analysis which will be investigated and discussed in the later chapters. It is to combine both sets of demands that this whole thesis combines a country-level analysis of the links between FDI and governance with a firm-level analysis of the effect of governance on the performance of foreign-owned firms in Asia.

For the analysis at country level and the analysis at firm level it is clear that the effects of governance on FDI or the performance of foreign-owned firms should not be analysed in isolation. That is, governance indicators are but one set of many possible determinants of the location of FDI. Both theory and the existing empirical literature point towards setting governance within a broader set of determinants. As this study will investigate, the governance impact in two set of analysis, accordingly, both the country-level and firm-level analysis are formulated within the wider contexts of the determinants of the location of FDI and the determinants of the performance of foreign-owned firms. The sample for the country-level analysis comprises 22 Asian countries. At the firm level, analysis, of necessity, needs to be more focused. The later discussion (next chapter) concentrates on a sample of firms' performance in related to governance and tax in selected Asian countries.

6.2. DATA AND METHODOLOGY FOR THE COUNTRY-LEVEL ANALYSIS

Data

The country level analysis more closely follows the empirical literature on the determinants of inward FDI based on the predictions of OLI theory. The relevant chapter analyses the effects of tax and government regulation on inward FDI at the country level. This is estimated as part of a wider specification of the determinants of the location of FDI. The main interest variables influencing FDI in this section will be national tax and regulation. The other control variables are established from the OLI concept of motives FDI (market size, resources, efficiency, and strategic asset seeking). For this part of the analysis, economic regressions are applied (OLS and fixed effect) to 23 countries during the period 2002-2020 (nine annual observations for each). The data are collected from several sources such as UNCTAD (FDI measures), World Development Indicators (market size, natural resources and other control variables), and World Bank Governance Indicators.

The (annual) data for the country-level analysis were collected for a total of 22 Asian countries over the period 2002-2010. For analytical purposes I ranked these countries by GDP per capita and divided the sample into two sub-samples – higher income and lower income. Details of the countries included in each are set out below.

With one exception all variables were taken from one of two World Bank databases: World Development Indicators (WDI) and Worldwide Governance Indicators (WGI). The combination of data for 22 countries over time periods provided a maximum of 198 observations. In practice there are missing observations so the actual sample size for estimation varied according to the model specification but was always substantially less. Based largely on economic and econometric reasoning, data availability and previous studies on impact governance on FDI, a panel data model to examine the impact of governance among other factors, on FDI inflow and stock in lower and higher income Asian countries.

The data for the country level analysis were taken from the *World Development Indicators* database produced by the World Bank. The sample comprised 22 different Asian countries which are divided to two categories, higher income and lower income country (see table below).

Table 12(6.1): Lower and Higher income countries in ASIA

SAMPLE OF COUNTRIES	
Lower Income Countries	**Higher income countries**
Bangladesh	Brunei Darussalam
Bhutan	China
Cambodia	Hong Kong SAR, China
India	Japan
Indonesia	Korea, Rep.
Lao PDR	Macao SAR, China
Mongolia	Malaysia
Nepal	Maldives
Pakistan	Philippines
Sri Lanka	Singapore
Vietnam	Thailand

Methodology

Three different methodology analyses are used to measure the impact of taxes and governance on inward FDI:

Regression analysis

Regression techniques are commonly used in cross-sectional or panel model studies of determinants (inward) FDI. The regression form is:

$$FDI_i = I_0 + {}_j X_{ji} + \varepsilon_i \qquad 6.1$$

Where FDI_i is inward foreign direct investment flows into country i and X_{ji} is the jth explanatory variable of country i.

Cross-sectional data for individuals, firms or countries might have heterogeneity in terms of unobservable specific effects to cross-section units or time periods (Hsioa, 1986). Therefore time-series and cross-section studies, which do not account for this heterogeneity, inherit the risk of obtaining biased results (Baltagi, 2005). In this context, modelling FDI determinants among countries increases the heterogeneous investment flow among countries. The equations in this study are estimated using (a) OLS; (b) panel fixed effects (country level analysis only) and (c) the cross-sectional equivalent of a panel fixed effects model, the least squares dummy variables (LSDV) model. The choices that different estimators were intending were partly to assess the robustness of key findings and partly to allow a choice of different assumptions with respect to the underlying model.

OLS estimation

This study applies OLS in both country and firm analyses; the estimation is very standard but it gives some interesting information; for instance, whether there exists a statistical relationship among variables of interest. OLS is arguably the most widely used method for the linear statistics model. The common form of OLS is below:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \ldots. + \beta_k X_{ip} + \varepsilon_i \qquad 6.2$$

Y_i is the value of case i on the outcome variable, β_0 is the regression constant, X_{ij} is i's score on the *J*th of *p* predictor value in the model, β_j is predictor *j*'s partial regression weight, and ε_i is the error of case i.

Most researchers are often interested in testing the null hypothesis that specific element in β is zero or creating a confidence interval for that variable using a sample-derived estimate combined with an estimate of the sample variance of the estimate. The validity of the hypothesis test and confidence level as implemented in most statistical computing packages depends on the extent to which the model's assumptions are satisfied. The OLS regression has five assumptions to fulfil: (1) the Ys are generated according to the model specified in equation 1: (2) the X values are fixed (rather than random): (3) the errors are uncorrelated random variables with (4) zero means, and (5) constant variance. The condition that the OLS estimation needs to be aware of is the existence of heteroskedasticity when the errors between predictors are related. This is because the condition of homoskedasticity has been violated.

The coefficient β tells us how much taxes and governance are higher on average. Some control variables are introduced in each level of analysis (country and firms).
The pooled OLS estimation is considerably the simplest methodology in regression analysis, which is more suitable for static cross-sectional data analysis. However, for time-series dimensions this method fails to account for the unobserved country-specific (fixed) effects that cause an omitted variable bias, which is then picked up by the error term and to control for the potential endogeneity problems. The correlation between some of the independent variables and country-specific effects is again picked up in the error term. Empirical studies on FDI which apply OLS regression analysis, for instance Balasubramaniam et al. (1996), use 46 developing countries for 15 years, investigated the impact of technology and spillovers in host countries and the result was that FDI has a positive effect but only for export promoting host countries.

Panel fixed effects and LSDV

In this study, modelling international trade or FDI among countries increases heterogeneous trading or investment relationships among those countries. In order to deal with heterogeneity as a result of increasing diversity in country samples, several papers introduce the panel data model such as fixed effect or random effect into the equation. Matyas (1998) puts forward that large country specific effects should be treated as non-observable random effects in the case of large country samples. Egger (2000) suggests that the fixed effects model would be the right choice if data samples include countries, which belong the same regional blocs such as the Asian region (ASEAN and China). Membership of the same regional bloc is determined by cultural and political similarities between countries or geographical distances between them. Therefore, these country specific effects should not be treated as non-observable random effects.

Cheng & Wall (2005) argue that the fixed effects model could be a better choice as long as the specification includes country-pair fixed effects. The fixed effects model deals with unobserved heterogeneity by removing individual effects along with any time-variant variables through a transformation. Given observation with an intercept, the fixed effect model can be written as follows:

$$Y_{it} = \beta_k \chi_{it} + \delta z_i + u_i + e_{it} \qquad 6.3$$

Where χit represents variables that vary over individuals and time, β is the coefficient on χit and zi is time-invariant variables with a vector of dummy variables δ, and ui capturing

cross-sectional and time effects, while eit is the disturbance balance term (Baum, 2006 and Wooldridge, 2002). A panel is normally considered to have data which vary both by time and cross-section. Essentially the same model can be used, as is done in this thesis, by using dummy variables to capture unobserved effects by, say, country and by sector. Although the specification is essentially that of the panel fixed effects model it is referred to as the least squares dummy variables model (LSDV) because it uses (in this case) cross-sectional rather than panel data.

The methodological approach is intended to be firmly within the tradition of empirical studies of the determinants of the location of FDI described by Blonigen (2005) as Partial Equilibrium Analysis of External Factors Affecting FDI Decisions and Location". The central question of interest in this chapter concerns the influence of governance issues on the location of FDI in Asian countries. To address this empirical model it includes the governance variables listed above. However, the view of this and almost all other studies in the same tradition is that governance is but one of many sets of possible influences on the location of inward investment. The statistical consequences (endogeneity) of excluding a variable which is correlated with the dependent variable and one or more of the other independent variables are severe. For example, if such omitted variables exist then OLS estimators are biased and inconsistent.

The model specified is estimated using a panel regression analysis. Two different panel estimation techniques (pooled ordinary least square and fixed effect) are used in this study. From the theoretical perspectives, the researcher is expected to examine the most suitable technique through a number of standard diagnostic tests on a given dataset. In practice, however, it is often difficult to know which technique is most appropriate since each of the techniques has its own strength and weakness. For instance, a pooled regression model implicitly assumes there are no problems of omitted variables in a model, which is hardly true. The fixed-effect specification allows for intercept shifts for each country. It takes care of the problem that may arise from omitting important variables from the model; this is accomplished by creating dummies for all but one country in the sample. The consequence of this is an indication of reduction in degrees of freedom, the severity of which deepens as the size of the sampled countries increases.

One approach to reducing these risks is to include a series of "control" variables to try to reduce the risk of an important omitted variable. In this chapter, the specification

of the main conceptual foundation for these control variables is the OLI paradigm and, in particular, Dunning (2000). For this reason market, resource and strategic asset-seeking variables are included within the specifications of the empirical model. As noted in the review of literature a considerable number of papers dealing with the effects of governance on inward FDI exists. To capture such effects a governance variable is included in this study specification.

The empirical model specified for both FDI inflows and inward FDI stocks was:

$$lnFDI_{jt} = \beta0 + \beta1.tradegdp_{jt} + \beta2.market1_{jt} + \beta3.market2_{jt} + \beta4.oilgdp_{jt} + \beta5.natrgdp_{jt} + \beta6.techn_{jt} + \beta7.gov_{jt} + \beta8.goveff_{jt} + \beta9.regul_{jt} + \beta10.corrup_{jt} + \beta11.totaltax_{jt} + u_{jt} \quad \text{…….(6.4)}$$

Where subscript j indicates country and t time, lnFDIjt is either the log of FDI inflows or log of inward FDI stocks (that is, the same general specification applies to each of two different FDI dependent variables) and ujt is an i.i.d. disturbance term. This study is heavily influenced by OLI paradigm as motive of FDI so that the controls variables are built from these motives and are described details in later section - 6.3

Equation 1 was estimated by ordinary least squares (OLS). However, there are a number of reasons why this OLS specification might be at risk of endogeneity, with the consequence that OLS estimates are biased and inconsistent. Amongst these are (a) omitted variables and (b) measurement errors that are correlated with both the dependent variable and one or more independent variables. One way to try to reduce the risk of such endogeneity is to use a (double) fixed-effects panel estimator to try to capture the unobserved effects of any omitted variables or measurement errors. This results in the following specification:

$$lnFDI_{jt} = \beta0 + \beta1.tradegdp_{jt} + \beta2.market1_{jt} + \beta3.market2_{jt} + \beta4.oilgdp_{jt} + \beta5.natrgdp_{jt} + \beta6.techn_{jt} + \beta7.gov_{jt} + \beta8.goveff_{jt} + \beta9.regul_{jt} + \beta10.corrup_{jt} + \beta11.totaltax_{jt} + \eta_j + \theta_t + v_{jt} \quad \text{……(6.5)}$$

Where ηj is a vector of country fixed effects, θt a vector of time fixed effects and vjt an i.i.d. disturbance term.

In summary, this country-level analysis reports two different estimators – OLS and panel-fixed effects. Since it is impossible to know for sure what the risks of endogeneity are, this allows the reader to choose between three different possible sets of

assumptions: first assumption is any variables omitted from or any measurement error associated with equation 6.1 is unlikely to be correlated with both the dependent and one or more independent variables (choose OLS estimates). Second, Any endogeneity arising from equation 6.1 is likely to be effectively captured by using fixed effects (choose panel-fixed effects estimates), it also has been tested using Hausman statistic for fixed effects versus random effects and the result is chi-sq (3) = 27.1 and p=0.000. Based on this result the econometric model in this study is estimated by fixed effects. An ideal set of results would find no real differences between each estimator, in which case we could conclude that the panel-fixed effects estimator help support the view that endogeneity is not a problem of significance with the OLS specification (equation 6.1). In reality such findings are not common.

6.3. VARIABLES

6.3.1. Dependent variables:

This study use two dependent variables:

1. FDI inflows – Net inward flows of FDI as a percentage of GDP (source: WDI)
2. FDI inward stocks – Net inward stocks of FDI as a percentage of GDP.

Data on inward stocks were nominal values and taken from the UNCTAD database on FDI and data on GDP were taken from the WDI database. Kernel density functions for both these dependent variables are presented in both table 6.3 and 6.4, together with the kernel density functions of the logs of each variable, plotted against the comparable normal distribution. As can be seen using the log of both variables is much closer to the normal distribution than the untransformed variable. Accordingly the log values labelled lnfdiflow and lnfdistock were used in our analysis.

In keeping with a number of the empirical studies of the determinants of inward FDI, for example that by Chidlow et al (2009), the model in this study is based on OLI theory as expressed by Dunning (1998, 2000) and others. OLI theory specifies a range of key motives for the choice of a location for inward FDI. Not all of these will necessarily be of consequence in any particular set of circumstances but, if they are, we should expect to observe the following effects of motives. Market-seeking motives – a statistically significant and positive relationship between consumption and inward FDI. Efficiency-seeking motives – a statistically significant and positive relationship between inward FDI and multi-factor productivity. Resource-seeking motives – a positive and significant

relationship between natural resource intensity and inward FDI. Strategic asset-seeking motives – a statistically significant and positive relationship with technology. Trade-openness effects – a positive and statistically significant relationship between both exports to sales ration and import penetration and inward FDI.

Independent variables used without further transformation:

1. International trade as a percentage of GDP **(tradegdp)**, taken from the WDI database and used as an indicator of the degree of integration of the country concerned into the world economy.
2. Oil rents as a percentage of GDP **(oilgdp)**, taken from the WDI database and used as one indicator of resource-seeking effects.
3. Natural resource rents as a percentage of GDP **(natrgdp)**, from the WDI database and used as another indicator of resource-seeking effects.
4. The aggregate indicators for government effectiveness **(goveff)**, regulatory quality **(regul)**, and corruption **(corrup)** taken from the WGI database. Higher scores of these variables indicate "better governance" such as less corruption and more government effectiveness.
5. The total tax rate, as a percentage of commercial profits, from the WDI database.

6.3.2 Variables combined using factor analysis (principal components):

A common problem with data in FDI and other empirical studies is that there are a potentially large number of influences, many of which are closely correlated with each other. Using such variables inevitably increases the risk of multicollinearity in the model. To limit such risks this study used factor analysis to combine several groups of variables into one or two principal components. In this way I can convert variables that have possibility of correlation into variables that linearly uncorrelated. The variables so created were:

The first and second principal components, market1 and market2, generated from a series of market-seeking variables (GDP, GDP per capita, population density, the share of consumption in GDP, GDP growth rate and the urban population as a percentage of the total), all of which were taken from the WDI database. The first principal component (techn) from a series of strategic asset-seeking variables (the number of broadband subscribers per 100 people, internet servers per million people and computer services as

a percentage of total exports). The first principal component (gov) derived from the voice and accountability and political stability indicators from the WGI database.
Correlation matrices for the independent variables are reported in Table 6.2 below.

Table 13(6.2): Correlation matrices for independent regression variables (Country level analysis)

TABLE 10: CORRELATION MATRICES FOR INDEPENDENT REGRESSION VARIABLES (COUNTRY LEVEL ANALYSIS)										
a. Low income										
	tradegdp	market1	market2	oilgdp	natrgdp	techn	gov	goveff	regul	corrup
tradegdp	1									
market1	0.0602	1								
market2	0.3721	-0.0616	1							
oilgdp	0.5148	0.2667	0.031	1						
natrgdp	0.3769	0.5902	0.0986	0.5215	1					
techn	0.5637	0.4262	0.0345	0.5606	0.4611	1				
gov	0.7107	-0.0465	0.3278	0.2801	0.4238	0.359	1			
goveff	0.0659	0.5296	0.3174	0.2066	0.2232	0.2825	0.0367	1		
regul	0.0394	0.3212	0.0161	0.17	-0.0703	0.1512	-0.3698	0.4009	1	
corrup	0.1182	0.3519	0.3315	-0.0342	0.1719	0.1912	0.1947	0.8574	0.2767	1
totaltax	-0.298	0.2214	0.1621	0.0263	-0.1887	0.0294	-0.3022	0.5711	0.306	0.3737
B. High income										
	tradegdp	market1	market2	oilgdp	natrgdp	techn	gov	goveff	regul	corrup
tradegdp	1									
market1	0.484	1								
market2	0.3395	-0.4606	1							
oilgdp	-0.1816	0.0667	0.1422	1						
natrgdp	-0.1898	0.0321	0.1576	0.9971	1					
techn	0.3016	0.7415	-0.4712	-0.3825	-0.408	1				
gov	0.2806	0.7778	-0.5323	-0.0998	-0.1295	0.7057	1			
goveff	0.6898	0.8637	-0.1957	-0.1507	-0.1749	0.75	0.7641	1		
regul	0.7107	0.8803	-0.2035	-0.003	-0.0351	0.6188	0.8023	0.8876	1	
corrup	0.6892	0.9016	-0.2612	-0.1601	-0.1914	0.7023	0.8174	0.9342	0.9527	1
totaltax	-0.609	-0.2504	-0.2391	-0.0365	-0.0245	-0.1253	-0.4287	-0.4363	-0.5718	-0.4638

The correlation matrices above are for all countries and it shows few of the values are high. It because these variables are from the principle component not the basic data.

6.3.3 Chow Test

In some studies which use regression analysis, one is often interested in finding whether sets of coefficients in two linear regressions are equal, and others are interested in finding whether the intercepts differ, given that the slopes are equal. According to Chow (1960), to test the equality between sets of coefficients in two linear regressions, one starts with the assumption that both are equal. A regression equation is fitted to the combined sets of observations, i.e. excluded and selected, and the residual sum-of-squared (RSS) is computed. Next step, a regression equation is fitted to the data without assuming the sets are equal. Likewise, the RSS is obtained. Chow shows that the ratio difference between these two sums, the latter sum, adjusted for the corresponding degrees of freedom, will be distributed as an F-ratio.

This thesis uses the Chow test to test equality of sets of coefficients in more than one regression. This test tells whether two regressions are different or not, without specifying the difference, which if any, would be something due to a difference in intercepts term or slope coefficients. The original paper by Chow (1960) showed that his method (Chow test) could help the researcher in determining whether or not newly collected data exhibit the same relationship between dependent and independent variables as the previous data. Preliminary estimation comprised estimation of equations 1 and 2 (for both stocks and flows separately) for a pooled sample and for both sub-samples (higher and lower income) separately. These were used to conduct Chow tests for parameter constancy to establish whether it was valid to combine higher income and lower income countries into a single sample for Asia. The results of these tests are reported in Table 6.3 below. In all cases the null hypothesis (that parameters are the same in both sub-samples) can be rejected at 90 percent or higher confidence levels. That is, it suggests that there are statistically significant behavioural differences between lower and higher income countries in the estimated model. In consequence separate estimates were derived for both sub-samples.

Table 14(6.3): Chow test for pooling the two sub-samples

Table 11: Chow Tests for Pooling the Two Sub-Samples		
Dependent Variable	**OLS**	**Panel Fixed Effects**
Test Statistics (F):		
FDI flows	2.8510	1.6945
FDI Stocks	9.1909	5.8562
Degrees of freedom	22,121	58, 85

6.4. COUNTRY LEVEL ANALYSIS OF GOVERNANCE EFFECT ON INWARD INVESTMENT

6.4.1. Flows of Inward Direct Investment

The results of the country-level analysis of net inflows of FDI (relative to GDP) are presented in Table 6.3 for each of the two estimators – OLS and panel-fixed effects. For both lower and higher income countries the results using the panel-fixed effects estimator are tricky to interpret because of the likely presence of multicollinearity which

can be reduced but not eliminated. In both cases the high value of the mean variance inflation factor suggests such a problem. In consequence, individual coefficients using the panel-fixed effects estimator are likely to be tricky to interpret. That is, whilst multicollinearity does not affect the explanatory power of the overall model, estimates of individual coefficients lack precision.

Results

Lower Income Countries

The results for governance and related variables differ between the OLS and Panel fixed effect estimators. To some extent it is to be expected that different estimators produce different results. There is some consistency between both estimators with respect to control variables but little with respect to the governance ones. With OLS none of the governance variables are significant except for corruption, which has a negative sign, implying net FDI inflows are higher where corruption is worst. This finding is not unusual as a previous study by Bardhan (1997) found that in the presence of a rigid regulation and inefficient bureaucracy, corruption may helping foreign firm doing business with speeding up the process of decision making. The results also indicate that lower income countries as preference location for their natural resource advantages. It shows the significance result on both oilgdp and naturalgdp. It is common for developing countries to have such advantage (Dunning, 2009) these countries become target destination of investment which are resource seeking rather than strategic asset seeking. Although the corruption problem is high in these countries but seem not discourage investor.

With the Panel fixed effect estimator none of the three governance indicators are statistically significant. The results of the Panel fixed effect model, therefore, suggest that governance variables are not as important as other factors to have impact on net inflows of FDI. In terms of control variables natural resources are shown to be a statistically significant and positive influence on net inflows of FDI for lower income countries. This result is robust since all the estimators produce a statistically significant and positive coefficient. Oil revenues are statistically significant but negative with both OLS and panel estimators. This suggests that resource-seeking motives are an important determinant of FDI inflows in the lower income countries but not with respect to oil. This perhaps the existence of government interference and also the nature of oil sector which depends on relative power and bargaining position vis-à-vis the host government rather than the political institution in place. There is some evidence that market seeking (market1) has a

statistically significant effect on FDI inflows but this effect is positive with both estimators. Openness to trade (trade as a percentage of GDP) and the total tax rate have statistically significant effects on net FDI inflows with the OLS estimator and Panel fixed effect.

Higher Income Countries

At 95 percent confidence levels none of governance variables are statistically significant with either the OLS or the panel-fixed effects estimators. This would suggest that governance issues are of much less consequence in understanding net FDI inflows into higher income countries than into lower income ones. Few control variables are found to be significant. The total tax rate and trade openness are positive and statistically significant in OLS estimates but not in Panel fixed effect. This suggests that endogeneity may have been important in driving some of the results in the OLS regression.

Table 15(6.4): Regression analysis of flows of FDI by country

TABLE 12: REGRESSION ANALYSIS OF FLOWS OF INWARD FOREIGN DIRECT INVESTMENT BY COUNTRY					
Dependent variable: Log of Net inflows of foreign direct investment as a % of GDP, World Bank					
Variable	**Label**	**Lower income countries**		**Higher income countries**	
		OLS	**Panel f.e.**	**OLS**	**Panel f.e.**
Lagged dependent	FDIflow-1				
variable (one period)					
Trade (% of GDP)	tradegdp	0.0261194***	0.0051221	0.0107166***	0.008985
		(0.005844)	(0.016446)	(0.0026593)	(0.0076582)
Market seeking 1	market1	0.3682649**	0.1360522	-0.5687165	1.124185
(principal components)		(0.1772024)	(0.5566513)	(0.668122)	(1.998223)
Market seeking 2	market2	0.1401393	0.1875681	0.2392479	0.6883296
(principal components)		(0.1413065)	(0.1495311)	(0.3122642)	(0.7908853)
Oil revenues as a %	oilgdp	-0.1649765***	-0.2099441*	0.0711685	-0.2012886
of GDP		(0.050573)	(0.1211463)	(0.1294447)	(0.1569896)
Natural resource	natrgdp	0.0687833**	0.1528729***	-0.0372532	0.0559364
revenues as a % of GDP		(0.0270716)	(0.053011)	(0.0688295)	(0.0828062)
Technology	techn	0.0952473	-0.1109495	-0.2470711	0.3752298
(principal component)		(0.1198357)	(0.1599539)	(0.2367913)	(0.8673131)
Governance (political)	gov	-0.0168101	2.011556	-0.8329225	0.3635997
(principal component)		(0.5560652)	(2.035405)	(0.5862699)	(1.730594)
Government efficiency	goveff	0.4850896	0.1136579	-0.9165455*	-0.1196251
		(0.9014072)	(0.7272542)	(0.5396589)	(0.7104869)
Regulatory efficiency	regul	0.7076891*	-0.484157	1.329934*	0.0056128
		(0.4224031)	(0.7070228)	(0.7825675)	(1.247868)
Corruption (lack of)	corrup	-1.764862***	1.296827	0.45574	0.3462147
		(0.5929201)	(0.8602532)	(0.8727512)	(1.927041)
Total tax rate (% of	totaltax	0.0286321**	-0.0277862*	0.0293244***	0.0342818
profits)		(0.0124226)	(0.0164884)	(0.0101892)	(0.0412011)
Constant	C	-3.514096***	0.2644865	-2.537729***	2.158397
		(0.9209654)	(1.508594)	(0.890609)	(2.96489)
R-squared		0.5957	0.8534	0.8289	0.8647
Adjusted R-squared		0.5293	0.7666	0.7927	0.7565
F statistic		8.97	9.84	22.9	7.99
F: degrees of freedom		11,67	29,49	11,67	29,49
Breusch-Pagan	chiSq (1)	15.45	27.25	7.2	12.55
AIC		231.8749	187.7238	159.3924	178.3438
Mean VIF		4.1	23.13	68.79	115.32
Shapiro-Wilk (z)		4.498	1.189	3.462	4.351
Wooldridge	F(1,10)	27.714	27.714	0.144	0.144
Arellano-Bond test for AR(2) in first differences:					
Arellano-Bond test for AR(2) in first differences:					
Sargan test of overid. Restrictions (Chi square, 12)					
Note: (1) figures in parentheses are (White) robust standard errors					
(2) * indicates significant at 90% confidence, ** at 95% and *** at 99%					

6.4.2. Stocks of Inward Direct Investment

The results of the country-level analysis for inward stocks of FDI (relative to GDP) are presented in Table 6.5. As with the analysis of flows, for both lower and higher income countries, the results again exhibit a high degree of multicollinearity with the panel-fixed effects estimator, as shown in the high values of the mean variance inflation factor.

Lower Income Countries

For the governance variables both the political variable and regulatory efficiency variables are positive and statistically significant with both the OLS and panel-fixed effects estimators. Government efficiency is not statistically significant with OLS or panel-fixed effects. Corruption is statistically significant but negative with OLS but not statistically significant and positive with Panel fixed effect.

Of the control variables trade openness (trade as a percentage of GDP), market seeking (market1 and market2) is statistically significant with the OLS but with Panel fixed effect estimators. Natural resources variable is statistically significant with both the OLS and Panel fixed effect estimators. Trade openness and market1 are positive in both cases and market2 negative in both cases. Natural resources are positive with OLS but negative with Panel fixed effect. Strategic asset seeking is not statistically significant with OLS but negative and statistically significant with panel-fixed effects estimators. This implies, as one might expect, that FDI tends to be associated with lesser levels of technology in lower income economies.

Higher Income Countries

The political variable is negative with both the OLS and Panel-fixed effect estimators but only statistically significant with OLS. This implies that voice, accountability and political stability, whilst positively affecting inward FDI stocks in lower income countries, have the opposite effect in higher income ones. Government efficiency is statistically significant but negative with both OLS and panel-fixed effects estimators. Regulatory efficiency is statistically significant and positive with the OLS but not statistically significant and positive with Panel-fixed effect estimators. Corruption (control of) is not statistically significant and positive with both estimators.

With respect to the control variables trade openness is positive and statistically significant with all estimators but market-seeking variables are statistically insignificant with both estimators. Oil revenues are negative and statistically significant with the panel-fixed effect estimator but not with OLS. Within our sample this suggests that FDI in higher income Asian economies is focused away from the oil-rich economies. Natural resources, technology and corruption, with a few small exceptions, tend not to be

statistically important determinants on inward stocks of FDI in the higher income Asian economies

Table 16(6.5): Regression analysis of stock inward FDI by country

TABLE 13: REGRESSION ANALYSIS OF STOCKS OF INWARD FOREIGN DIRECT INVESTMENT BY COUNTRY					
Dependent variable: Log of stocks of inward foreign direct investment as a % of GDP, UNCTAD and World Bank					
Variable	**Label**	**Lower income countries**		**Higher income countries**	
		OLS	**Panel f.e.**	**OLS**	**Panel f.e.**
Lagged dependent	FDIstock-1				
variable (one period)					
Trade (% of GDP)	tradegdp	0.0185066***	0.0089828	0.0107391***	0.0048591***
		(0.0032687)	(0.0107064)	(0.0010183)	(0.0016013)
Market seeking 1	market1	0.5648378***	0.2325863	-0.3319918	0.2280761
(principal components)		(0.0970926)	(0.3384618)	(0.2731457)	(0.3996108)
Market seeking 2	market2	-0.1960578**	-0.1785346	-0.1659238	0.0980066
(principal components)		(0.0955604)	(0.1200077)	(0.101507)	(0.1523135)
Oil revenues as a %	oilgdp	0.0231631	0.0352646	0.0711894	-0.0941768**
of GDP		(0.0347847)	(0.0573716)	(0.0591454)	(0.0429471)
Natural resource	natrgdp	0.048782**	-0.0657958**	-0.0070095	0.0311035
revenues as a % of GDP		(0.0188977)	(0.0256007)	(0.0320318)	(0.0208266)
Technology	techn	-0.0973008	-0.2237501**	0.296895***	0.232298
(principal component)		(0.0746283)	(0.1081855)	(0.0974604)	(0.1811411)
Governance (political)	gov	1.710817***	2.136183*	-0.9066386***	-0.474761
(principal component)		(0.3683799)	(1.113065)	(0.2698285)	(0.427724)
Government efficiency	goveff	-0.3894815	0.371772	-0.9244813***	-0.4224457*
		(0.4621247)	(0.5594917)	(0.1861183)	(0.2299445)
Regulatory efficiency	regul	1.029182***	0.6861419**	1.299094***	0.1984469
		(0.3217018)	(0.3470335)	(0.2667383)	(0.2286847)
Corruption (lack of)	corrup	-1.967777***	0.588738	-0.1296364	0.0507186
		(0.308327)	(0.399657)	(0.2529017)	(0.2044358)
Total tax rate (% of	totaltax	0.0333037***	-0.0088494	-0.0112482	0.0202854**
profits)		(0.0096506)	(0.0097306)	(0.0043404)	(0.0085416)
Constant	C	-5.537123***	-0.7644994	-2.969115***	0.1528556
		(0.5167723)	(0.7674232)	(0.3995012)	(0.6727909)
R-squared		0.8488	0.9572	0.9711	0.9946
Adjusted R-squared		0.8253	0.9338	0.9651	0.9905
F statistic		36.22	40.87	161.71	238.51
F: degrees of freedom		11,71	29,53	11,53	28,36
Breusch-Pagan	chiSq (1)	2.17	19.26	3.97	0.6
AIC		156.7555	156.7555	156.7555	-41.00404
Mean VIF		4.1	23.13	68.79	115.32
Shapiro-Wilk (z)		1.58	2.581	0.362	0.085
Wooldridge	F(1,10)	22.192	22.192	27.992	27.992
Arellano-Bond test for AR(2) in first differences:					
Arellano-Bond test for AR(2) in first differences:					
Sargan test of overid. Restrictions (Chi square, 12)					
Note: (1) figures in parentheses are (White) robust standard errors, except for OLS and panel estimates for high incom					
(2) * indicates significant at 90% confidence, ** at 95% and *** at 99%					

6.5. OVERVIEW

The country-level analysis needs careful interpretation. For the reasons given in the data and methodology section a selection of estimators was chosen to deal with possible endogeneity in the model. Under ideal circumstances the results would be so robust that they do not vary according to choice of estimator, type of investment measure (flows or stocks) and type of country (high or low income). Reality is different and different estimators do produce different results. Nonetheless the results presented here do support some important conclusions which are there are important behavioural differences with respect to inward FDI between higher and lower income countries. Including other determinants of FDI as control variables is important. Trade openness and natural resources in particular, are of significance in most variants of the specification. In most variants of the model at least two of the governance indicators are statistically significant. This supports the view that the relation between inward FDI and these governance variables is worth exploring. The data lacks sufficient precision for some of the specific inferences to be robust so the country-level findings need to be supported (as in this paper) with some more detailed firm-level analysis.

6.6. CONCLUSIONS

It is widely accepted amongst development economists that countries with relatively good governance tend to have more stability and grow faster, while countries with relatively weak governance tend to have less stability and grow slower. Accordingly, elements of good governance are expected to play an important role in determining the direction of FDI inflow and growth rate of an economy. However, despite its likely role, assuring foreign investors to engage FDI and economic performance, the qualitative nature of governance makes it difficult to measure accurately. Studies that investigate the impact of FDI inflows revealed various results; for instance Li and Resnick (2003) in their study of democratic institutions and FDI flows to developing countries. They discovered as much as democratic instruction improved rights protection, which encourages FDI inflows, whereas increased democracy also reduces FDI received by less-developed countries. Another similar study carried out by Asiedu and Lien (2011) investigated the interaction between democracy, FDI and natural resources. They found

out that democracy impact on FDI in this case depends on the importance (share) of natural resource in the host country's exports, whether low or high.

The analysis presented in this chapter provides evidence of links between FDI and governance at the country level for a sample of 22 Asian countries. This evidence suggests that lower income and higher income countries are behaviourally different in this respect. The analysis does not consider the effects of governance on FDI in isolation but as part of a wider set of determinants of the location of FDI. It suggests that treating governance in this way is important – that to exclude other determinants might create biased and misleading results. Overall, the complexity of the issue and the quality of available data is such that the effects of specific governance indicators do not produce results that are robust for all possible estimators or specifications. Nonetheless the more general finding that good governance has a positive effect on inward FDI in Asia is shown to be robust. Therefore, the result suggests that if the host countries are benefiting from the FDI activities, thus to have higher inflows of FDI or stock FDI are important so that good governance plays an important role to attract FDI.

The positive results between corruption and FDI in this study is not new. Association between corruption and FDI have been widely explored by scholars (Wheeler and Mody, 1992; Mauro, 1995; Gupta, Davoodi, and Alonso-Terme, 2000; Wei, 2000a). Although the finding from previous studies showed mostly a negative relationship between corruption and FDI, it still has not reached the expected conclusion that perceived high level of corruption in the host countries deter FDI as they did not find a significant relationship. However, some of the previous studies also showed some positive results that corruption may increase FDI in the presence of a rigid regulation and an inefficient bureaucracy to speed up the decision making process (Bardhan, 1997). Similar finding by Houston (2007) that corruption has positive effects on economic growth in countries with good institution. This study finding some positive results of association between corruption and both stock and inflow FDI but they are not significant. As it was mentioned earlier that like governance variables corruption is no different. It is as part of a wider set of determinants of the location of FDI.

CHAPTER VII: FIRM LEVEL ANALYSIS LINKING THE PERFORMANCE OF FOREIGN OWNED FIRMS TO TAXES AND THE REGULATORY ENVIRONMENT

7.1. INTRODUCTION

As discussed in the review of literature there are a very large number of empirical studies which examine the determinants of inward FDI. Comparatively few actively consider the role of taxes or of government bureaucracy. In consequence there is not a strong body of evidence to confirm or reject the view that tax and bureaucracy act as deterrents to efficiency seeking investment. Such evidence is scarcer for Asia. This chapter provides such evidence. Blonigen (2005) provides a review of the relevant studies. This chapter, firstly, analyses the effect of government and taxes on firm performance using OLS regression techniques. In order to explicitly incorporate firm heterogeneity it, secondly, conduct propensity score matching analysis of the effect of taxes and government on firm performance.

Governance and taxes are predominantly a country regulatory environment phenomenon but the consequences are not. The effects of governance and taxes as part of government policy on FDI are felt at the level of individual firms or even in an individual investment project. To analyse these effects requires at least a firm level analysis. A fundamental reason why firms are engaged in FDI activity (within the OLI paradigm) is because of the presence of the advantages of economies of scale and other characteristics that give them market power, so that they can overcome the disadvantages of being foreign and compete with a local firm in the host countries. As for the government policies (regulation and taxes) these can clearly become important factors that affect FDI through their consequences and industry structure. This chapter will explore the relationship between firm performance and taxes and governance in host countries.

Tax and governance related issues such as bureaucracy and corruption are part of economic and institutional environment for investment. This study follows similar approach by Dollar (2005). The country level analysis found the relationship between

governance and FDI in aggregate. The purpose of this chapter is to see how taxes and governance affect firm performance, if at all. That is, the chapter focuses on the effects of tax and governance on firm performance in three Asian economies. It analyses the link between tax and performance not between tax and investment (which was covered in the earlier country analysis). It assumes that adverse effects on firm performance would imply that tax and governance have an impact equally on both domestic and foreign business activities including investment.

In this chapter evidence is presented on the impact of tax and governance on firm performance for three Asian countries: Indonesia, the Philippine and Vietnam. In the previous chapter the country level evidence suggest that corporate income tax and governance do affect the aggregate inflow of FDI. An important mechanism is by affecting the profits that firms receive. The effects of corporate income tax are an obvious potential influence, covered in the previous chapter. What receives less attention is how they affect profits and other aspects of performance before taxes on corporate income are paid. As was demonstrated in Chapter IV indirect taxes have the potential to substantially affect "pre-tax" (more accurately pre income tax) profits. The object of this chapter is to provide some evidence of such effects arising from the system of tax and governance.

This chapter addresses two fundamental and related questions. Firstly it asks whether or not all firms in the three countries, whether foreign owned or not, exhibit statistically significant effects of tax and governance on firm performance. One reason for so doing is sample size. When all firms are included there are enough observations to adequately analyse each country separately as well as the three combined. Secondly, it repeats the analysis but for firms with some foreign ownership. For data reasons the analysis of foreign owned firms in only conducted for the three countries combined and not for each country individually. Conducting the analysis separately for all firms and for those that are (part or wholly) foreign owned means that any effects specific to foreign ownership, as opposed to all firms, can be identified.

In the wider context FDI can be argued to help the economy to be more productive and more profitable. The phenomena of large difference in growth rates within countries and cities is one of the reason of some studies interest to investigate and questioning why some location in developing world grow rapidly, while other stagnates (Dollar et al, 2005). Similar to the approach of Dollar (2005) study, this chapter explores the hypothesis

that variations in the regulatory environment could affect these. Taxes and the regulatory environment (bureaucracy) can be influential both at the country and at the firm level. The effect of taxes on FDI has been an interesting topic in both aspects, for both the international and public economist. Although the obvious analysis of taxes and its FDI relationship has shown that higher taxes discourage FDI, however, this study agrees with the investigation by Blonigen (2005) argued that the effect of taxes on FDI can vary dependent on the type of taxes, the measurement of FDI activity, and the treatment of tax in the host and home countries.

The analysis in this chapter use three different methodological approaches. The effects of taxes and bureaucracy on firm performance are estimated, along with those for a number of control variables using OLS and LSDV regression techniques. The widespread use of such techniques allows for ready interpretation. All methodologies have limitations and an important limitation of regression analysis with firm level data is that it does not explicitly allow for firm heterogeneity. To better deal with firm heterogeneity this chapter also presents a propensity score matching analysis. That both approaches yield similar conclusions suggest the findings to be robust with respect to the choice of each estimator.

7.2. PERFORMANCE MEASUREMENT

It is common to use various different performance measures in empirical research, March and Sutton, (1997) provide the review some of this literature. This study using the following measures of firm performance:

- Sales per worker
- profit per worker
- Growth in output (sales) over a 3 year period
- Exports as a percentage of total sales

Performance as measurement of an outcome is not a rare topic in management, economic and finance studies. The interest in using performance as a measurement has increased as a topic in published journals (March and Sutton, 1997) that have included the performance of firms or organisations as dependent, independent, or control variables, and among those studies where accounting and financial measurements are applied. In

the literature on corporate financial performance there are many alternative measures of firm performance. For example concepts of accounting and economic performance (Pierre J. Richard, 2009) can encompass three specific outcomes: financial performance (profit, ROA, ROI), product market performance (sales, market share, etc.), and shareholder return (total shareholder return, value added, etc.).

Firms as organisations are heterogeneous in their resources and capabilities, and how and where they choose to use them (Barney, 1991). In this study, firm size is one of the control variable as it is likely that local or foreign and small or big firms perform in a different manner. In the organizational literature there are three common approaches to a firm's performance measurement. The first is where a single measure is applied which is not a direct measure of performance but is assumed to be closely identified with underlying performance (e.g. Hawawini et al., 2003; Hilman & Keim, 2001; Robert & Dowling, 2002; Spanos, Zaralis, Lioukas, 2004). The second approach is where the researcher uses several different measures to compare analysis with different dependent but identical independent variables (e.g., Baum & Wally, 2003; Miller, 2004; Peng, 2004). The third approach is where the researcher aggregates dependent variables, assuming convergent validity based on the correlation between the measures (e.g., Cho & Pucik, 2005; Goerzen & Beamish, 2003). The justification of the approach depends on the objective measure of performance. This study follows the second approach as I measured the relationship using two dependent variables (sales per worker and profit per worker) and identical independent variables.

Due to the type of survey and data that this study has used it has, therefore, applied productivity to measure firm performance. The sales or profit per worker are widely used measures of organizational productivity and of profitability respectively. The main benefit of these type of measures are that each provides a single index that can be used to compare firms' performance.

7.3. OLS AND LSDV ESTIMATES

7.3.1. Data

Data for the firm level analysis were taken from World Bank enterprise surveys for each of three Asian countries: Indonesia the Philippines and Vietnam. These surveys are conducted using a questionnaire that is standardized to a large extent but the questionnaire actually employed in any one country also has some significant national variations. At best this creates a time consuming task of matching replies to the same question set in different questionnaires and at worst it creates problems of compatibility which prevent some countries being combined into the same sample. For details of World Bank enterprise surveys see: http://www.enterprisesurveys.org/

As a consequence of these issues the number of countries for the same time period (2009) included in this firm level sample was substantially fewer than in the country level analysis. The countries included were Indonesia, Philippines and Vietnam.

These countries are all ASEAN members, but they do not represent and are not intended to be representative of either Asia or ASEAN as a whole. This study of firm level analysis should be seen as moving from the wider Asian perspective of the country analysis to a tighter focus on these ASEAN countries. Nor is the firm level analysis intended to be representative of the whole economy of any of the countries included in the sample. The intention is to produce, in effect, a small number of econometric "case studies" covering the small number of ASEAN countries for which consistent data is available. To achieve the best use of the available data, this study will analyze the impact of tax and governance on firm performance in three different techniques: OLS, Least Squares Dummy Variable (LSDV) and propensity matching score analysis.

The World Bank enterprise surveys encompass both domestic and foreign owned firms. For the first analysis both all firms, domestic and foreign, are included in the sample but a foreign ownership variable was used to capture behavioral effects linked to the degree of foreign ownership. In the second analysis firms with at least some foreign ownership are included in the sample but those with no foreign ownership excluded.

There are a number of previous studies, whilst not normally focusing on foreign owned firms, have estimated the links between firm performance on the one hand with

governance and business climate indicators on the other. An example of this type of analysis is provided by Dollar et al (2005). Individual specifications can and do vary but a generic version of such a model would comprise of three aspects. First, more than one dependent variable capturing different aspects of firm performance (and, hence, separate regressions for each dependent variable). Second, a series of governance and related indicators and third, a series of control variables intended to capture other effects on firm performance.

A specification of this type would apply to an individual selected Asian country but the sample may, as with Dollar et al (2005), include firms drawn from multiple countries. The approach taken in this study is to apply separately a common specification of this type to each country individually and all three combined. Two different dependent variables, sales per worker and profit per worker (in $), are used. The specification (OLS) using sales per worker was:

$$SP_{it} = SP_{it} = \alpha 0 + \alpha 1 .Age_i + \alpha 2 .Size_i + \alpha 3.Export_i + \alpha 4comp_i + \alpha 5.bur_i + \alpha 6.Corrupt_i + \alpha 7.skillworker_i + \alpha 8.education_i + \alpha 9.capita1_i + \alpha 10.capita2_i + \alpha 11.govtbid_i + \alpha 12.tax_i + \alpha 13.KPW1_i + \alpha 14.KPW2_i + \alpha 15.foreign1_i + \alpha 16.infra_i + w_i \quad (7.1)$$

Where subscript i denotes firm, subscript j dummy country, national and sector and where w_i is an i.i.d. disturbance term. The specification with profit per worker (PPW_i) as the dependent uses an identical specification as the right hand side of equation 7.1.

As with the country level analysis it is unrealistic to rule out a number of possible causes of endogeneity. For example, the possibility of both measurement errors and omitted variables cannot be excluded. Firm level survey data almost inevitably involves a significant number of missing observations and, in any case, is cross-sectional. This rules out GMM estimation. A fixed effects estimator, more properly the least squares dummy variable (LSDV) estimator, remains feasible so a second specification using the LSDV specification to capture the impact of unobserved variables and measurement errors was used. This was defined as:

$$SP_{it} = \alpha 0 + \alpha 1 .Age_i + \alpha 2 .Size_i + \alpha 3.Export_i + \alpha 4comp_i + \alpha 5.bur_i + \alpha 6.Corrupt_i + \alpha 7.skillworker_i + \alpha 8.education_i + \alpha 9.capita1_i + \alpha 10.capita2_i + \alpha 11.govtbid_i + \alpha 12.tax_i + \alpha 13.KPW1_i + \alpha 14.KPW2_i + \alpha 15.foreign1_i + \alpha 16.infra_i + \delta_i + \theta_t + \varepsilon_{it} \quad (7.2)$$

where δ_i is a vector of sector fixed effects, θ_t a vector of country fixed effects and where ε_{it} is an i.i.d. disturbance term.

7.3.2. Variables

Dependent variables:

For each country two different variables were used to measure firm performance:

1. Sales per worker (SPW), measured in US $, defined as sales divided by total permanent employees.
2. Profit per worker (PPW), measured in US $, defined as profit which total sales minus total cost and divided by total permanent employees.

Independent variables:

1. Years of establishment (age), defined as the total years of operation as indicator of experience.
2. Firm size class from micro (0) to large (3), measured based on number of employee (question a6a)
3. Competition (comp) as total number of competitors (other similar businesses) in the domestic market (question e2).
4. Foreign ownership (foreign1); any positive percentage foreign share in the firm (0,1), variable based on question b2b.
5. Bureaucracy (tax admin, labour regulation and business license/permit) as a perceived obstacle. Mean score of responses for each of the four categories, scored from 0 (no constraint) to 4 (severe).
6. Corruption, extent to which this is an obstacle (also scored from 0 to 4); question j30f
7. Skilled production workers, % of total, questions L3b and L4b
8. Average number of years of education for production workers (question L9)
9. Capita1: the net book value of assets (question n6a and n6b)
10. Capita2: replacement cost of assets (question n7a and n7b)
11. Govt bid is whether firm bid for a government contract; (0,1) variable based on question j6a.
12. Tax, the extent to which tax rates are a perceived obstacle (scored from 0 to 4), question j30a.
13. KPW1 defined as the net book value of assets divided by total employees
14. KPW2 defined as the replacement cost of assets divided by total employees.
15. Infrastructure (infra) defined as average score of the extent of perceived obstacles (scored from 0 to 4) arising from electricity, telecommunication and transport.

For example if the score of electricity, telecommunication and transport is 1,2 and 3 so the average score will be 2.

7.3.3. All firms

Combined sample

Governance and tax variables

Table 7.1 presents the results of the firm level regression analysis for all firms (local and foreign) and all sample countries. Tax has a statistically significant positive effect (but only at 90 percent confidence) on sales per worker with the OLS specification but not with the LSDV estimator. Bureaucracy does not have a statistically significant effect on sales per worker with either estimator. Both tax and bureaucracy variables are not statistically significant on profit per worker according to the fixed effects (LSDV) estimator, however bureaucracy is statistically significant at 90 percent with the OLS estimator. With sales per worker and profit per worker as the dependent variables most of the firm characteristics (control) variables are significant (size, labour, capital, foreign ownership and education). Turning to the analysis using profit per worker as a dependent variable shows a similar result: that firm characteristics factors such as size, skill worker, education, capital and foreign owned are significant and positively affect performance.

Control variables

The degree of foreign ownership is statistically significant and positive with both the OLS estimator and cross section fixed effect (LSDV) estimator. This confirms an unexpected and perverse finding: that exporting has a negative and statistically significant effect upon firm performance using sales per worker. Size is statistically significant and positive with both the OLS and LSDV estimators for both performance variables. With foreign owned variable both sales per worker and profit per worker measurement of firm performance the coefficient are both positive and statistically significant at 99 persent indicate that the higher foreign ownership the higher sales per worker or profit per worker. Export is statistically significant and negative with both estimators on both firm performance measurements. This suggests that performance is better when the company focus on domestic market or, possibly, when competition is less fierce.

The effects of education cost per worker on both firms' performance measurements are, as might be expected, positive and statistically significant as firms with more highly educated employees most likely to have better performance. The

coefficient for the age of the firm is negative and statistically insignificant according to both estimators with both measurement performances as the dependent variable. This suggests that older, more experienced firms are not necessarily more profitable than newer ones, perhaps lacking flexibility in adjustment. As a general proposition all other control variables such as corruption or bidding for government contracts, are always or almost always statistically insignificant for both dependent variables and both estimators.

Table 17(7.1): Firm analysis all countries

	Dependent variable:		**Dependent variable:**	
Variable	**Sales per worker**		**Profit perworker**	
	OLS	**Fixed effect**	**OLS**	**Pixed effect**
Age	-.0000559	-0.0001182	-0.0002459	-0.0003277
	.000237	0.0001964	0.0002752	0.0002686
Size	.6765276***	0.5256849***	0.6090107***	0.4836788***
	.0555298	0.0548492	0.0665724	0.0697663
Export	-.629464***	-0.597158***	-0.91667***	-0.763748***
	.2343015	0.2175523	0.2896959	0.2850764
Competition	.0290215	0.0038221	-0.0620031	-0.0130031
	.0442204	0.0411444	0.0528565	0.0523771
beuracracy	.1149176	0.1974121	0.3432493*	0.2118183
	.1723742	0.0411444	0.2067894	0.202888
corruption	-.0186697	-0.0014329	-0.0039106	0.003788
	.0376586	0.0345239	0.0449461	0.0439678
skillworker	.0005529***	0.000963***	0.0011546***	0.000986***
	.000423	0.0004099	0.0004994	0.0004928
Education	.3165565***	0.2278345***	0.2745608***	0.2552395***
	.0377581	0.0355833	0.0455746	0.0463368
Capital1	-1.74e-08***	-0.0000000144***	-0.0000000143***	-0.000000014***
	3.38e-09	3.24E-09	4.02E-09	3.95E-09
Capital2	-4.12e-14	-4.91E-15	-4.09E-14	-1.3E-14
	8.47e-14	8.15E-14	1.01E-13	9.89E-14
Govtbid	-.0324767	-0.0595083	-0.1118627	-0.0647818
	.1344546	0.1236665	0.1637826	0.1620383
Tax	.1467724***	0.0361859	0.024375	0.0250489
	.042164	0.0401904	0.0506774	0.0514008
KPW1	.0000194***	0.0000163***	0.0000128***	0.0000143***
	3.17e-06	0.00000301	0.00000393	0.00000388
KPW2	2.29e-06***	0.00000164**	0.00000191	0.00000171
	1.14e-06	0.0000011	0.00000143	0.0000014
Foreign1	.8754863***	0.7137571***	0.9514985***	0.8838253***
	.1284319	0.1206085	0.1553698	0.1530613
Infra	.1011754***	0.1290366***	0.1515525***	0.1389594***
	.0553132	0.0506543	0.0663481	0.0650974
R-squared	0.19	0.33	0.1818	0.2325
Adjusted R-squ	0.17	0.32	0.1732	0.2156
F stastistic	37.78	28.21	21.05	13.79
F: degree of fre	1720	1893	1611	1593

According to theory, size and age should affect firm performance. A larger firm is more likely to have possibilities to exploit economies of scale and scope, allowing larger firms to operative more effectively and so generate superior performance relative to smaller firms (Penrose, 1959). An alternative point of view suggests that size is correlated with market power (Sheperd, 1986) and with market power comes x-inefficiency and inferior performance (Leibenstein, 1976). With respect to age, it is also open to differing predictions. The older the firm, the more experience and, it is argued,

the greater the benefits from learning by doing (Stinchombe, 1965), giving older firms superior performance. However some suggest that the older the firm the more they are prone to inertia and unlikely to have flexibility to adjust in a rapidly changing environment As a result older firms may lose out in the performance stakes to younger (Marshall, 1920).

Indonesia

This section replicates the analysis for the combined sample but for Indonesia alone. Table 7.2 shows that, in Indonesia, Bureaucracy has a statistically significant (at 90 percent confidence) impact on both performance indicators with both estimators (OLS and LSDV). Surprisingly the coefficient estimates are positive, implying that perceived obstacles from bureaucracy are associated with better performance. It is unlikely that bureaucratic obstacles are themselves a cause of better performance. A possible explanation is that more efficient firms are more likely to have perceptions of cumbersome bureaucracy. If this is correct then a dual causality exists when a predictive variable (sales per worker and profit per worker) depend on the variable of prediction (obstacle of bureaucracy) and it is possible that the regression results for Indonesia are biased. As this is one of the possibilities analysis on the positive result of the association between the bureaucracy obstacle and firm performance, to reduce such risk (bias) a propensity score matching will be applied in the later analysis.

Perceived obstacles arising from tax rates have no statistically significant effects with either estimator or either performance indicator. For Indonesia the regression evidence does not support the view that tax rates affect performance. The variables which appear to be consistent statistically significant are size, education, foreign owned (all positive and significant at 99 percent confidence) and infrastructure (like bureaucracy significant at 90 percent and positive rather than negative). For Indonesia the corruption variable has a statistically significant negative effect of performance in three of the four cases. It means the lower the obstacles of corruption (less corruption) the better the firm performance which is a result I would have expected.

Table 18(7.2): Firm analysis Indonesia (all firm)

	Indonesia			
Variable	Sales per worker		Profit perworker	
	OLS	fixed effect	OLS	fixed effect
Age	-0.0002302	-.0002998	-.000351	.0004309*
	.0002672	.0002657	.000286	-.0002831
Size	0.7785222***	.6056383 ***	.8949726***	.7074853***
	.0890431	.0970961	.0953125	.1035121
Export	0.2550281	-.0236992	.2239483	-.0437825
	.6397418	.6359625	.6848271	.6777239
Competition	0.0260816	.0545401	.0237165	.0576226
	.0571251	.0573957	.0611634	.0611735
beuracracy	0.5107543*	.4966711*	.4743245*	.4512263*
	.2739269	.2737084	.2933402	.2917927
corruption	-0.0981261*	-.0673511	.1369116***	-.103483*
	.0579943	.0580109	.0621481	.0619174
skillworker	0.0008251*	.0009121 *	.0007852*	.0009075*
	.0004896	.0004837	.0005241	.0005155
Education	0.3186457***	.2645898***	.3503553***	.289451***
	.0554268	.0562018	.0593761	.0599502
Capital1	0.00000623	6.82e-06	5.99e-06	6.82e-06
	4.85e-06	4.80e-06	5.20e-06	5.12e-06
Capital2	-0.00000000205***	-2.21e-09***	-.02e-09***	-2.19e-09***
	7.15e-10	7.06e-10	7.66e-10	7.52e-10
Govtbid	0.2133188	.3334471	.4325103*	.5740144**
	.2688551	.270275	.2915705	.2918903
Tax	0.0163326	-.021353	.0267728	-.0129669
	.0804932	.0800602	.0861778	.0853205
KPW1	0.0014972	.0015542	.0016436	.0016621
	.0011696	.0011555	.0012522	.0012316
KPW2	0.003874***	.0040603***	.0037349***	.0039356***
	.0012032	.0011866	.001288	.0012645
Foreign1	1.060455***	1.01874***	1.087719***	1.03907***
	.2724954	.2708211	.2917196	.2886141
Infra	0.1239243*	.1095554*	.1536274*	.1301025**
	.0754644	.0750725	.0811172	.0802847
R-squared	0.3330	0.3658	0.3431	0.3809
Adjusted R-squ	0.3194	0.3411	0.3297	0.3569
F stastistic	24.56	14.86	25.66	15.84
F: degree of fre	787	773	786	772

Philippines

The results for the same analysis applied to the Philippines data are reported in Table 7.3. In the case of the Philippines the coefficients for bureaucracy are not statistically significant for 3 of the 4 models, the exception being OLS estimates with profit per worker (positive and significant at 90% confidence). Perceived obstacles arising from tax rates have no statistically significant effects on sales per worker but have statistically significant (at 95%) effects on profit per worker. Again it is difficult to argue that higher taxes result in higher profitability, particularly given the potential importance of indirect taxes discussed in Chapter V. Again it is more likely that more efficient firms are more prone to perceive tax as a problem. Perhaps their efficiency means that they have many fewer internal constraints and focus more on external ones. If this is the case the consequences for the regression estimates are again dual causality and a risk of bias. Some of the control variables firm size, foreign ownership and capital per worker (KPW1) are positive and statistically significant at 95% or higher confidence. None of the other control variables were systematically statistically significant at 95% confidence.

Table 19(7.3): Firm analysis Philippine (all firm)

Variable	Philiphine			
	Sales per worker		Profit perworker	
	OLS	fixed effect	OLS	fixed effect
Age	0.0001612	.0000513	.0002213	-.0003092
	.0004039	.0003894	.0004938	.0004855
Size	0.5159302***	.3177465***	.4153488***	.2485959**
	.0990599	.0997126	.1269006	.1302663
Export	-0.6596828*	-.7069785**	-.7325777*	-.7950356 *
	.3530471	.3396522	.4839115	.4741642
Competition	-0.001688	-.02557	-.0649594	-.120801
	.0966632	.0935959	.1229316	.1215609
beuracracy	0.2065807	.1985325	.4330905*	.3844421
	.2427655	.234687	.3118752	.307136
corruption	0.0338711	.01194	.0186271	-.0161222
	.0574224	.0554999	.0730035	.0719877
skillworker	0.0000242	.0005316	.0003346	.0002513
	.0012526	.0012154	.0017564	.0017405
Education	0.1358716*	.1215992*	.1485021*	.1222215
	.0716197	.0705244	.0932614	.0924437
Capital1	-0.0000000223**	-1.91e-08*	3.00e-08***	-2.50e-08*
	1.11e-08	1.07e-08	-1.48e-08	1.46e-08
Capital2	2.21E-10	1.88e-10	3.73e-10	3.18e-10
	2.24e-10	2.16e-10	3.02e-10	2.97e-10
Govtbid	-0.0764723	-.1551774	.0565765	-.0036113
	.2150778	.2080823	.2760065	.2723242
Tax	-0.0577954	-.0748364	-.1719638**	-.1802325**
	.0668209	.0642905	.0866929	.0852035
KPW1	0.0000122***	.0000105***	.0000117**	9.98e-06**
	3.75e-06	3.60e-06	4.92e-06	4.81e-06
KPW2	0.000000717	7.32e-07	2.44e-07	-7.95e-07
	2.16e-06	2.09e-06	2.74e-06	2.70e-06
Foreign1	0.5785446***	.4544035***	.6424022***	.5432438**
	.1819183	.1787446	.2339075	.2337487
Infra	0.1019456	.0967333	.1045692	.1012535
	.0973412	.0942487	.1271872	.1256284
R-squared	0.1259	0.2215	0.0876	0.1575
Adjusted R-squared	0.1026	0.1801	0.0603	0.109
F stastistic	5.39	5.36	3.22	3.25
F: degree of freedom	599	584	536	522

In this analysis like the other two countries (Indonesia and Vietnam) the data was gathered from survey conducted by World Bank and Philippine has the most un-answered questions fewer as result less colour data. Using the same regression model but less data affect the explanatory power as a result.

Vietnam

The same analysis was repeated for Vietnam and the results are reported in Table 7.4. As was the case with the Philippines perceived bureaucracy constraints were not statistically significant for either performance indicator or with either estimator (OLS or LSDV). Tax rates (perceived constraints) were, as with the Philippines typically statistically significant at 90% confidence and positive. As a result the same concerns apply to the estimates for Vietnam: it is not plausible that higher taxes cause better firm

performance so it is likely that strong performance alters perceptions of taxes. Since direct taxes are normally paid on profits it should not be surprising that profitable firms see them as a more serious obstacle. This has the same implications as before: two-way causality and possible bias. To reduce this risk, this study apply propensity score matching in the later on.

For the control variables firm size, education, foreign ownership and capital per worker (KPW1) are all statistically significant at 95% confidence or higher and positive. The remainder of the control variables are typically not statistically significant.

Table 20(7.4): Firm analysis Vietnam (all firm)

Variable	Vietnam			
	Sales per worker		Profit perworker	
	OLS	fixed effect	OLS	fixed effect
Age	.0003698	.0003886	0.0002061	.0002358
	.0004391	.000418	.0005966	.0005723
Size	.499225***	.4357883***	0.4849444***	.3531489 ***
	.087423	.0865112	.1265582	.1262244
Export	-.7532136***	-.6808791 ***	-0.4870353	-.3055747
	.2768425	.266053	.3835473	.3719478
Competition	-.1431527**	-.1422741**	-0.1877611*	-.1976451*
	.0713056	.068687	.107582	.1041379
beuracracy	.1850205	.1441103	-0.2834436	-.4301663
	.4620794	.4432243	.6652817	.6423568
corruption	-.0921167	-.1065184*	0.0662266	.0407828
	.0783075	.0747981	.1114949	.1074203
skillworker	.0011228	.0018207 *	-0.0001325	.0008816
	.0012709	.0012298	.0017835	.0017398
Education	.1736769***	.1790659***	0.2826321***	.2789127 ***
	.0574307	.0556535	.0841104	.0821917
Capital1	-3.61e-09	-1.48e-09	-1.29E-08	-1.04e-08
	1.83e-08	1.78e-08	2.55e-08	2.51e-08
Capital2	-2.76e-14	6.75e-15	-5.94E-14	-1.91e-14
	8.06e-14	7.72e-14	1.10e-13	1.06e-13
Govtbid	-.131184	-.2259726*	-0.1242992	-.1971455
	.1598475	.1565583	.2295896	.2264013
Tax	.139283**	.1144043*	0.1678898*	.1296065*
	.0624123	.060103	.0888337	.0862274
KPW1	.000042***	.0000428***	0.0000331***	.000035***
	6.31e-06	6.17e-06	8.85e-06	8.71e-06
KPW2	2.10e-06*	1.75e-06	0.00000284*	2.44e-06
	1.34e-06	1.30e-06	1.85e-06	1.81e-06
Foreign1	.8603249***	.6486835***	1.151095***	.8881519 ***
	.1951606	.1875332	.2759304	.2670159
Infra	.1269006	.1271128	0.0157496	.0110187
	.0971587	.0927914	.1390131	.1337252
R-squared	0.3144	0.4015	0.2136	0.3061
Adjusted R-squared	0.2921	11.06	0.1849	0.2589
F stastistic	14.07	0.3652	7.45	6.48
F: degree of freedom	491	478	439	426

7.3.4. Foreign only firms (OLS and LSDV)

This section repeats the analysis but for the sample of firms with at least some foreign ownership. Since this greatly reduces the sample size the analysis is applied only to the pooled sample of the three countries (Indonesia, the Philippines and Vietnam). The results are presented below in Table 7.5.

Table 21(7.5): OLS and LSDV foreign only firms

Variable	Dependent variable: Sales per worker		Dependent variable: Profit perworker	
	OLS	Fixed effect	OLS	Pixed effect
Age	.0238936***	0.0239767***	.0220484**	0.023588**
	.0070698	0.0070682	.0088221	0.0070762
Size	.1701819	0.147917	.3281739	0.1772663
	.1375159	0.1389392	.1783133	0.1378696
Export	-.1688755	-0.1201554	-.6595085	-0.3632995
	.2530817	0.2568071	.3319176	0.2028778
beuracracy	.1403177	0.1195852	.1709768	0.0838268
	.2940858	0.2945958	.3763288	0.3661832
corruption	.1022841	0.0910095	.128882	0.072007
	.0774418	0.0780862	.0984821	0.0965134
skillworker	-.0005362	-0.0006053	-.0007043	-0.0010716*
	.0004847	0.0004886	.0006037	0.0005909
Education	.252689***	0.2515487**	.2231899*	0.220484*
	.0932603	0.0932387	.1174169	0.1141089
Capital1	1.09e-09***	1.81E-09	-3.05e-09	1.15E-10
	9.04e-09	9.07E-09	1.12e-08	1.09E-08
Capital2	2.06e-10	2.64E-10	-1.39e-09	-1.14E-09
	1.68e-09	1.68E-09	2.08e-09	2.02E-09
Govtbid	-.1203419	-0.1185482	-.3350807	-0.3114414
	.3149861	0.3148983	.3916169	0.1138137
Tax	-.0957758	-0.0782127	-.167233	-0.0878682
	.0885286	0.0899136	.1156378	0.1138137
KPW1	.0000251***	0.0000259***	.0000197**	0.0000238***
	6.26e-06	0.0000063	7.89e-06	0.00000772
KPW2	1.03e-06	0.00000104	2.94e-06*	0.00000304*
	1.56e-06	0.00000155	1.98e-06	0.00000191
National	0.335169*	0.3464958*	0.0966302	0.1568761
	0.2248673	0.2250344	0.2934367	0.2860709
Infra	-.1235535	-0.1353909	-.1326252	-0.1904061
	.1156692	0.1161288	.1493067	0.1455565
Growth	.0188013***	0.0189666***	0.0227664***	0.023563***
	0.0056239	0.0056242	0.0069377	0.0067585
R-squared	0.1809	0.1912	0.1448	0.1835
Adjusted R-squar	0.147	0.1524	0.1062	0.1475
F stastistic	5.3	4.92	3.76	5.09
F: degree of freec	386	354	355	358

For the sample of firms wholly or partly foreign owned the results are much clearer than for all firms. Perceptions of the extent to which bureaucracy is an obstacle have no statistically significant effect on firm performance as measured by sales per worker and by profit per worker. This applies to both OLS and LSDV estimates. Likewise there were no statistically significant effects of the degree to which tax rates are a perceived constraint.

For the sample of foreign owned firms several of the control variables are systematically statistically significant at least 90 percent confidence and have a positive effect on firm performance. These are age, education, capital per worker (KPW1) and

growth. The remainder of the control variables are typically not statistically significant. The results with respect to the control variables share much in common with those for all firms. The same variables such as education and capital intensity are positive and statistically significant with both samples. There are also important differences. For the sample of foreign firms age of the firm has a positive and statistically significant effect on firm performance but for all firms it is statistically insignificant. In contrast firm size is typically significant in the "all firms" data (foreign and non-foreign firms) in previous sample (7.3.3) but statistically insignificant in only foreign firms sample.

The results with respect to the control variables do suggest important behavioural differences between domestic and foreign owned firms. This leads to several conclusions. Firstly, unlike the full sample, the results suggest no statistically significant effects of either tax or bureaucracy on foreign owned firms. Secondly, the absence of perverse findings that either bureaucracy or tax actually enhances performance reduces concerns with respect to reverse causality. There is less to suggest a risk of bias. Finally the comparison of results between all firms and foreign owned firms does suggest that are important behavioural differences between domestic and foreign owned firms. The findings of the regression analysis are useful but not conclusive. Further analysis is needed to deal with the effects of this heterogeneity in behaviour.

7.3.5. Conclusions of the Regression Analysis

For the sample which includes all firms the results give rise to some concern. Examination of the combined sample of all three countries would lead one to conclude that neither bureaucracy nor tax rates have statistically significant effects on firm performance. Previous studies such as Dollar (2005) have also used multi-country studies but the analysis on a country by country basis raises concerns. Results which suggest that either bureaucracy or tax rates are associated with better performance must raise questions concerning causality. The possibility of reverse causality exists: that profitability in particular increases the sensitivity to tax rates. Care needs to be taken here. The analysis here uses a measure of profit before taxes on corporate income are paid. Profit taxes cannot directly affect these underlying gross profits but profitability can create a concern about profit taxes. Firms with no significant pre-tax profits will not expect to pay much profit tax.

The likelihood that the regression models involve a reverse causality from performance to perceived tax constraints also creates a risk that their estimates are biased. The OLS and LSDV estimates are useful in highlighting some key features but are not wholly reliable because of these concerns. For this reason a propensity score matching approach was also used. For the sample which includes only foreign owned firms the analysis for the three countries combined is even more conclusive with respect to tax and bureaucracy. There were no statistically significant effects on firm performance of either. With respect to control variables there are some differences which suggest important behavioural variation between domestic and foreign owned firms. This also suggests that the analysis needs to be supported by propensity score matching.

7.4. PROPENSITY SCORE MATCHING

7.4.1. Overview

Propensity score matching is used in the firm level analysis. Matching techniques are more commonly used for cross-sectional than time series or panel analysis, where they are more naturally suited. The two key variables in a propensity score matching technique are the ***treatment*** variable and the ***outcome*** variable. The treatment variable needs to be a (0,1) variable but the outcome variable can either take on any value or itself be a (0,1) variable.

The matching approach can be seen as an extension and development of a simple test. The sample can be divided into two sub-samples using the (0,1) treatment variable. For example, in the firm level analysis the sample can be divided into those firms who report bureaucracy (treated) as a significant constraint and those firms who do not (untreated). Using a performance indicator such as, say, sales per worker the mean for each group can be calculated. A t-test between the two means can then be used to assess whether there is a statistically significant difference between the treated (problems with bureaucracy) firms and the untreated.

Although a straightforward approach a simple t test for the difference in means between the treated and untreated sub-samples is subject to bias if the two groups do not compare like with like. For example, firms reporting problems with bureaucracy may be smaller or less experienced than those who do not. The matching approach comprises the careful selection of a control group of untreated firms to match the key characteristics of firms included in the treated group. The firms included in the "matched" control group should share all observable key characteristics in common with those in the treated group other than the treatment itself.

In the matching approach a series of control variables are used to estimate the propensity score. This is done by using a probit model to estimate the probability of treatment (whether or not the firm has significant problems with bureaucracy). The probit model estimates the probability of observing a treated firm using a number of variables. For example, the probability of observing constraints arising from governance may be related to firm size, sector, age of the firm, exporting and foreign ownership.

Once a "matched" control group has been created a t-test for the difference between the mean of the treated and untreated sub-samples is conducted. So, for example, if the

difference in the mean sales per worker is negative and statistically significant it implies that the treatment (bureaucracy) is associated with lower sales per worker. There are two possible problems that may arise. Firstly, the control group may not adequately match the treated group in all the observable characteristics. This is known as "bias on observables". Since the relevant variables are observable it is possible to test for differences between the treated group and the control group. There is also the possibility of "bias on unobservables". This is similar to omitted variable bias in a regression model. If a key variable has been omitted from the matching process then the results are biased. For example, suppose the nationality of the firm affects both the treatment (bureaucracy) and the outcome (sales per worker) but is excluded from the matching process. This exclusion may well mean that the t tests for the treatment effect are biased.

This section builds on the preceding firm level regression analysis by using a propensity score matching approach. This technique is described in more detail in the methodology. At heart it is simple. It compares the mean value of an "outcome" variable between a sample of firms who have been subject to a "treatment" with a sample of firms that have not. In this case the "outcome" variable is each of four different indicators of firm performance and the treatment variables are firms perceptions of the severity of obstacles created by, firstly, tax rates and, secondly, bureaucracy. The analysis tests whether tax rates and bureaucracy (separately) had statistically significant effects on firm performance.

Comparing means between two sub-samples is a fairly simple approach. A matching approach tries to compare the "treated" group with a control group that is selected to be as similar as possible in all key observed characteristics. In so doing it offers a key advantage that the regression model cannot. It explicitly takes into account firm heterogeneity.

The analysis is presented below in the following way. Firstly, the results for the combined sample (Indonesia, the Philippines and Vietnam) are analysed. Secondly, the analysis for each individual country is reported and discussed. Selection of the control group was in each case using kernel density matching and standard errors for treatment effects were bootstrapped.

7.4.2. Data and Variables

The data used for the matching analysis was taken from the same sources as the earlier regression analysis: the World Bank Enterprise surveys of Indonesia, the Philippines and Vietnam. All three surveys were conducted in 2009.

The analysis used four different performance indicators:

1. Sales per worker (spw), in local currency but converted into US $ for the combined sample.
2. Profit per worker (ppw), also in local currency but converted to US $ for the combined sample
3. Growth, the % change in the firm's output between 2006 and 2009.
4. Export, the share of exports in total sales.
5. The treatment variables were:
6. Tax rates was measured as 1 for all firms who rated tax rates as a "major" or "very severe" obstacle, zero otherwise
7. Bureaucracy was given as the mean score of four different administrative obstacles (customs, business licensing, tax administration and labour regulation). For each the degree of difficulty was scored from 0 to 4, with 0 representing "no obstacle" and 2 a "moderate obstacle". Valued as 1 if the firm's mean score was more than 2 and 0 otherwise.

Matching analysis requires a number of variables ("observables") on which to select a suitable propensity score and an appropriate control group. As far as possible these should capture all important differences between "treated" and "untreated" firms.

The variables used as observables were:

1. Foreign ownership , foreign1, (1 for any % foreign ownership, 0 for none)
2. Firm size class, size1 (0 micro, 1 small, 2 medium and 3 large)
3. Export (as defined above, used as an "observable" for the first three performance indicators only)
4. Infrastructure obstacles, Infra, the mean score of three different infrastructure obstacles (each scored from 0 to 4)
5. The age of the firm in years, age.
6. The main market was national, as opposed to local, national, (0,1)
7. The firm bid for a government contract (0,1), govbid.

8. The degree of severity to which corruption posed a problem, scored from 0-4, corruption.

The sample sizes used were Indonesia 1242 observations, Philippines 1139 observations and Vietnam 1002 observations

7.4.3. All firms

The combined sample (Indonesia, Philippines and Vietnam)

1. *Using Tax Rates as the Treatment Variable*

Table 7.6 below reports matching tests for each of the four performance indicators (sales per worker, profit per worker, growth and exports) using tax rates as the treatment variable. For none of these variables could we reject the null hypothesis that tax rates have a significant effect on firm performance at 90% confidence or higher. The evidence of the sample suggests that perceived difficulties with high tax rates make no statistically significant difference to firm performance according to each of the indicators.

Table 22(7.6): Matching test with tax rates as the treatment-combines sample

Matching Tests with Tax Rates as the Treatment - Combined Sample

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	54018.7	821509.2	-767490.5	1714902.8	-0.45
	ATT	54064.8	789036.5	815346.4	-0.9014227	-0.45
ppw	Unmatched	19371.2	27315.4	-7944.2	18084.6	-0.44
	ATT	19368.2	30439.8	-11071.6	9320.7	-1.19
growth	Unmatched	39.7212	14.1275	25.5938	23.2666	1.10
	ATT	40.2708	8.1500	32.1208	39.5235	0.81
export	Unmatched	0.1858	0.2077	-0.0219	0.0223	-0.98
	ATT	0.1825	0.2206	-0.0382	0.0247	-1.54

Figure 7.1 below provides a graphic representation of bias on observables, before and after the matching procedure.

Figure 6(7.1): Bias on observables-tax rates, combines sample

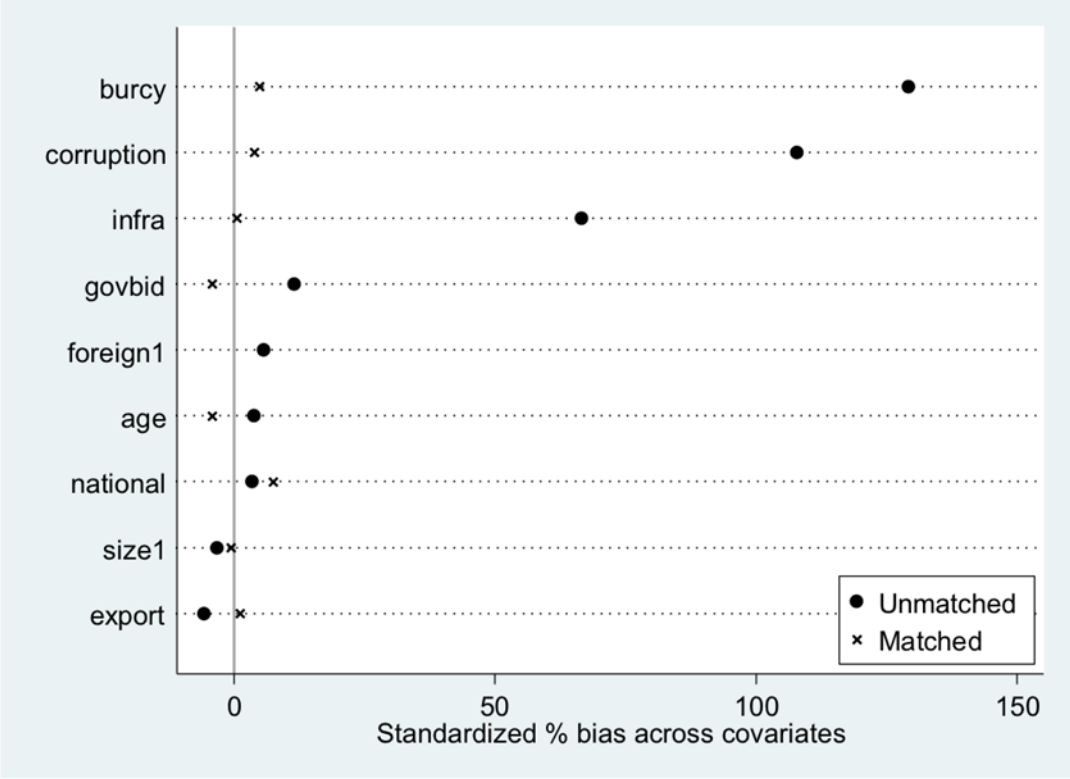


Table 7.7 presents summary data for the selection on observables, with tax rates as the treatment. It should be noted that the t test for a difference in means between the treated and untreated group after matching would lead to acceptance of the null hypothesis (of no difference in the means) at 90% confidence or higher. The matching process (with respect to observables) therefore seems satisfactory.

Table 23(7.7): Selection on observables-tax rates, combined sample

Selection on Observables - Tax Rates, Combined Sample

Variable	Unmatched Matched	Mean Treated	Control	%bias	% reduction in bias	t-test t
foreign1	U	0.20205	0.17959	5.7		0.93
	M	0.20486	0.18311	5.5	3.2	0.66
size1	U	1.9178	1.9432	-3.2		-0.5
	M	1.9201	1.924	-0.5	84.9	-0.06
export	U	0.18983	0.21061	-5.7		-0.9
	M	0.18691	0.18245	1.2	78.5	0.15
infra	U	1.3544	0.75356	66.6		11.9
	M	1.3304	1.3256	0.5	99.2	0.06
burcy	U	1.512	0.54301	129.2		24.26
	M	1.4844	1.4476	4.9	96.2	0.53
age	U	26.575	22.295	3.9		0.68
	M	26.552	31.073	-4.2	-5.6	-0.4
national	U	0.41096	0.39384	3.5		0.56
	M	0.41319	0.37641	7.5	-114.9	0.9
govbid	U	0.10959	0.07607	11.6		1.98
	M	0.10764	0.11976	-4.2	63.8	-0.46
corruption	U	2.1336	0.74579	107.9		19.02
	M	2.1076	2.057	3.9	96.3	0.44

2. Using Bureaucracy as the Treatment Variable

Table 7.8 repeats the matching tests reported above (in Table 7.7) but using bureaucracy as the treatment variable. Again there are no statistically significant effects at 90 percent or higher confidence. Like tax rates there is no evidence to support the hypothesis that perceived difficulties with bureaucracy have a significant harmful effect on firm performance.

Table 24(7.8): Matching test with Bureaucracy as the treatment-combine sample

Matching Tests with Bureaucracy as the Treatment - Combined Sample

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	84805.6	782991.0	-698185.4	2681810.6	-0.26
	ATT	86041.6	1477185.1	-1391143.5	1199333.0	-1.16
ppw	Unmatched	12633.4	26261.1	-13627.7	28126.8	-0.48
	ATT	12849.1	28962.5	-16113.4	10174.4	-1.58
growth	Unmatched	0.8667	18.2328	-17.3661	36.6769	-0.47
	ATT	0.8763	27.1760	-26.2998	28.4424	-0.92
export	Unmatched	0.2464	0.2036	0.0428	0.0347	1.23
	ATT	0.2421	0.2034	0.0386	0.0301	1.28

Figure 7.2 below presents a visual summary a graphic of bias on observables, before and after the matching procedure

Figure 7(7.2): Bias on observables-bureaucracy, combined sample

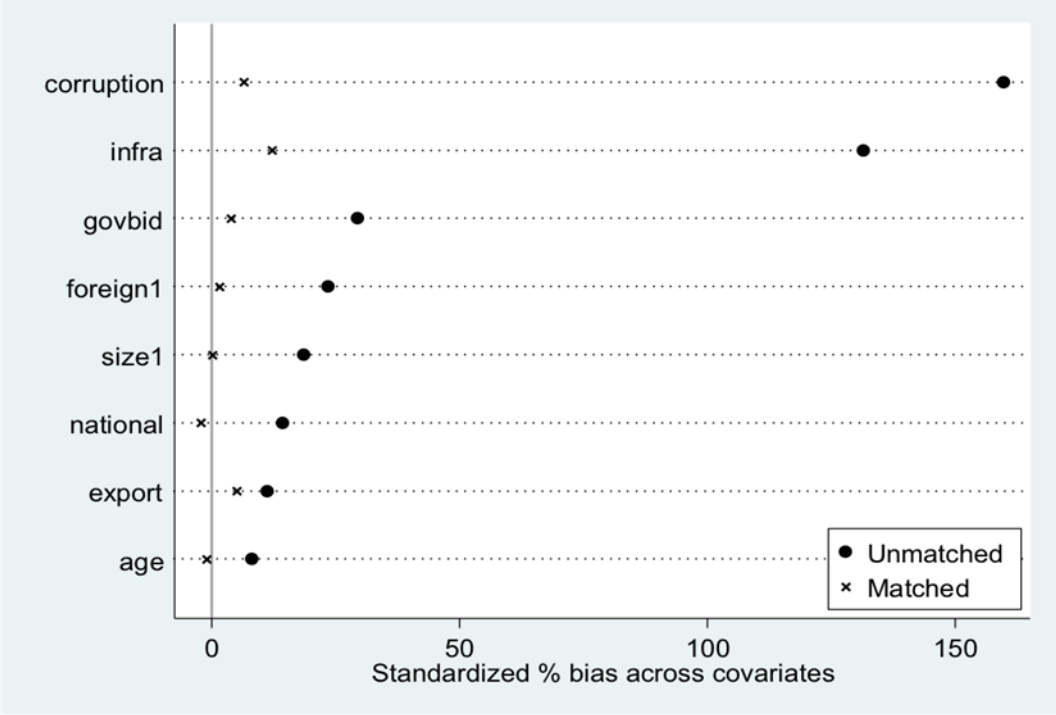


Table 7.9 presents summary data for the selection on observables, with bureaucracy as the treatment. As with the tax rates case the null hypothesis (of no difference between

the mean of the treated and control groups) cannot be rejected for any of the observables so it is concluded that matching on observables was satisfactory.

Table 25(7.9): Selection an observables-bureaucracy combine sample

Selection on Observables - Bureaucracy, Combined Sample

Variable	Unmatched Matched	Mean Treated	Control	%bias	% reduction in bias	t-test t
foreign1	U	0.26891	0.17179	23.5		2.72
	M	0.2735	0.26684	1.6	93.1	0.11
size1	U	2.0588	1.9091	18.6		1.98
	M	2.0427	2.0411	0.2	98.9	0.02
export	U	0.24639	0.20359	11.2		1.23
	M	0.24376	0.22417	5.1	54.2	0.39
infra	U	1.9552	0.77411	131.5		15.88
	M	1.9231	1.8135	12.2	90.7	0.85
age	U	37.193	24.36	8.2		1.1
	M	37.444	38.926	-1	88.5	-0.06
national	U	0.47059	0.39935	14.4		1.55
	M	0.47863	0.48876	-2	85.8	-0.15
govbid	U	0.17647	0.07882	29.5		3.77
	M	0.17094	0.15786	3.9	86.6	0.27
corruption	U	2.6807	0.80437	159.8		16.89
	M	2.6667	2.5888	6.6	95.8	0.49

Indonesia

1. *Using Tax Rates as the Treatment Variable*

This section repeats essentially the same matching analysis but for Indonesia rather than the full sample. Table 7.10 reports the matching tests for a difference between the mean of the treated and control groups, using tax rates as the treatment. Results are given for each of the four performance indicators. They show no statistically significant effect (at 90 percent or higher confidence) of perceived high tax rates on any of the performance indicators.

Table 26(7.10): Matching with tax rates as the treatment-Indonesia

Matching Tests with Tax Rates as the Treatment - Indonesia						
Variable	**Sample**	**Treated**	**Controls**	**Difference**	**S.E.**	**T-stat**
spw	Unmatched	1178600000	23042000000	-21864000000	78442000000	-0.28
	ATT	1248800000	23962000000	-22713000000	258000000000	-0.88
ppw	Unmatched	3090588.51	3246870.06	-156281.55	5684927.59	-0.03
	ATT	3297518.76	1132276.28	2165242.48	3174816	0.68
growth	Unmatched	0.5906	27.8675	-27.2769	77.5519	-0.35
	ATT	0.6278	36.1709	-35.5432	42.9290	-0.83
export	Unmatched	0.2304	0.1047	0.1258	0.0411	3.06
	ATT	0.1814	0.1528	0.0286	0.0660	0.43

Figure 7.3 and Table 7.11 below provide evidence with respect to bias on observables. Both suggest the matching process to have been adequate.

Figure 8(7.3): Bias on observables-tax rates, Indonesia

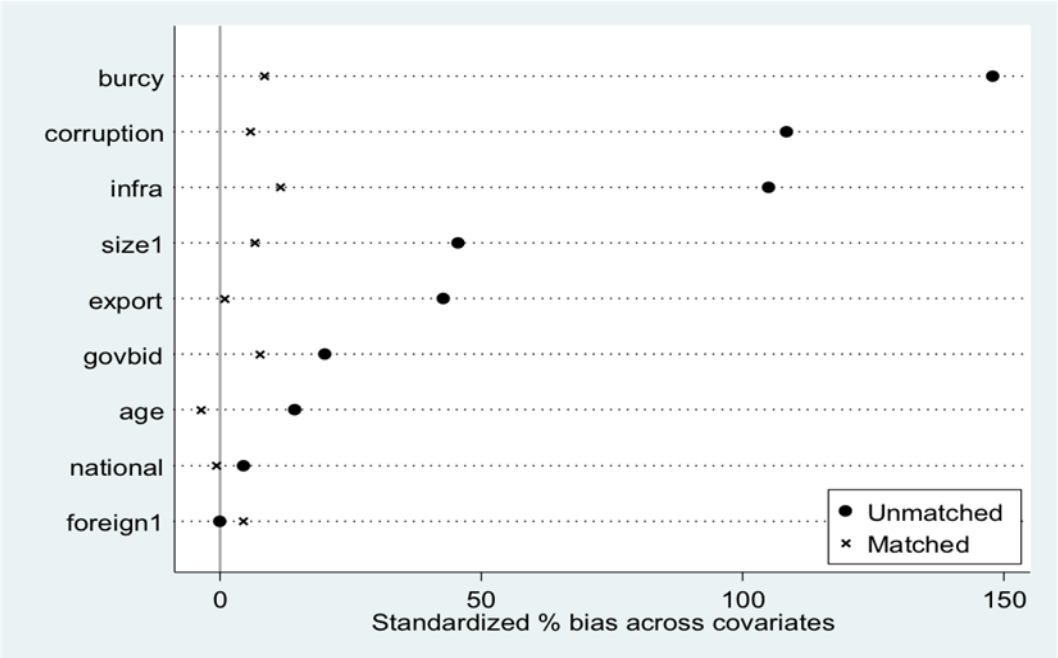


Table 27(7.11): Selection on observable-tax rates, Indonesia

Selection on Observables - Tax Rates, Indonesia

Variable	Unmatched / Matched	Mean: Treated	Mean: Control	%bias	% reduction in bias	t-test: t
foreign1	U	0.09302	0.0929	0		0
	M	0.1	0.08704	4.4	-10101.1	0.2
size1	U	2.1628	1.7801	45.6		3.01
	M	2.1	2.0434	6.7	85.2	0.29
export	U	0.24651	0.10985	42		3.15
	M	0.195	0.19187	1	97.7	0.04
infra	U	1.7636	0.7418	105		7.83
	M	1.6125	1.5002	11.5	89	0.5
burcy	U	1.6705	0.51446	147		11.39
	M	1.5313	1.4646	8.5	94.2	0.38
age	U	67.093	31.937	14		1.28
	M	70.7	79.464	-3.6	75.1	-0.12
national	U	0.46512	0.44262	4.5		0.29
	M	0.5	0.50323	-0.6	85.7	-0.03
govbid	U	0.09302	0.04235	20		1.56
	M	0.1	0.08069	7.7	61.9	0.3
corruption	U	2.0698	0.68169	108		7.64
	M	1.975	1.9001	5.9	94.6	0.24

2. *Using Bureaucracy as the Treatment Variable*

Table 7.12 reports the results of the matching analysis for Indonesia, using bureaucracy as the treatment variable. As with the combined sample there was no statistically significant effect of perceived bureaucratic obstacles on any of the four performance indicators.

Table 28(7.12): Matching test with bureaucracy as the treatment- Indonesia

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	2274200000	26209000000	-23935000000	100790000000	-0.24
	ATT	1969100000	95773000000	-93804000000	60300000000	-1.56
ppw	Unmatched	212755	3796922	-3584166	7299435	-0.49
	ATT	235013	2223993	-1988980	4337384	-0.46
growth	Unmatched	0.7720	20.6352	-19.8632	90.0294	-0.22
	ATT	0.9098	4.3152	-3.4054	5.2468	-0.65
export	Unmatched	0.2555	0.1084	0.1471	0.0509	2.89
	ATT	0.2471	0.2178	0.0294	0.0686	0.43

Figure 7.4 and Table 7.13 provide evidence concerning bias on observables. Both support the view that the matching process was suitable.

Figure 9(7.4): Bias on observables-bureaucracy, Indonesia

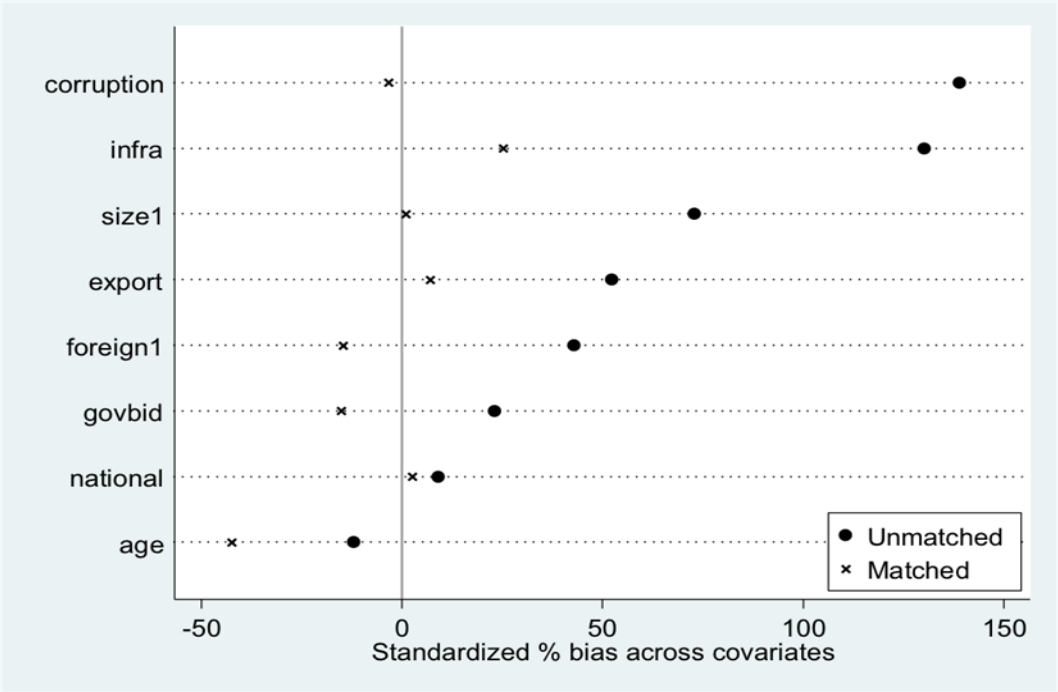


Table 29(7.13): Selection on observables- bureaucracy, Indonesia

Selection on Observables - Bureaucracy, Indonesia

Variable	Unmatched / Matched	Mean: Treated	Mean: Control	%bias	% reduction in bias	t-test: t
foreign1	U	0.25926	0.09653	43		2.74
	M	0.21739	0.27285	-14.6	65.9	-0.43
size1	U	2.4074	1.8039	73		3.79
	M	2.3043	2.2956	1.1	98.5	0.04
export	U	0.29259	0.11291	52.3		3.25
	M	0.29783	0.27368	7	86.6	0.21
infra	U	2.0802	0.75716	130.2		8.13
	M	1.9493	1.6928	25.2	80.6	0.86
age	U	19.148	33.802	-11.9		-0.44
	M	19.565	71.746	-42.4	-256.1	-0.77
national	U	0.48148	0.4359	9.1		0.47
	M	0.47826	0.46497	2.6	70.9	0.09
govbid	U	0.11111	0.04827	23.1		1.46
	M	0.04348	0.08475	-15.1	34.3	-0.56
corruption	U	2.4444	0.71946	139		7.49
	M	2.3478	2.3876	-3.2	97.7	-0.1

The Philippine

1. *Using Tax Rates as the Treatment Variable*

Table 7.14 reports matching tests for the Philippines with tax rates as the treatment variable. For three of the performance indicators (sales per worker, profit per worker and growth) perceived problems with tax rates have no statistically significant effect. For exports there is a statistically significant and negative effect. Firms who perceive tax rates to be a major or severe problem have a significantly lower share of exports in their total sales.

Table 30(7.14): Matching test with tax rates as the treatment- Philippines

Matching Tests with Tax Rates as the Treatment - Philippines

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	2155065	4612675	-2457610	1756473	-1.40
	ATT	2158009	3530254	-1372245	2210193	-0.62
ppw	Unmatched	1161164	3273835	-2112671	1635934	-1.29
	ATT	1165055	2559140	-1394085	2057858	-0.68
growth	Unmatched	52.9967	8.4863	44.5104	28.3447	1.57
	ATT	53.2407	5.3591	47.8816	53.3880	0.90
export	Unmatched	0.1750	0.2265	-0.0515	0.0287	-1.80
	ATT	0.1730	0.2408	-0.0678	0.0381	-1.78

Figure 7.5 and Table 7.15 below provide evidence with respect to bias on observables. Both show the matching process to have been appropriate.

Figure 10(7.5): Bias on observables- tax rates, Philippines

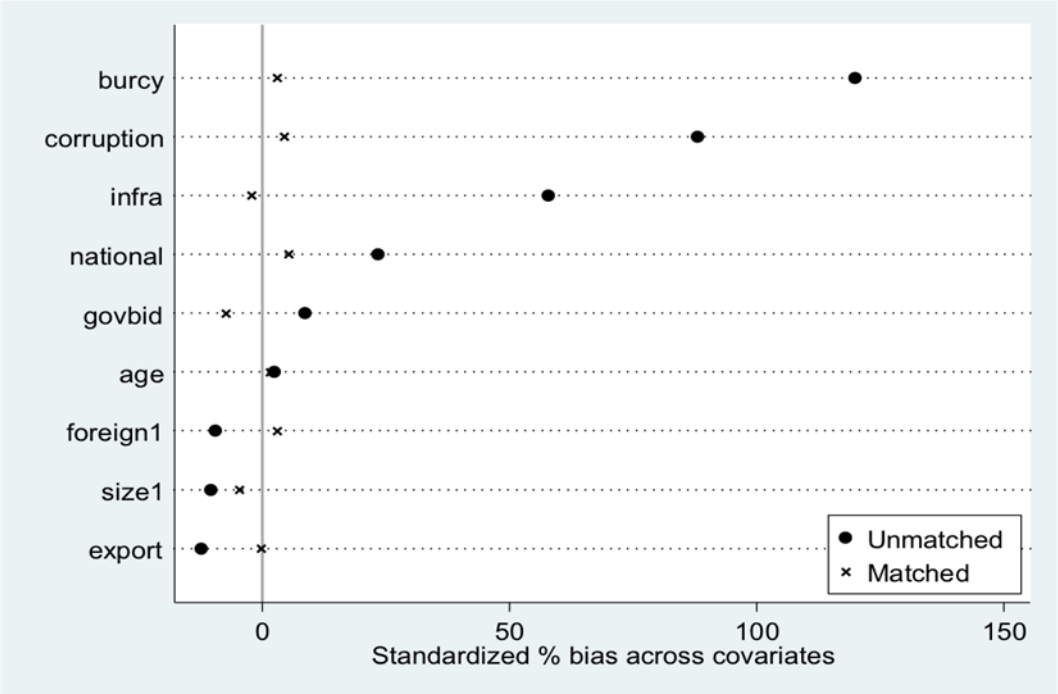


Table 31(7.15): Selection on observables- tax rates, Philippines

Selection on Observables - Tax Rates, Philippines

Variable	Unmatched Matched	Mean Treated	Control	%bias	% reduction in bias	t-test t
foreign1	U	0.23041	0.2711	-9.4		-1.21
	M	0.23148	0.21808	3.1	67	0.33
size1	U	1.8295	1.9092	-10.4		-1.32
	M	1.8287	1.8638	-4.6	55.9	-0.48
export	U	0.18166	0.22799	-12.3		-1.56
	M	0.1825	0.18302	-0.1	98.9	-0.02
infra	U	1.3018	0.77193	57.9		8.04
	M	1.2986	1.3178	-2.1	96.4	-0.2
burcy	U	1.571	0.6835	120		17.15
	M	1.5621	1.539	3.1	97.4	0.29
age	U	20.286	19.942	2.5		0.32
	M	20.324	20.093	1.7	32.7	0.18
national	U	0.34562	0.23913	23.5		3.17
	M	0.34722	0.32269	5.4	77	0.54
govbid	U	0.10599	0.08056	8.7		1.18
	M	0.10648	0.12759	-7.3	17	-0.68
corruption	U	2.2719	1.1074	88.1		12.03
	M	2.2639	2.2034	4.6	94.8	0.48

1. *Using bureaucracy as the Treatment Variable*

Table 7.16 presents the relevant matching tests, with bureaucracy as the treatment. Bureaucracy has no statistically significant effects on any of the performance indicators.

Table 32(7.16): Matching test with bureaucracy as treatment - Philippines

Matching Tests with Bureaucracy as the Treatment - Philippines

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	1750002	4280136	-2530134	2761145	-0.92
	ATT	1770590	4354041	-2583451	1992670	-1.30
ppw	Unmatched	835863	2965663	-2129799	2570787	-0.83
	ATT	856152	2889585	-2033434	1854381	-1.10
growth	Unmatched	0.6398	19.4510	-18.8112	44.8643	-0.42
	ATT	0.6578	35.1492	-34.4914	32.6044	-1.06
export	Unmatched	0.2139	0.2154	-0.0014	0.0452	-0.03
	ATT	0.2084	0.1786	0.0299	0.0537	0.56

Figure 7.6 and Table 7.17 provide evidence concerning bias on observables. Both support the view that the process of selection on observables was of a reasonable standard.

Figure 11(7.6): Bias on observables-bureaucracy, Philippines

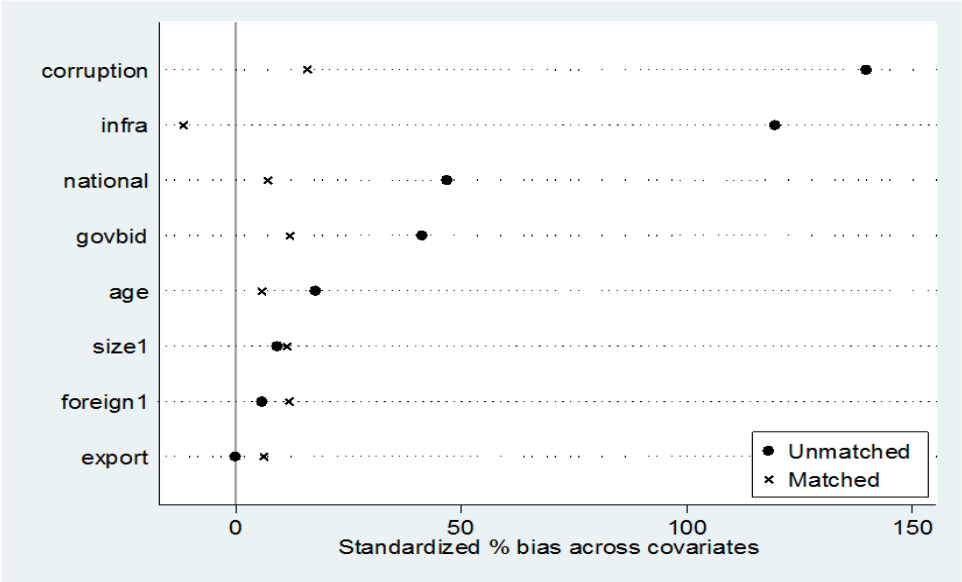


Table 33(7.17): Selection on observable-bureaucracy, Philippines

Selection on Observables - Bureaucracy, Philippines						
Variable	**Unmatched Matched**	**Mean Treated**	**Control**	**%bias**	**% reduction in bias**	**t-test t**
foreign1	U	0.28767	0.26129	5.9		0.49
	M	0.29577	0.24287	11.8	-100.5	0.71
size1	U	1.9589	1.8871	9.2		0.75
	M	1.9718	1.8832	11.4	-23.5	0.68
export	U	0.21781	0.21808	-0.1		-0.01
	M	0.21197	0.18816	6.1	-8818.1	0.38
infra	U	1.8722	0.80948	119.5		10.38
	M	1.8263	1.9293	-11.6	90.3	-0.61
age	U	22.425	19.853	17.8		1.52
	M	22.408	21.58	5.7	67.8	0.34
national	U	0.46575	0.24624	46.9		4.14
	M	0.46479	0.43188	7	85	0.39
govbid	U	0.21918	0.07527	41.3		4.26
	M	0.19718	0.15541	12	71	0.65
corruption	U	2.8904	1.2419	139.8		10.59
	M	2.8732	2.6867	15.8	88.7	1.02

Vietnam

1. Using Tax Rates as the Treatment Variable

Table 7.18 sets out matching tests for the Vietnam using tax rates as the treatment variable. For each of the four performance variables there was no statistically significant effect of perceived obstacles posed by tax rates on firm performance.

Table 34(7.18): Matching test with tax rates as the treatment- Vietnam

Matching Tests with Tax Rates as the Treatment - Vietnam

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	592019458	415812029	176207429	125638106	1.40
	ATT	592019458	498200696	93818761.5	151000000	0.62
ppw	Unmatched	200941459	107936453	93005006.3	122975932	0.76
	ATT	200941459	121128695	79812764.6	79600000	1.00
growth	Unmatched	2.2785	4.1163	-1.8378	12.4848	-0.15
	ATT	2.2785	2.2775	0.0009	3.1470	0.00
export	Unmatched	0.1983	0.3143	-0.1160	0.0713	-1.63
	ATT	0.1754	0.2468	-0.0713	0.0481	-1.48

Figure 7.7 and Table 7.19 give details of bias on observables. Both imply that the treated group and the selected control group are well matched on observables.

Figure 12(7.7): Bias on observable-tax rates, Vietnam

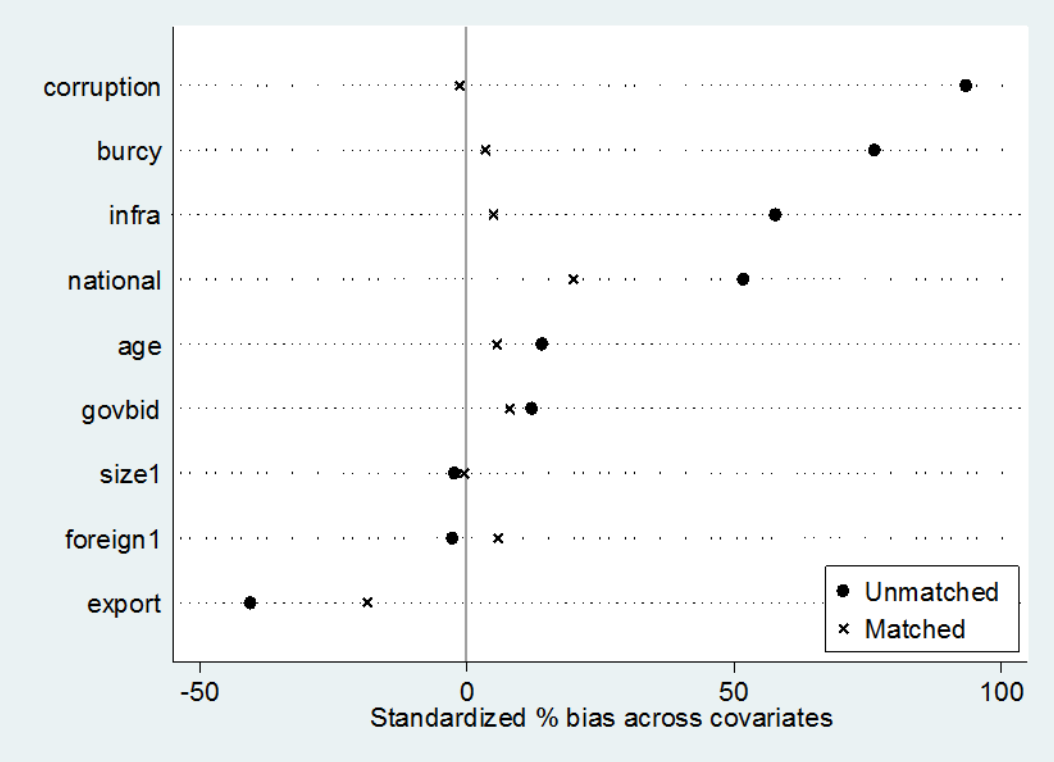


Table 35(7.19): Selection on observables-tax rates, Vietnam

Selection on Observables - Tax Rates, Vietnam

Variable	Unmatched Matched	Mean Treated	Control	%bias	% reduction in bias	t-test t
foreign1	U	0.15625	0.16607	-2.6		-0.15
	M	0.15625	0.13508	5.7	-115.6	0.24
size1	U	2.1875	2.2054	-2.3		-0.13
	M	2.1875	2.1916	-0.5	77.1	-0.02
export	U	0.16906	0.31918	-40.5		-1.98
	M	0.16906	0.23824	-18.6	53.9	-0.8
infra	U	1.1615	0.74494	57.8		3.41
	M	1.1615	1.1258	5	91.4	0.18
burcy	U	0.89844	0.38705	76.3		5.66
	M	0.89844	0.87481	3.5	95.4	0.12
age	U	14.781	13.032	14.1		0.82
	M	14.781	14.086	5.6	60.2	0.22
national	U	0.78125	0.54286	51.7		2.65
	M	0.78125	0.68951	19.9	61.5	0.82
govbid	U	0.15625	0.11429	12.2		0.72
	M	0.15625	0.12879	8	34.6	0.31
corruption	U	1.2813	0.32857	93.5		6.62
	M	1.2813	1.2953	-1.4	98.5	-0.04

2. *Using bureaucracy as the Treatment Variable*

Table 7.20 presents the standard matching tests, with bureaucracy as the treatment. For three of the four performance indicators bureaucracy has no statistically significant effects on firm performance. For sales per worker there is a statistically significant effect at 95% confidence. Contrary to expectations the effect is positive, suggesting that bureaucratic obstacles improve rather than restrict firm performance. Whilst there is insufficient information to be sure of the reasons for this it is, perhaps, more likely that more efficient firms feel more constrained by bureaucracy than firms whose own performance is poor.

Table 36(7.20): Matching test with bureaucracy as the treatment- Vietnam

Matching Tests with Bureaucracy as the Treatment - Vietnam

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	771358288	425607654	345750634	204109863	1.69
	ATT	843300902	285596715	557704187	263115991	2.12
ppw	Unmatched	223399585	124127060	99272525	90445071	1.1
	ATT	88949205	64761682	24187523	278154697	0.09
growth	Unmatched	2.9911	0.9784	2.0127	1.9983	1.01
	ATT	0.2504	0.5900	-0.3395	0.6359	-0.53
export	Unmatched	0.5000	0.2575	0.2425	0.1316	1.84
	ATT	0.5000	0.2981	0.2019	0.1789	1.13

Figure 13(7.8): Bias on observables- bureaucracy Vietnam

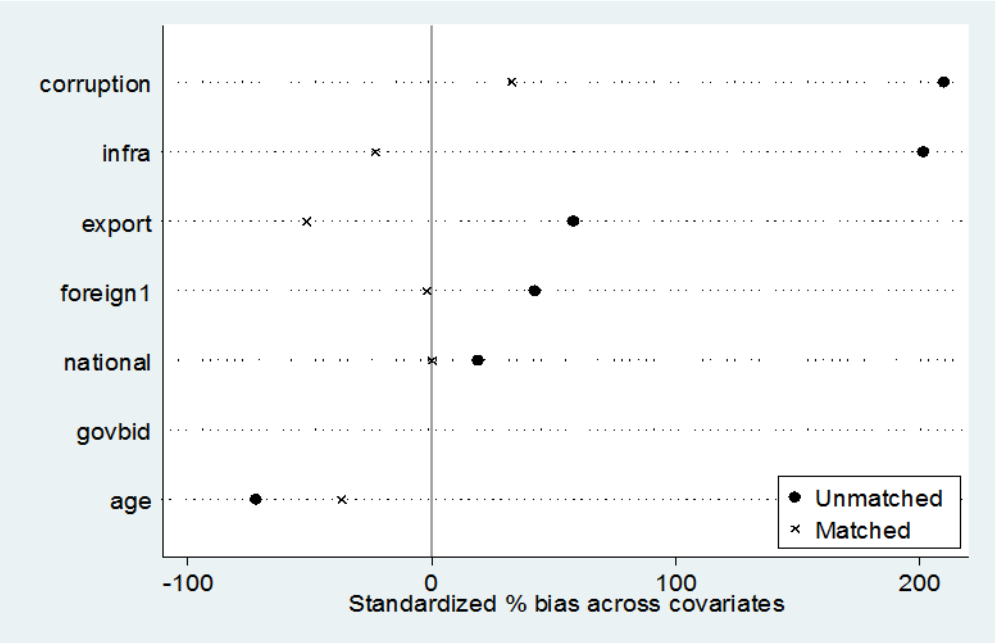


Table 37(7.21): Selection on observables -bureaucracy, Vietnam

Selection on Observables - Buraucracy, Vietnam

Variable	Unmatched Matched	Mean Treated	Control	%bias	% reduction in bias	t-test t
foreign1	U	0.33333	0.14948	42.3		1.51
	M	0.5	0.50993	-2.3	94.6	-0.02
export	U	0.5	0.26559	58.1		1.76
	M	0.575	0.78245	-51.4	11.5	-0.78
infra	U	2.1667	0.74098	201.3		6.5
	M	2.0833	2.2467	-23.1	88.5	-0.62
age	U	7.2222	13.461	-72		-1.56
	M	7.75	10.96	-37.1	48.5	-1.67
national	U	0.66667	0.57216	19		0.57
	M	0.75	0.75	0	100	0
govbid	U	0	0	.		.
	M	0	0	.	.	.
corruption	U	2.2222	0.35567	209.8		6.9
	M	1.75	1.4603	32.6	84.5	0.29

7.4.4. Foreign firms only

This section repeats the propensity score matching analysis for the sample of firms with some foreign ownership. As with the regression analysis this was conducted only for the three countries combined into a single sample and (for reasons of sample size) not for each country individually.

1. *Using Tax Rates as the Treatment Variable*

Table 7.22 reports the matching tests with perceived constraints with tax as the treatment.

Table 38(7.22): Matching test with tax rates the treatment-combines sample

Matching Tests with Tax Rates as the Treatment - Combined Sample

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	90142.8	129672.2	-39529.3	84273.5	-0.47
	ATT	69841.1	118958.3	-49117.2	65214.4	-0.75
ppw	Unmatched	31573.3	64856.4	-33283.1	76090.1	-0.44
	ATT	33651.5	39236.2	-5584.8	29291.4	-0.19
growth	Unmatched	0.4784	1.6316	-1.1532	1.9330	-0.60
	ATT	0.5371	0.6654	-0.1283	0.3175	-0.40
export	Unmatched	0.4033	0.5631	-0.1598	0.0617	-2.59
	ATT	0.4281	0.5278	-0.0997	0.0907	-1.10

The results suggest that there is no statistically significant effect of tax rates on any of the four performance indicators for foreign firms. Selection on observables checks are presented in Figure 7.9 and in Table 7.23 below. These suggest the control group of foreign firms nor reporting tax constraints is well matched with the treated group (those with perceived tax constraints).

Figure 14(7.9): Bias on observables-tax rates, combined sample

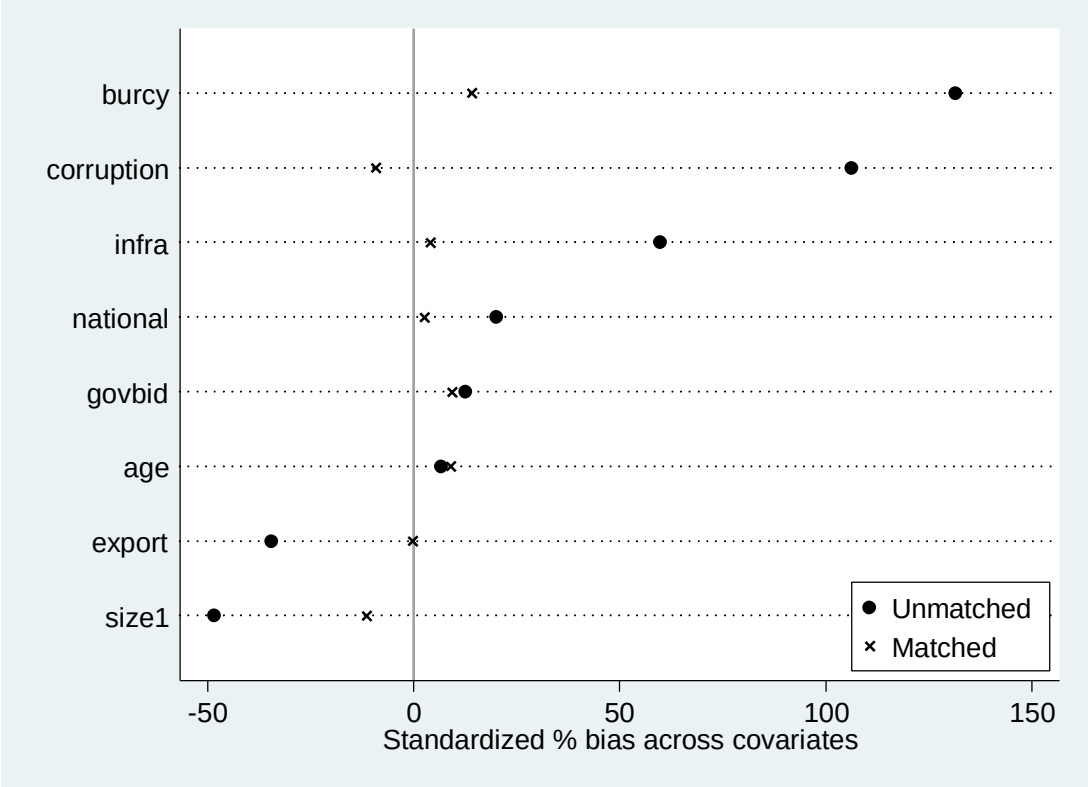


Figure 15(7.23): Selection on observables-Tax rates combined sample

Selection on Observables - Tax Rates, Combined Sample

Variable	Unmatched Matched	Mean Treated	Control	%bias	% reduction in bias	t-test t
size1	U	2.1356	2.4972	-48.3		-3.62
	M	2.18	2.2659	-11.5	76.3	-0.54
export	U	0.4	0.55531	-34.5		-2.47
	M	0.4466	0.44752	-0.2	99.4	-0.01
infra	U	1.3164	0.7722	59.9		4.78
	M	1.2733	1.2359	4.1	93.1	0.2
burcy	U	1.6794	0.68704	131.5		10.67
	M	1.5483	1.4422	14.1	89.3	0.67
age	U	16.576	15.736	6.7		0.5
	M	16.78	15.637	9.1	-36	0.46
national	U	0.38983	0.29444	20.1		1.47
	M	0.38	0.36729	2.7	86.7	0.13
govbid	U	0.10169	0.06667	12.6		0.97
	M	0.08	0.05415	9.3	26.2	0.51
corruption	U	2.1695	0.84722	106.3		7.98
	M	1.96	2.0746	-9.2	91.3	-0.44

2. Using bureaucracy as the Treatment Variable

Table 7.24 reports the matching tests for the foreign firm sample but using bureaucracy as the treatment variable. Again, there is no statistically significant effect of perceived bureaucracy constraints on any of the four performance variables.

Table 39(7.24): Matching test with bureaucracy as the treatment-Combined sample

Matching Tests with Bureaucracy as the Treatment - Combined Sample

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
spw	Unmatched	216451.6	122156.7	94295.0	123102.0	0.77
	ATT	176612.6	86494.1	90118.6	153457.2	0.59
ppw	Unmatched	20157.3	64729.5	-44572.2	111534.8	-0.40
	ATT	20829.2	17582.6	3246.6	23857.9	0.14
growth	Unmatched	0.5888	1.6154	-1.0265	2.8126	-0.36
	ATT	0.6092	0.3393	0.2699	0.3619	0.75
export	Unmatched	0.4226	0.5828	-0.1602	0.0835	-1.92
	ATT	0.4367	0.4326	0.0041	0.1124	0.04

Figure 7.10 and Table 7.25 provide evidence of matching on observables, which suggest the selected control group is adequately matched.

Figure 16(Figure 7.10): Bias on observables-bureaucracy, combined sample

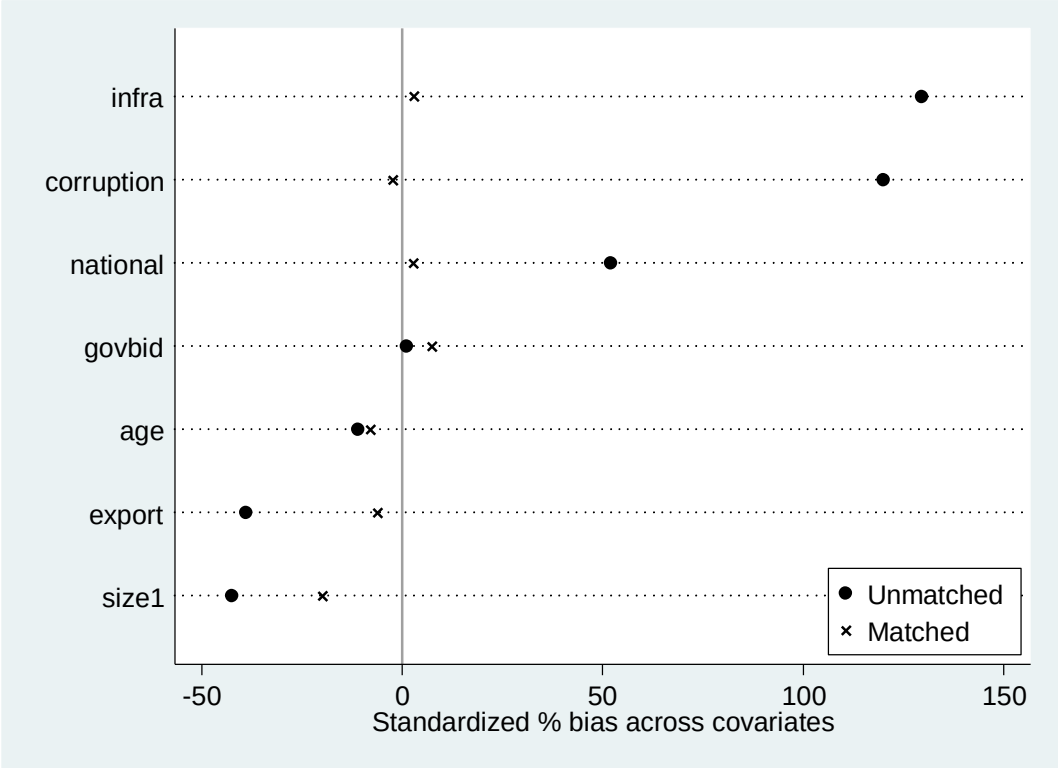


Table 40(Table 7.25): Selection on observables-Bureaucracy, Combined sample

Variable	Unmatched	Mean			% reduction	t-test	
	Matched	Treated	Control	%bias	in bias	t	p>t
size1	U	2.1667	2.5	-42.4		-2.48	0.013
	M	2.1379	2.2943	-19.9	53.1	-0.74	0.461
export	U	0.40333	0.57735	-38.9		-2.06	0.041
	M	0.41724	0.44492	-6.2	84.1	-0.23	0.818
infra	U	1.8445	0.76573	129.6		7.39	0
	M	1.7817	1.7577	2.9	97.8	0.1	0.918
age	U	14.567	15.991	-11		-0.62	0.538
	M	14.655	15.682	-8	27.9	-0.3	0.762
national	U	0.53333	0.28354	52		2.87	0.004
	M	0.51724	0.50384	2.8	94.6	0.1	0.92
govbid	U	0.06667	0.06402	1.1		0.06	0.955
	M	0.06897	0.05051	7.4	-598.6	0.29	0.772
corruption	U	2.3333	0.87805	119.9		6.41	0
	M	2.2759	2.3049	-2.4	98	-0.09	0.931

7.5. CONCLUSIONS

The firm level analysis is complex at the country level and has data limitations. The analysis presented in this chapter provides evidence of links between firm performance and the two interest variables which are bureaucracy and tax. Using regression techniques with the pooled sample (the three countries combined) neither of these two variables has a significant impact on firm performance (table 7.26). This conclusion applies both to all firms in the sample and to (separately) firms with some foreign ownership.

Table 41(Table 7.26), summarized result of all countries combined

Firm performance	Tax (all countries)			Bureacracy (all countries)		
	OLS	Fixed effect/LSDV	Propensity score	OLS	Fixed effect/LSDV	Propensity score
SPW	+/significant	+/significant	-/not significant	+/ not significant	+/ not significant	-/not significant
PPW	+/ not significant	+/ not significant	-/not significant	+/significant	+/ not significant	-/not significant
Growth			+/not significant			-/not significant
export			-/not significant			+/ not significant

When the analysis is repeated for each country individually some issues emerge from the regression analysis (Table 7.27). Firstly there are perverse results where bureaucracy is found to have a positive and significant effect on firm performance in Indonesia and where tax was found to have positive and significant effect in Vietnam. These results are not just implausible but raise questions about possible reverse causality (that high performing firms notice constraints more). This means a risk of bias in the estimates. Secondly, the estimates for the control variables suggest important behavioral differences between domestic and foreign firms. The regression analysis is a useful first step but highlights the need to also use propensity score matching.

Table 42(Table 7.27): Summarized firm performance in each country

Firm performance	Tax (Indoensia)			Bureacracy (Indonesia)		
	OLS	Fixed effect/LSDV	Propensity score	OLS	Fixed effect/LSDV	Propensity score
SPW	+/ not significant	-/ not significant	-/ not significant	+/ not significant	+/ not significant	-/ not significant
PPW	+/ not significant	-/ not significant	-/ not significant	+/ significant	+/ not significant	-/ not significant
Growth			-/ not significant			-/ not significant
export			+/ not significant			+/ not significant

Firm performance	Tax (Philippines)			Bureacracy (Philippines)		
	OLS	Fixed effect/LSDV	Propensity score	OLS	Fixed effect/LSDV	Propensity score
SPW	-/ not significant	-/ not significant	-/ not significant	+/ not significant	+/ not significant	-/ not significant
PPW	-/significant	-/significant	-/ not significant	+/ not significant	+/ not significant	-/ not significant
Growth			+/ not significant			-/ not significant
export			-/significant			+/ not significant

Firm performance	Tax (Vietnam)			Bureacracy (Vietnam)		
	OLS	Fixed effect/LSDV	Propensity score	OLS	Fixed effect/LSDV	Propensity score
SPW	+/ significant	+/ significant	+/ not significant	+/ not significant	+/ not significant	+/ significant
PPW	+/ significant	+/ significant	+/ not significant	+/ not significant	+/ not significant	+/ not significant
Growth			-/ not significant			-/ not significant
export			-/ not significant			+/ not significant

Most of the existing work on the relationship between institution factors and firm performance assumes that the institution factors are constant within a country (Dollar, 2005). The empirical link that this thesis establish between the institutional factors and firm performance for both local and foreign investment in host countries with conducting the matching analysis the number of performance indicators was expanded to four, adding sales growth and exports (as a percentage of sales) to sales per worker and profit per worker. The results of the matching analysis were very clear. It was run a total of five times. Four of these included both domestic and foreign firms: the pooled sample and each of three countries individually. The last was for a pooled sample of foreign firms only. In each of these five runs not one of the four performance indicators was found to have a statistically significant effect with either bureaucracy or tax rates as the treatment variable. The evidence of the sample does not support the view that either bureaucratic or tax rate constraints have significantly affected firm performance in the three countries.

Most empirical studies on performance use the banking industry as a sample, while in this study uses manufacture companies based on sectors. This thesis follows the study by Dollar, Hallaward-Driemeier, and Mengistae's (2005) which investigated firms' determinants factors on performance that focus on the investment climate (infrastructure, role government, regulation) and ownership, and the result shown that those factors are matter but not according to the result on this study (thesis), this could be simply because

it uses different sample of data or these factors are not as important as other unobserved factors that affect firm's performance (Harvey Leibenstein, 1976 ; Bastos and Nasir, 2004; Williamson, O., 1967)

Although this section of analysis did not support most of studies that found association between tax and governance and firm's performance (Baumol, 1967; Hall, 1967; Weiss, 1967), however, there are some important issues of interpretation in this thesis as a whole, chapter V demonstrated that indirect taxes have the potential to significantly affect "pre-tax" gross profits (those before taxes on corporate income). Chapter VI found that, at a country level, taxes and governance can affect aggregate inward investment. The final analysis which discussed in this chapter finds no evidence to support a view that either tax or bureaucracy has a negative effect on firm performance. This finding applies equally to domestic and foreign owned firms. Since none of the performance indicators are based on after tax profits the finding is consistent with the literature that finds taxes on corporate income to influence investment decisions. What the analysis presented here shows is that the evidence does not support a view that either taxes or bureaucracy affect the underlying "pre-tax" profit.

A fundamental limitation of this and similar research is the counter-factual. The only available firm level data are for firms that exist. These are the ones that decided that the constraints created by taxes or bureaucracy were not so severe as to prevent investment in the first place or subsequent dis-investment. It is impossible to know about firms who closed or investment projects that never took place because of tax or bureaucracy problems. The input-output analysis presented in Chapter IV suggests that the effects of indirect taxes must have acted as deterrent in some cases. The reasons why some firms seem to cope with these and other, non-existent ones do not is an important topic for future research.

CHAPTER VIII: SUMMARY AND CONCLUSIONS

This study analyses the impact of tax and governance on the volumes of FDI in Asia and the attractiveness of Asia as a location for inward FDI. Using data from a number of different Asian countries, the research was divided into 3 main analytical chapters:

3. How important are indirect taxes, in relation to direct taxes, in affecting the potential profitability of inward investment in Asia? How do indirect taxes change the incentives to invest in one sector over another? (Chapter V)
4. At the country level how conducive are governance regulatory and tax in Asian countries to encouraging inward foreign direct investment? (Chapter VI)
5. To what extent do tax and bureaucracy adversely affect firm performance in some Asian countries and, hence, influence efficiency seeking motives for inward investment? (Chapter VII)

8.1. INPUT-OUTPUT ANALYSIS OF INDIRECT TAXES (CHAPTER V)

The findings of the input-output analysis of China, Indonesia and Korea presented in Chapter V are very clear. They show that, for some sectors, indirect taxes represent a substantially larger loss of revenues to investors than do direct taxes on profits. The findings also show that, unlike profit taxes, the burden of indirect taxation varies considerably between one sector and another. This distorts the returns to investment in one sector relative to another. There have been very few studies on the impact of taxes on FDI especially in ASIA (with the exception of China). Using selected Asian countries data (sectors) to investigate the potential existence of distortion as result of different indirect tax impose on different sectors become one of the contribution of this chapter. Although, the role of direct taxes (on corporate income) on inward FDI has been well explored in the literature but there has been much less attention devoted to the impact of indirect taxes, none specifically dealing with Asia. Another contribution of this chapter is many studies on inward FDI are conducted at country level and Indirect taxes such as import tariffs operate at the sector level so that this study provides insights as to how indirect taxes alter incentives to invest in one sector rather than another.

8.2. TAXES AND GOVERNANCE AS DETERMINANTS OF THE LOCATION OF INWARD FDI IN ASIA (CHAPTER VI)

Many of the empirical studies of the determinants of inward FDI are based on the OLI paradigm, as is the research presented in Chapter VI. The OLI paradigm has always acknowledged the importance of countries' locational advantages as a key determinant factor of MNEs' foreign production (Dunning, 1998). Empirical studies, in many cases, identify the factors that affect the locational choice for FDI. Among the variables used are labor costs, exchange rate and exchange rate volatility, taxation, regional integration, openness to trade, infrastructure, government stability, corruption, the quality of bureaucracy and politics. This study, which focuses on the role of tax and governance, uses almost all those determinants as part of control variables in the analysis.

The country level regression analysis shows that there are statistically significant behavioural differences between high income and low income countries in Asia. For this reason the regression analysis was run separately for each income group. Results of particular note are those that exhibited a consistent pattern, giving a similar finding for both high and income groups and for both FDI flows and stocks. Regulatory efficiency was consistently found to have a positive and statistically significant effect on inward FDI. For other governance variables the results tended to vary according to estimator. Taking the panel fixed effects estimator (as less prone to omitted variable bias) good governance was found to have a positive and statistically significant effect on inward FDI stocks for higher income countries but not for flows or stocks in lower income countries. The total tax rate was found to have a statistically significant effect on FDI inflows in lower income countries but not on inflows for higher income countries. Although there are a significant number of country level regression studies of the determinants of inward FDI which include tax very few focus on Asia specifically. Likewise only a small number of such studies consider governance as a determinant. The focus on Asia and the use of both tax and bureaucracy as determinants is a contribution of this study.

8.3. THE EFFECT OF TAXES AND GOVERNANCE ON FIRM PERFORMANCE AND EFFICIENCY SEEKING (CHAPTER VII)

The analysis of firm performance used data from the 2009 World Bank Enterprise Surveys for Indonesia, the Philippines and Vietnam. Regression analysis suggests that, for most specifications, neither taxes nor bureaucracy had a statistically significant effect on firm performance for the pooled sample of all three countries. This applies both to all firms (domestic and foreign) and to foreign firms only. However, repetition of the analysis on a country by country basis yielded some perverse results which suggest a positive relationship between tax and firm performance (Indonesia) or a positive relationship between bureaucracy and firm performance (Philippines and Vietnam). These findings raise doubts about the possibility of dual causality and bias with the regression estimates.

Propensity score matching was used to provide a check on the findings of the regression analysis, which also extended the number of performance indicators to four. The results of the matching analysis were clear. For the pooled sample (all firms and all three countries), the sample of foreign owned firms and the sample of all firms for each individual country the results were the same: neither governance nor taxes had any statistically significant effect on firm performance. Within the FDI literature the effects of tax and bureaucracy on firm performance have been under explored. In consequence there is not a strong body of evidence to confirm or reject the view that tax and bureaucracy act as deterrents to efficiency seeking investment. Such evidence is more scarce for Asia. This study provides such evidence.

8.4. LIMITATIONS

The input-output analysis of indirect taxes has several limitations and complications. Firstly, input-output tables simply do not exist at any reasonable level of detail for most Asian economies. It is not possible to provide a broad coverage of Asia for this reason. The input-output analysis is useful and provides an original contribution but it can only focus on the distortions to incentives to invest in one sector rather than another. It cannot provide evidence that such distortions actually resulted in a distorted pattern of investment by sector in each of the countries covered. It is possible to show

that the underlying returns to investment are distorted by indirect taxes but not that actual flows or stocks of investment are affected by this. Such analysis would require a counter-factual. It would be necessary to have some sense of what investment in each sector would have been had the indirect taxes not been applied. Although this is a possible topic for future research it would be very challenging to undertake in any convincing way.

The country level regression analysis is subject to the same limitations of much research using OLS or panel fixed effects techniques. Common sources of concern would be various forms of bias. The possibility clearly exists that an important variable correlated with both independent and dependent variables has been excluded is, not least because OLI theory offers such a rich selection of different possible influences on the locational decision in FDI. If that is the case then there is a risk of omitted (confounding) variable bias. The use of panel fixed effects helps to reduce the risk of omitted variable bias but cannot eliminate it.

With the cross-sectional firm level analysis the same limitations apply to the regression analysis. A further problem arises with the regression if there is two-way causality, if performance affects perceived problems with tax or bureaucracy as well as those problems affecting performance. The risk is that, if such behavior exists, the regression estimates are again biased.

Propensity score matching although useful for addressing some issues (firm heterogeneity in particular) with the regression model is still not without limitations. It is known that matching estimators can be subject to bias on observables and bias on unobservable. The analysis finds no evidence of a problem of bias on observables. Bias on unobservable remains a possibility, in a similar way to omitted variable bias in the regression model. It is very difficult to be certain that the matching process did not exclude a confounding variable.

A more fundamental limitation of the analysis, as with much empirical work, is the absence of a clear and workable counter-factual. For example, the findings that tax and bureaucracy do not have a statistically significant effect on firm performance are based on a sample of firms that actually exist. The investment projects that did not take place or those that were abandoned as a result of taxes or of bureaucracy are simply not observed. In similar fashion the country level analysis uses data on FDI stocks and flows. These are the investment that took place despite taxes or bureaucratic obstacles. Those flows that were deterred are simply not recorded.

A further limitation to the study was data availability. The input-output analysis could only be conducted for the three Asian countries with sufficiently detailed input-output tables. The firm level analysis could also only be conducted for those three countries for which common enterprise survey were available.

8.5. AREAS FOR FURTHER RESEARCH

While this study extent the literature on FDI in the context of South East Asian countries, two areas need to further investigation. One is that there is no evidence found in this study how open the selected Asian countries toward FDI and how the policy toward FDI change time to time as evidence improvement to openness. Furthermore, recent trends show that intra-regional FDI is powerful force for economic integration, therefore, it is necessary to investigate whether Asian neighbor investors are more resistant on the host country as result of culture and distance compare to non-Asian foreign investors. The other is that there is a scope using disaggregate FDI data at industry level and factor production instead of sales or profit. At the time research conducted, FDI data at industry level are inadequate in coverage to conduct an extensive econometric analysis. However, very recent data published by the World Bank are encouraging in this to be done.

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