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Economic Development in Developing Countries: An In-depth Analysis of the Nexus of Social Capital and Institutions in Fostering Entrepreneurial Activities for Economic Development.

ROHMA HASHMI-MPHIL

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Abstract

This research makes dual contributions to understanding entrepreneurial dynamics and social capital in developing nations. Study 1 delves into the intricate relationship between the business environment, entrepreneurial activity, and human development index. Employing a two-stage regression analysis on panel data from 51 developing countries (2013-2018), the research highlights the pivotal role of the ease of doing business in fostering opportunity-driven entrepreneurship. Significantly, it challenges conventional wisdom by uncovering nuanced relationships between entrepreneurship and components of the Human Development Index (HDI), particularly Gross National Income (GNI). The findings underscore the imperative for developing nations to prioritize policies enhancing the ease of doing business, creating an environment conducive to opportunity-driven entrepreneurship. Simultaneously, targeted efforts are needed to address barriers hindering the positive contribution of such entrepreneurship to GNI.

Study 2 focuses on the interplay between social capital dimensions and opportunity-driven entrepreneurship, economic growth, and development in developing economies. Utilizing a two-step regression model and data from the World Value Survey and Global Entrepreneurship Monitor, the study provides nuanced insights. Civic norms and close trust emerge as influential factors in fostering opportunity entrepreneurship, while generalised trust and association membership play a pronounced role in economic growth. This research challenges simplistic views by offering a comprehensive understanding of how various dimensions of social capital (bridging and bonding) contribute differently to entrepreneurial activities and economic development in diverse developing contexts. The findings emphasize the strategic importance of fostering opportunity-driven entrepreneurship and enhancing social capital for sustained development, urging policymakers to consider the nuanced roles of different social capital dimensions (bridging and bonding) in crafting effective strategies.

Chapter 1: Introduction

The interplay between entrepreneurship, social capital, and economic development is crucial for understanding the growth trajectories of developing nations. Entrepreneurship, heralded as a catalyst for economic transformation, has been linked to innovation, job creation, and economic diversification, particularly in dynamic market contexts and structural reforms (Schumpeter, 1934; Naudé, 2011; Sinha, 2023). However, the effectiveness of entrepreneurship in driving development relies significantly on the institutional quality and social capital dynamics within the entrepreneurial ecosystem. This thesis explores these interrelations through two interconnected studies, aiming to fill critical gaps in the literature and offer actionable insights for policymakers and researchers.

Despite extensive research on entrepreneurship and development, significant gaps remain. Much of the existing scholarship has focused on developed economies, where institutional quality and social capital dynamics differ significantly from those in developing nations (Acs et al., 2008; Doran et al., 2018; Muringan et al, 2021). Additionally, previous studies often fail to differentiate between opportunity-driven and necessity-driven entrepreneurship, leading to oversimplified conclusions about their developmental impacts (Van Stel et al., 2005; Minniti & Lévesque, 2010). These gaps hinder a nuanced understanding of how entrepreneurship operates in resource-constrained contexts. Moreover, the reliance on GDP and GNI as primary measures of development overlooks critical aspects such as education, health, and overall well-being (Dreze & Sen, 1999; Islam et al., 2018). The critical yet underexplored role of social capital in entrepreneurial ecosystems, particularly in developing nations where formal institutions are often weak or underdeveloped. Existing research has largely overlooked the nuanced impacts of bonding and bridging social capital on opportunity-driven entrepreneurship, limiting our understanding of how diverse networks foster innovation, scalability, and economic growth (Urbano et al., 2020; Putnam, 2000; Xie et al, 2021).

The thesis addresses these gaps by investigating the interplay between institutional quality, social capital dynamics, and entrepreneurial activity, with a focus on their combined effects on economic and human development. In study one, the differentiation between opportunity-driven and necessity-driven entrepreneurship provides a more granular perspective on their developmental impacts. Additionally, the integration of Human Development Index (HDI) as a

multidimensional measure highlights the importance of addressing non-economic aspects of development, advancing the discourse beyond traditional GDP-centric analyses. By exploring these multifaceted dynamics, the research aims to provide theoretical advancements and practical insights into achieving equitable and inclusive growth. The second study addresses the gaps by examining the multidimensional effects of social capital on opportunity-driven entrepeneurship, offering insights into how trust and collaboration can act as buffers against institutional deficiencies.

The significance of this research lies in its ability to bridge critical gaps in the literature and offer actionable contributions. Theoretically, it advances the understanding of entrepreneurship in developing economies by integrating the roles of institutional quality and social capital. Practically, it informs policymakers about the conditions necessary to foster high-impact entrepreneurship, emphasizing the importance of supportive institutions and robust social networks for sustainable development (Djankov et al., 2006; Chawla & Bhatia, 2017). The findings aim to guide the design of targeted interventions, such as improving regulatory frameworks, fostering trust-building mechanisms within communities, and leveraging diverse networks to enhance scalability and innovation, ultimately supporting equitable and inclusive economic growth.

The first study investigates the role of institutions in shaping entrepreneurial activity and its impact on economic development. Institutions—defined as the formal and informal rules governing social, economic, and political interactions—play a critical role in determining the opportunities and constraints faced by entrepreneurs (North, 1990). This study focuses on the Ease of Doing Business Index (EODB) as a measure of institutional quality, analyzing its impact on opportunity-driven and necessity-driven entrepreneurship (Cumba et al, 2024). Opportunity-driven entrepreneurship, which arises from recognizing and exploiting market gaps, is often linked to innovation and economic diversification (Urbano and Aparicio, 2016; Fairlie & Fossen, 2018). In contrast, necessity-driven entrepreneurship, motivated by a lack of employment opportunities, is frequently associated with subsistence-level activities with limited scalability (GEM, 2020; Bosma et al., 2008).

To provide a more comprehensive analysis, this study adopts the Human Development Index (HDI), a multidimensional measure encompassing education, health, and income, capturing outcomes beyond traditional economic metrics such as GDP (Anand & Sen, 1994; Acs et al.,

2015). By analyzing panel data from 51 developing countries, the study explores how institutional quality influences entrepreneurial activity and, in turn, impacts HDI and its components.

The findings from Study 1 establish a solid foundation for understanding the critical role of institutional quality in fostering high-impact entrepreneurship, particularly opportunity-driven ventures that drive innovation and economic diversification. However, institutional quality alone does not fully explain the complexities of entrepreneurial ecosystems in developing nations. The insights gained highlight the need to explore complementary informal mechanisms, such as social capital, which significantly influence entrepreneurial success.

Social capital—encompassing networks, trust, and shared norms—plays a crucial role in enabling entrepreneurs to access resources, foster collaboration, and navigate institutional gaps (Putnam, 2000; Woolcock, 1998; Onyango, 2023; Alanzi et al, 2022). In contexts where formal institutions are weak or underdeveloped, social capital can act as a substitute or buffer. Bonding social capital offers localized support through strong ties, while bridging social capital connects entrepreneurs to diverse networks that drive scalability and innovation (Granovetter, 1983; Burt, 2005; Schäfer & Kuebart, 2023). These dynamics demonstrate the importance of considering both institutional quality and social capital for a holistic understanding of entrepreneurial ecosystems in developing nations (Alanzi et al, 2022).

Building on the institutional perspective of Study 1, Study 2 delves into the role of social capital in fostering opportunity-driven entrepreneurship and its subsequent influence on economic growth. Social capital, encompassing networks, trust, and shared norms, is a fundamental determinant of entrepreneurial success, particularly in contexts where formal institutions are weak or underdeveloped (Putnam, 2000; Woolcock, 1998; Nguyen et al., 2022). Bonding social capital, characterized by strong ties within close-knit groups, often facilitates resource sharing and mutual support but may limit access to diverse opportunities (Granovetter, 1983; Burt, 2005; Akçomak et al., 2021; Onyango, 2023). Conversely, bridging social capital, which connects individuals across heterogeneous networks, fosters the exchange of ideas and resources, driving innovation and broader economic impacts (Nahapiet & Ghoshal, 1998; Schäfer & Kuebart, 2023).

This study employs data from the Global Entrepreneurship Monitor (GEM) and World Value Survey (WVS) to examine the multidimensional effects of social capital on entrepreneurship and economic growth, using two-stage regression analysis, in developing economies. By distinguishing between bonding and bridging social capital, it addresses the nuanced ways in which these dimensions contribute to entrepreneurial activities and developmental outcomes.

Together, these two studies provide a comprehensive analysis of how institutional quality and social capital influence entrepreneurial activity in developing nations. By emphasizing their interconnected roles, this research contributes to a deeper theoretical understanding of entrepreneurial ecosystems and their critical importance in fostering economic progress. In developing countries, where resources are often limited and institutional frameworks are weaker, establishing the right conditions for entrepreneurship is essential for driving innovation, creating jobs, and supporting economic diversification. Furthermore, the findings offer practical insights for policymakers, highlighting the need to implement targeted strategies that enhance institutional frameworks and leverage social networks to achieve these objectives. Ultimately, this thesis underscores the importance of fostering the right developmental pathways to accelerate economic transformation and modernization, which are crucial for improving living standards and ensuring long-term economic resilience in developing countries.

Chapter 2: Role of Institutions and Entrepreneurship in the Development of Developing Nations

2.1 Introduction:

The proliferation of business ownership and entrepreneurial initiatives plays a pivotal role in fostering economic development, a notion underscored in Schumpeter's seminal work (1947). Various scholarly perspectives extensively explore the multifaceted impacts of entrepreneurial activities on economic progress. Entrepreneurs actively drive innovation by introducing novel concepts and products into markets, thereby instigating the development of technologies, inventive business models, and enhanced manufacturing processes (Si et al., 2021). Furthermore, entrepreneurship functions as a catalyst for job creation and the augmentation of employment opportunities, consequently mitigating unemployment rates and propelling economic development (Stoica et al., 2020). According to a report by the Kauffman Foundation, start-up enterprises in the United States contributed significantly by generating 2.3 million new employment positions in 2015. Contrastingly, established firms collectively experienced a decline, losing 1 million jobs during the same period (Morelix et al., 2015).

Entrepreneurial activity plays a pivotal role in the nascent phases of industries, substantially impacting productivity through heightened competition. Research conducted by Pradhan et al. (2020) reveals that the introduction of new entrants within an industry enhances competitive forces, subsequently resulting in reduced prices, increased efficiency, and productivity gains. Such enhancements not only benefit consumers but also foster a more dynamic and efficient economy.

Furthermore, entrepreneurship contributes to economic diversification by fostering the inception of novel industries and enterprises, thereby diminishing reliance on a singular sector. This diversification, as posited by Ogunlana (2018), fortifies the economy, rendering it more resilient to external shocks. Additionally, it serves as a catalyst for regional development by fostering the establishment of new businesses in underdeveloped or marginalized areas. This approach aids in mitigating regional disparities, and fostering more inclusive economic growth, as elucidated by Haugh (2005). A real-life illustration of this phenomenon is the Grameen Bank in Bangladesh, founded by Professor Muhammad Yunus in 1983. The bank's primary objective was to extend microfinance to impoverished women in rural Bangladesh,

who were otherwise excluded from traditional banking services. This initiative catalysed the establishment of numerous enterprises in underprivileged regions of Bangladesh, exemplifying how entrepreneurial endeavors can stimulate economic growth and development (Yunus, 2004).

The role of entrepreneurs in effecting structural transformations of countries, transitioning from low-income, primary-sector-based societies to high-income, service, and technology-oriented societies, has garnered significant attention in recent decades (Noseleit, 2013). This consideration extends to elucidating the entrepreneurial role in situations of stagnant development, including scenarios of war or conflict, as well as in periods of accelerated growth, such as those characterized by high innovation (Noseleit, 2013).

The past fifty years have witnessed a spectrum of development experiences worldwide, encompassing successful economic structural transformations witnessed in East Asia, mixedsuccess transformations observed in several former Soviet Union countries, rapid innovation accompanied by notable growth in countries like Finland, India, Ireland, and to a lesser extent, the United States (World Bank, 2021). Conversely, there have been instances of growth stagnation, collapse, and persistent conflict, particularly evident in various African countries (Naudé, 2008). Citing the Global Entrepreneurship Monitor, sub-Saharan Africa recorded a total early-stage entrepreneurial activity (TEA) rate of 25.1% in 2020, contrasting with 12.1% in Europe and North America (GEM, 2021). Despite this notable level of entrepreneurial activity, numerous sub-Saharan African nations continue to grapple with economic challenges. The efficacy of entrepreneurial activity appears contingent upon the economic development stage of respective countries. This has led to a debate among scholars, with conflicting views on the role of forming businesses to achieve economic goals in emerging economies.

While some studies, such as those by Audretsch (2012), highlight the beneficial impact of entrepreneurship, contributing to economic progress in both developed and developing nations, others, including Acs and Varga (2005), Sautet (2013) and Van Stel, Carree, and Thurik (2005) underscore the adverse effects on less developed nations. This disparity underscores the complexity surrounding the impacts of entrepreneurship in diverse economic contexts.

In recent decades, innovative entrepreneurs have gained recognition as crucial drivers of economic growth and development, substantiated by extensive research (Akinwale et al, 2020; Andreeva et al, 2016; Crudu, 2019; Del Monte et al, 2020; Klofsten et al, 2019; Medeiros et al, 2020; Stoica et al, 2020; Wei and Duan, 2023). A renowned study conducted by Van Stel, Carree, and Thurik (2005) examined the impact of Total Entrepreneurial Activity (TEA) on economic growth across 36 countries. The findings revealed a nuanced pattern wherein TEA exhibited an inconsistent influence on economic growth. Notably, while TEA yielded a significantly positive impact on economic growth within developed countries, it conversely exhibited a significantly negative correlation with growth in developing economies (Van Stel et al, 2005). Moreover, the study underscored that within more advanced economies, the phenomenon of start-up entrepreneurship demonstrated a notably positive association with innovation. This correlation highlights the varying dynamics of entrepreneurial activities across diverse economic landscapes, emphasizing the differential effects on economic growth based on the developmental stage of the economy (Van Stel et al, 2005)

There exist various definitions of entrepreneurship, including the creation of a new enterprise, the process by which a new enterprise becomes feasible, or the exploitation of a market opportunity (Diandra and Azmy, 2020). Recent scholarly discourse has engendered debates concerning whether and which type of entrepreneurship holds the most substantial benefits for economic development. Opportunity-driven entrepreneurship emerges from individuals capitalizing on unique market opportunities (Fairlie and Fossen, 2018; Urbano et al, 2020).

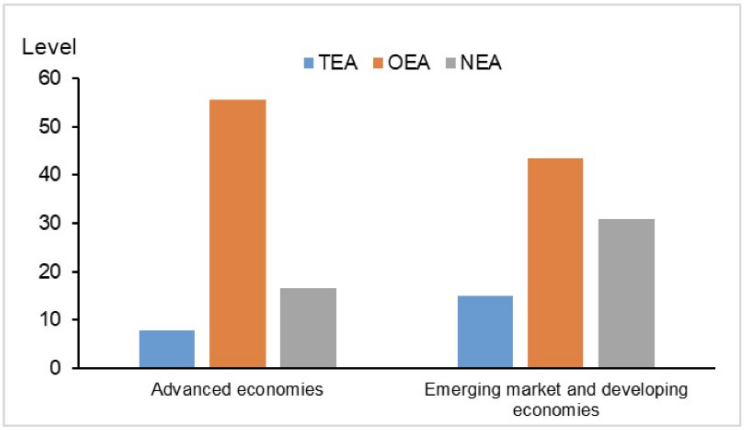
For instance, the well-known enterprise Airbnb originated when its founders, Brian Chesky and Joe Gebbia, were facing challenges in paying rent. They conceived the idea of renting out air mattresses in their apartment to individuals attending a city conference. This concept's success led to the establishment of Airbnb, a platform enabling individuals to rent out their homes to travellers (Books, 2017). Similarly, Uber, another successful opportunity-driven business, stemmed from its founders, Travis Kalanick and Garrett Camp, encountering difficulties finding a taxi on a snowy night in Paris. Recognizing an opportunity, they envisioned a more efficient and convenient ride service using technology (Books, 2017). Opportunity-driven entrepreneurs are motivated by growth potential, innovation, and personal aspirations, thereby aligning with innovative activities. Consequently, this form of entrepreneurship holds the potential to stimulate employment creation and bolster productivity within the economy (Urbano et al, 2020). Findings from a cross-sectional study conducted by Kim et al. (2022),

encompassing 111 economies across the years 2001 to 2019, revealed a significant correlation between increased rates of opportunity-driven entrepreneurship activity and augmented economic growth. The study identified that a rise in the activity rate of opportunity-driven entrepreneurship was associated with a 0.41% increase in annual GDP per capita, translating to a substantial 4.1% rise over a decade.

Conversely, necessity-driven entrepreneurship characterizes non-innovative businesses and often emerges from individuals compelled into self-employment due to unemployment, aiming to support themselves and their families (GEM, 2020). This form of entrepreneurship is more prevalent in developing nations compared to developed ones, as evidenced in Figure 1. Studies, such as that conducted by Stoica et al. (2020) examining European countries, have demonstrated that necessity-driven entrepreneurship plays an insignificant role in contributing to economic development.

Figure 1:

The much-needed opportunity entrepreneurship remains low in developing economies.



NEA = necessity-driven early-stage entrepreneurial activity, OEA = opportunity-driven early-stage entrepreneurial activity, TEA = total early-stage entrepreneurial activity.

Note: The levels of TEA, OEA, and NEA are mean values between 2001 and 2019.

(Personal Collection, 2022)

Moreover, institutional factors and the business environment significantly influence the entrepreneurship rate at the country level (Urbano et al., 2020). According to a study conducted by the OECD, entrepreneurship exerts a positive impact on productivity growth, particularly in nations fostering a supportive business environment conducive to new ventures. Such supportive conditions often include tax incentives tailored for new businesses. Conversely, restrictive legislative and regulatory frameworks are considered pivotal impediments hindering potential entrepreneurs' access to and expansion within the business

sector (Canare, 2018). To sustain private sector growth, numerous economies have endeavoured to streamline the business registration process. These initiatives aim to simplify bureaucratic procedures and foster a more conducive environment for entrepreneurship. Notably, the World Bank has championed such efforts through its Doing Business project. This initiative measures and ranks economies based on ten quantitative measures of regulations, assessing the ease of doing business. The project serves as a comprehensive framework for establishing benchmarks for business regulations and their enforcement across diverse economies (World Bank, 2020).

The inception of businesses in developing economies predominantly occurs within the informal sector, primarily due to the formidable challenges associated with establishing a formal enterprise. This phenomenon stems from the burdensome bureaucracy and regulatory hurdles that impede the formalization process. It is imperative to delineate the distinction between formal and informal businesses to avoid ambiguity. Evidence substantiates that approximately 65% of economic output in these economies is consistently generated within the informal sector. Firms operating in the informal sector encounter limitations in accessing opportunities and legal protections afforded to formal sector enterprises. Remarkably, even within the formal sector, disparities may exist regarding access to these opportunities and protections, subsequently impacting performance and output (Chen and Carré, 2020).

The deficiencies in accessing legal protections and opportunities for both informal and some formal sector firms are shown to significantly influence their performance and output. These constraints underscore the critical importance of efficient business regulations in fostering a thriving private sector and overall economic development (Chen and Carré, 2020). Efficient and streamlined regulations can catalyze and encourage the formalization of businesses, thereby enhancing their access to opportunities and legal protections, essential elements for sustained growth and development.

Human Development Index (HDI) stands as an alternative measure to GDP per capita in evaluating economic and social development. Economists advocate for HDI as a superior indicator, emphasizing its focus on the well-being of individuals rather than solely on economic output. HDI encompasses three pivotal indicators of development: health, education, and gross national income (Dasic, 2020). The significance of HDI lies in its capacity to demonstrate that certain developing nations exhibit a higher standard of living than implied by GDP per

capita measurements. This disparity elucidates that countries with lower GDP per capita rankings may still achieve higher HDI standings if they boast elevated levels of education, commendable health outcomes, and other markers of human well-being (Lind, 2019).

Illustratively, countries like Costa Rica and Cuba, despite registering lower GDP per capita figures compared to others in their regions, achieve relatively high HDI rankings owing to robust social safety nets, commendable education systems, and favorable health outcomes. Similarly, nations such as Bhutan and Costa Rica, through policies aimed at fostering happiness and well-being, secure high positions on the HDI despite comparatively modest GDP per capita levels (World Bank, 2023). However, some studies critique the HDI methodology, contending that it inadequately reflects the relative significance of these factors in diverse contexts (Marinello and Puma, 2020). Thus, to gain deeper insights into a country's development, some propose a novel approach by dissecting the components of the Human Development Index. Among these components, literacy, life expectancy, and GNP per capita are widely acknowledged as crucial indicators of development.

The existing body of literature has extensively explored the nexus between the business environment, institutional factors, entrepreneurial activity, and their subsequent impact on economic growth (Aparicio et al, 2016; Głodowska,2017; Nave et al, 2023; Urbano et al,2019; Urbano et al,2020). However, a discernible gap persists in understanding how these business and institutional contexts influence different types of entrepreneurships, particularly in developing economies. Moreover, the literature lacks comprehensive research addressing the ongoing debate regarding the role of entrepreneurship within developing nations. This study aims to bridge these gaps by employing a two-step analytical approach. Firstly, it will scrutinize the linkages from the business environment and institutional factors to distinct forms of entrepreneurship, distinguishing between opportunity and necessity-driven entrepreneurial activities. Secondly, it will investigate the subsequent impact of these diverse entrepreneurial types on economic growth, using the Human Development Index (HDI) as a comprehensive metric. The study will delve deeper into the HDI and its three constituent components - literacy rate, life expectancy, and Gross National Income (GNI) - to provide a nuanced understanding of the overall development landscape of these economies.

To fill these literature gaps, this study will leverage data obtained from reputable sources such as the World Bank and the Global Entrepreneurship Monitor (GEM). The analysis will employ

a rigorous two-step regression methodology, implemented using the statistical software STATA. By adopting this approach, the study aims to shed light on the intricate relationships between the business environment, institutional factors, entrepreneurial activities, and their collective impact on economic growth and human development. This endeavour is pivotal in providing a comprehensive understanding of the mechanisms driving development within these specific contexts and thereby contributing significantly to the existing literature on entrepreneurship and economic growth in developing economies.

Section 2 of the paper describes the literature linking business environment, entrepreneurship, and economic development. Firstly, we describe studies that explore the contribution of entrepreneurship to economic development. The second part of the literature review discusses both the theoretical and empirical literature linking business environments and institutions to entrepreneurship. The third part will discuss the human development index which is used as a measure of the development in the economies. In Section 3, we first develop the research questions and hypotheses and thereafter describe the model and data used to empirically test these hypotheses. The results of the analysis and discussions of the findings are presented in Section 4 while the summary and the recommendations are found in Section 5.

2.2 Literature Review

2.2.1 Entrepreneurial Activity and Economic Development

A substantial body of literature exists, delving into the pivotal role of entrepreneurship in fostering economic development. Various scholarly works, such as those by Sanyang and Huang (2010), Minniti and Levesque (2008), Naude (2008), Ahmed and Nwankwo (2013), Carree and Thurik (2005), Yusuf and Albanawi (2016), Nwachukwi and Ogbo (2012), Decker et al. (2014), Kuźnar (2023), Ludmila et al (2024), and Pretorius et al. (2021) have contributed significantly to comprehending the impact of entrepreneurial activity on an economy's development.

Entrepreneurial activity exerts multifaceted influences on an economy's development, notably through mechanisms such as knowledge spillover (Audretsch and Keilbach, 2007; Ferreira et al., 2024), heightened business competition, and augmented product and service diversity (Stel et al., 2005; Heim et al., 2023). The inception of new businesses or the expansion of existing ones precipitates employment generation. Additionally, the creation of new markets, industries, technologies, institutional forms, jobs, and enhancements in real productivity collectively contribute to the augmentation of social and economic wealth. These factors culminate in income elevation, subsequently elevating the overall living standards of the population (Almodóvar-González et al., 2020).

Moreover, this phenomenon engenders the augmentation of competition, innovation, and productivity within the economy. Entrepreneurs, by entering the market with lower prices and a wider range of products, impel existing businesses to heighten their competitiveness. Consequently, established market players are compelled to reassess their operations, thereby augmenting their value, reducing costs, and enhancing overall efficiency. The amplification of competition within an economy proves advantageous as enterprises and individuals are motivated to refine their operations (Carree and Thurik, 2010).

Entrepreneurs, driven by high-growth ambitions and innovative ideas, catalyze the establishment of new businesses, thereby pressuring established firms to elevate productivity and performance (Pradhan et al., 2020). This interplay of mechanisms assumes a pivotal role in the dynamics of entrepreneurial activity and economic development (Pradhan et al., 2020).

By challenging existing firms, entrepreneurs can enforce efficiency upon them. The advent of new enterprises not only bolsters economic production and employment but also compels existing firms to operate more competently to contend with emerging competition. The influx of new firms further stimulates innovation within industries, consequently leading to the creation of novel markets (Estrin et al., 2022).

These mechanisms find support in the Theory of Economic Development propounded by Schumpeter in 1934. This theory accentuates the role of the entrepreneur as a fundamental catalyst for economic development, aligning with the outlined mechanisms. According to this theory, an entrepreneur's pursuit of innovation compels firms to introduce new inventions, thereby rendering prevailing products and technologies obsolete. This phenomenon, identified as creative destruction, constitutes a defining characteristic of the Schumpeter Mark I regime (Acs et al., 2009; Panahi et al., 2024).

One of the reasons behind this is that existing suppliers, before the entry of new firms, are more eager to exploit the profitability of their existing products rather than search for new products. This is supported by knowledge spillover and add theory of knowledge spillover. The literature on knowledge spillovers and entrepreneurship highlights that existing businesses are a significant source of new competitors, especially when they fail to fully utilise the knowledge they produce (Acs et al, 2013; Audretsch and Keilbach, 2008; Kaneva and Untura, 2019; Delmar,2011). This will serve as a motivation to innovate since the launch of new products or even the launch of similar products forces firms to innovate in order to maintain their competitive edge. In the case of new entrants failing to come up with innovative products and services, this will cause the market to have an excess supply of the existing products and services driving the prices very low and impacting the businesses' revenues negatively (Acs et al, 2013). Therefore, in order to compete new firms are more likely to engage in innovation and existing firms will also be more likely to engage in innovation to not lose their market share to new firms. Therefore, the entry of new firms will promote innovation and generate the development of the economy since new firms will provide a greater variety of new products and services than would be available from existing firms (Kaneva and Untura, 2019). New firms increase the possibility of bringing in process innovation resulting in higher productivity and new problem-solving methods with new entrepreneurs bringing in more dynamic ideas. A few examples of such successful entrepreneurs are Andrew Carnegie, Michael Dell, Thomas Edison, Henry Ford, Bill Gates, Ray Kroc, and Sam Walton. Entrepreneurs

frequently play crucial roles in the early evolution of industries. Entrepreneurs might boost output by boosting competition (Geroski, 1989; Nickel, 1996; Nickel et al., 1997; Ferreira et al, 2020).

The strategic introduction of variations in existing goods and services indeed has the potential to illuminate technical possibilities and consumer preferences (Delmar,2011). However, a critical examination of this practice reveals potential downsides that warrant deeper consideration (Nordas, 2010). While it's true that this approach can expedite the identification of optimal product-market pairings, the overemphasis on profitability and growth as the sole metrics of success neglects other crucial aspects of business sustainability (Delmar,2011). The relentless pursuit of immediate profitability through variations may encourage a short-term view, favouring incremental improvements over genuine innovation (Dodgson and Gann, 2018).

The extant literature on entrepreneurial activity and its impact on economic growth predominantly focuses on developed countries, with limited attention given to developing economies. Notable studies by Acs et al. (2012), Bosma et al. (2018), Egbo-ga and Zubairu (2020), and Stoica et al. (2020) have underscored the significance of entrepreneurship in fostering growth in developed nations. However, the lack of theoretical frameworks and empirical evidence about developing countries, as highlighted by Peprah and Adekoya (2020), Taiwo et al. (2012), and Aparicio et al. (2016), is a critical gap in the existing research. Naude's (2011) research proved that the demand for entrepreneurship was higher in developing countries and the study argued that entrepreneurship plays a vital role in driving the development of the developing economies. Larroulet and Couyoumdjian (2009) indicate that developed economies have a low entrepreneurial activity rate however a higher rate of entrepreneurship driven by opportunity in comparison to necessity. Taiwo et al (2012) study produced similar results emphasizing the importance of encouraging entrepreneurial studies in developing economies. This dichotomy underscores the imperative to foster entrepreneurial studies in developing economies, as elucidated by Minniti and Lévesque's (2010) mathematical model, which underscores the pivotal role of innovative entrepreneurship in driving long-term economic growth and development. In order to comprehensively understand the dynamics of entrepreneurial activity and its consequences, future research must prioritize the unique contexts and challenges faced by developing

countries, thus contributing to a more holistic understanding of the role of entrepreneurship in global economic development.

A study by Doran, McCarthy and O'Connor (2018) studied 55 countries, both developed and developing, from 2004 to 2011 using GEM data. They analyzed how entrepreneurship can have an impact on high-income and middle/low-income countries. The data used was collected from the World Bank and the World Bank's classification system was used to categorize countries into developed and developing categories based on their gross national income (GNI) per capita. According to this classification, countries with a GNI per capita of $12,055 or higher were considered developed, while countries with a GNI per capita below $12,055 were considered developing. The results have indicated that entrepreneurial activity has a significant negative relationship with the economic development of middle/low-income economies while there was a positive relationship with high-income countries. The study resonates with its findings by stating that entrepreneurs in high-income economies are more innovative, internationalized and growth-focused than entrepreneurs in middle/low-income economies. The authors suggest that this is because there is significant support for entrepreneurs in developed countries in the forms of business development programmes, training, government funding and favoring policies for new entrepreneurs. The finding emphasized that developing nations should follow the steps of developed nations in the last few decades and focus on promoting business with a high growth potential. Therefore, the implication drawn from this study is significant: not all forms of entrepreneurship automatically contribute positively to economic development. Instead, it underscores the critical role of supportive ecosystems and favorable conditions in shaping the impact of entrepreneurship on economic growth.

The prevalent approach in entrepreneurship studies often relies on the Total Early-Stage Entrepreneurial Activity (TEA) rate from the Global Entrepreneurship Monitor (GEM) to assess entrepreneurial activity (Terza,2020; Stel,2005; Abdinnour and Adeniji, 2023). However, this conventional method overlooks a critical aspect: the failure to distinguish between various types of entrepreneurial activities leads to oversimplified conclusions about their impacts on economic growth. Therefore, I contend that a nuanced understanding of the diverse forms of entrepreneurial activity is imperative for a more accurate assessment of their effects on the economy.

In addition, contrary to a common misconception that entrepreneurship invariably yields positive economic outcomes, scholars such as Terza (2020), Stel (2005), Prieger et al. (2016), Urbano (2016), and Sergi (2019) emphasize the necessity of recognizing the multifaceted nature of entrepreneurial activities and their differential impacts on economic growth. This assertion challenges the simplistic notion that entrepreneurship uniformly drives economic development. It is essential to acknowledge that entrepreneurship encompasses various categories, including necessity-driven entrepreneurship, opportunity-driven entrepreneurship, innovation-driven entrepreneurship, and social entrepreneurship, each with its distinct characteristics and effects on the economy (Fairlie and Fossen, 2018). Neglecting these distinctions limits our understanding of how different entrepreneurial activities influence economic growth. For instance, opportunity-driven entrepreneurship, characterized by identifying and capitalizing on market opportunities, often contributes positively to economic development by fostering job creation, innovation, and overall growth. Conversely, necessity-driven entrepreneurship, borne out of circumstances like unemployment or economic hardship, may not always generate favorable outcomes for economic advancement. Necessity-driven entrepreneurship is when an individual starts a business because they have no other way to earn a living. (Urbano, 2016).

Acs's (2006) study, focusing on developing nations results depicted that there is a negative correlation present between self-employment and income per capita. The study backed up their finding by suggesting that the following circumstances may cause informal self-employment which is accounted as entrepreneurial activity. One of the circumstances he discussed was that when there are bureaucratic barriers, the creation of new formal businesses will be limited. Most entrepreneurs in developing countries are driven by necessity (Bosma et al 2008; Guerrero et al, 2021). Most entrepreneurs do not start a business in these countries because they want a sense of independence or to increase their income which are the main motives in developed nations. They start businesses out of necessity in contrast to developed nations where entrepreneurship is often opportunity driven.

According to Urbano and Aparicio (2016), individuals are driven by necessity because of bad working conditions, such as unemployment, fewer wealth and resources such as human capital and entrepreneurial capability. Despite this, the authors discovered that necessity entrepreneurship is positively associated with economic growth due to its impact on employment. Wong et al. (2005) and Galindo-Martín et al (2020), on the other hand, found

no statistically significant relationship between necessity entrepreneurship and economic growth. Anokhin and Wincent (2012) make the case that high rates of self-employment may be due to the low availability of jobs. The study's findings proved that the country's development stage acts as a moderator between the relationship between the country's start-up entrepreneurial activity and innovation. The results depicted developing economies had a negative relationship whereas the developed economies had a positive relationship. The authors explained their findings stating that this is due to the low-quality opportunities which do not bring innovation advancements, and the entrepreneurial activity is driven by necessity

Nevertheless, it is important to note that necessity-driven entrepreneurship plays an important role in developing economies since it is a common source of income for the unemployed (Garba,2013; Stoica, 2020). Furthermore, the rate of necessity-driven entrepreneurial activity shows a pattern of variation across developing countries with similar income levels. This suggests that further research should be carried out to get a profound understanding of the relationship between necessity entrepreneurship and economic development in developing nations.

Most authors studying the relationship between entrepreneurship and economic growth in developing economies measure entrepreneurial activity through total entrepreneurial activity and necessity entrepreneurship which fails to account for the innovative aspect of entrepreneurship (Acs et al. 2008; Linan and Fernandez-Serrano 2014; Urbano and Aparicio 2016; Wong et al.,2005). Thus, it is important to incorporate opportunity-driven entrepreneurship into the developing nations' context and test whether this kind of entrepreneurship will help with development in this context.

According to Wong et al. (2005), higher rates of growth are attributed to opportunity entrepreneurship because it reflects the creation of economic rent that ideally arises from integrating or creating knowledge and technology. Urbano and Aparicio (2016) suggest that entrepreneurs exploit knowledge-based opportunities to create new products that improve a nation's economic performance. Knowledge sources which aid in entrepreneurial success include personal experience gained from working in a business environment and through formal education. Several studies evaluating the impact of knowledge-based entrepreneurship used variables such as opportunity entrepreneurship and high-tech entrepreneurship to estimate the entrepreneurial activity based on knowledge

(Leogrande,2022; Wakkee et al,2018; Stoica et al, 2020). According to Reynolds et al. (2005), opportunity entrepreneurship is the outcome of an entrepreneur deciding to pursue entrepreneurial activities based on knowledge. Therefore, they are associated with innovation. Such an innovation-led view of opportunity entrepreneurship reflects the creation of knowledge and technology, which positively influences economic growth (Valliere & Peterson, 2009; Urbano & Aparcio, 2016). Ferreira et al. (2017) assert that opportunity based entrepreneurship has a positive impact on labor productivity growth, implying a link between opportunity entrepreneurship and economic growth. Therefore, promotes innovation and has an advantage over entrepreneurial activity driven by necessity. It can be concluded that opportunity-driven entrepreneurship, which promotes innovation, is an important mechanism for transforming entrepreneurship into economic growth and development (Acs et al. 2012; Noseleit 2013; Valliere and Peterson 2009).

In order to advance the literature on the impact of entrepreneurship on the economy's growth it is important to take a further step and focus on the determinants of different types of entrepreneurial activity (Alvarez and Barney, 2014; Valdez and Richardson, 2013). Therefore, the next section of the Literature review will look at how institutional and business environment are the determinants of entrepreneurial activity.

From the discussion above we can conclude that opportunity-driven has a positive impact however necessity entrepreneurship can have a negative impact on the development of the developing economies. The development of the economy can be measured through indicators such as GNI and HDI. In Section 2.3, the literature related to the Human Development Index will be discussed in more depth.

Hypothesis 1a: Opportunity-driven entrepreneurship has a significant positive impact on the Human Development Index.
Hypothesis 1b: Opportunity-driven entrepreneurship has a significant positive impact on GNI.

Hypothesis 2a: Necessity entrepreneurship has a negative impact on the Human Development Index.
Hypothesis 2b: Necessity entrepreneurship has a negative impact on GNI.

2.2.2 Institutions, Ease Of Doing Business, Entrepreneurship and Economic Development

Recent literature has predominantly centred around the relationship between ease of doing business, economic growth, and development, as evidenced by studies conducted by Nave and Rodrigues (2022), Gano and Chea (2021), and Gizaw et al. (2023). Despite this focus, there has been a notable scarcity of research examining the impacts of the institutional and business environment on various forms of entrepreneurship within developing nations (Barcena, 2021; Urbano et al., 2020; Sambharya and Musteen, 2014). It is noteworthy that to date, no study has specifically investigated whether the ease of doing business index serves as a robust determinant for distinct entrepreneurial activities, particularly distinguishing between opportunity-driven and necessity-driven entrepreneurship.

Earlier works, exemplified by North and Thomas (1973), uncovered that elevated barriers to business entry impede economic development by rendering it challenging for new enterprises to penetrate the market and compete with established firms. Institutional environments, encompassing the rules, laws, or policies within a country, are recognized as potential barriers in specific contexts (Hitt and Xu, 2016). Studies within this realm have demonstrated that both formal and informal institutional barriers, such as high taxes, corruption, and business legislation, wield significant influence over the extent of entrepreneurial activity by shaping individual behaviours (Fonseca et al., 2001; Klapper et al., 2006; Dreher and Gassebner, 2013; Hitt and Xu, 2016). Kosi and Bojnec's (2013) research classified institutional barriers into categories including financial sector regulation, PMR (Property Market Regulation), the judicial system, legislation protecting property rights, LMR (Labor Market Regulation), and fiscal regulation.

The World Bank has annually published Ease of Doing Business reports for over a decade, employing this metric to rank the business environments or institutional frameworks of 200 countries globally. The assessment incorporates various indicators, including starting a business, dealing with construction permits, obtaining electricity, registering property, accessing credit, protecting minority investors, tax payment procedures, cross-border trading, contract enforcement, and insolvency resolution (World Bank, 2023). Among these indicators, access to credit has garnered attention within academic discourse. Theoretical perspectives

suggest that a well-established financial system and financial development contribute to economic growth (Levine, 2005; Beck et al., 2008; Bara et al., 2016). Meierrieks's (2014) study accentuated the role of a well-developed financial system in promoting growth through the facilitation of innovation.

Contract enforcement, another criterion within the Ease of Doing Business framework, has been a subject of scholarly investigation regarding its correlation with development and growth. Scholars such as Hall and Jones (1999), Barro (2003), Rodrik et al. (2004), and Chowdhury et al. (2019) have explored the dynamics of contract enforcement in relation to broader economic development and growth.

Digdowiseiso and Sugiyanto's (2021) study concentrated on the significance of institutional quality, encompassing elements such as the rule of law, corruption, and bureaucratic quality. Their findings suggested a positive relationship between high institutional quality and entrepreneurial activity. The study contended that factors like the rule of law, corruption levels, and bureaucratic quality play a pivotal role in driving business creation, thereby positively influencing economic development. Similarly, Bosma et al.'s (2018) study, focusing on European countries, yielded comparable results. Their research indicated a positive correlation between the quality of institutions and GDP per capita, attributing this association to increased business creation. Hall and Sobel's (2018) research, which encompassed both developing and developed nations, demonstrated that improvements in institutional quality led to economic development. This positive outcome is attributed to an associated increase in business creation, contributing to enhanced income and productivity.

Literature studying business taxes is mostly focused on the effect of tax and fails to account for the administration of taxes which is also a component for ease of doing business (Abille and Mumuni, 2023; Business, 2019). According to the World Bank Enterprise survey, the tax rate was ranked as one of the highest voted constraints faced by businesses followed closely by tax administration (Wang, 2016). Tran and Dat (2019) and Fisman and Svensson (2007) research proved that a high tax rate will cause a decline in national investment, entrepreneurial activity, and foreign direct investment. Minority investor protection which is another aspect of EODB has been found to have a positive relationship with economic development and growth (Castro, Clementi, and MacDonald 2004; Haidar 2009). Several studies suggest that high start-up costs, which include the time and costs for the processes to

start a business formally and the paid-in minimum capital requirement, can cause business creation and entrepreneurial activity to lower (Fonseca et al,2001; Rusu and Roman, 2017).

On the contrary, Van Stel, Storey, and Thurik (2007) and Fernandez et al (2023) found that there is no significant relationship between firm creation and administration costs, times and procedures. They proved that these variables influence the distribution of business activity between formal and informal economy instead of impacting the total volume of entrepreneurial activity. Klapper and Love's (2010) research found contradictory results stating that there is a significant negative relationship between firm creation and time and procedure. In terms of business regulation, their study discovered that business registration reforms, that will consume less time to register business property, can help promote higher entrepreneurial activity.

Moreover, certain studies have directed their attention towards the comprehensive assessment of the ease of doing business index rather than examining its individual components in isolation. Djankov, McLiesh, and Ramalho (2006) concluded that the relationship between ease of doing business and economic growth is conducive to greater economic growth facilitated by increased entrepreneurial activity. Nevertheless, research focusing on the overall index tends to centre on the nexus between ease of doing business, foreign direct investment, and economic development and growth (Nave and Rodrigues, 2022; Gano and Chea, 2021; Gosh et al., 2019; Hassan and Basit, 2018; Corcoran and Gillanders, 2015). Studies delving into the impact of the Ease of Doing Business Index (EODBI) on entrepreneurial activity specifically remain limited (Chawla and Bhatia, 2017; Acs et al., 2008; Groşanu et al., 2015). Furthermore, there exists a literature gap concerning the correlation between the ease of doing business and various types of entrepreneurships, and how this interrelation influences the development trajectory of economies in the developing world.

Formal institutions such as political, legal and economic systems, bureaucratic and administrative procedures, rules and regulations are erected by the governing body of a nation to regulate the behaviour of individuals within it. These formal institutions play a role in determining entrepreneurial activity (Puffer,2010). Comparative studies at the country level show that political stability and investment have a positive relationship (Alvarez and Urbano, 2011; Abu and Karim, 2015; Groşanu et al, 2015). Multidimensional indicators of law, regulation, and policy credibility, which have been linked to political stability, show positive

relationships with investment, entrepreneurial activity, and economic growth. Corruption and political instability, as well as other imperfections in a country's governance, increase transaction costs while limiting income (Abu Murad and Alshyab, 2019). Dheer (2017) studied macro-level data on 84 nations and proved that corruption and political stability have a significant impact on entrepreneurial activity. The study proved that controlling corruption and ensuring political stability would increase the likelihood of future entrepreneurs capturing a larger share of the revenue they generate, improve cash flow reliability, and motivate higher levels of entrepreneurial activity.

Several studies have consistently demonstrated an intriguing relationship between political stability, corruption control, and entrepreneurship, particularly in developing countries. Some studies find that nations characterized by low political stability and insufficient control of corruption, particularly developing countries, exhibit higher rates of entrepreneurship (Avnimelech et al, 2014; Dutta et al, 2013; Groşanu et al, 2015; Sayed and Slimane, 2014). However, a nuanced understanding emerges when scrutinizing the nature of entrepreneurial activities in these contexts. Notably, a substantial proportion of entrepreneurial endeavors in these regions are attributed to self-employment and necessity entrepreneurship. This suggests that economic circumstances and limited alternative opportunities might be driving individuals to engage in entrepreneurial activities out of necessity rather than opportunity. As countries progress in economic development and fortify their political stability and corruption control mechanisms, a noteworthy shift occurs in entrepreneurial dynamics. Wennekers et al. (2005) contribute to this discourse by asserting that in developed countries with heightened political stability and effective corruption control, opportunity entrepreneurship gains prominence. The argument here is that as nations advance economically and enhance their governance structures, a transition from necessity-driven entrepreneurship to opportunity-driven entrepreneurship becomes apparent. This phenomenon underscores the crucial role of political stability and corruption control in fostering an environment conducive to sustainable and growth-oriented entrepreneurial ventures.

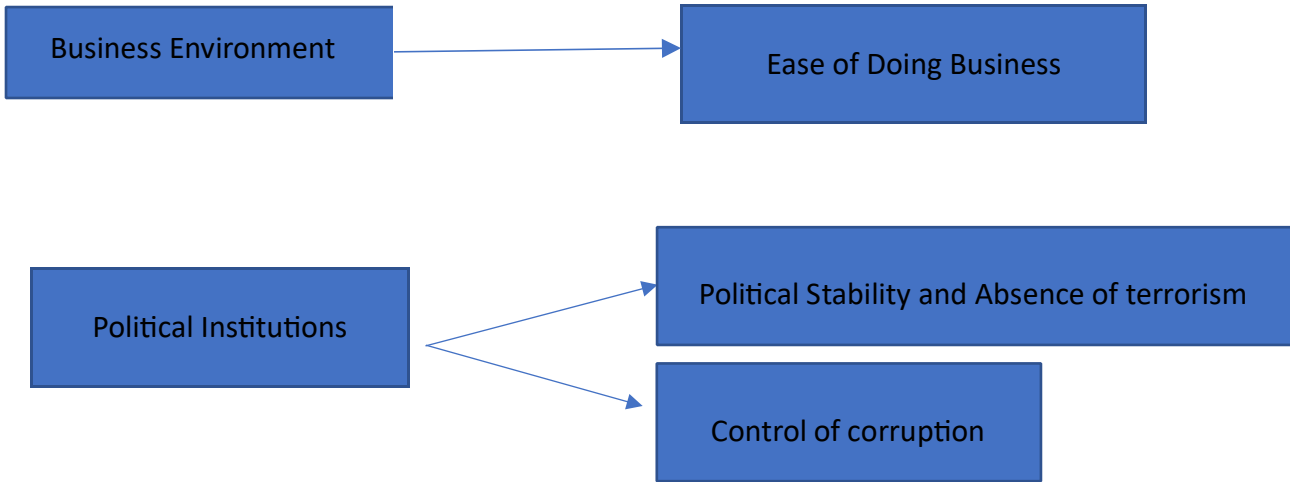
Corruption, defined as the misuse of public power for private benefits, encompasses practices such as bribery, extortion, nepotism, and favouritism. Its deleterious impact on economic development is evident through the impeding of infrastructure development, delays in implementing favourable social policies, diminished tax revenue, reduced investment, and heightened inequality (Avnimelech et al., 2014). Nevertheless, the role that corruption plays

in determining entrepreneurial activity remains a subject of debate. Some scholars argue that bribery may expedite crucial processes and alleviate time constraints for entrepreneurs (Avnimelech et al, 2014; Liu et al, 2019; Tonoyan et al,2010). In time-sensitive and innovative entrepreneurial endeavours, where bureaucratic regulations can be protracted and cumbersome, especially in underdeveloped countries, corruption is seen to secure contracts, permits, and resources more efficiently. This perspective suggests that, in certain contexts, bribery may help level the playing field and enable entrepreneurs to compete on more equal terms with established players. However, it is essential to acknowledge the ethical concerns and legal ramifications associated with corruption, emphasizing the need for a delicate balance between expediting entrepreneurial activities and maintaining ethical standards.

On the other hand, it is contended that the prevalence of bribes may impose supplementary expenditures on initial start-up costs, thereby constraining the economic returns entrepreneurs anticipate from leveraging their innovative or novel concepts. Corruption amplifies the potential for opportunistic behaviours by other actors, diminishing the incentive for entrepreneurs to invest in nascent ventures (Jung and Lee, 2023). Moreover, involvement in corrupt practices and acquiring the skills associated with such activities may deplete an entrepreneur's time and energy (Avnimelech et al., 2014), resources that could otherwise be directed towards the creation of productive and value-generating opportunities (Kaufmann and Wei, 1999). Corruption also enables less efficient enterprises to persist in the market, leveraging limited public resources to maximize profits at the detriment of potentially more innovative and efficient businesses (Ngunjiri, 2010; Estrin et al., 2013). This scenario may engender disincentives for entrepreneurs, consequently diminishing the rate at which new businesses emerge within a society.

Based on the preceding analysis, the forthcoming diagram will illustrate the study's focus on institutional factors, specifically the examination of how both the business environment and political institutions influence entrepreneurial activity levels.

Figure 2:



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Following the discussion, we can propose the following hypothesis

Hypothesis 3a: Ease of doing business, control of corruption, and political stability have a positive impact on Opportunity-driven entrepreneurship

Hypothesis 3b: Ease of doing business, control of corruption, and political stability have a positive impact on Necessity-driven entrepreneurship.

2.2.3 Human Development Index as a measure of Economic Development

To study the influence of entrepreneurial activity on the development of developing nations, it is imperative to identify a suitable dependent variable for measuring economic progress. While numerous studies advocate for Gross National Income (GNI) and Gross Domestic Product (GDP) as a pertinent measure of development (Barro and Sala-i-Martin, 1995; Ahmed et al., 2021; Milenkovic, 2014), it is essential to acknowledge its inherent limitations, which will be expounded upon in the subsequent section. In this study, the Human Development Index (HDI) is selected as an alternative and more reliable metric, as asserted by scholars such as Dreze and Sen (1999), Anand and Sen (1994), and Kucera and Sarna (2018). Notably, a few studies, including Acs et al. (2015), Grant et al. (2019), and Salman (2014), have employed the HDI as a measure of economic development and explored its relationship with entrepreneurial activity. Economic analysts have traditionally concentrated on assessing the impact of entrepreneurship on economic output indicators

such as GDP, productivity, and employment. However, there has been relatively less emphasis on investigating its influence on human development.

Entrepreneurial endeavours wield a transformative influence on a nation's Human Development Index (HDI) (Acs et al., 2015; Grant et al.,2019; Salman,2014). The commencement and expansion of entrepreneurial ventures not only foster job creation but also bolster productivity, thereby fostering economic growth, as expounded in previous discussions. This resultant economic dynamism manifests in elevated income levels, enhanced accessibility to education and healthcare, and an overarching amelioration in the quality of life for individuals and communities (Acs et al. 2015). In essence, the nexus between entrepreneurial activity and positive HDI outcomes is a cogent testimony to the pivotal role played by entrepreneurship in engendering comprehensive societal advancement.

According to the United Nations Development Programme (UNDP), human development is "about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. People are the real wealth of nations. Development is thus about expanding the choices people have to lead lives that they value". The human development index includes three equally weighted dimensions: a long and healthy life along with quality education and a good standard of living. The human development index is known as an improved version of the traditional economic development measures since it extends beyond the purchasing power of private income and includes the measurement of well-being and quality of life (Alamieyeseigha and Kpolovie, 2013; Atkinson, 2015).

The literature argues that relying solely on economic prosperity measures such as GDP and GNP per capita is an inadequate method for assessing a nation's development. Merely observing an increase in income (GDP per capita) does not necessarily equate to an improvement in the overall well-being of a country (Dreze and Sen,1999; Anand and Sen,1994; Kucera and Sarna,2018). These scholars contend that national income calculations only consider registered monetary exchanges, often incorporating commodities that may be detrimental to social welfare, such as weapons. Furthermore, the conventional metrics of GDP and GNP per capita operate under the flawed assumption that natural resources are both free and limitless neglect the intrinsic value of leisure time and fail to account for crucial factors like freedom, human rights, and income inequality (Kucera and Sarna, 2018). Building upon

these arguments, findings presented in Islam et al.'s (2018) study underscore that countries with elevated income levels, as measured by GDP per capita, do not consistently correlate with higher life expectancy and literacy rates. Consequently, the study compellingly concludes that economic growth alone does not necessarily signify the holistic development of human societies.

Nevertheless, several studies have criticized the Human Development Index and argue that the longevity of developing countries has been undervalued. This means that there will be an increase in the human development index when there is a small rate of economic growth along with a far greater fall in life expectancy due to a failing healthcare system in the developing country. Cifuentes et al (2008) state that HDI puts a monetary value on the extra year of life of individuals, with a higher value on an extra year of life for rich countries in comparison to poor countries, due to the trade-off between longevity and income. In other words, the extra income required to compensate for less life expectancy and the human development index remains constant. On the other hand, argues that the valuation of extra schooling is over-valued as much as four times the valuation given by the labour market on extra schooling. Zimbabwe can be used as an example, it has the lowest GDP per capita, 60% lower than the second lowest, in the sample, showing that the HDI's valuation of longevity in the lowest income country is 0.006% of its value of the highest income country. Whereas their average income only has a difference of 0.2% of the national income per capita. However, the literacy rate and life expectancy were well above the lowest scoring country, to be precise abo scoring higher than 56 countries. However, this success of scoring high in education and life expectancy is undermined by the HDI calculation and Zimbabwe's HDI is ranked one of the lowest in the sample (Ravallion,2012). Furthermore, it can be argued that life expectancy is valued independently of income and intrinsically. However, the fact that the valuation of education is disproportionate to GNI after a point in the valuation of the HDI, as proven in Shah's (2016) study, seems to indicate a fault in the HDI. Income per capita plays a very important role in education and it is instrumentally linked to income and welfare. Therefore, due to the discussed shortcoming of the human development index, the present study decided to split the HDI into its components to have a better understanding of the impact of different types of entrepreneurial activity regarding the development of the countries.

While life expectancy and healthcare are important indicators for the development of a nation, it may not be immediately apparent how they are linked to entrepreneurial activity. However, there are several ways in which these indicators can affect entrepreneurship and economic development. A well-functioning healthcare system can create opportunities for entrepreneurship and innovation. For example, entrepreneurs may develop new medical technologies, devices, or services to address unmet healthcare needs in each population. This can create new businesses, employment opportunities, and economic growth. Therefore, while life expectancy and healthcare may not be directly linked to entrepreneurial activity, entrepreneurship has an indirect impact (Atun, 2012).

Literature regarding life expectancy as an indicator of development remains inconclusive. Several authors suggest that high life expectancy is an imperative indicator of development (Mahumud et al,2013; Kunze,2014; Hickson,2009; Cervellati and Sunde,2011; He and Li, 2020). High income per capita means there is an improvement in housing, education and health services since these factors lead to improved health, lower mortality rate and hence higher life expectation (He and Li, 2020). Furthermore, it can be argued that high life expectancy results in raising savings rates which will result in higher rates of physical capital accumulation (Cervellati and Sunde,2011). However, studies have argued that in the final ages of life, elderly people are not producing economic output since they are retired and are living off their savings accumulated, or pension benefits received from the government (Foster,2018). High life expectancy is a result of better healthcare and lifestyle, which means individuals are physically and mentally more fit and can perform better at work. This can help increase the productivity of available resources and produce better innovative ideas (Mahumud et al,2013). Additionally, it also helps increase the incentives to undertake longterm investments (e.g. in human capital). A study conducted with a focus on developing nations proved that expenditure on health was highly beneficial for developing countries. Since the current healthcare facilities are poor increasing expenditure in the sector will result in a significant positive outcome in terms of life expectancy (Elmi and Sadeghi,2012). Moreover, Bruno et al (1996) made a case that in the development of developing countries, it is not the aggregate income, which is significant, but it is how it is spent to increase the welfare of the country. It is long argued that the income generated should be spent on suitable social services, such as the public provision of clean drinking water, sanitation, health care, epidemiological protection, and basic education (Preston,1975; He & Smith, 2024; Gönel &

Aksu, 2024). Therefore, this supports the notion that healthcare and education are vital to judge the development of the countries.

Nevertheless, it can be argued high life expectancy leads to a higher burden on the youth and workforce which can hinder the nation's development and human welfare due to the cost of excessive population growth. This may cause the government funds to be spent on the older population in the forms of pensions and costly healthcare which in return will not bring in any benefit or development (Bloom et al,2015). Developing nations have limited government funds and these funds could have been spent on education instead or perhaps on subsidising innovative industries which would contribute to development. In addition, this will increase the tax burden on the working population resulting in lower net income which will result in lower consumption and investment. Thus, impacting the development of the nation negatively (Pahlevi,2017).

There is good evidence for the benefits of literacy: studies consistently find that adults with better literacy skills are more likely to be employed, and to earn more, than those with poorer literacy skills, even when taking account of other factors which affect work performance (Johnston, 2004). Additionally, research work by Saurabh et al (2013) proved that a high literacy rate results in lower population growth which makes development faster with limited resources. The study suggests that economic activities can open new opportunities for gainful employment however it can only be possible if the prospective employees are literate. A study conducted by Rehman et al (2015) discovers that literacy rate can improve the welfare and development of a nation through many channels: by increasing the efficiency of the labor force, fostering democracy and by creating better conditions for good governance through improving health and equality.

The above discussion proves life expectancy is an important indicator of the health and wellbeing of a population. It reflects the quality and accessibility of healthcare, as well as environmental and social factors that affect health, such as nutrition, sanitation, and access to clean water. Improvements in life expectancy are often associated with improvements in healthcare and public health interventions, as well as economic development. Access to healthcare is also an important factor in the development of a nation. A well-functioning healthcare system can provide essential preventive and curative services to a population, which can lead to improvements in overall health outcomes and productivity. In addition,

healthcare systems can be a source of employment and economic growth. Therefore, the study will research the impact of different types of entrepreneurial activity on the life expectancy and literacy rate.

On account of the discussion in Sections 2.1 and 2.3 we can propose the following hypothesis:

Hypothesis 1c: Opportunity-driven entrepreneurship has a significant positive impact on Life Expectancy.

Hypothesis 1d: Opportunity-driven entrepreneurship has a positive impact on Literacy rate.

Hypothesis 2c: Necessity entrepreneurship has a negative impact on Life Expectancy.

Hypothesis 2d: Necessity entrepreneurship has a negative impact on the Literacy Rate.

2.2.4 Theoretical Framework and Model

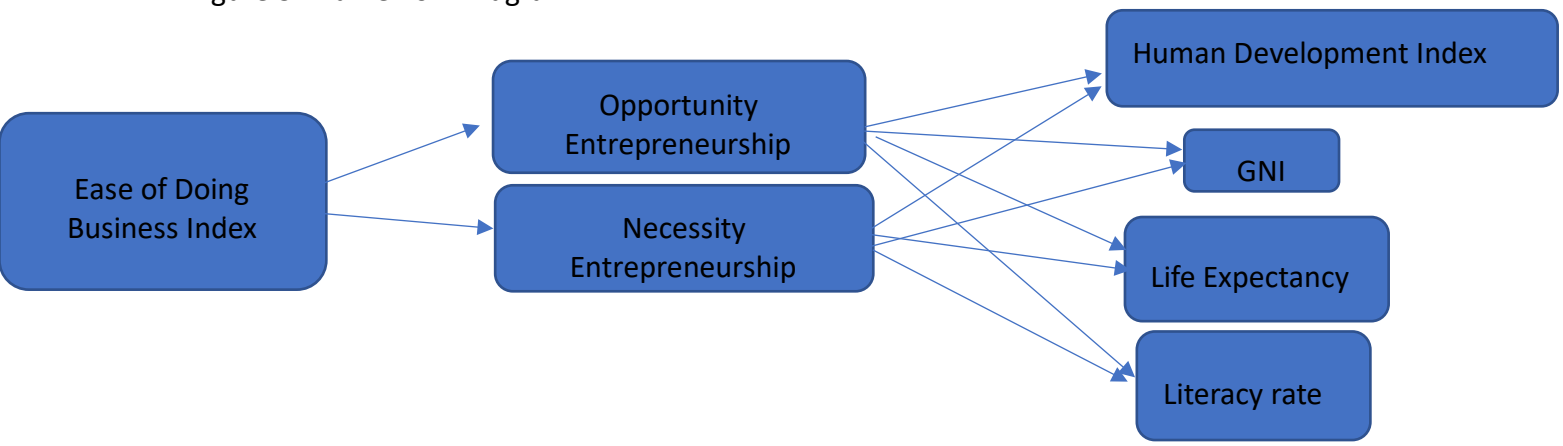
The present study makes two main contributions. First, it takes into consideration that the business environment plays a vital role in determining the level of entrepreneurial activity across developing nations. However, it emphasizes the effect of the business environment, represented by the ease of doing business index, cannot be truly understood without considering the type of entrepreneurship. Literature has argued that different factors play a role in determining opportunity-driven and necessity entrepreneurship. The study will aim to fill the gap in the literature regarding how the business environment, represented by the ease of doing business index, impacts different types of entrepreneurial activity i.e. opportunitydriven and necessity. entrepreneurship.

Secondly, the study will attempt to understand the role opportunity-driven and necessity entrepreneurship play in the development of developing economics. The development of the economies will be measured through the Human Development Index. This study will take a further step and split the components of HDI i.e. Life Expectancy, Literacy and GNI to study the impact of entrepreneurial activity on development in more depth.

Figure 2 presents the theoretical model developed for this study to evaluate the effect of opportunity-driven and necessary entrepreneurial activity on the human development index in developing nations. In addition, the model recognises that the success of entrepreneurial

activity (opportunity-driven and necessity) depends on the business environment which is represented by the ease of doing business index.

Figure 3: Framework Diagram



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2.3 Methodology

The study undertakes empirical analysis using panel data collected for the years 2013-2018 from the World Bank and GEM. and sample focus was on 51 developing countries which can be found in the Appendix. The study tried to include as many developing nations as possible however we had to restrict down to the selected countries due to the lack of data available for GEM data. The data used in this study is secondary quantitative data obtained from the World Bank and GEM websites. Data management and analysis were performed using STATA. The rationale for using secondary data in this study is strongly supported by prior research emphasizing its reliability, depth, and international comparability. Secondary data from recognized sources like the World Bank and the Global Entrepreneurship Monitor (GEM) provides standardized, high-quality indicators crucial for cross-national analyses (Roser et al., 2019; Williams & Vorley, 2017).

The Global Entrepreneurship Monitor (GEM) conducts an annual survey to measure entrepreneurship activity and its characteristics in different countries. GEM measures opportunity-driven entrepreneurship by asking survey respondents about the motivation behind starting their business. Specifically, GEM asks respondents whether they started their business because they saw an opportunity to create something new, or whether they started their business because they had no other option for work. Based on the responses to this question, GEM categorizes entrepreneurship activity as either opportunity-driven or necessity-driven. Opportunity-driven entrepreneurship is defined as the percentage of the adult population who started or are in the process of starting a business because they saw a business opportunity. In contrast, necessity-driven entrepreneurship is defined as the percentage of the adult population who started or are in the process of starting a business because they had no other option for work.

The GEM database, specifically, has been widely validated for its ability to distinguish between opportunity-driven and necessity-driven entrepreneurship. This validation is supported through extensive empirical studies and methodological scrutiny. For instance, Bosma et al. (2020) highlights GEM's robust framework for assessing entrepreneurial activity, demonstrating its capacity to capture nuanced dynamics, such as gendered entrepreneurial motives and societal influences. The GEM framework employs rigorous data collection

processes involving harmonized survey instruments administered across multiple countries, ensuring comparability and consistency (Alvarez et al, 2014). Independent evaluations have confirmed its reliability in capturing critical aspects of entrepreneurial activity, such as intentions, societal perceptions, and institutional influences, through detailed questionnaires aligned with the entrepreneurial ecosystem framework (Kelley et al., 2016). Furthermore, GEM's ability to distinguish between different types of entrepreneurships has been demonstrated in studies correlating its indicators with economic growth, innovation levels, and societal well-being (Reynolds & Curtin, 2015).

Studies further affirm GEM's methodological rigor, citing its reliance on a multi-layered data validation process. For example, the database incorporates expert panels for cross-checking survey results, quality control mechanisms at national and international levels, and statistical adjustments to address sampling biases (Faghih et al, 2019; Cusi, 2020). The longitudinal nature of GEM data also enables researchers to conduct trend analyses over time, which has been crucial in evaluating the relationship between entrepreneurship and economic development across diverse socio-economic contexts (Obschonka et al., 2018). Moreover, studies such as Pathak et al. (2015) validate GEM's capacity to link individual entrepreneurial motives to broader socio-economic outcomes, underscoring its utility in cross-national and comparative entrepreneurship research.

Using such data ensures methodological rigor by mitigating biases associated with primary data collection across multiple countries, enhancing the reproducibility of findings (Pathak et al., 2015). Secondary data is particularly advantageous for cross-national studies, enabling the analysis of longitudinal trends and international comparisons, which are critical for understanding entrepreneurship's role in economic development (Obschonka et al., 2018). Moreover, the GEM dataset facilitates granular analyses of entrepreneurial motives, helping researchers draw robust, actionable insights into economic policy (Kelley et al., 2016; Amorós et al., 2019).

The selected timeframe of 2013–2018 captures a stable and relevant economic period following the 2008 financial crisis. By this time, the aftereffects of the crisis had largely subsided, and most economies had entered a recovery phase marked by structural

adjustments and policy reforms aimed at fostering economic resilience (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2014; Lafuente et al., 2016). Research suggests that by 2013, global financial systems had regained stability, with notable improvements in credit availability, business confidence, and macroeconomic indicators such as GDP growth (Claessens et al., 2014; Bordo and Siklos, 2019). This recovery period is particularly significant for entrepreneurship studies because it represents a phase when new business creation was influenced less by crisis-induced necessity and more by opportunity-driven motives, reflecting a shift toward long-term developmental goals (Peric and Vitezic, 2016).

This post-crisis recovery phase is also significant for examining entrepreneurship's role in economic restructuring and development. Entrepreneurs often emerge as key players in such transitions by identifying market gaps, fostering innovation, and contributing to job creation (Audretsch et al., 2022). Studies emphasize that recovery periods provide a unique opportunity to analyze how entrepreneurial ecosystems adapt and evolve in response to structural changes in the economy (Peric and Vitezic, 2016). By focusing on this timeframe, the study aligns with recommendations to analyze periods of structural transition to identify emerging entrepreneurial and developmental trends (Lafuente et al., 2016). Additionally, the timeframe balances temporal relevance and data availability. Most datasets, including those from the World Bank and the Global Entrepreneurship Monitor (GEM), provide comprehensive and reliable data for these years, facilitating robust statistical analyses. Furthermore, this timeframe ensures the capture of medium-term trends in entrepreneurial behavior and its socioeconomic impacts, making it ideal for panel analyses aimed at deriving meaningful insights.

Focusing on 51 developing countries allows the study to examine entrepreneurship's role in diverse socio-economic contexts. Marquis and Raynard (2015). underscores the importance of targeting developing nations due to their distinct institutional challenges and developmental dynamics, which shape the entrepreneurial landscape. For instance, Naudé (2011) highlights that developing economies often grapple with weak institutions, limited access to finance, and inadequate infrastructure, which significantly influence entrepreneurial outcomes. Similarly, Desai (2012) emphasizes that entrepreneurship in developing countries operates within unique structural constraints, often requiring innovative approaches to resource utilization and market creation.

This focus is further supported by studies that explore opportunity and necessity entrepreneurship's differing impacts on economic growth in such settings. Wennekers, van Stel, and Thurik (2008) argue that necessity entrepreneurship, while prevalent in developing countries, often has limited impact on economic growth compared to opportunity-driven entrepreneurship, which is more strongly linked to innovation and productivity. Recent studies also confirm that the interplay between these two types of entrepreneurships can vary significantly depending on the socio-economic context, highlighting the importance of cross-national analyses in developing economies (Bosma et al., 2018; Kelley et al., 2016; Dileo and García Pereiro,2019).

The selection of countries was also guided by data completeness within the GEM and World Bank databases, ensuring the robustness and transparency of the analysis. These databases provide harmonized and high-quality data, which is essential for conducting reliable cross-national research. Moreover, focusing on countries with comprehensive data coverage allows for the application of robust statistical methodologies, mitigating biases and enhancing the generalizability of the findings (Reynolds & Curtin, 2015; Amorós & Bosma, 2016).

This study employed a two-stage least squares (2SLS) regression analysis to investigate the relationship between institutional factors, entrepreneurial activity, and economic development. The 2SLS approach is widely recognized as effective for addressing simultaneity bias, a common issue in studies involving institutional quality and entrepreneurship (Gaies and Maalaoui, 2022). Simultaneity arises when independent variables, such as the Ease of Doing Business Index, are correlated with the error term, potentially leading to biased estimates (Wooldridge, 2015; Angrist & Pischke, 2009). The interplay between institutional quality and entrepreneurial activity often results in mutual influence, further complicating the estimation of causal relationships (Acemoglu et al., 2014; Fritsch et al., 2019). By employing 2SLS, this study sought to address such issues robustly and ensure reliable causal inferences.

The 2SLS method operates in two stages to address endogeneity concerns. In the first stage, instrumental variables were identified and utilized based on their strong theoretical and empirical correlation with the Ease of Doing Business Index while being uncorrelated with the

error term. These instruments isolated the exogenous variation in institutional quality, mitigating bias and enhancing the validity of the estimates (Semykina & Wooldridge, 2010; Nogueira & Madaleno, 2021). In the second stage, the predicted values from the first stage were used to estimate a linear regression model. The dependent variable was the Human Development Index (HDI) and its components, including Life Expectancy, Literacy Rate, and GNI, while the independent variables were the estimated values of opportunity-driven and necessity-driven entrepreneurship (OppHat and NeccHat). Control variables such as Population, Political Stability, Inflation, and Investment were included to strengthen the robustness of the models (Ahn, 2002; Angrist & Pischke, 2010; Lewbel, 2012). A total of 10 regression models were introduced to comprehensively analyze the relationships under investigation, ensuring that different aspects of the hypotheses were tested.

To ensure the robustness of the regression analysis, several assumptions were tested and addressed. Simultaneity bias, which arises when the error terms are correlated with independent variables like the Ease of Doing Business Index, was mitigated through the use of carefully selected instrumental variables (Jones et al., 1990). Robust standard errors for panel data were employed to account for heteroskedasticity and autocorrelation, following best practices in econometric literature (Baum et al., 2007; Stock & Watson, 2015). Homoscedasticity and normality of residuals were assessed, with any violations corrected using robust variance estimators (Stock & Watson, 2015). Variance inflation factors (VIFs) were calculated to evaluate multicollinearity, with all values confirmed to be below 2, indicating no significant concerns.

The application of 2SLS regression analysis enabled the study to address simultaneity and endogeneity issues effectively, providing reliable and unbiased estimates. This approach allowed for the robust identification of causal relationships between institutional quality, entrepreneurial activity, and development outcomes. The methodology has been validated in prior studies exploring similar dynamics, further reinforcing its suitability for this analysis (Rodrik et al., 2004; Baum et al., 2007). By leveraging this rigorous econometric approach and introducing 10 models to test various facets of the hypotheses, the study contributes to understanding the complex interplay between the institutional environment, entrepreneurial activity, and economic development, offering valuable insights for policy and academic research (Naudé et al., 2011).

The justification for the population log as a control variable is to control the country size (Alouini and Hubert, 2019). Inflation is believed to control the purchasing power of the economic agents while an increase in inflation will lead to an increase in nominal output which will affect employment. This can be explained by Philip's curve trade-off between inflation and unemployment rates. The idea is that inflation and unemployment have a negative relationship. This can be explained by the fact that to combat the high inflation the reserve bank will increase the interest rates which will make it difficult for businesses to borrow capital restricting their spending and hence having a negative impact on the employment rate. Investment rate which is the gross capital formation as a percentage of GDP can have an impact on how entrepreneurial activity affects the human development index (Oketech,2006). However, this is a factor we are not looking into in this study there it will be controlled. The World Governance Indicators (WGI) is a dataset compiled by the World Bank that measures governance quality across countries. The dataset covers 215 economies and includes six dimensions of governance: Some WGI were also used as explanatory variables. This is because it is argued improving WGI will lead to a better business environment and therefore can promote higher investment impacting GNI and entrepreneurial activity. The World Governance Indicators (WGI) reports account for 200 countries and cover aggregate and individual governance indicators from the year 1996 to the present. It is divided into six dimensions of governance. However, in order to suit the purpose of the study we decided to use control of corruption and political stability which accounts for the ability of the government to formulate and implement sound policies and regulations (regulatory quality), and the extent to which public power is exercised to private gain (control of corruption).

2.3.1 Equations

Model 1: $\widehat{\text{Nec}} = \beta_0 + \beta_1 eob_i + \beta_2 controlcorruption_i + \beta_3 politicalstab_i + \beta_4 Invt_i + \beta_5 Inf_i + \beta_6 Pop_i + \epsilon_i$

Model 2:

$\widehat{\text{Opp}} = \beta_0 + \beta_1 eob_i + \beta_2 controlcorruption_i + \beta_3 politicalstab_i + \beta_4 Invt_i + \beta_5 Inf_i + \beta_6 Pop_i + \epsilon_i$

Model 3:

$\text{HDI} = \beta_0 + \beta_1 \hat{Opp}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$

Model 4:

$$\text{GNI} = \beta_0 + \beta_1 \hat{Opp}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$$

Model 5:

$$\text{HDI} = \beta_0 + \beta_1 \hat{\text{Necc}}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$$

Model 6:

$$\text{GNI} = \beta_0 + \beta_1 \hat{\text{Necc}}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$$

Model 7:

$$\text{LifeExp} = \beta_0 + \beta_1 \hat{Opp}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$$

Model 8:

$$\text{LiteracyRate} = \beta_0 + \beta_1 \hat{Opp}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$$

Model 9:

$$\text{LiteracyRate} = \beta_0 + \beta_1 \hat{\text{Necc}}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$$

Model 10:

$$\text{LifeExp} = \beta_0 + \beta_1 \hat{\text{Necc}}_i + \beta_2 politicalstab_i + \beta_3 Invt_i + \beta_4 Inf_i + \beta_5 Pop_i + \beta_6 eob_i + \epsilon_i$$

2.3.2 Definitions

Table 1:

Variable / Indicator	**Abbreviation**	**Definition**	**Source**	**Independent/Dependent/Con**
Entrepreneurial Employee Activity (Opportunity)	Opp	Rate of involvement of employees in entrepreneurial activities, such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary	*GEM*	*Independent*
Necessity-driven (% of TEA)	Necc	Necessity-driven entrepreneurial activity is defined as the percentage of those involved in total early-stage entrepreneurial activity because there were no better options for work	*GEM*	*Independent*
Inflation, consumer prices (annual %)	Inflation	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods	*World Bank*	*Control*

		and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.		
Population, total	*Poplog*	Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship. The values shown are midyear estimates.	*World Bank*	*Control*
Control of Corruption: Estimate	*Control of Corruption: Estimate*	Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate gives the country's score on the aggregate indicator, in units of standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	*World Bank*	*Dependent*
GNI (current US$)	*GNI*	GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation	*World Bank*	*Dependent*

		of output plus net receipts of primary income (compensation of employees and property income) from abroad. Data are in current U.S. dollars.		
Literacy rate, adult total (% of people ages 15 and above)	*Literacy*	Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life.	*World Bank*	*Dependent*
Life expectancy at birth, total (years)	*Life Exp*	Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.	*World Bank*	*Dependent*
Ease of doing business score (DB17-20 methodology)	*EOB*	The ease of doing business score is the simple average of the scores for each of the Doing Business topics: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders,	*World Bank*	*Independent*

		enforcing contracts and resolving insolvency. The score is computed based on the methodology in the DB17-20 studies for topics that underwent methodology updates.		
Total investment (% of GDP)	*Invt*	The World Bank defines Total investment (% of GDP) as the sum of gross domestic investment and net capital inflows from abroad, divided by the country's GDP, expressed as a percentage.	*World Bank*	*Control*
Human Development Index	*HDI*	Definition: A composite index measuring average achievement in three basic dimensions of human development long and healthy life, knowledge and a decent standard of living.	*World Bank*	*Dependent*
Political Stability and Absence of Violence/Terrorism: Estimate	*Political Instability*	Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. Estimate gives the country's score on the aggregate indicator, in	*World Bank*	*Dependent*

		units of standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.		

2.3.3 List of Countries

Table 2: Countries Categorized by Continent

Continent	Countries
Africa	Algeria, Angola, Burkina Faso, Cameroon, Egypt, Ghana, Libya, Madagascar, Malawi, Morocco, Nigeria, Senegal, South Africa, Sudan, Tunisia, Uganda, Zambia
Asia	India, Indonesia, Iran, Jordan, Kazakhstan, Lebanon, Malaysia, Philippines, Qatar, Saudi Arabia, Thailand, Turkey, Vietnam
Europe	Bosnia and Herzegovina, Bulgaria, Georgia, Poland, Romania, Russia
North America	Barbados, Belize, Guatemala, Jamaica, Mexico, Panama, Puerto Rico, Trinidad and Tobago
South America	Argentina, Brazil, Chile, Colombia, Ecuador, Suriname, Uruguay

Note: These countries were selected based on the World Bank's definition of developing countries.

2.4 Results and Discussion

2.4.1 Descriptive Statistics

Table 3:

index	GNI (Log)	HDI	Life Exp	Literacy	Necc	eob	Control of Corruption	Political Stability	Inflation	Investment (% GDP)	Population (log)	Opp New
count	312	306	312	106	95	306	312	312	288	276	294	155
mean	11.10826	0.705948	71.71839	83.91805	26.02021	60.57765	-0.297325535	-0.385389265	6.348488	29.26016304	4.8853659	1.997419
std	0.821386	0.111837	6.513846	24.17513	11.6278	10.01247	0.654765052	0.782011373	8.927779	36.39572373	2.873445043	1.787836
min	9.164416	0.41	52.228	0.791	0.72	32.5	-1.6265	-2.444217	-25.1298	7.793	0.891704676	0.1
25%	10.50201	0.6425	67.8645	81.31638	18.29	54.7175	-0.6818922	-0.8704082	1.905744	19.19125	1.448159525	0.6
50%	11.15916	0.733	74.243	94.16305	26.32	61.31	-0.3404016	-0.343349	3.844762	23.517	6.462191736	1.5
75%	11.67793	0.795	76.27775	95.6443	33.32	67.6925	-0.065565225	0.143666825	6.737256	28.331	7.298538636	2.65
max	12.94939	0.877	80.1	99.78163	58.95	83	1.619351	1.27792	55.97533	361.493	8.291978311	11.5

(Personal Collection, 2023)

Table 3 shows the summary statistics of the data. The log-transformed Gross National Income (GNI) has a mean of 11.11, reflecting substantial income disparities among the sampled nations. The Human Development Index (HDI), averaging 0.71 with a range of 0.41 to 0.88, highlights the varying levels of progress in education, health, and income across these

countries. Life Expectancy, with a mean of 71.72 years and a range from 52.23 to 80.10 years, underscores the disparities in health outcomes within the sample. These variables provide a foundation for analysing the relationship between opportunity-driven and necessity-driven entrepreneurship and development outcomes in developing economies.

Figure 4.

	MEDIAN	CORRELATION WITH HDI
GNILOG	11.10826	
HDI	.7059477	
LIFEEXP	71.71839	
LITERACY	83.91805	
NECC	26.02021	0.0718
EOB	60.57765	0.4942
CONTROLOFC~	-.2973255	0.4756
POLITICALS~E	-.3853893	0.4293
INFLATION	6.348488	0.2287
INVESTMENT	29.26016	0.0738
POPULATION	4.885366	-0.2643
OPPNEW	1.997419	0.4698

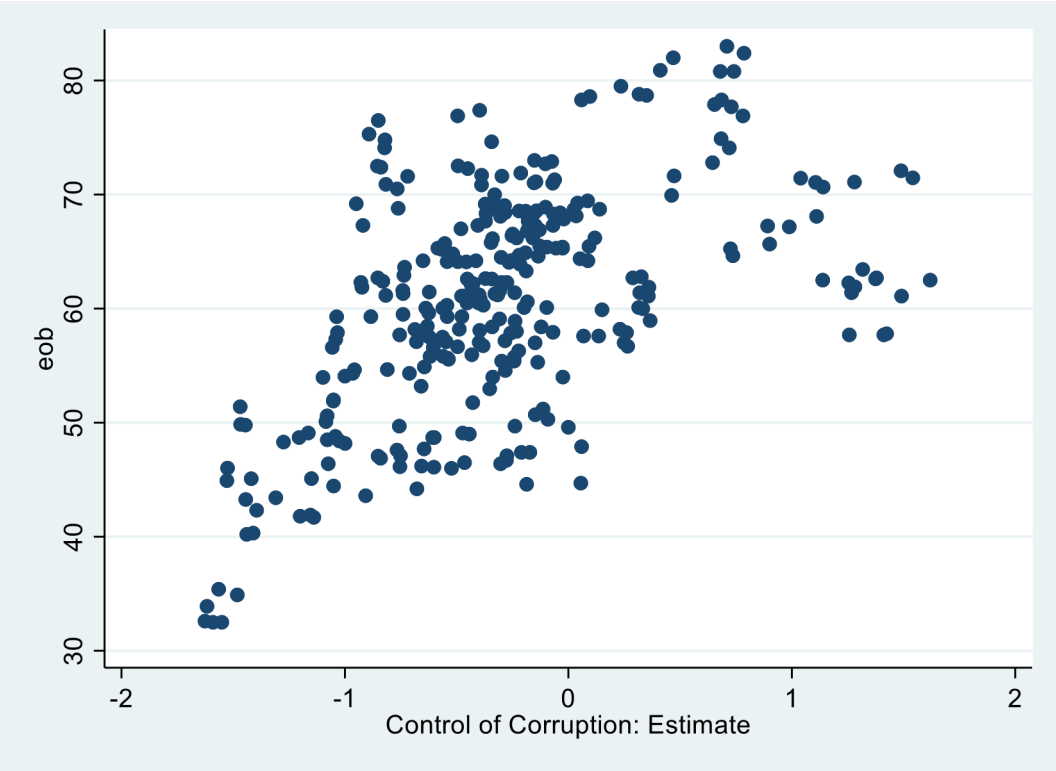
(Personal Collection, 2023)

The provided summary statistics in Figure 4 offer a comprehensive view of the economic, institutional, and entrepreneurial landscape of the dataset. The mean GNI (log) value of 11.11 and an average HDI of 0.71 suggest that the sampled countries are predominantly middle-income nations with moderate levels of human development. The high average life expectancy (71.72 years) and literacy rate (83.92%) reflect positive outcomes in human capital development, which are essential for economic progress. On the entrepreneurial front, necessity-driven entrepreneurship (NECC) shows a high average value of 26.02%, indicating that a significant portion of entrepreneurial activity in these nations is driven by economic necessity rather than opportunity. The average opportunity-driven entrepreneurship

(OPPNEW) is notably lower at 1.99%, suggesting that structural and institutional barriers may limit innovative entrepreneurial ventures. Institutional factors such as control of corruption (-0.30) and political stability (-0.39) are relatively low, highlighting governance challenges that could impede business development and economic growth. The ease of doing business (EOB) score of 60.58 indicates moderate progress but room for improvement in fostering a more conducive environment for entrepreneurship. Macroeconomic indicators such as inflation (6.35%) and investment as a percentage of GDP (29.26%) reflect mixed economic conditions. While investment levels are promising, the moderate inflation rate may still pose challenges to economic stability. The average population size (log) of 4.89 indicates varying demographic scales, potentially impacting market size and labor availability.

The correlation analysis highlights several critical relationships with HDI. Ease of Doing Business (EOB) shows a strong positive correlation (0.4942), indicating that streamlined processes and reduced barriers for businesses significantly contribute to human development. Similarly, control of corruption (0.4756) is strongly correlated with HDI, emphasizing the importance of governance and institutional trust in fostering economic and social progress. Opportunity-driven entrepreneurship (0.4698) also demonstrates a strong positive correlation with HDI, underscoring its role in promoting innovation, job creation, and economic diversification. This relationship suggests that as human development improves, individuals are more likely to engage in entrepreneurial activities driven by opportunity rather than necessity. Inflation (0.2287) and investment (0.0738) show weaker positive correlations, suggesting that while macroeconomic stability and capital investments are important, their direct impact on human development is less pronounced. Conversely, population size (-0.2643) and political stability (-0.3854) are negatively correlated with HDI, reflecting the challenges larger populations and unstable political environments pose to development. Necessity-driven entrepreneurship (0.0718), in contrast, exhibits a negligible correlation with HDI, aligning with its limited contribution to innovation and sustainable economic growth. These findings emphasize the need for improved governance, political stability, and policies fostering opportunity-driven entrepreneurship to enhance human development, alongside investments in education, healthcare, and economic stability.

Figure 5. Scatterplot of Ease of Doing Business and Control of Corruption



(Personal Collection, 2023)

The scatterplot (Figure 5) proves that control of corruption and ease of doing business are highly correlated. In order to avoid the problem of multicollinearity the variable control of corruption will be removed from the regression models which consist of eob as an explanatory variable.

The data utilised in our empirical analysis is annual data between the years of 2013 to 2018 for 53 developing countries. The analysis used was a 2-step regression analysis. The first stage involved treating the ease of doing business index as an independent variable and opportunity and necessity as a dependent variable. We have not yet accounted for the impact of this on the economies' development which is measured by the human development index. This is done in the next step where we link the ease of doing business index to the growth equation by estimating entrepreneurship and a growth equation in a simultaneous two-stage least square panel data setting. The product (OppHat and NeccHat) of the first regression model which estimates the ease of doing business index and entrepreneurship is used as an

independent variable in our second model which accounts for the impact of the independent ease of doing business index and entrepreneurship on the dependent variable which is human development index.

2.4.2 Ease of Doing Business, Control of Corruption and Political Stability

Table 4: Regression Estimates for Entrepreneurial Activity

Variables	Necc (Model 1)	Opp (Model 2)
Necessity		
EOB	0.154	
Control of Corruption	-8.700***	
Political Stability	5.214**	
Inflation	0.420*	
Investment GDP	-0.151*	
Population log	-0.235	
Opportunity-driven		
EOB		0.216***
Control of Corruption		1.124***
Political Stability		-0.086
Inflation		0.024*
Investment GDP		-0.020*
Population log		-0.003
R2	0.226	0.273
Number of Obvs	81	136

Significance Level Key:
* p < 0.05: Statistically significant at the 5% level.
** p < 0.01: Statistically significant at the 1% level.
*** p < 0.001: Statistically significant at the 0.1% level.

(Personal Collection, 2023)

Testing Hypothesis 3a: Ease of doing business has a positive impact on Opportunity-driven entrepreneurship (Model 2)

Testing Hypothesis 3b: Ease of doing business has a negative impact on necessity-driven entrepreneurship (Model 1)

The relationship between ease of doing business, which accounts for the business environment, in the present study, and the opportunity-driven is found to be significant as presented in Model 2 The P-values are less than 0.05 which means it is significant and the positive coefficient of eob indicates there is a significantly positive relationship. This can be interpreted as when the ease of doing business index is high the opportunity-driven entrepreneurial activity rate will also be high. Whereas the relationship with necessity-driven entrepreneurship is found to be insignificant as presented in (Model 1). The P-value is more than 0.05 in Table 4 which means it is insignificant, and we can conclude the ease of doing business index does not have any impact on the level of necessity-driven entrepreneurship.

Necessity-driven entrepreneurs start businesses out of necessity because of a lack of other options in the labour market (Stoica et al,2020). They intend to earn a living for their family and their decision will not be dependent on how easy it is to start a business. Since they have no other means of earning and are forced to start it regardless of the difficulties and time duration to start it. Individuals are faced with limited job opportunities or economic hardship. In such cases, ease of doing business may not be a significant factor in whether individuals decide to start a business. Therefore, it can be said that ease of doing business is not a determinant of necessity- entrepreneurship.

On the other hand, the decision of individuals to embark on opportunity-driven entrepreneurship is driven by the prospect of higher income or independence, which is intricately linked to the regulatory environment governing business initiation. As posited by Urbano et al. (2020), opportunity-driven entrepreneurs are often individuals not actively seeking traditional employment, making their ventures contingent upon favorable conditions for business establishment. When confronted with a low ease of doing business index, characterized by time-consuming and costly procedures, the economic rent of prospective businesses and individuals aiming for increased income is significantly impacted. Nave and Rodrigues (2022) assert that such adverse conditions may dissuade potential entrepreneurs from exploiting identified market opportunities. The associated opportunity cost, particularly for those seeking independence, becomes apparent as the delay in generating income due to high startup costs and prolonged initiation processes may demotivate individuals.

Conversely, a regulatory environment marked by leniency and reduced procedural costs has the potential to elevate the economic rent of businesses, rendering opportunity-driven

entrepreneurship more attractive. The likelihood of a higher number of individuals willing to exploit market opportunities for the prospect of substantial income is heightened in such conditions (Nave and Rodrigues, 2022). Moreover, for those aspiring for independence, the assurance of a less arduous and time-consuming business initiation process enhances the attractiveness of opportunity-driven ventures, mitigating the demotivating effects of delayed income generation.

Table 4 shows that the impact of political instability is insignificant on opportunity-driven entrepreneurship. The present finding is opposing past studies' results which found a significant relationship between the two (Alvarez and Urbano, 2011; Abu and Karim, 2015; Groşanu et al, 2015). Developing countries are often characterized by higher levels of political instability compared to developed countries. This is due to a variety of factors, including weaker institutional and regulatory frameworks, economic challenges, and social and cultural factors (Dheer,2017). In addition, it is argued that political instability can create an environment in which formal business activities become more difficult, as regulations and legal frameworks may become unclear or unstable. In addition, a wider economic impact of political instability is economic crises, such as currency devaluation or inflation, which can make it difficult for formal businesses to operate (Citron and Nickelsburg, 1987). While GEM provides valuable insights into formal entrepreneurship activity, it does not capture the full extent of entrepreneurial activity in some countries, particularly in developing countries where informal businesses may be more common (GEM,2023). Informal businesses often operate outside of formal regulatory frameworks, making them difficult to track and measure using traditional data collection methods (Acs et al, 2008). Therefore, this can result in an insignificant relationship between political instability and entrepreneurial activity in developing nations.

The relationship between corruption and opportunity-driven entrepreneurship is significantly positive as depicted in Model 2. This finding is aligned with the findings of the literature (Abu Murad and Alshyab, 2019; Avnimelech et al, 2014; Jung and Lee, 2023; Ngunjiri 2010; Estrin et al. 2013). These authors argue that corruption can create an environment in which entrepreneurs face significant challenges in accessing resources, such as financing and government contracts. This can create barriers to entry for new businesses and limit the ability of entrepreneurs to grow and scale their ventures. In contrast, when corruption is effectively controlled, entrepreneurs may be able to operate in a more predictable and stable

environment. This can lead to more equitable access to resources and opportunities, as well as greater confidence among entrepreneurs and investors in the overall business environment.

Avnimelech et al (2014) found a positively significant relationship between control of corruption and total entrepreneurial activity and backed their finding by suggesting that controlling corruption can also create a level playing field for businesses, reducing the advantage of large, established firms that may have more resources to navigate corrupt practices. As the present study's results prove, this can create opportunities for new and innovative businesses to enter the market and compete on their merits. Therefore, it can be said that the control of corruption is an important factor in promoting opportunity entrepreneurship. By creating a level playing field and enabling entrepreneurs to access resources and opportunities more equitably, controlling corruption can help to promote opportunity-driven entrepreneurship as proven in Model 2.

Model 1 which shows the impact of control of corruption on necessity entrepreneurship depicts contradictory findings to opportunity-driven entrepreneurship. The results found that there is a significantly negative relationship which meant that when control of corruption was low, higher corruption, the necessity-driven entrepreneurial activity was high. These results were similar to the results of Anokhin and Schulze (2009). This finding can be backed up by the fact that corruption can also create economic instability, leading to higher unemployment rates and reduced economic growth. In such an environment, individuals may be more likely to turn to entrepreneurship as a means of generating income and supporting themselves and their families.

In addition, it can argued that bribes, which are a result of corruption, may help to secure contracts, acquire permits, expedite administrative processes, seek loans, and receive critical information (Anokhin and Schulze, 2009). Entrepreneurial activities are time-constrained, and corruption may sometimes facilitate the process of starting new business ventures. Necessity-driven individuals, grappling with unemployment and facing urgent financial needs, may find themselves compelled to engage in corrupt practices to overcome hurdles that would otherwise impede their entrepreneurial pursuits.

Table 5: Regression Estimates for Human Development Index

Variables	**HDI (Model 3)**	**Life Expectancy (Model 4)**	**Literacy Rate (Model 5)**	**GNI Log (Model 6)**
Opportunity-driven				
OppHat	0.029***	2.357***	12.189**	-0.226***
eob	0.007**	0.326***	0.737***	0.040***
Political Stability	0.008	0.452	-10.911	-0.413***
Inflation	0.001**	-0.098**	0.285	0.0169***
Investment GDP	0.003***	0.158***	-1.125***	0.006
Population log	-0.006***	-0.682***	1.503*	-0.118***
R2	0.541	0.515	-0.416	0.489
Number of Obvs	241	247	87	247
	Model 7	**Model 8**	**Model 9**	**Model 10**
Necessity				
NeccHat	-0.003***	-0.279***	-1.442**	0.027***
eob	0.008***	0.369***	0.961***	0.036***
Political Stability	0.025***	1.778***	-4.058*	-0.540***
Inflation	0.004***	0.065	1.129***	0.001
Investment GDP	0.002***	0.059*	-1.632***	0.015***
Population log	-0.007***	-0.788***	0.955*	-0.108***
R2	0.541	0.515	0.416	0.489
Number of Obvs	241	247	87	247

Significance Level Key:
* p < 0.05: Statistically significant at the 5% level.
** p < 0.01: Statistically significant at the 1% level.
*** p < 0.001: Statistically significant at the 0.1% level.
(Personal Collection, 2023)

2.4.3 Opportunity-Driven Entrepreneurship and Human Development Index

Hypothesis 1a: Opportunity-driven entrepreneurship has a significant positive impact on the Human Development Index (Model 3)

The results in Model 3 depict there is a positive relationship between OppHat and HDI since they have a positive coefficient of 0.029. This shows that as 1% of OppHat increases the human

development index rises by 2.9%. The model has a high R-squared value of 54% which signifies that the model was able to explain 54% of the cross-country variation in the human development index. This was a clear indication that opportunity-driven entrepreneurship was a significant determinant of the human development index in developing economies. The Pvalue of the regression is equal to 0.010 which indicates that the impact of OppHat on HDI is significant at a significance level of 1%. Therefore, we can state that OppHat has a significantly positive relationship with HDI.

Literature has established that entrepreneurship helps improve economic situations in developing nations through mechanisms such as job creation and productivity enhancements (Ács, 2006; Van Praag and Versloot, 2007; Van Stel et al., 2005; Wong et al., 2005). The results from this study align with the literature's findings.

The results obtained can be translated into that opportunity-driven entrepreneurs possess innovative capabilities and exploit unidentified opportunities in non-traditional industries. Introducing innovative technologies, creating new products and services, promoting new business models, new jobs and employment opportunities, and improving competitiveness, all with positive social and economic benefits that boost the levels of development of countries (Stoica et al,2020; Ivanovic-Djukle et al, 2018; Galindo and Mendez, 2014). The literature states opportunity entrepreneurship is the creation of new businesses or products that arise from identifying gaps or opportunities in the market. Thus, it is associated with innovation, job creation, and increased competition and these factors lead to positive social and economic benefits which help boost the levels of development of the economies (Stoica et al,2020; Ivanovic-Djukle et al, 2018; Galindo and Mendez, 2014). The Human Development Index measures the country's average achievements in three basic dimensions of human development: a long and healthy life, access to knowledge, and a decent standard of living which are used as a measure of a country's overall development. Successful entrepreneurs create jobs and increase productivity, leading to higher incomes and improved living standards.

Hypothesis 1c: Opportunity-driven entrepreneurship has a significant positive impact on Life Expectancy. (Model 4)

Model 4 depicts the results of regressing Life Expectancy with OppHat which measures the impact OppHat has on life expectancy in developing nations. The relationship is positive meaning when OppHat goes up the life expectancy is expected to rise. The coefficient is 2.35669 which indicates there is a strong positive relationship. The results of this model are significant as indicated by the P-values. The model has an R-squared value of 51% which indicates the model explains 51% of the variation of life expectancy by the change in OppHat.

High incomes help individuals afford better healthcare which helps them have a longer and healthier life which they could not have been able to afford with lower incomes. It enables individuals and communities to access better healthcare services, such as preventative care, vaccinations, and treatments for illnesses and diseases. In addition, higher incomes can also improve access to education, which can lead to better health outcomes and improved health behaviours which can be seen in Model 4 which shows that opportunity-driven entrepreneurship will increase life expectancy. The regression shows that opportunity-driven entrepreneurship is positively significant with life expectancy in developing nations.

Opportunity-driven entrepreneurship can lead to the development of new products and services that address social or environmental challenges, such as access to healthcare or clean water. For instance, some entrepreneurs may develop innovative healthcare solutions or create businesses that provide access to healthcare services in underserved areas. In addition, innovative technologies, new products, and services produced through opportunity-driven entrepreneurship can be very beneficial for the advancement of healthcare. The intended benefits are better quality of patient care and new cures for illnesses. This means the population will have better health and less suffering due to illnesses which increases the life expectancy of the population (Faulkner and Kent, 2001). Successful entrepreneurship can also create positive spillover effects in the broader community, such as improved infrastructure, more efficient supply chains, and better access to information and communication technologies, which can all contribute to better health outcomes and improved quality of life New jobs and employment opportunities are created through opportunity-driven entrepreneurship. This helps reduce unemployment and lessens the burden on the government to spend on unemployment benefits. This leaves more government revenue to be spent on social services including the healthcare and education. In addition, opportunitydriven businesses are more likely to expand hence generating higher taxes for the government. This will increase the government revenue enabling them to increase their

spending on healthcare and education hence leading to a rise in life expectancy and literacy rate.

Hypothesis 1d: Opportunity-driven entrepreneurship has a positive impact on Literacy rate. (Model 5)

Model 5 shows the relationship between OppHat and literacy rate in our sample of developing nations. The results indicate that there is a positive relationship between the two which is indicated by the positive coefficient of 12.189. In addition, the relationship is significant as the p-value, which is 0.02, is less than the significant level of 5%.

Entrepreneurship also contributes to improvements in literacy rates by creating employment opportunities, which can increase access to education and improve living standards. This is proven by the present study's result presented in Model 5 which depicts a significantly positive relationship between opportunity-driven entrepreneurship and literacy rate. Successful entrepreneurs create jobs and generate income that can be used to send children to school or invest in education and training for themselves and their employees. Research suggests income is a strong determinant of literacy rate implying that an increase in income will encourage literacy in developing countries (Bridge,1979). Opportunity-driven entrepreneurship is more likely to expand and make high profits generating high incomes for its employees and owners which will encourage them to educate their families. Similarly, an increase in income will also enable them to afford better healthcare which will increase the life expectancy.

Furthermore, it can be argued that opportunity-driven entrepreneurship is related to innovation and technology which requires non-manual labour while necessity-driven is related to manual labour. Studies have proved that those with non-manual jobs gain in literacy over the life course whereas a rise in manual jobs causes a fall in literacy (Treiman, 2006). This is because non-manual jobs typically require more advanced cognitive skills and education, while manual jobs often involve repetitive physical labour and may not require as much reading, writing, or critical thinking. Research has shown that non-manual jobs tend to require higher levels of literacy and that individuals in these jobs may be more likely to engage in reading, writing, and other literacy-related activities outside of work (Bynner and Parsons, 2006). This can lead to ongoing improvements in literacy skills over time, as individuals are

exposed to more complex language and ideas and are challenged to think critically and communicate effectively. Thus, it can be seen from the current results that when opportunitydriven entrepreneurship increases the literacy rate increases and a rise in necessityentrepreneurship decreases literacy.

Opportunity-driven entrepreneurship is biased towards highly skilled and educated labour (Acs et al,2012). Developing nations have a shortage of skilled and educated labour creating a deficit in labour supply for these firms pushing the wages for these highly skilled and educated labourers high. Unequal supply means the wages for these jobs are higher thus motivating the population to achieve more education which increases the literacy rate. Moreover, entrepreneurship can also lead to the development of new products or services which enhance access to education or literacy programs. For instance, opportunity-driven entrepreneurs may develop innovative approaches to teaching literacy, or create businesses that provide educational resources or support

Hypothesis 1b: Opportunity-driven entrepreneurship has a significant positive impact on GNI. (Model 6)

Model 6 shows the relationship between GNI and Opportunity-driven entrepreneurship is significantly negative.

The current findings suggest that when entrepreneurship is driven by opportunities, there is a positive impact on the Human Development Index (HDI). This is attributed to the fact that opportunity-driven entrepreneurship contributes to improvements in life expectancy and literacy rates. Both of these factors are crucial components of the HDI, a composite index that measures overall human development. However, it is noteworthy that despite the positive effect on HDI, opportunity-driven entrepreneurship is associated with a decrease in Gross National Income (GNI) as depicted in Model 6. The apparent contradiction between the positive impact on HDI and the negative impact on GNI can be explained by the fact that GNI, as an economic indicator, may not fully capture the broader improvements in well-being brought about by entrepreneurship driven by opportunities.

In other words, while opportunity-driven entrepreneurship may not directly translate into a significant increase in GNI, it contributes to enhancing key aspects of human development, such as life expectancy and literacy rates. These non-economic factors play a vital role in

shaping the overall well-being of a society, and they are reflected in the HDI. Therefore, the observed decrease in GNI should not overshadow the positive contributions made by opportunity-driven entrepreneurship to the overall human development of a population.

Studies and the present studies results have proven opportunity-driven to have positive effects on human development, as it can provide individuals with employment opportunities and help to reduce poverty. This is because it can lead to job creation, innovation, and increased competition. When comparing our results to those of older studies, it must be pointed out that the majority of the literature has supported the idea that opportunity entrepreneurship accelerates economic growth measured through GNI which is opposite to the findings of the present study (Acs and Armington 2006; Ferreira et al. 2017; Levie and Autio 2008; Schramm 2006, James's 2016). However, it is worth noting that these studies have been focused on developed economies, unlike the present study.

The present study, contrary to previous findings, proves that opportunity-driven entrepreneurship has a negative impact on GNI. This could be because previous research has focused on mixed samples or developing nations whereas this study particularly focuses on middle- and low-income countries. In high-income countries, there is significant support such as business development courses in high education and training systems, government grants and policies which promote and support entrepreneurship through established institutions that provide funding through banks and venture capital funds. However, these training facilities, grants and intuitions are lacking in middle and low-income countries which acts as a barrier to sustaining opportunity-driven businesses to bring economic benefits. The negative impact on growth can be attributed to these variables, which measure individuals who leave employment based on perceiving an opportunity. However, these individuals faced challenges and failed to generate income due to the reasons mentioned above. In essence, the departure from employment in pursuit of opportunities did not yield the expected financial outcomes, contributing to an adverse effect on overall growth.

Opportunity-driven entrepreneurship, while a vital driver of innovation and economic growth in the long run, can indeed have short-term implications on Gross National Income (GNI). The initial stages of establishing new businesses and developing innovative products are inherently resource-intensive, often requiring substantial investments before economic returns are realized. This process involves various essential steps, including research and development,

product testing, infrastructure development, and the establishment of supply chains. Entrepreneurs, especially in developing countries, may encounter obstacles in accessing crucial resources such as finance, technology, and skilled labour. Limited access to these resources not only constrains the sustainability and growth potential of businesses but also increases the risk of failure. In some cases, these businesses may even face closure, leading to the wastage of invested resources and negatively impacting GNI.

Moreover, newly established businesses through opportunity entrepreneurship are likely to be smaller and less established compared to existing businesses. As these enterprises compete for resources, they may deplete the available pool, potentially reducing the overall GNI. This competition for resources could result in existing businesses facing challenges in sustaining their operations negatively impacting the GNI.

Furthermore, the economic impact of opportunity entrepreneurship is not immediate and may not be evenly distributed across sectors or regions. The benefits of new businesses and products often take time to permeate other areas of the economy and reach diverse segments of society. The uneven distribution of these benefits may exacerbate existing economic disparities, contributing to an uneven impact on overall GNI. Additionally, the inherent risk in opportunity-driven entrepreneurial ventures means that some new businesses or products may fail. When this happens, there are not only financial losses but also a waste of invested resources. These failures can further exacerbate the short-term negative impact on GNI, as the anticipated returns may not materialize.

Although the majority of the literature found contradictory results, there are limited studies such as Acs (2006) and Reynolds et al (2005) which found results similar to the present study. They back up their findings by arguing that there is a mechanism involved in translating knowledge to growth which determines the economies' development. They further explain that entrepreneurial activity is the vehicle that runs the mechanism of converting different factors into growth. It is suggested that opportunity-driven entrepreneurship's positive impact on the economy is mostly a result of individuals motivated by their entrepreneurial knowledge. However, this may not be the case for the developing countries as there is limited entrepreneurial knowledge in these countries. Therefore, it can be argued that due to inadequate business training and education in developing nations, opportunity-driven entrepreneurial activity does not generate any economic growth. Since, business knowledge

in entrepreneurs is essential to be able to turn the benefits of opportunity entrepreneurship into growth (Levie and Autio,2008).

In addition, a lack of awareness and knowledge regarding the benefits of innovative entrepreneurship will demotivate entrepreneurs to wait around long enough for the benefits of opportunity-driven entrepreneurship to start showing. They end up basing their decisions on their limited existing knowledge and get demotivated to invest more into the business therefore ending up shutting it down before the business would bring any beneficial growth for the economy while using up the resources (Haynie and Mullen,2009).

The poor quality of labour in developing countries can significantly impede the Gross National Income (GNI) and hinder economic development. As Gruber (2007) emphasizes, the success of opportunity-driven entrepreneurship is closely tied to the quality of labour within organizations. In developing nations where the quality of labour is subpar, the potential benefits of entrepreneurial ventures are compromised. The investment of resources, including both labour and capital, in such organizations yields minimal returns, contributing to a cycle of economic inefficiency. This not only undermines the overall productivity of these enterprises but also results in a negative impact on the nation's GNI. When the workforce lacks the necessary skills, education, and efficiency, the potential for economic growth diminishes, thereby impeding the development trajectory of the entire economy. In essence, the poor quality of labour in developing countries becomes a critical factor hindering the positive contribution of opportunity-driven entrepreneurship to GNI and economic advancement.

In addition, it can be argued that the value of opportunity entrepreneurship is maximised if the risk is not disproportionally shifted to stakeholders rather than primary entrepreneurs (Choi et al,2008). The entrepreneurs who are motivated to start opportunity entrepreneurial activity are the ones who recently left their salaried employment and getting financed for start-ups in developing nations is extremely difficult. According to Beck (2007), study statistics show that access to and cost of finance is often ranked as one of the most constraining features of the business environment in developing nations for start-ups. In comparison to any other characteristic of the business environment such as tax rates and macroeconomic instability and also rates as major growth constraints for new start-ups. These entrepreneurs lack capital, and it is not easy for them to access capital from institutions in developing countries. Therefore, they rely on family and friends, or wealthy people are looking for new

start-ups to invest their money known as 'Angel Investors'. Thus, the risk is shifted to the stakeholders rather than the primary entrepreneur which is a deterrent for economic growth from opportunity-driven entrepreneurship (Edelman,2017).

2.4.4 Necessity-Driven Entrepreneurship and Human Development Index

Hypothesis 2a: Necessity entrepreneurship has a negative impact on the Human Development Index. (Model 7)

Model 7 represents the impact of NeccHat on HDI. Model 7 is the regressing NeccHat with HDI and depicts a negative relationship as the coefficient is -0.003 which indicates that as NeccHat goes up by 1% HDI will go down by 0.3%. In addition, as discussed above R-squared value, which is as high as 54%, is a good indication of the validity of the model. Although the low coefficient shows a low negative relationship the results are significant as reflected in the P-value.

There is evidence in the past literature which suggests that necessity entrepreneurship can have a negative impact on the development of the economy and their findings are in line with this study's findings (Urbano and Aparicio,2016; Wincent,2012; Wong et al.,2005). Nevertheless, scholars such as Garba (2013) and Stoica (2020) had contradictory findings to the present study. Necessity entrepreneurship refers to starting a business out of necessity, often due to a lack of other viable employment opportunities (Urbano and Aparicio,2016). Necessity entrepreneurship can impact the human development index negatively since it can lead to the exploitation of workers and the environment. Entrepreneurs who start businesses out of necessity do not have the resources to implement sustainable practices or ensure that their workers are treated fairly (Audretsch et al, 2022) This can lead to negative environmental and social impacts that undermine the human development index.

Additionally, developing nations lack policies and laws which control or limit the exploitation of the labour and environment (Vives, 2008). For instance, less job security or low pay can impact their employees' affordability of decent healthcare or basic education which can lower the life expectancy and literacy rate. Negative environmental externalities of the businesses can impact the health of the population negatively (Millar, 2013). This is proved by the results

in Models 8 and 9 prove that necessity-driven entrepreneurship will impact life expectancy and literacy rate negatively and the results are significant.

Hypothesis 2c: Necessity entrepreneurship has a negative impact on Life Expectancy. (Model 8)

Hypothesis 2d: Necessity entrepreneurship has a negative impact on the Literacy Rate. (Model 9)

Moreover, necessity entrepreneurship may decrease HDI since it can contribute to income inequality (Wincent,2012). Necessity entrepreneurs often lack the skills and resources necessary to start high-growth businesses, and as a result, their businesses may generate relatively low incomes for themselves and their employees. This can perpetuate poverty and inequality, which can hinder human development. Necessity-driven entrepreneurs possess fewer endowments of human capital and entrepreneurial skills. These kinds of entrepreneurs tend to have low education and run businesses with the mindset of covering their living expenses; therefore, expect their business growth to be very limited. Employment by necessity-driven businesses can act as an opportunity cost of labour which could have been used in innovative activities to generate economic benefits (Wincent,2012).

Necessity-driven entrepreneurs are not interested in innovation or growth and participate in entrepreneurial activities which do not stimulate growth or create employment. High self-employment by necessity acts as a deterrent for tax collection generating a low revenue for the government. This will limit the government's spending on social services such as healthcare compromising on patient care quality leading to higher deaths and lower life expectancy. Low government revenue will also limit the government spending on education causing a low literacy rate which can be seen in Model 9.

Furthermore, research has proven that entrepreneurs face high levels of stress due to high workload and high business risk and negative emotions (Hatak et al, 2015). Necessity-driven entrepreneurs face difficulties finding employment and therefore decide to start these new ventures. Due to being unemployed they are already facing financial difficulties and are desperate for their business to start generating income to support their living. This puts a higher strain on their mental health. These negative emotions have a consequence on

entrepreneurs' and their family's health (Hatak et al, 2015). For decades literature has proven that entrepreneurial failure has a strong link with depression and anxiety-related disorders which leads to a greater risk of mortality which will cause life expectancy to decrease (Clayton, 1990; Parkes and Weiss, 1983; Kraus and Lilienfeld, 1959).

Since necessity entrepreneurship generates low-skilled jobs they are more likely to be manual jobs (Treiman, 2006; Kwai, 2023). Studies have proved a rise in manual jobs causes a fall in literacy rate. Manual jobs may not require as much literacy and may not provide as many opportunities for literacy-related activities outside of work. As a result, individuals in manual jobs may experience a decline in literacy skills over time, particularly if they are not exposed to new ideas or challenged to engage in critical thinking and communication (Treiman, 2006 Kwai, 2023). Thus, it can be seen from the current results that a rise in necessityentrepreneurship decreases literacy. This is also proven in model 9 as the results depict a negative significant relationship which means that when NeccHat rises the literacy rate falls.

Hypothesis 2b: Necessity entrepreneurship has a negative impact on GNI (Model 10)

The results for the relationship between GNI and necessity-driven entrepreneurship were unanticipated in Model 10. The results contradicted the previous finding (Urbano and Aparicio (2016) which found that necessity decreases economic output. Nevertheless, previous studies have been related to developed nations while the present study is focusing on developing countries. Necessity entrepreneurs are looking to support their families because of a necessity to provide their families due to a lack of other job opportunities in developing nations. Developed nations are more likely to provide unemployment benefits to the unemployed whereas developing countries unemployment benefits significantly. The cost to the government to finance the unemployed might act as an opportunity cost and reduce the economic out in developed nations. Whereas, in developing nations when these individuals were unemployed, they were not impacting the economy however once they started a business they started generating income therefore increasing the GNI.

The reason for the positive impact of necessity, although it's limited, is because these people are forced into business for an income which they would not have had otherwise due to lack of job opportunities. Their businesses generate capital for the economy and provide income

to the unemployed. In addition, through higher productivity in the economy the GDP per capita. These factors cause a rise in the GNI and HDI as shown by the results (Reference).
In some cases, necessity entrepreneurship can lead to economic growth and increased GNI. For example, if a necessity entrepreneur can create a successful business that meets a demand in the market, the business may generate revenue and create jobs, which can contribute to economic growth and increase GNI.

2.5 Conclusion

The study delved into the relationship between ease of doing business, opportunity-driven entrepreneurship, and necessity-driven entrepreneurship, offering valuable insights into their distinct impacts on the Human Development Index (HDI) in developing countries. The evidence suggests that the ease of doing business serves as a strong determinant for fostering opportunity-driven entrepreneurship, while its relationship with necessity-driven entrepreneurship is found to be insignificant. The pivotal role of a conducive business environment in motivating opportunity-driven entrepreneurship, crucial for the development of economies, underscores the importance of focusing on improving the ease of doing business indicators in developing nations. The study advocates for a strategic emphasis on creating an environment that encourages opportunity-driven entrepreneurship, thereby contributing positively to the Human Development Index.

The clear distinction between the impact of opportunity-driven and necessity-driven entrepreneurship on the HDI reinforces the idea that prioritizing the former is essential for sustained human development. Opportunity-driven entrepreneurs contribute positively to the HDI by enhancing literacy rates and life expectancy, crucial components of well-being and societal progress. On the contrary, necessity-driven entrepreneurship, stemming from a lack of alternative opportunities, has a detrimental effect on these key indicators.

Noteworthy is the study's revelation regarding the impact of entrepreneurial motivations on specific components of the HDI. Opportunity-driven entrepreneurship is found to enhance life expectancy and literacy rate, vital aspects for the well-being and living standards of the population, while necessity-driven entrepreneurship has a detrimental effect. The unexpected finding regarding Gross National Income (GNI) reveals a nuanced relationship, attributing the negative impact of opportunity-driven entrepreneurship challenging the conventional

understanding in the field. This may be because this study focuses on developing countries where opportunity-driven entrepreneurship may be contributing to the development of sectors that directly influence human development indicators (education, healthcare, etc.). The entrepreneurial ventures may be operating in sectors that contribute to the well-being and quality of life of individuals without significantly boosting overall economic output. In addition, factors such as a lack of knowledge and training pose significant obstacles, potentially hindering the positive impact on GNI.

2.5.1 Novel Contribution

The presented study significantly contributes to the entrepreneurship literature by shedding light on the differential impacts of opportunity-driven and necessity-driven entrepreneurship on the Human Development Index (HDI) in developing economies. In alignment with the findings of scholars such as Schumpeter (1934), Shane (2003), Urabano (2016), Acs (2006) and Audretsch and Thurik (2001), who emphasize the importance of distinguishing between opportunity and necessity entrepreneurship, this study extends the understanding to the context of developing nations. The research not only confirms the widely acknowledged notion that fostering opportunity-driven entrepreneurship is vital for enhancing economic development but also delves into the specific components of HDI, namely literacy rate, life expectancy, and Gross National Income (GNI). The unexpected result regarding GNI challenges conventional wisdom, providing a nuanced perspective on the relationship between economic development and entrepreneurial motivations in developing economies. The nuanced exploration of GNI in the context of developing nations contributes to a more comprehensive understanding of the interplay between entrepreneurship, economic development, and government policies, thus advancing the scholarly discourse on this crucial subject.

In light of these findings, it is imperative for developing nations to recalibrate their policies. Prioritizing the improvement of ease of doing business indicators becomes a strategic imperative, laying the groundwork for a conducive environment that nurtures opportunitydriven entrepreneurship. Simultaneously, efforts should be directed at mitigating the barriers hindering the positive contribution of opportunity-driven entrepreneurs to GNI.

2.5.2 Limitations and Recommendations

While this study contributes valuable insights into the intricate relationships between the business environment, institutional factors, entrepreneurial activities, and their collective impact on economic growth and human development in developing economies, it is essential to acknowledge certain limitations that may affect the interpretation and generalization of the findings.

One notable limitation is the reliance on data obtained from sources such as the World Bank and the Global Entrepreneurship Monitor (GEM). While these are reputable databases, data accuracy and consistency may vary across different countries, potentially introducing biases or limitations in the analysis. Future research can overcome this limitation by incorporating additional datasets or conducting in-depth country-specific analyses to ensure a more robust and comprehensive understanding of the relationships under investigation.

Another challenge lies in the potential endogeneity issues that may arise in the two-step regression methodology used in this study. Establishing causality between the business environment, types of entrepreneurship, and economic growth is complex, and the study should acknowledge the possibility of reverse causation or omitted variable bias. Future research could employ advanced econometric techniques, such as instrumental variable analysis, to address endogeneity concerns more effectively.

The study's focus on developing economies as a collective entity might oversimplify the diverse economic, cultural, and institutional contexts within these nations. Future research could overcome this limitation by conducting more nuanced analyses, considering regional or country-specific variations to provide a more granular understanding of the impact of entrepreneurship on economic development.

2.5.3 Policy Implications

The insights derived from this research bear substantial implications for policymakers in developing economies, offering a roadmap for strategic interventions to promote sustainable economic growth and elevate human development. In light of the study's findings, the following policy recommendations are proposed.

Policymakers are urged to prioritise comprehensive reforms to enhance the overall business environment. This entails addressing bureaucratic impediments, streamlining regulatory

processes, and fostering transparency in governance. By creating an environment conducive to business, governments can actively stimulate opportunity-driven entrepreneurship, thereby contributing positively to economic growth and human development indicators.

Acknowledging the potential positive contribution of necessity-driven entrepreneurship to Gross National Income (GNI), policymakers should tailor their support mechanisms for entrepreneurs driven by necessity. This involves the implementation of targeted initiatives, including access to training programs, microfinance options, and other resources specifically designed to enhance the viability and success of businesses born out of necessity. Such tailored support can prove instrumental in uplifting entrepreneurs facing economic challenges and bolstering overall economic resilience.

In light of the significant positive impact of opportunity-driven entrepreneurship on literacy rates, policymakers are advised to make strategic investments in education and training programs. Collaborative efforts between the government, educational institutions, and the private sector can play a pivotal role in equipping aspiring entrepreneurs with the necessary skills and knowledge to run successful businesses. This investment not only benefits individual entrepreneurs but also contributes to the overall human capital development of the nation.

Recognizing the negative impact of necessity-driven entrepreneurship on the Human Development Index (HDI), policymakers should focus on fortifying social safety nets. The implementation or expansion of social welfare programs can serve as a safety net for individuals engaged in necessity-driven entrepreneurial activities, ensuring their basic needs are met. This approach contributes to mitigating adverse effects on life expectancy and overall well-being in the population.

To enhance the ease of doing business and foster opportunity-driven entrepreneurship, it is crucial to strategically prioritize policies that streamline bureaucratic processes, reduce regulatory burdens, and facilitate transparent business registration procedures. This concerted effort aims to create a conducive environment for entrepreneurs, promoting a smoother entry into the business landscape.

Moreover, targeted support programs tailored for opportunity-driven entrepreneurs, such as financial incentives, mentorship initiatives, and networking opportunities, can play a pivotal

role in empowering individuals with innovative business ideas. Investing in education and training programs is equally essential, not only for enhancing workforce skills but also for positively impacting literacy rates and life expectancy.

By addressing barriers that impede the contribution of opportunity-driven entrepreneurs to Gross National Income (GNI), such as knowledge and training gaps, and providing sectorspecific support, governments can unlock the full potential of this entrepreneurial segment. Ultimately, aligning government policies with entrepreneurial goals is paramount, fostering an environment that encourages innovation, protects intellectual property, and supports businesses contributing positively to societal well-being. Through these comprehensive measures, nations can pave the way for sustainable economic growth and development.

The next section critically discusses the current policies and initiatives that developing countries have implemented to encourage opportunity-driven entrepreneurship.

Malaysia - Cradle Fund

Source: https://cradle.com.my

- The Cradle Fund in Malaysia provides early-stage funding and support for technology startups. It aims to nurture a vibrant start-up ecosystem by offering financial assistance, mentorship, and networking opportunities for aspiring entrepreneurs. Nevertheless, The Cradle Fund in Malaysia, while supporting early-stage start-ups, may face sustainability concerns if there is insufficient follow-through support for these companies as they grow and mature.

Suggestion: Establish mechanisms for long-term sustainability by incorporating ongoing support for businesses as they grow. Encourage private sector involvement and explore public-private partnerships to ensure a holistic and sustainable entrepreneurial ecosystem.

The study highlights the lack of support for opportunity-driven entrepreneurship in middle- and low-income countries, which often leads to business failures. Establishing mechanisms for long-term sustainability aligns with addressing the challenges identified. Ongoing support can include mentorship programs, access to finance, and educational initiatives to enhance the chances of success for emerging businesses.

Rwanda - ICT Innovation Ecosystem

Source: https://www.minict.gov.rw/programs/innovation-emerging-technologiesdirectorate-general

- Rwanda has invested in developing its information and communication technology (ICT) sector to foster innovation and entrepreneurship. Initiatives like the Kigali Innovation City and supporting tech hubs have created an environment conducive to start-ups and technologydriven businesses. However, the success of technology-focused initiatives like Rwanda's ICT innovation ecosystem may be contingent on effective collaboration between the government and the private sector. Lack of coordination could hinder the development.

Suggestion: Encourage collaboration between the public and private sectors to leverage the strengths of both. Create platforms for regular dialogue, joint initiatives, and partnerships that enhance the effectiveness of entrepreneurship policies. The study emphasizes the importance of collaboration between various stakeholders, including the public and private sectors, to overcome challenges in opportunity-driven entrepreneurship. Joint initiatives and partnerships can facilitate the sharing of resources and expertise, addressing issues such as limited access to finance and inadequate entrepreneurial education in developing nations.

Chile - Start-Up Chile

Source: https://startupchile.org/en/

- Start-Up Chile is a government-backed program that attracts early-stage, high-potential entrepreneurs to start their businesses in Chile. Selected start-ups receive funding, mentorship, and workspace to encourage innovation and the creation of a vibrant entrepreneurial ecosystem. However, The Start-Up Chile program faced initial challenges in coordinating with various stakeholders, and some start-ups expressed concerns about bureaucratic hurdles, highlighting potential implementation challenges.

Suggestion: Streamline regulations but ensure that the regulatory framework remains robust. Regularly review and update regulations to address emerging challenges and prevent regulatory gaps that may lead to fraudulent practices. The study points out that streamlining regulations is essential, but it emphasizes the need for a robust regulatory framework. The lack of support systems in middle- and low-income countries contributes to the failure of opportunity-driven businesses. Streamlined regulations can facilitate easier business operations, but ensuring their robustness is crucial to prevent fraudulent practices and protect

stakeholders, including investors and lenders. This also aligns with the finding that ease of doing business is a strong determinant of opportunity entrepreneurship. A regulatory framework that is both streamlined and robust addresses the challenges of limited access to resources and finance, creating an environment where entrepreneurs can thrive. Regular reviews and updates to regulations are necessary to adapt to emerging challenges, ensuring that the regulatory environment remains conducive to sustainable opportunity-driven entrepreneurship in developing nations.

2.5.4 Practice Implications for Entrepreneurs

By trying to adapt to suggested practices entrepreneurs can contribute to creating an environment that fosters opportunity-driven entrepreneurship, aligning with the study's findings on the positive impact of such entrepreneurship on the Human Development Index in developing countries.

Seek Continuous Learning Opportunities: Entrepreneurs should actively seek opportunities for continuous learning and skill development. This can include formal education, online courses, workshops, and mentorship programs to enhance their capabilities.

Identify and Leverage Opportunities: Entrepreneurs should focus on identifying opportunities that align with the development of sectors influencing human development indicators. This strategic approach can have a positive impact on societal well-being.

Collaborate with Other Entrepreneurs: Collaboration among entrepreneurs can lead to the creation of synergies and shared resources. Entrepreneurs can form networks to exchange knowledge, experiences, and support each other in overcoming challenges.

Emphasize Social Impact: Entrepreneurs can emphasize the social impact of their ventures. By contributing to sectors such as education and healthcare, they can align their businesses with the well-being of the population, positively influencing human development indicators.

Advocate for Policy Changes: Entrepreneurs can actively advocate for policy changes that support a conducive business environment. This includes engaging with policymakers to

address regulatory hurdles and promote a more favourable ecosystem for entrepreneurial activities.

Measure Impact Beyond Economic Output: Entrepreneurs should consider measuring the impact of their ventures beyond traditional economic metrics. Emphasizing the improvement of literacy rates, life expectancy, and other human development indicators can provide a more comprehensive picture of their contributions.

Participate in Community Development: Entrepreneurs can actively participate in community development initiatives. This involvement can range from supporting local educational programs to contributing to healthcare services, aligning their ventures with the broader goal of societal progress.

2.5 References

1. Abille, A.B. and Mumuni, S., 2023. Tax incentives, ease of doing business and inflows of FDI in Africa: Does governance matter?. Cogent Economics & Finance, 11(1), p.216.
2. Acemoglu, D., Johnson, S. and Robinson, J.A., 2014. Institutions as a fundamental cause of long-run growth. Handbook of Economic Growth, 1(A), pp.385–472.
3. Acemoglu, D., Gallego, F.A. and Robinson, J.A., 2014. Institutions, human capital, and development. *Annu. Rev. Econ.*, *6*(1), pp.875-912.
4. Acs, Z.J., Audretsch, D.B. and Lehmann, E.E., 2013. The knowledge spillover theory of entrepreneurship. Small business economics, 41, pp.757-774.
5. Acs, Z.J., Desai, S. and Klapper, L.F., 2008. What does "entrepreneurship" data really show?. Small Business Economics, 31, pp.265-281.
6. Acs, Z.J., Szerb, L., Autio, E., Acs, Z.J., Szerb, L. and Autio, E., 2015. The global entrepreneurship and development index. Global entrepreneurship and development index 2014, pp.39-64.
7. Ahmed, A. and Nwankwo, S., 2013. Entrepreneurship development in Africa: an overview. World Journal of Entrepreneurship, Management and Sustainable Development, 9(2/3), pp.82-86.
8. Ahmed, F., Dzator, J.A. and Zhang, J.X., 2021. Remittances, income inequality and investment in Bangladesh. The Journal of Developing Areas, 55(1).
9. Akinwale, Y.O., Alaraifi, A.A. and Ababtain, A.K., 2020. Entrepreneurship, innovation, and economic growth: Evidence from Saudi Arabia. In Eurasian Economic Perspectives:
10. Alamieyeseigha, D.S.P. and Kpolovie, P.J., 2013. The making of the United States of America: Lessons for Nigeria. Owerri: Springfield Publishers.
11. Almodóvar-González, M., Fernández-Portillo, A. and Díaz-Casero, J.C., 2020. Entrepreneurial activity and economic growth. A multi-country analysis. European Research on Management and Business Economics, 26(1), pp.9-17.
12. Almodóvar-González, M., Fernández-Portillo, A. and Díaz-Casero, J.C., 2020. Entrepreneurial activity and economic growth. A multi-country analysis. European Research on Management and Business Economics, 26(1), pp.9-17.
13. Alanzi, S., Ratten, V., D'Souza, C. and Nanere, M., 2022. Culture, economic, and entrepreneurial environment in the Gulf cooperation council (GCC) countries. In Strategic

entrepreneurial ecosystems and business model innovation (pp. 61-74). Emerald Publishing Limited.

14. Alouini, O. and Hubert, P., 2019. Country size, economic performance and volatility. Revue de l'OFCE, (4), pp.139-163.
15. Alvarez, S.A. and Barney, J.B., 2014. Entrepreneurial opportunities and poverty alleviation. Entrepreneurship theory and practice, 38(1), pp.159-184.
16. Álvarez, C., Urbano, D. and Amorós, J.E., 2014. GEM research: achievements and challenges. *Small Business Economics*, *42*, pp.445-465.
17. Amorós, J. and Cristi, O., 2010. Poverty, human development, and entrepreneurship. The dynamics of entrepreneurship: Theory and evidence.
18. Anand, S. and Sen, A., 1994. Human Development Index: Methodology and Measurement.
19. Andreeva, E.L., Simon, H., Karkh, D.A. and Glukhikh, P.L., 2016. Innovative entrepreneurship: a source of economic growth in the region12(3)., pp.899-910.
20. Angrist, J.D. and Pischke, J.-S., 2009. Mostly harmless econometrics: An empiricist's companion. Princeton: Princeton University Press.
21. Anokhin, S. and Schulze, W.S., 2009. Entrepreneurship, innovation, and corruption. Journal of business venturing, 24(5), pp.465-476.
22. Anokhin, S. and Wincent, J., 2012. Start-up rates and innovation: A cross-country examination. Journal of International Business Studies, 43, pp.41-60.
23. Aparicio, S., Urbano, D. and Audretsch, D., 2016. Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. Technological forecasting and social change, 102, pp.45-61.
24. Atkinson, A.B., 2015. Inequality: What can be done?. Harvard University Press.
25. Atun, R., 2012. Health systems, systems thinking and innovation. Health policy and planning, 27(suppl_4), pp.iv4-iv8.
26. Audretsch, D.B., Lehmann, E.E. and Wright, M., 2015. Technology transfer and entrepreneurship. Academy of Management Perspectives, 29(2), pp.123–138.
27. Audretsch, D.B. and Keilbach, M., 2007. The theory of knowledge spillover entrepreneurship. Journal of Management studies, 44(7), pp.1242-1254.
28. Audretsch, D.B. and Keilbach, M., 2008. Resolving the knowledge paradox: knowledgespillover entrepreneurship and economic growth. Research Policy, 37(10), pp.1697-1705.

29. Audretsch, D.B., Belitski, M., Chowdhury, F. and Desai, S., 2022. Necessity or opportunity? Government size, tax policy, corruption, and implications for entrepreneurship. Small Business Economics, 58(4), pp.2025-2042.
30. Autio, E., Nambisan, S., Thomas, L.D.W. and Wright, M., 2014. Digital affordances, innovation, and entrepreneurship. Strategic Entrepreneurship Journal, 8(4), pp.256–273.
31. Avnimelech, G., Zelekha, Y. and Sharabi, E., 2014. The effect of corruption on entrepreneurship in developed vs non-developed countries. International Journal of Entrepreneurial Behavior & Research.
32. Ayala, J.C. and Manzano, G., 2014. The resilience of the entrepreneur. Influence on the success of the business. A longitudinal analysis. Journal of economic psychology, 42, pp.126-135.
33. Ayyagari, M., Demirgüç-Kunt, A. and Maksimovic, V., 2014. Who creates jobs in developing countries? Small Business Economics, 43(1), pp.75–99.
34. Aziz, O., Grant, K.A. and Arshed, N., 2020. Does entrepreneurial activity assist in the alleviation of poverty?. The Journal of Applied Business and Economics, 22(7), pp.114132. Bangladesh. Universal Journal of Public Health, 1(4), pp.180-186.
35. Baum, C. F., Schaffer, M. E. & Stillman, S. (2007) 'Enhanced Routines for Instrumental Variables/Generalized Method of Moments Estimation and Testing', *Stata Journal*, 7(4), pp. 465–506.
36. Bloom, D.E., Canning, D. and Lubet, A., 2015. Global population aging: Facts, challenges, solutions & perspectives. Daedalus, 144(2), pp.80-92.
37. Bosma, N., Content, J., Sanders, M. and Stam, E., 2018. Institutions, entrepreneurship, and economic growth in Europe. Small Business Economics, 51, pp.483-499.
38. Bordo, M.D. and Siklos, P., 2019. The transformation and performance of emerging market economies across the great divide of the global financial crisis (No. w26342). National Bureau of Economic Research.
39. Bridge, R.G., 1979. The Determinants of Educational Outcomes: The Impact of Families, Peers, Teachers, and Schools.
40. Bruno, M., Ravallion, M. and Squire, L., 1996. Equity and growth in developing countries.
41. Brqawi, O.A., 2023. Entrepreneurial activity in the Gulf countries: An institutional approach. Gulf Studies Journal, 8(1), pp.30–55.
42. Business, D., 2019. Ease of doing business score and ease of doing business ranking.

43. Bynner, J. and Parsons, S., 2006. New light on literacy and numeracy: Full report. National Research and Development Centre for adult literacy and numeracy, Institute of Education, University of London.
44. Carree, M.A. and Thurik, A.R., 2005. Understanding the role of entrepreneurship for economic growth (No. 1005). Papers on Entrepreneurship, Growth and Public Policy.
45. Carree, M.A. and Thurik, A.R., 2010. The impact of entrepreneurship on economic growth (pp. 557-594). Springer New York.
46. Cervellati, M. and Sunde, U., 2011. Life expectancy and economic growth: the role of the demographic transition. Journal of economic growth, 16, pp.99-133.
47. Cifuentes, M., Sembajwe, G., Tak, S., Gore, R., Kriebel, D. and Punnett, L., 2008. The association of major depressive episodes with income inequality and the human development index. Social science & medicine, 67(4), pp.529-539.
48. Citron, J.T. and Nickelsburg, G., 1987. Country risk and political instability. Journal of Development Economics, 25(2), pp.385-392.
49. Claessens, S., Dell'Ariccia, G., Igan, D. & Laeven, L. (2014) 'Cross-Country Experiences and Policy Implications from the Global Financial Crisis', *Economic Policy*, 29(80), pp. 653–700.
50. Crudu, R., 2019. The role of innovative entrepreneurship in the economic development of EU member countries. Journal of Entrepreneurship, Management and Innovation, 15(1), pp.35-60.
51. Cumba, L.T., Huang, X., Zhang, Z. and Muhammad, S., 2024. The mediating effect of entrepreneurship on financial support and economic growth in African emerging economies. *International Journal of Emerging Markets*
52. Cusi, M.L.A. and Bernal, L.D.P., 2020. *Global Entrepreneurship Analytics: Using GEM Data*. Routledge.
53. De Clercq, D., Honig, B. and Martin, B., 2021. Contextualizing entrepreneurship in emerging economies. Entrepreneurship Theory and Practice, 45(5), pp.176–200.
54. Decker, R., Haltiwanger, J., Jarmin, R. and Miranda, J., 2014. The role of entrepreneurship in US job creation and economic dynamism. Journal of Economic Perspectives, 28(3), pp.3-24.
55. Del Monte, A., Moccia, S. and Pennacchio, L., 2020. Regional entrepreneurship and innovation: Historical roots and the impact on the growth of regions. Small Business Economics, pp.1-23.

56. Delmar, F., Wennberg, K. and Hellerstedt, K., 2011. Endogenous growth through knowledge spillovers in entrepreneurship: an empirical test. Strategic Entrepreneurship Journal, 5(3), pp.199-226.
57. Dileo, I. and García Pereiro, T., 2019. Assessing the impact of individual and context factors on the entrepreneurial process. A cross-country multilevel approach. International Entrepreneurship and Management Journal, 15(4), pp.139-141.
58. Dodgson, M. and Gann, D., 2018. Innovation: A very short introduction. Oxford University Press.
59. Dreze, J. and Sen, A., 1999. India: Economic development and social opportunity. OUP Catalogue.
60. Dutta, N., S. Sobel, R., and Roy, S., 2013. Entrepreneurship and political risk. Journal of Entrepreneurship and Public Policy, 2(2), pp.130-143.
61. Egboga, I. and Zubairu, U., 2020. How Effective Has Global Entrepreneurship Been As A Tool For Economic Growth?. Journal of Business and Behavioural Entrepreneurship, 4(1), pp.112-121.
62. Elmi, Z.M. and Sadeghi, S., 2012. Health care expenditures and economic growth in developing countries: panel co-integration and causality. Middle-East Journal of Scientific Research, 12(1), pp.88-91.
63. Estrin, S., Korosteleva, J. and Mickiewicz, T., 2022. Schumpeterian entry: innovation, exporting, and growth aspirations of entrepreneurs. Entrepreneurship Theory and Practice, 46(2), pp.269-296.
64. Faghih, N., Bonyadi, E. and Sarreshtehdari, L., 2019. Global entrepreneurship capacity and entrepreneurial attitude indexing based on the global entrepreneurship monitor (GEM) dataset. Globalization and Development: Entrepreneurship, Innovation, Business and Policy Insights from Asia and Africa, pp.13-55.
65. Fairlie, R.W. and Fossen, F.M., 2018. Opportunity versus necessity entrepreneurship: Two components of business creation.
66. Ferreira, J.J., Ratten, V. and Dana, L.P., 2017. Knowledge spillover-based strategic entrepreneurship. International Entrepreneurship and Management Journal, 13, pp.161-167.
67. Foster, L., 2018. Active ageing, pensions and retirement in the UK. Journal of population ageing, 11, pp.117-132.

68. Fritsch, M., Sorgner, A. & Wyrwich, M. (2019) 'Institutions, Entrepreneurship, and Economic Growth', *Small Business Economics*, 53(3), pp. 669–682.
69. Gaies, B. and Maalaoui, A., 2022. Macro-level determinants of entrepreneurship and endogeneity bias–A methodological contribution. Management, 25(3), pp.22-38.
70. Marquis, C. and Raynard, M., 2015. Institutional strategies in emerging markets. Academy of Management Annals, 9(1), pp.291-335.
71. Garba, A., Fariastuti Djafar, F.D. and Mansor, S.A., 2013. Evidence of opportunity and necessity driven entrepreneurship in Nigeria. Journal of Entrepreneurship Management and Innovation (JEMI), 9(3), pp.57-78.
72. Głodowska, A., 2017. Business environment and economic growth in the European Union Countries: What can be explained for the convergence?. Entrepreneurial Business and Economics Review, 5(4), pp.189-204.
73. Grant, K.A., Aziz, O. and Arshed, N., 2019. The impact of entrepreneurial activity on poverty alleviation. Economic and Social Development: Book of Proceedings, pp.215-224.
74. Groşanu, A., Boţa-Avram, C., Răchişan, P.R., Vesselinov, R., and Tiron-Tudor, A., 2015. The influence of country-level governance on business environment and entrepreneurship: A global perspective. Amfiteatru Economic Journal, 17(38), pp.60-75.
75. He, L. and Li, N., 2020. The linkages between life expectancy and economic growth: some new evidence. Empirical Economics, 58, pp.2381-2402.
76. Islam, M.S., Mondal, M.N.I., Tareque, M.I., Rahman, M.A., Hoque, M.N., Ahmed, M.M. and Khan, H.T., 2018. Correlates of healthy life expectancy in low-and lower-middle-income countries. BMC Public Health, 18, pp.1-11.
77. Johnston, G., 2004. Adult literacy and economic growth (No. 04/24). New Zealand Treasury Working Paper.
78. Jung, H.J. and Lee, S.H., 2023. The impact of bribery relationships on firm growth in transition economies. Organization Science, 34(1), pp.303-328.
79. Kaneva, M. and Untura, G., 2019. The impact of R&D and knowledge spillovers on the economic growth of Russian regions. Growth and Change, 50(1), pp.301-334.
80. Kaufmann, D. and Wei, S.J., 1999. Does" grease money" speed up the wheels of commerce?.
81. Kelley, D. J., Singer, S. & Herrington, M. (2016) *Global Entrepreneurship Monitor 2015/16: Global Report*. Babson College. Available at: www.gemconsortium.org.

82. Klofsten, M., Fayolle, A., Guerrero, M., Mian, S., Urbano, D. and Wright, M., 2019. The entrepreneurial university as driver for economic growth and social change-Key strategic challenges. Technological Forecasting and Social Change, 141, pp.149-158.
83. Kunze, L., 2014. Life expectancy and economic growth. Journal of Macroeconomics, 39, pp.54-65.
84. Kwai, C.W., 2023. Necessity Entrepreneurs: Drivers and Characteristics. *International Journal of Economics and Management Research*, *2*(3), pp.27-44.
85. Lafuente, E., Acs, Z. J. & Szerb, L. (2016) 'The Entrepreneurship Paradox: More Entrepreneurs, Lower Growth', *Global Entrepreneurship Monitor Reports*.
86. Leogrande, A., Costantiello, A. and Laureti, L., 2022. The Opportunity Driven Entrepreneurship in the Context of Innovation Systems in Europe in the Period 20102019. Available at SSRN 4229027.
87. Liñán, F. and Fernandez-Serrano, J., 2014. National culture, entrepreneurship and economic development: different patterns across the European Union. Small Business Economics, 42, pp.685-701.
88. Liu, J., Hu, M., Zhang, H., and Carrick, J., 2019. Corruption and entrepreneurship in emerging markets. Emerging Markets Finance and Trade, 55(5), pp.1051-1068.
89. M. Salman, D., 2014. Mediating role of research and development on entrepreneurial activities and growth: Evidence from cross-country data. World Journal of Entrepreneurship, Management and Sustainable Development, 10(4), pp.300-313.
90. Mahumud, R.A., Rawal, L.B., Hossain, G., Hossain, R. and Islam, N., 2013. Impact of life expectancy on economics growth and health care expenditures: a case of
91. Medeiros, V., Marques, C., Galvão, A.R. and Braga, V., 2020. Innovation and entrepreneurship as drivers of economic development: Differences in European economies based on quadruple helix model. Competitiveness Review: An International Business Journal, 30(5), pp.681-704.
92. Milenkovic, N., Vukmirovic, J., Bulajic, M. and Radojicic, Z., 2014. A multivariate approach in measuring socio-economic development of MENA countries. Economic Modelling, 38, pp.604-608.
93. Millar, J.S., 2013. The corporate determinants of health: how big business affects our health, and the need for government action!. Canadian Journal of Public Health, 104, pp.e327-e329.

94. Minniti, M. and Lévesque, M., 2008. Recent developments in the economics of entrepreneurship. Journal of Business venturing, 23(6), pp.603-612.

95. Minniti, M. and Lévesque, M., 2010. Entrepreneurial types and economic growth. Journal of Business Venturing, 25(3), pp.305-314.

96. Naudé, W., Amorós, J. E. and Cristi, O. ,2011. '"Surfeiting, the Appetite May Sicken": Entrepreneurship and the Happiness of Nations', *Small Business Economics*, 38(3), pp. 271–280.

97. Nave, E., Ferreira, J., and Marques, L.M., 2023. Business environment reforms effect on entrepreneurial activities of high-income economies: panel data evidence. Cross Cultural & Strategic Management.

98. Nogueira, M.C. and Madaleno, M., 2021. Are international indices good predictors of economic growth? Panel data and cluster analysis for European Union countries. Sustainability, 13(11), p.603.

99. Nordås, H.K., 2010. Trade in goods and services: Two sides of the same coin?. Economic Modelling, 27(2), pp.496-506.

100. Noseleit, F., 2013. Entrepreneurship, structural change, and economic growth. Journal of Evolutionary Economics, 23, pp.735-766.

101. Nwachukwu, A.C. and Ogbo, A., 2012. The role of entrepreneurship in economic development: The Nigerian perspective. European Journal of Business and Management, 4(8), p.96.

102. Obschonka, M., Schmitt-Rodermund, E. & Silbereisen, R. K. (2018) 'Entrepreneurial Motives and Development in Global Contexts', *Journal of Business Venturing*, 33(2), pp. 181–199.

103. Onyango, R. A. (2023). *Insights into the interplay between business financing and micro-enterprise performance: Empirical evidence from Kenya.* Research in Business Development, 15(2), 45–67

104. Oketch, M.O., 2006. Determinants of human capital formation and economic growth of African countries. Economics of Education Review, 25(5), pp.554-564.

old and new perspectives on the policy issues.

105. Pahlevi, M., 2017. Impact of governance and government expenditure on human development in Indonesia. Research Paper of Master of Arts in Development Studies International Institute of Social Studies.

106. Pathak, S., Xavier-Oliveira, E. & Laplume, A. O. (2015) 'Entrepreneurship in Emerging Markets: The Influence of Growth Orientation and National Culture', *Journal of International Business Studies*, 46(3), pp. 308–332.

107. Peprah, A.A. and Adekoya, A.F., 2020. Entrepreneurship and economic growth in developing countries: Evidence from Africa. Business Strategy & Development, 3(3), pp.388-394.

108. Peric, M. and Vitezic, V., 2016. Impact of global economic crisis on firm growth. *Small business economics*, *46*, pp.1-12.

109. Pradhan, R.P., Arvin, M.B., Nair, M. and Bennett, S.E., 2020. The dynamics among entrepreneurship, innovation, and economic growth in the Eurozone countries. Journal of Policy Modeling, 42(5), pp.1106-1122.

110. Preston, S.H., 1975. The changing relation between mortality and level of economic development. Population studies, 29(2), pp.231-248.

111. Prieger, J.E., Bampoky, C., Blanco, L.R. and Liu, A., 2016. Economic growth and the optimal level of entrepreneurship. World Development, 82, pp.95-109.

Proceedings of the 28th Eurasia Business and Economics Society Conference (pp. 25-40). Springer International Publishing.

112. Ravallion, M., 2010. Troubling tradeoffs in the human development index. World Bank Policy Research Working Paper.

113. Ravallion, M., 2012. Troubling tradeoffs in the human development index. Journal of development economics, 99(2), pp.201-209.

114. Rehman, A., Jingdong, L. and Hussain, I., 2015. The province-wise literacy rate in Pakistan and its impact on the economy. Pacific Science Review B: Humanities and Social Sciences, 1(3), pp.140-144.

115. Reynolds, P. D. and Curtin, R. T. ,2015. New Business Creation: An International Overview. *Springer.*

116. Rodrik, D., Subramanian, A. & Trebbi, F. (2004) 'Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development', *Journal of Economic Growth*, 9(2), pp. 131–165.

117. Roser, M., Ritchie, H. & Ortiz-Ospina, E. (2019) 'World Bank Data: A Reliable Source for Global Development Indicators', *Our World in Data*. Available at: ourworldindata.org.

118. Sala-i-Martin, X.X. and Barro, R.J., 1995. Technological diffusion, convergence, and growth (No. 735). Center discussion paper.

119. Sanyang, S.E. and Huang, W.C., 2010. Entrepreneurship and economic development: The EMPRETEC showcase. International Entrepreneurship and Management Journal, 6, pp.317-329

120. Saurabh, S., Sarkar, S. and Pandey, D.K., 2013. Female literacy rate is a better predictor of birth rate and infant mortality rate in India. Journal of family medicine and primary care, 2(4), p.349.

121. Sayed, O. and Slimane, S.B., 2014. An appraisal of the determinants of entrepreneurship in developing countries: The case of the Middle East, North Africa and selected Gulf Cooperation Council nations. African Journal of Social Sciences, 4(4), pp.63-74.

122. Schäfer, S. and Kuebart, A., 2023. A typology of trans-local knowledge circulation between entrepreneurial ecosystems. In: Handbook on Entrepreneurial Ecosystems. Cheltenham: Edward Elgar Publishing, pp.221–240.

123. Semykina, A. and Wooldridge, J.M., 2010. Estimating panel data models in the presence of endogeneity and selection. *Journal of Econometrics*, *157*(2), pp.375-380

124. Sergi, B.S., Popkova, E.G., Bogoviz, A.V. and Ragulina, J.V., 2019. Entrepreneurship and economic growth: the experience of developed and developing countries. In Entrepreneurship and Development in the 21st Century (pp. 3-32). Emerald publishing limited.

125. Shah, S., 2016. Determinants of human development index: A cross-country empirical analysis.

126. Sinha, J.K., 2023. Dynamics of Investment, Economic Growth, and Employment in Contemporary India: Analyzing Patterns and Future Potential. *Politi Sci Int*, *1*(1), pp.52-60

127. Stel, A.V., Carree, M. and Thurik, R., 2005. The effect of entrepreneurial activity on national economic growth. Small business economics, 24, pp.311-321.

128. Stephan, U., Hart, M. & Drews, C. (2019) 'Exploring the Relationship Between Economic Inequality, Entrepreneurship, and Social Context', *Small Business Economics*, 52(4), pp. 765–789.

129. Stock, J. H. & Watson, M. W. (2015) *Introduction to Econometrics*. Pearson Education.

130. Stoica, O., Roman, A. and Rusu, V.D., 2020. The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. Sustainability, 12(3), p.1186.

131. Taiwo, M.A., Ayodeji, A.M. and Yusuf, B.A., 2012. Impact of small and medium enterprises on economic growth and development. American journal of business and management, 1(1), pp.18-22.

132. Terza, C.G., 2020. TOTAL ENTREPRENEURIAL ACTIVITY AND ECONOMIC GROWTH. Journal of Public Administration, Finance and Law, (17), pp.485-490.

133. Tonoyan, V., Strohmeyer, R., Habib, M., and Perlitz, M., 2010. Corruption and entrepreneurship: How formal and informal institutions shape small firm behavior in transition and mature market economies. Entrepreneurship theory and practice, 34(5), pp.803-832.

134. Urbano, D. and Aparicio, S., 2016. Entrepreneurship capital types and economic growth: International evidence. Technological forecasting and social change, 102, pp.34-

135. Urbano, D., Aparicio, S., and Audretsch, D., 2019. Twenty-five years of research on institutions, entrepreneurship, and economic growth: What has been learned?. Small business economics, 53, pp.21-49.

136. Urbano, D., Audretsch, D., Aparicio, S., and Noguera, M., 2020. Does entrepreneurial activity matter for economic growth in developing countries? The role of the institutional environment. International Entrepreneurship and Management Journal, 16, pp.10651099.

137. Valdez, M.E. and Richardson, J., 2013. Institutional determinants of macro–level entrepreneurship. Entrepreneurship theory and practice, 37(5), pp.1149-1175.

138. Wakkee, I., Hoestenberghe, K. and Mwasalwiba, E., 2018. Capability, social capital and opportunity-driven graduate entrepreneurship in Tanzania. Journal of Small Business and Enterprise Development, 25(4), pp.554-572.

139. Wang, Y., 2016. What are the biggest obstacles to growth of SMEs in developing countries?–An empirical evidence from an enterprise survey. Borsa Istanbul Review, 16(3), pp.167-176.

140. Wei, W. and Duan, J., 2023. How do entrepreneurial activities at different levels promote business growth: a review and research agenda. Chinese Management Studies.

141. Williams, N. and Vorley, T., 2017. Institutional asymmetry: How formal and informal institutions affect entrepreneurship in Europe and beyond. Journal of Business Research, 73, pp.83–94.

142. Wong, P.K., Ho, Y.P. and Autio, E., 2005. Entrepreneurship, innovation and economic growth: Evidence from GEM data. Small business economics, 24, pp.335-350.

143. Wooldridge, J. M. (2015) *Introductory Econometrics: A Modern Approach*. Cengage Learning.

144. Yusuf, N. and Albanawi, N.I., 2016. The role of entrepreneurship in economic development in Saudi Arabia.

Chapter 3: Social Capital, Entrepreneurship and Economic Development in Developing Economies

3.1 Introduction

Social capital plays a significant role in driving economic growth in developing countries by facilitating entrepreneurship, promoting information sharing, and fostering collaboration. The relationship between social capital and economic growth is moderated by innovative entrepreneurship, which leverages the resources, knowledge, and cooperation facilitated by social capital to drive productivity improvements and create economic value. By reinforcing the impact of social capital, opportunity-driven entrepreneurship becomes a key mechanism through which social capital translates into sustained economic growth in developing countries.

Social capital has become a focal point for both academics and policymakers, with scholars recognizing its significance in elucidating economic growth variations across regions. Policymaking institutions like the World Bank, OECD, and the European Union are actively investigating ways to employ social capital as a strategic tool to foster growth. Nevertheless, implementing the social capital mechanisms of one region in others poses practical challenges. In the absence of a thorough comprehension of how social capital functions, initiatives seeking to harness it for economic growth across diverse regions are likely to be ineffective.

In broad terms, social capital encompasses various aspects of social structure and institutionalized relationships, including trust, networks, and norms that facilitate cooperative actions (Serageldin and Grootaert, 2017). Scholars commonly delineate two primary forms of social capital: bonding and bridging. Bonding social capital entails closed networks that interconnect similar or homogenous groups while bridging social capital involves open networks that establish connections among diverse or heterogeneous groups (Putnam, 1995;

Coleman, 1988; Claridge, 2018; Lancee, 2010; Sánchez-Arrieta et al, 2021). The balance between bonding and bridging social capital can either impede or enhance the alignment and synergy within economic activities, thereby contributing to disparate economic growth patterns across regions (Claridge, 2018).

In the academic sphere, extensive research has explored and documented the significance of social capital in fostering economic growth. Renowned scholars such as Robert Putnam, in his seminal work "Bowling Alone," have provided valuable insights into how declining social capital, often measured by reduced civic engagement and trust, can impede economic progress. This body of research underscores the pivotal role played by social trust and networks in driving economic advancement (Putnam, 2015).

Moreover, economists like Edward Glaeser (2009) and Bruce Sacerdote (2002) have contributed to the understanding of the intricate connections between social capital and entrepreneurship. Their studies emphasize how regions with higher levels of social capital tend to nurture more prosperous startups. This phenomenon is attributed to the capacity of trust and social connections to alleviate barriers associated with resource acquisition and funding access for aspiring entrepreneurs (Weiss,2019).

From a policy perspective, the World Bank's "World Development Report 2015: Mind, Society, and Behavior" underscores the critical role of social capital in enhancing economic outcomes, particularly in developing countries. The report advocates for policies aimed at strengthening social networks and promoting cooperation, recognizing their potential to underpin sustainable economic progress (Klein,2017). Similarly, the European Union's cohesion policy emphasizes the importance of bridging social capital to alleviate regional disparities and foster economic growth. This policy framework places strategic investments in education, training, and cross-sectoral collaboration at the forefront, aiming to leverage bridging social capital as a catalyst for economic development in less-developed regions (Ferragina, 2012; Crescenzi and Giua , 2020).

Two real-world examples further illustrate the impact of social capital on economic destinies. Silicon Valley, known as a global technology hub, thrives on its ecosystem of open and diverse networks—exemplifying bridging social capital. In this region, tech startups, venture capitalists, universities, and research institutions coexist, fostering a culture of knowledge

sharing, innovation, and entrepreneurship, which drives continuous growth and prominence in the tech industry (Audretsch et al, 2011).

In contrast, the Rust Belt region of the USA historically centred on manufacturing industries, faces economic challenges attributed to an overreliance on bonding social capital. Closed networks within specific industries limit diversification and hinder adaptation to economic changes, resulting in job losses and population decline. This stark contrast between Silicon Valley and the Rust Belt underscores the vital role that the balance between bonding and bridging social capital plays in shaping regional economic destinies (Putnam,1994).

The relationship between social capital and economic growth is complex and influenced by the interplay of bonding and bridging social capital. By understanding these dynamics, policymakers can design more effective strategies to harness social capital and promote inclusive economic growth The nexus between social capital and economic growth has garnered significant attention in academic discourse, policy formulation, and industry insights due to its intricate and multifaceted nature. Social capital, defined as the network of social relationships and the associated norms and values that facilitate cooperation and trust within a society, has emerged as a pivotal factor influencing economic development. Understanding this complex relationship is crucial for policymakers seeking to devise effective strategies aimed at harnessing social capital's potential to promote inclusive economic growth (Iyer et al, 2005; Prasetyo and Kistanti, 2020).

The significance of the topic lies in the acknowledgement that economic growth extends beyond traditional economic factors and is intertwined with the social fabric of society, especially in developing countries as acknowledged by Professor Friedman (2017). Social capital can act as a catalyst or constraint, shaping the trajectory of economic development. Robust social networks can enhance information diffusion, facilitate entrepreneurship, and foster innovation, thus bolstering economic growth (Forte et al, 2015). Conversely, a lack of social cohesion can hinder cooperation, reduce trust, and impede economic progress (Oh et al, 2014).

Despite the growing body of research on this subject, several debates and unresolved questions persist. In the academic discourse on social capital and economic growth, an ongoing debate revolves around four key dimensions. Firstly, scholars discuss the causal

direction: Does social capital drive economic development, or does economic growth enhance social capital? (Stam et al, 2014). Secondly, the balance between bonding and bridging social capital is scrutinized, with considerations of how it affects economic growth (Van Staveren and Knorringa, 2007). Additionally, the potential dark side of social capital is acknowledged, emphasizing the need for equitable benefit distribution (Claridge, 2018). Lastly, contextual factors are recognized as pivotal, given that social capital's impact varies across cultural, historical, and institutional contexts (Gedajlovic et al, 2013). These debates offer insights into the dynamic, context-dependent nature of the relationship.

3.1.1 Research Rationale

Social capital plays a pivotal role in driving economic growth, especially in developing countries. This research seeks to explore and elucidate the relationship between social capital, opportunity-driven entrepreneurship, and economic growth. The research is grounded in the growing recognition of social capital as a potent catalyst for economic development (Anokhov, 2019; Pio, 2020; Suryahadi et al, 2020; Oliver Huidobro et al 2022; Mohammadzade et al, 2021). It fosters opportunity-driven entrepreneurship by providing essential resources, networks, and trust, ultimately contributing to economic growth (Doh and Zolnik,2011; Lyu, 2023). Opportunity-driven entrepreneurship is a key driver of economic growth (Stoica et al, 2020). Social capital empowers and amplifies the impact of these entrepreneurial activities by facilitating access to knowledge, resources, and collaboration, leading to enhanced productivity and economic value creation (Anokhov, 2019). International organizations and policymakers increasingly acknowledge the importance of social capital in fostering economic growth (Stoica et al, 2020). This research provides valuable insights into how social capital can be harnessed directly to drive entrepreneurial activities and promote sustained economic growth in diverse developing contexts. The research will encompass a selection of developing countries from different regions, ensuring diversity in economic, cultural, and social contexts. Various dimensions of social capital, such as network size, strong and weak ties, network diversity, generalized trust, association membership, and civic norms, will be explored. The study will address three primary research questions related to how social capital directly facilitates opportunity-driven entrepreneurship, its role in translating entrepreneurship into economic growth, and the differential impact of bonding and bridging social capital in developing nations. This research seeks to fill a significant gap in the literature by investigating

the specific mechanisms through which social capital directly fosters opportunity-driven entrepreneurship and its impact on economic growth within developing countries.

Proving the relationship between the indicators (strong/weak ties, close trust, generalized trust, association membership, and civic norms) and social capital involves demonstrating their theoretical and empirical associations with social capital.

3.1.2 Research questions

1. Investigating how social capital facilitates opportunity-driven entrepreneurship in diverse developing economies.

   This research question is about the role of social connections and relationships (social capital) in supporting entrepreneurs who start businesses because they see opportunities (opportunity-driven entrepreneurship). The focus is on understanding how these social ties make it easier for people to engage in entrepreneurial activities.

2. Exploring the role social capital plays in translating opportunity-driven entrepreneurship into economic growth in developing countries.

   This research question seeks to understand how social capital contributes to turning entrepreneurial opportunities into actual economic growth in developing countries. It focuses on the process by which the social networks of entrepreneurs help translate their business initiatives into positive economic outcomes. By exploring this relationship, the study aims to shed light on the mechanisms through which social capital influences the transformation of entrepreneurial endeavours into economic growth, with a specific emphasis on the context of developing nations.

3. Analysing the impact of bonding and bridging social capital on opportunity-driven entrepreneurship in the context of developing nations.

   This research question is delving into the effects of two types of social connections, bonding, and bridging social capital, on entrepreneurship driven by opportunities in developing countries. Bonding social capital involves strong

ties within a specific group, like family or close friends, while bridging social capital pertains to connections across diverse groups or communities. The inquiry aims to analyse how these distinct types of social relationships influence the pursuit of entrepreneurial opportunities in the specific context of developing nations. By examining both close-knit connections and broader social networks, the study seeks to uncover insights into how different forms of social capital impact entrepreneurial activity in these regions.

4. Analyzing how the impact of bonding and bridging social capital on economic growth differ in the context of developing nations.

   This research question is focused on comparing and understanding how the effects of two types of social connections, bonding and bridging social capital, differ in their impact on economic growth within developing nations. The study aims to analyze and delineate the distinct ways in which these two forms of social capital contribute to or influence economic growth in the specific context of developing countries. By investigating these differences, the research seeks to provide insights into the nuanced roles of social relationships in fostering economic development in diverse communities within developing nations.

3.2 Literature Review

Social capital theory has become a prominent framework for understanding the dynamics of human relationships, and networks, and their implications for various aspects of society, including entrepreneurship and economic growth. This literature review delves into the multifaceted concept of social capital, examining its theoretical underpinnings, measurement

approaches, and the distinction between bonding and bridging social capital. It also explores the intricate relationship between social capital, entrepreneurship, and economic growth, particularly emphasizing the role of opportunity-driven entrepreneurship.

The review begins by providing a comprehensive overview of social capital theory, tracing its origins from Granovetter's network approach to contemporary interpretations by scholars like Portes. It highlights the conceptualization of both positive and negative forms of social capital and the importance of differentiating between bonding and bridging social capital. This theoretical foundation sets the stage for understanding the complexities of social capital's impact on various outcomes.

The subsequent section of the review delves into the relationship between social capital, entrepreneurship, and economic growth. It explores how social networks and connections influence entrepreneurial activities, particularly in the context of opportunity-driven entrepreneurship. The review highlights the role of social capital in mitigating the uncertainty associated with entrepreneurial activity, facilitating access to resources, and fostering innovation. Additionally, it delves into the role of social capital in developing countries, where networking and personal trust often become crucial during transitional periods and where entrepreneurship can thrive even without innovation.

Throughout the literature review, it becomes apparent that social capital is not a one-sizefits-all concept. Its impact on entrepreneurship and economic growth varies depending on the balance between bonding and bridging social capital, as well as other contextual factors. The review also highlights the importance of considering both positive and negative aspects of social capital in understanding its implications.

This literature review provides a comprehensive exploration of the intricate relationship between social capital, entrepreneurship, and economic growth. It sheds light on the various dimensions of social capital theory and its practical implications for fostering opportunitydriven entrepreneurship in diverse contexts.

3.2.1 Economic Development Theory

The neoclassical approach stands as a prominently influential theoretical framework concerning economic growth. In traditional neoclassical growth models, the pivotal drivers of economic growth are perceived to be investments in physical capital and labour. This framework predominantly incorporates models rooted in Solow's (1957) approach, which recognizes the occurrence of diminishing returns in relation to both capital and labour. Neoclassical perspectives, foundational to this framework, involve key assumptions such as perfect competition and information, the absence of externalities, positive and diminishing returns of the marginal product of capital, homogeneous availability of technology, and seamless factor mobility across regions (Hunt, 2000). The underlying growth theory, based on a fundamental Cobb-Douglas production function, asserts a reduction in the marginal product of both capital and labour, indicating the presence of diminishing returns. It emphasizes augmentations in the stock of physical capital and labour as primary catalysts for fostering economic growth.

Within the neoclassical models delineating economic growth, there exists an inherent limitation: a lack of comprehensive incorporation of the role played by technology and novel ideas in driving economic progress (Lipsey et al, 2005; Vlados and Chatzinikolaou, 2024). These models presume technological advancement to occur autonomously, almost fortuitously, without direct ties to economic activities. They posit technological progress as an external factor, independent of influences stemming from investment patterns or innovation within the economy (Sredojević et al,2016). Consequently, these models fail to provide a holistic explanation for the varied growth rates observed across different countries or regions. Their primary focus centres on tangible assets such as infrastructure and machinery, overlooking the pivotal role of knowledge and emergent technologies in stimulating economic growth. The discrepancy between the anticipated economic growth according to these models and the actual observed growth rates is encapsulated by the "Solow Residual." (Cvetanović et al, 2019) This discrepancy underscores the significance of knowledge and technology as catalysts for economic expansion. Consequently, some economists favour alternative approaches, such as those embedded in endogenous growth perspectives, which explicitly consider how knowledge creation, innovation, and technological advancements profoundly influence and drive economic growth (Petrakis et al, 2020)

The endogenous growth perspectives place significant emphasis on the critical role of knowledge and technological advancements in fostering economic expansion (Acs and

Sanders, 2021). Diverging from earlier theories, these contemporary concepts propose that knowledge and technology are not external forces but rather internally generated within the economy itself. Within this novel framework, knowledge is perceived as a distinct asset that does not adhere to conventional patterns of diminishing returns observed in physical assets like buildings or machinery. Unlike traditional theories, which suggest that the utility of assets decreases with increased usage, knowledge, in this context, retains its efficacy without depletion (Lewis,2013). Instead, its application continually contributes to economic growth. This approach posits that knowledge is not confined to singular ownership but can disseminate and benefit multiple entities without diminishment, characterizing it as a nonrivalrous and non-excludable resource. This diverges significantly from earlier theories that did not extensively consider the broad availability and universal benefits of knowledge. Although recent iterations of these growth theories acknowledge instances where knowledge, particularly in patent or trademark forms, might have limited or exclusive accessibility to specific entities, the central premise remains unchanged (Onyimadu, 2015). It underscores that knowledge serves as a pivotal driver for sustained and enduring economic growth by continually contributing without experiencing diminishing effects (Tang et al, 2016).

However, the endogenous growth theory encounters limitations in elucidating the mechanisms behind knowledge spillovers. It operates under the assumption that these spillovers are costless, effortlessly occurring, and not limited by geographical boundaries (Delmar et al, 2011; Akcigit and Ates, 2021). Nonetheless, this assumption poses challenges with counteracting research indicating that knowledge spillovers do entail costs, exhibit geographical constraints and do not occur automatically (Acs et al., 2013). Another significant issue lies in the endogenous growth theory's focus on associating productivity enhancements with the growth in the "stock" of knowledge, which is portrayed as a productive factor in the form of human capital. However, the theory predominantly considers the quantity rather than the quality of labour within its model. This oversight neglects to account for the nuanced aspects related to the quality of labour, posing a limitation in comprehensively understanding the dynamics driving productivity improvements within the framework of endogenous growth theory.

The identified constraints inherent in the endogenous growth theory underscore the imperative to broaden our analytical scope beyond the conventional emphasis placed solely on the accrual of knowledge and human capital (Peretto, 2018). The acknowledgement of

costs, geographical constraints, and the non-automatic nature of knowledge spillovers highlights the complexities involved in fostering innovation and productivity growth (Andrews and Criscuolo, 2013). Moreover, the theory's focus on quantity rather than the quality of labour overlooks crucial elements that contribute to enhancing productivity (Qian, 2018).

Considering these constraints, the importance of integrating social capital theory into economic frameworks becomes evident (Moreno, 2018). Social capital theory provides a sophisticated framework to comprehend the interplay between social networks, interpersonal connections, and trust among entities, serving as catalysts for the exchange of knowledge, diffusion of innovation, and consequent economic progress (Sequeira and Ferreira-Lopes, 2011). By incorporating social capital into the analysis, we can better comprehend the mechanisms through which networks and relationships generate valuable resources, information, and opportunities that contribute to economic growth (Moreno, 2018).

The discourse surrounding these limitations within the context of endogenous growth theory substantiates the compelling necessity to incorporate social capital theory into economic models. Such an integration allows for a more comprehensive and nuanced depiction of the intricate dynamics governing innovation, productivity, and overall economic advancement. It explicitly acknowledges the pivotal role played by interconnected social structures in shaping these fundamental economic outcomes.

3.2.2 Social Capital Theory

This paper employs the social capital theory as its primary theoretical framework, specifically focusing on the concepts of bonding and bridging, as described by Bhandari and Yasunobu (2009). Social capital is a term with conceptual ambiguity, prompting researchers to adopt various measurement approaches. The differentiation between bonding and bridging social capital is rooted in the influential research of Mark Granovetter (Granovetter 1973, 2000). This aspect of social capital theory is commonly known as the network approach and is predominantly adopted by researchers exploring social capital from an economic perspective. The theoretical lineage within this framework can be traced back from James Coleman (1988) to Ronald Burt (2000), Nan Lin (2017), and Alejandro Portes (1998).

In the past decades, there has been a growing recognition of the potential to differentiate between predominantly positive and negative forms of social capital, even though direct measurement remains elusive and is often inferred through various indicators or proxies (Putnam, 1994; Sandefur and Laumann,2009; Portes, 2014; Portes, 2024). Leveraging extensively from Bourdieu's theories, sociologist Portes (1998) has formulated the notion of positive social capital as an actual and potential asset accessible to individuals, contributing to positive socioeconomic outcomes. However, it is important to acknowledge that social capital can also have negative manifestations, wherein trust and solidarity within a group may lead to harmful consequences for society, while still serving the interests of the specific group. Portes (1998) contends that within any society, there exist both positive and negative forms of social capital, and these can coexist within the same network.

Extensive empirical research on social capital has emphasized the positive outcomes resulting from high levels of interpersonal trust and social networks (Halpern, 2005; Koniordos, 2017; Villalonga-Olives and Kawachi, 2015; Algan, 2018; Portes and Vickstrom, 2015; Berraies,2020; Umar et al, 2023). This abundance of affirmative findings has led to a prevailing belief in the normative positivity of social capital. For instance, tightly knit groups may indeed provide various benefits to their members, but they might simultaneously restrict access and deny these advantages to non-members (Portes, 1998; Portes and Vickstrom, 2015; Baycan and Öner, 2023). Empirical instances of predominantly positive social capital include the Vietnamese community in New Orleans, where mutual vigilance fosters a supportive environment that deters children from skipping school or engaging in gang activities (Aldrich,2017). Similarly, Asiatic immigrant mothers in the USA display positive social capital by actively participating in their children's education, providing them with academic support and resources (Zhou, 2005).

However, theoretical contributions have long recognized that social capital does not necessarily guarantee positive effects on society (Bourdieu, 1985; Coleman, 1988; DeFilippis, 2001; Foley & Edwards, 1998; Olson, 1982; Zhang et al, 2021; Gannon and Roberts, 2020; Agger and Jensen, 2015; Chen and Zhou, 2017; Baycan and Öner, 2023). Instances of predominantly negative social capital involve situations where enforced solidarity perpetuates harmful practices and restricts individuals from pursuing social upward mobility or associating with outsiders. A case in point is the Puerto Rican drug dealers in New York, who tightly maintain their connections within the drug milieu, making it unacceptable to engage with the

wider society or seek social advancement outside of their group (ReynosoVallejo, 2003). Thus, Portes asserts that social capital has dual implications, as social ties can exert control over deviant behaviour and grant privileged access to resources, while simultaneously limiting individual freedoms and impeding outsiders' access to those resources due to particularistic preferences (Portes, 1998; Portes, 2000; Portes and Landolt, 1996; Negura and Asiminei, 2021; Chuong and Chi, 2023).

The willingness to explore the measurement of social capital resources can be attributed to economists' interest in considering social capital as a novel form of capital. This recognition is evident in the works of economists such as Dasgupta and Serageldin (2000), Spellerberg (2001), Robison et al. (2002), Beugelsdijk and Smulders (2009), Fine (2010), Schuller and Field (2013), Biornskov (2012), Gannon and Roberts (2020) and Muringani et al (2021). The distinction between open networks that include diverse individuals and tightly knit networks with exclusive membership, known as bridging and bonding social capital respectively (Fukuyama, 2000; Putnam, 2000), has facilitated the economists' efforts to quantify and operationalize these two types of capital as positive or negative externalities (Biornskov,2012).

In addition, in response to the drawbacks of social capital, scholars have recognized that the simplistic "more is better" approach may not hold true, and social capital can manifest in different forms (Lancee, 2010; Kyne and Aldrich, 2020; Sorensen, 2016). The differentiation between open networks that include diverse people and tightly knit networks that exclude others, known as bridging and bonding social capital (Fukuyama, 1999; Putnam, 2000), has made it simpler for economists to measure and quantify these two types of capital as either positive or negative effects on society. However, this approach comes with the risk of oversimplification, which researchers like Beugelsdijk and Smulders (2003), Mendoza-Botelho (2013) and Baycan and Öner (2023) have pointed out. Therefore, the present study aims to analyse the social capital indicators separately to have an in-depth understanding and avoid the risk of oversimplification.

Putnam (1995), defines social capital as the characteristics of social organization, including networks, norms, and social trust, which facilitate coordination and cooperation for mutual benefit. Putnam (1995) distinguishes between two types of social capital: bonding and bridging. Bonding social capital encompasses the values and networks that link individuals within homogeneous groups who share common characteristics, such as ethnicity, age,

gender, and social class. Examples of bonding social capital include active involvement in community organizations and the cultivation of trust among neighbors (Putnam and Goss, 2002; Collins et al, 2014; Li et al, 2022).

There are two prevailing viewpoints in contemporary literature regarding the functioning of bonding social capital networks. The initial perspective characterizes bonding social capital networks as akin to "Olson-type groups" or "distributional coalitions" (Antonieti and Boschma, 2018; Muringani et al, 2021; Crescenzi et al, 2015; Corttinovis et al., 2017; Rodriguez-Pose and Storper, 2007). This approach builds upon the insights of Olson (1982), who posited that interest groups generate benefits for their members but, in doing so, place disproportionate burdens on society at large. Consequently, despite their advantages in terms of articulating interests and aligning preferences, their overall impact is deemed negative on the broader society. From this standpoint, strong bonding within a specific locality can lead to detrimental outcomes such as rent-seeking behaviour, insider-outsider disparities, clientelism, and nepotistic practices, all of which hinder economic advancement (Crescenzi et al., 2013; Farole et al., 2007; Storper, 2013).

The second viewpoint asserts that bonding social capital works in synergy with bridging social capital, resulting in favourable social and economic consequences (Portes, 1998; Storper, 2013; Woolcock, 2010; Cici et al, 2020; Markowska-Przybyła, 2020). It contends that a certain level of social control, the imposition of sanctions, and the supportive aspects of bonding social capital are essential for the cultivation of bridging social capital, ultimately leading to more extensive socio-economic achievements.

Empirical studies exploring the impact of bonding social capital have yielded inconclusive results. Studies focusing on economic growth (Beugelsdijik and Smulders, 2009; Hoyman et al., 2016), innovation (Crescenzi et al, 2015), and regional diversification (Cortinovis et al., 2017) generally indicate a negative relationship but demonstrate a robust and statistically significant impact. In summary, these results present a mixed picture regarding whether bonding social capital exerts a detrimental influence on economic growth.

On the other hand, bridging social capital refers to the value and social networks that connect individuals from diverse groups. An example of bridging social capital is the general trust placed in strangers (Patulny and Lind,2007; Chu et al, 2018). One form is bonding social capital,

which exists within tightly connected groups with strong emotional ties among members, leading to increased social support and solidarity within the group. This bonding social capital is akin to Coleman's concept of closed networks that encourage trust and norm development (Coleman, 1988). In contrast, there is bridging social capital, which links people or groups that differ from each other and facilitates resource acquisition. Unlike bonding social capital, which involves networks of similar individuals with similar resources, bridging social capital plays a critical role in acquiring a diverse range of resources and enhancing the flow of information between different groups (Bhandari and Yasunobu, 2009; Wulandhari et al 2022).

Bridging social capital pertains to the presence of open networks that establish connections among diverse groups (Kyne and Aldrich, 2020; Antonietti and Boschma, 2018; Beugelsdijik and Smulders, 2009; Boschma, 2005; Cortinovis et al., 2017; Crescenzi and Gagliardi, 2015; Rodríguez-Pose and Storper, 2006; Storper, 2013). These networks are sometimes referred to as "Putnam groups," drawing inspiration from Putnam's argument (1993) that involvement in civic or voluntary associations, such as educational and cultural groups, leads to positive social and economic outcomes. Bridging social capital operates through various mechanisms, either directly or indirectly, to promote economic growth (Bjornskov, 2006; Muringani et al, 2021). The connections forged between diverse groups enhance the diversity of knowledge sources (Rodríguez-Pose and von Berlepsch, 2019). This, in turn, facilitates creativity (Florida, 2003), fosters innovation (Crescenzi et al, 2015), encourages firm entry (Malecki, 2012), and fuels entrepreneurship (Feldman et al., 2019).

Bridging social capital is generally regarded as having positive effects on socio-economic outcomes (Gannon and Roberts,2020; Cici et al, 2020; Akcomak, 2009; Beugelsdijk and Smulders, 2009; Farole et al., 2011; Patulny and Lin, 2007; Putnam, 2002; Rodríguez-Pose and Storper, 2006; Sabatini, 2008; Storper, 2013; Van Staveren and Knoringa, 2006; Westlund and Larson, 2016). Although bridging social capital delivers benefits both at the individual and collective levels, it entails substantial costs in terms of development and maintenance.

By distinguishing between bonding and bridging social capital, researchers can better understand the costs associated with social capital, especially the potential negative consequences of being heavily enmeshed in dense, closed networks. Many scholars agree that bonding (dense, homogeneous networks) and bridging (weaker, heterogeneous networks) can lead to different outcomes (Sørensen, 2016; Pillai et al, 2017; Claridge, 2018).

Some negative outcomes of social capital may result from an excessive focus on bonding and insufficient emphasis on bridging (Eklinder-Frick,2011). Bridging social capital can alleviate these costs by providing connections beyond a specific group, granting individuals greater access to resources and reducing dependency (Woolcock, 1998; Putnam, 2000; Zheng, 2010; Gannon and Roberts,2020; Cici et al, 2020)

Scholars have notably differentiated between homogeneous (bonding) and heterogeneous (bridging) networks, positing that the latter are more inclined to yield positive externalities compared to the former (Sorensen, 2016; Pillai et al, 2017; Claridge, 2018). However, despite this theoretical distinction, the empirical operationalization of these concepts has not been fully developed thus far. The notion of bridging being more likely to generate positive externalities than bonding is prominent in the literature (Putnam, 2002). Putnam draws a pertinent distinction between "getting by" and "getting ahead," indicating that bonding social capital supports trust and reciprocity within closed networks, allowing individuals to navigate daily life (Erlandsen and Svendsen, 2023). On the other hand, getting ahead is facilitated through bridging social capital, represented by crosscutting ties that foster interactions with dissimilar individuals and contribute to the development of generalized trust (Hooghe, 2007; Ateca-Amestoy et al, 2014). Research on intergroup relations or interracial attitudes supports this proposition (Abrams et al, 2005). Intensely focused social connections within a specific group may foster in-group bias, leading to increased trust and cooperation within the group but also creating out-group hostility and aversion towards other groups (Eklinder-Frick et al,2011).

Nevertheless, the distinction between bonding and bridging social capital has been criticized as problematic. One particular concern is the tendency to attribute solely negative attributes to bonding social capital and solely positive attributes to bridging social capital (Gannon and Roberts, 2020; Williams, 2020; Patulny and Svendsen,2007). In addition, this approach runs the risk of oversimplification and reductionism, as social capital is a complex and multifaceted concept (Beugelsdijk and Smulders, 2003). Some researchers argue that the optimal effects of social capital are achieved when both bonding and bridging forms coexist (Warren et al., 2001; Stone & Hughes, 2002). This suggests that a balanced combination of both forms of social capital is beneficial in various contexts. Claridge (2018) argues that this theory oversimplifies the reality. He examined the situation more closely and found that while bonding social capital

does have negative consequences due to its tightly knit and exclusive nature, it is also an essential source of social support for individuals like yourself. The author asserts that the balance between bonding and bridging social capital is significant. He argues that neither form of social capital is inherently negative; instead, their impact depends on the appropriate balance and contextual factors that are relevant to you and your situation. Thus, it is crucial to develop a nuanced understanding of the interplay between bonding and bridging social capital to comprehend their implications in different situations and contexts.

Although the literature commonly portrays bonding and bridging social capital as opposing concepts, the expectation that regions characterized by elevated levels of bridging social capital would demonstrate diminished levels of bonding social capital or the other way around is not consistently supported (Burcher and Mayer, 2018). Contrary to this assumption, regions can display either high or low levels of both types of social capital. These two forms coexist, with regions fostering robust internal networks within specific groups also showing heightened bridging across diverse groups (Rodriguez-Pose and Storper, 2006).

Moreover, the effects of bridging social capital can be influenced by the extent of bonding social capital in a particular place (Tahlyan et al, 2022; Alfano, 2022; Halpern, 2005; RodriguezPose and Storper, 2006; Storper, 2013; Woolcock, 2010). Thus, these two types of social capital interact and operate along a continuum ranging from low to high social capital, with their unique combinations yielding distinct outcomes. As Halpern (2005) and Rodriguez-Pose and Storper (2006) suggest elevated levels of both bonding and bridging social capital contribute to improved socio-economic outcomes. In contrast, a scenario of high bridging and low bonding social capital may lead to ‘anomie,' which is defined as the absence of shared expectations and sanctions. Conversely, low bridging and high bonding social capital may lead to 'amoral familism,' while low levels of both can result in 'amoral individualism.' (Alfano, 2022)

The relationship between social capital and trust, articulated by Putnam (1993), is deeply intertwined. Expanding on Fukuyama's (1995) notion of a narrow and wide radius of trust, Patulny (2009) introduces the distinction between bonding and bridging social capital. Bonding social capital, characterized by a confined radius, facilitates specific exchanges and interactions while fostering social control and solidarity within defined limits. Bridging social capital involves networking across diverse groups, often requiring a certain level of bonding

for its establishment. However, an imbalance in the distribution of these two forms of social capital, especially an overemphasis on bonding social capital, can yield negative consequences. Despite its significance, the dynamic interaction between bonding and bridging social capital remains a relatively unexplored area in developing economies.

In general, empirical investigations into various aspects such as economic growth (Xie et al, 2021), innovation (Crescenzi et al, 2015), regional diversification (Cortinovis et al., 2017), and income inequality (Hoyman et al., 2016) have consistently revealed a strong and positive connection between bridging social capital and these outcomes. However, when it comes to exploring the relationship between bonding and bridging social capital, the existing research has produced mixed findings, and the consensus remains elusive.

The debate surrounding the relationship between bonding and bridging social capital has profound implications for entrepreneurship and economic growth. Bonding social capital refers to connections within homogenous groups, fostering trust and cooperation among individuals with similar backgrounds or identities. Bridging social capital, on the other hand, involves connections across diverse groups, facilitating access to novel information and resources.

Both forms of social capital are essential for entrepreneurship. Bonding social ties aids in quick resource exchange while bridging connections expose entrepreneurs to fresh ideas and markets. However, an excessive focus on bonding alone might limit exposure to external influences crucial for innovation and growth.

In the upcoming section, the literature review will delve deeper into the ongoing debate on the interplay between bonding and bridging social capital in relation to entrepreneurship and economic growth. It will explore the existing research, highlighting the inconclusive nature of this relationship while emphasizing its undeniable significance. The focus will be on understanding how these forms of social capital interact, complement each other, and impact entrepreneurial activities and overall economic development.

3.2.3 Relationship between Social Capital, Entrepreneurship, and Economic Growth

Social capital has been a subject of investigation across various levels of analysis, encompassing the individual (Borgatti et al, 1998), organizational (Nahapiet & Ghoshal, 1998), and societal (Putnam, 1993) dimensions. Within the social capital discourse, a core premise asserts that networks of relationships form a basis that either comprises or results in valuable resources that can be harnessed for the benefit of both individuals and collectives.

Economists have shown a longstanding interest in identifying the factors that underlie variations in economic performance among different countries. Among these factors, the concept of social capital garnered significant attention after Robert Putnam's influential work "Making Democracy Work" in 1993. This notion has been explored by various researchers, including Knack and Keefer (1997), La Porta et al. (1997), Narayan and Pritchett (1999), Lindbeck et al. (1999), Zak and Knack (2001), Glaeser et al. (2002), Akcomak and ter Weel (2009), and Dearmon and Grier (2009); Muntaner et al (2020).

Recent advancements in economic sociology have underscored the pivotal role of social networks in shaping economic interactions (Chetty et al, 2022; Felicio et al, 2012; Bahmani et al, 2012; Biornskov, 2012; Engbers et al, 2013; Kramin et at, 2016; Forte et al, 2015). Individuals are commonly enmeshed in networks of social connections, and the performance of individuals or businesses can be more comprehensively grasped by analysing the intricate web of relationships in which they are situated (Gulati et al, 2000; Felicio et al, 2012). These networks furnish conduits for the exchange of valuable resources and information. Within this context, individuals leverage their network connections to seek advice and gain entry to critical resources necessary for addressing various challenges inherent to their business endeavours. In essence, an individual's capacity to generate value and attain personal objectives is influenced by their network relationships, constituting a significant facet of social capital (Khazami, 2020; Beugelsdijk and Smulders, 2009; Felicio et al, 2012; Engbers et al, 2013).

In Coleman's framework from 1988, social capital is seen as an integral component of human capital that enables members of a particular society to cultivate trust, collaborate in establishing new groups and associations, and adhere to shared norms. Putnam (1993) goes a step further by including civic norms as a component of social capital, defining it as "the features of social life – networks, norms, and trust – that enable participants to act together

more effectively to pursue shared interests." (Pg. 23). The elements of trust, norms, and networks play a role in enhancing the efficiency of economic transactions by minimizing uncertainties and imbalances in information among transaction participants. They also facilitate the coordination of actions for mutual gain and decrease the incentives for dishonest behaviour. Consequently, social capital is anticipated to foster economic growth.

Building upon this rationale, Knack and Keefer (1997) utilize indicators from the World Values Survey (WVS) to investigate whether trust, civic norms, and networks contribute to variations in economic growth across countries. Their findings suggest that trust and civic norms exhibit positive correlations with economic growth. While the impact of networks on growth is not definitively established in their analysis, it remains an area of exploration. In a different perspective, Narayan and Pritchett (1999) narrow their focus to social networks and their influence on household income. They uncover a positive connection between tightly-knit social networks and household income by examining Tanzanian villages in cross-sectional studies.

In a study by Engbers et al. (2013) focusing on U.S. metropolitan economic development, the impact of different forms of social capital on economic growth was investigated. The study used a technique called shift-share analysis to examine how each metropolitan area's competitive advantage in job creation was influenced by local factors and policies. They also looked at per capita income change as an economic growth indicator, while considering factors like human capital, industry mix, and job types. The key finding was that bridging social capital had a positive and significant impact on job creation but didn't significantly affect per capita income change. These findings highlight the importance of social capital for economic planners and practitioners, emphasizing the need to foster bridging social capital to boost regional competitiveness.

A substantial body of research reaffirms the conclusions drawn by Knack and Keefer (1997) regarding the favourable impact of social capital on economic growth (Pio, 2020; Muringani et al, 2021; Oliver et al, 2022; Xue et al, 2023; Glaeser et al., 2002; Beugelsdijk and van Schaik, 2005; Akcomak and ter Weel, 2009; Dearmon and Grier, 2009; Bjørnskov, 2012, Felicio et al, 2012; Bahmani et al, 2012; Biornskov, 2012; Engbers et al, 2013; Kramin er at, 2016; Forte et al, 2015). However, the precise pathways through which social capital influences economic growth remain areas of ongoing investigation. One potential avenue is the role of institutions

in mediating this relationship. For instance, La Porta et al. (1997) establish a robust positive relationship between trust and various indicators of governmental effectiveness, including the efficiency of the judicial system and the quality of bureaucracy. Drawing from Japan's data, Yamamura (2012) identifies that associations akin to those highlighted by Putnam have a positive impact on the enactment of public information disclosure ordinances by local governments.

In a study conducted by Hoyman et al. in 2016, the researchers examined how different types of social capital, such as civic associations, interest groups, and religious congregations, affect economic development in U.S. counties. They measured economic development using per capita income and income inequality. The study aimed to test the contrasting theories of Putnam and Olson, which argue for positive and negative effects of social capital on economic growth, respectively. To understand the impact better, they categorized social capital into "bridging" and "bonding" types based on how diverse and inclusive these associations were. Using regression analysis and data from various sources, including the Global Entrepreneurship Monitor. The results from the study showed that bridging organizations had a positive influence on per capita income, while Olson groups had a negative impact on income inequality.

Knack and Keefer (1997) proposed another crucial channel through which social capital influences growth: by bolstering investor confidence in contract enforcement, social capital can foster investment. A very recent study by Jameaba (2022) supports this, the study looks at the connection between social capital development and economic growth across 47 countries. Drawing upon social capital theory and institutional theory, the study asserts that social capital holds considerable sway over economic growth through its influence on factors like trust, consumption, savings, investments, and government spending patterns. This observation aligns with the predictions of a general equilibrium model put forth by Zak and Knack (2001), wherein environments characterized by low levels of trust correspond to diminished investment activities. Furthermore, alternative channels such as education, financial development, and innovation (Zheng, 2010) also emerge as important considerations Guiso et al. (2004) and Thompson (2018) argue that social capital contributes to the development of financial systems. Lastly, drawing upon data from the European Union spanning the period from 1990 to 2002, Akcomak and ter Weel (2009) and Zheng (2010) demonstrate that social capital plays a role in determining innovation.

Despite the pivotal role of entrepreneurship in driving economic growth, the exploration of this aspect has been relatively limited. For instance, Bauer Schuster et al. (2010) have presented compelling evidence indicating that individual affiliations with private associations and clubs exert an influence on entrepreneurship. In addition, a study conducted by Doh and Zolnik (2011) studied the relationship between social capital and entrepreneurship in the knowledge economy. Social capital, defined as trust, associational activities, and civic norms, was quantified using a social capital index based on World Values Survey data. Entrepreneurship was measured through self-employment. The study employed a binomial logistic model to demonstrate that social capital significantly and positively impacted entrepreneurship, suggesting that social networks and norms aided in identifying and pursuing entrepreneurial opportunities which then drives economic growth (Cox et al, 2021; Doh and Zolnik, 2011)

Entrepreneurship and Social Capital

An avenue of the social capital effect on growth that remains relatively less explored pertains to entrepreneurship. Entrepreneurship is widely recognized as a fundamental catalyst for economic growth (Schumpeter, 1934; Baumol, 1990; Murphy et al., 1991). Social capital holds a distinct relevance, particularly within the realm of aspiring entrepreneurs. Bourdieu (1986) and Putnam (1993) emphasize the role of social practice in comprehending entrepreneurship. Mckeever et al (2014) note that these authors acknowledge the significant impact of social capital on entrepreneurial activities. In the context of regional or national levels, Kwon and Arenius (2010) and Pillai et al (2017) propose that social capital serves as a driving force behind entrepreneurial endeavours within the specific locality, highlighting how individual actions are influenced by their immediate network connections and the broader social context. Stephan and Uhlaner (2010) propose that national-level social capital, which they term a socially supportive culture, directly affects the pace of entrepreneurial activity. Parallelly, Kwon and Arenius (2010) and Peiró-Palomino and Tortosa-Ausina (2015) ascertain that social capital at the national level significantly shapes perceptions of opportunities and investment decisions in entrepreneurial initiatives.

A significant hurdle in fostering entrepreneurship lies in the associated risk, as embarking on an entrepreneurial venture entails investing in a potentially uncertain endeavour. One of the

pivotal challenges confronting potential entrepreneurs pertains to the uncertainty associated with the decision to initiate a new venture (Fisher et al, 2020; Lawrence and Lorsch, 1967; Milliken, 1987). This uncertainty primarily stems from the lack of specific information that is integral to making the critical decision of launching a business. Given the constraints individuals face in terms of their capacity to gather and assimilate information, as well as their ability to assess the potential outcomes of different choices (Peters and Brush, 1996; Fisher et al, 2020), they often rely on external connections to access the essential information required for informed decision-making. Social capital can mitigate this risk by influencing the uncertainty surrounding entrepreneurial outcomes. Putnam (1993) accentuates this notion by asserting, and subsequently validated through empirical investigation, that engagement in networking activities can potentially stimulate entrepreneurial activity, particularly through participation in diverse organizational memberships. This involvement in various associations amplifies exposure to valuable information sources, thus augmenting an individual's capacity to access the necessary information that guides entrepreneurial decisions. In essence, the role of social capital is pronounced when it comes to aspiring entrepreneurs, aiding them in overcoming the information deficit inherent to embarking on entrepreneurial ventures. This dynamic underscores the significance of external connections in facilitating well-informed decision-making within the entrepreneurial context (Purwati et al, 2021; Peters and Brush, 1996; Putnam, 1993).

Recent findings by Guga and Peta (2023) corroborate earlier research, underscoring the pivotal role of social capital in shaping entrepreneurial behaviour in Albania. Their study emphasizes the significance of networking and informal connections as integral components of social capital, both exhibiting a positive and significant influence on entrepreneurial activity and success. Furthermore, Guga and Peta's investigation of the moderating impact of entrepreneurial ability, particularly in opportunity recognition, reaffirms the intricate interplay between social capital and entrepreneurial performance. In essence, these recent findings reinforce the notion that social capital remains a substantial driving force within Albania's entrepreneurial landscape, exerting its influence not only on individual ventures but also on the broader entrepreneurial ecosystem in the country.

Entrepreneurial activities are intricately intertwined with cultural and social contexts, finding their foundation within intricate networks of both personal and institutional associations (Chan et al, 2006; Jackson et al, 2008; Leite et al, 2024). It's noteworthy that an individual's

social network is subject to influence from a spectrum of social interactions and supportive elements. Furthermore, the level of political and societal acceptance that entrepreneurship enjoys in a specific region directly corresponds to the pace of new business establishment (Gartner et al, 2004; Jack and Anderson, 2002). Social networks, stemming from extended family ties, community-based connections, or organizational affiliations, are postulated to complement the effects of education, experience, and financial resources (Greve and Salaff, 2003).

Developing countries

Investigations conducted among countries undergoing transition underscore the fact that entrepreneurship is an ever-present phenomenon, that exists within every nation (Luthans et al, 2000; O'Donnell et al, 2024). This entrepreneurial drive can flourish when environmental factors, including family and support networks, sources of financing, local communities, government institutions, and cultural elements, exert a positive influence on entrepreneurial conduct (Bygrave and Minniti, 2000; Igwe et al,2020). In situations lacking political stability and well-defined support frameworks, the significance of networking and personal trust amplifies during transitional periods, as they provide a semblance of consistency and predictability amid profound change. In accordance with Koellinger (2008), even in developing countries, where entrepreneurial activity often involves imitation, there remains potential for achieving economic gains. Moreover, Gamage et al (2020) support the notion that developing nations significantly influence the accessibility of business creation opportunities, to the extent that certain countries exhibit distinct distributions of production factors within society, allowing entrepreneurship to flourish without relying on innovation. This perspective is echoed by Bosma and Levie (2010), who underscore that the perception of entrepreneurial opportunities, along with entrepreneurial activity, tends to be more pronounced in efficiency-driven economies compared to innovation-driven economies. In the case of Latin American countries, Alvarez and Barney. (2015) establish a link between the socioeconomic context characterized by factors like unemployment and lower educational attainment and entrepreneurial activity. Research further affirms that developed countries grant access to resources and facilitate network development (Escandon-Barbosa et al, 2019). Among an entrepreneur's most invaluable assets are social networks, which aid in identifying optimal timing and locations for commencing entrepreneurial ventures, as well as in sourcing

necessary resources, be they human or financial (Murray and Palladino, 2021; Doh and Zolnik, 2011).

A study by Escandon et al (2019) explored the relationship between social capital and entrepreneurial activity in developing and developed countries. The study studies 39 countries from 2001 to 2014 and uses data from the World Bank, Global Entrepreneurship Monitor and World Value Survey. The empirical analysis method utilised was a linear hierarchical model. The results of the study signified that social capital has a stronger influence in developing countries in comparison to developed countries in relation to entrepreneurial activity.

Opportunity-driven Entrepreneurship

Opportunity-driven entrepreneurship is a pivotal aspect of the broader entrepreneurial landscape. In contrast to necessity-driven entrepreneurship, which arises from limited job options, opportunity-driven entrepreneurship stems from recognizing favourable market conditions, unmet needs, technological advancements, or emerging trends (Aparicio et al, 2016). This form of entrepreneurship involves actively identifying and leveraging business prospects that can lead to innovation, job generation, and economic expansion. It involves individuals motivated by creating value and seizing market openings. Such entrepreneurs often engage in risk-taking, product or service innovation, and market expansion, vitalizing the business environment (Boudreaux and Nikolaev, 2019).

From an economic perspective, the role of opportunity-driven entrepreneurship cannot be overstated. It acts as a catalyst for job creation, lessening unemployment rates (Fairlie and Fossen, 2020). By introducing novel products, services, or processes, these entrepreneurs enhance competitiveness and stimulate economic diversification. Their activities often result in heightened productivity, as innovative ventures adopt advanced technologies and practices for efficiency gains. These activities contribute to nurturing a culture of innovation and knowledge sharing, influencing the broader entrepreneurial ecosystem (Wong et al, 2005).

Given the paramount importance of opportunity-driven entrepreneurship, it is crucial to explore the factors propelling its emergence. Among these factors, social capital emerges as a pivotal influencer (Doh and Zolnik, 2011). Social capital, encompassing networks, relationships, and trust within communities or societies, substantially impacts an

entrepreneur's ability to spot prospects, access resources, and navigate obstacles (Nieto and González-Álvarez, 2016). Understanding how social capital interacts with opportunity-driven entrepreneurship holds special relevance for developing economies pursuing sustainable growth and development. This study endeavours to address this gap by investigating how social capital, in its various forms, shapes the inclination for and success of opportunity-driven entrepreneurship, thereby contributing to the economic advancement of developing nations.

Social capital plays a crucial role in establishing networks that streamline the identification of opportunities and the acquisition, accumulation, and allocation of scarce resources and strategic initiatives (Al-Omoush et al, 2020; Davidson and Honig, 2003; Miller et al., 2007). Small enterprises, within the realm of innovations, play a noteworthy role by forming connections with larger firms (Naude et al., 2008), thereby influencing the performance of international companies (Pangarkar, 2008; Polard and Simberova, 2002). These interactions also have a ripple effect on a nation's economic activity by intricately linking established, emerging, and small firms (Minniti et al, 2005). The literature increasingly emphasizes the importance of networks for entrepreneurs, with some suggesting that social capital could be their paramount advantage (Cici et al, 2020; Nala, 2016; Arenius and De Clercq, 2005; Audretsch and Keilbach, 2004; Davidson and Honig, 2003; Mitchell and Co, 2004). Numerous studies highlight that networking expands entrepreneurs' awareness of opportunities, facilitates access to crucial resources, and helps navigate business challenges (Adler and Kwon, 2002; Low et al., 1988). These networks enable entrepreneurs to fulfil roles that conventional formal institutions may not fulfil completely, such as ensuring contract compliance and enabling credit transactions (Welter and Smallbone, 2006). Examining entrepreneurship from a social capital perspective is significant, given that social capital emerges as a vital asset for small business proprietors aiming to thrive in competitive markets (Aldrich et al., 1986). Moreover, successful collaboration among network participants necessitates a degree of expertise and competence, enhancing the sustainability of these relationships (Lin, 2017). The accumulation of prior entrepreneurial experiences significantly shapes the development of social capital, thereby mitigating initial challenges. Such networks enhance resource availability and foster increased discovery of opportunities (De Carolis and Saparito, 2006). For instance, Nahapeit and Ghoshal (1998) contend that social capital networks create a conducive setting for recognizing entrepreneurial prospects through the generation of new knowledge. Networks prove instrumental in accessing information and building knowledge necessary for seizing entrepreneurial opportunities.

In a comprehensive examination of start-up business networks, Blundel and Smith (2001) conclude that during the initiation of an opportunity-driven venture, entrepreneurs predominantly draw upon informal connections within their personal networks to mobilize resources, particularly in the pre-establishment phase. Drawing from an amalgamation of research studies that delve into the dynamics of networking within small and start-up firms (Chell and Baines, 2000), networking is characterized as an endeavour that diverges based on the individual owner-manager, and the specific individuals engaged in the interaction. Scrutinizing the significance of personal networking activities, Sawyerr et al (2003) illustrate how start-ups heavily rely on a well-established matrix of personal networks to navigate the uncertainties inherent in the external environment. In terms of exploring social network membership and activity levels among self-employed individuals and employed, Dodd (1997) discovered statistically significant levels of resemblance between both groups.

However, it can be argued that this might not promote opportunity-driven entrepreneurship because social capital plays a role in curbing self-interested behaviours among transaction participants through the enforcement of informal norms (Keefer and Knack, 2005).In essence, trust and social norms manifest in the collective perception that individuals will opt for cooperative actions within the context of scenarios resembling the prisoner's dilemma, rather than pursuing opportunistic behaviours that could harm others. This prevailing perception establishes an environment conducive to the initiation and expansion of businesses.

Linking Micro-Level Interactions to Macroeconomic Outcomes

The integration of social capital into macroeconomic analysis is convincingly justified by its demonstrated ability to link micro-level interactions with macroeconomic outcomes. Social capital, embodied in trust, collaboration, and networks, enhances individual productivity, firm efficiency, and innovation, which collectively influence broader economic indicators. Burgess and Venables (2004) illustrate how microeconomic variables, such as entrepreneurship and firm-level innovation, form the foundation for sustained macroeconomic growth. Buta (2016) and Iyer and Kitson (2005) further establish that trust and community engagement enhance national and regional economic competitiveness and resilience by fostering efficient cooperation and resource allocation.

Mishchuk et al. (2023) emphasize that micro-level trust and networks are critical for driving innovation and optimizing resource use, key contributors to GDP growth and economic stability. Similarly, Thompson (2018) highlights the role of localized networks in scaling up innovation to impact national economic performance, while Klein (2013) links micro-level well-being to labor productivity, which directly affects macroeconomic stability. Together, these studies demonstrate that social capital functions as a crucial mechanism through which microeconomic behaviors aggregate to shape macroeconomic outcomes, such as GDP growth, competitiveness, and resilience. This evidence firmly supports the inclusion of social capital as a vital variable in macroeconomic analysis, providing a comprehensive understanding of how micro-level interactions influence systemic economic performance.

Critical Analysis of Historical Literature: Identifying Past Limitations and Presenting Novel Contributions to the Field

While the theory of social capital has made notable strides in entrepreneurship research, limitations persist in how these concepts are translated into operationalized and empirically investigated frameworks. Primarily, preceding studies have predominantly concentrated on singular-country contexts, offering outcomes that lack generalizability on a broader geographical scale (Light and Dana, 2013; Meek et al., 2009; Martez and Rodriguez, 2004; Westlund et al., 2014). Notably, individual social capital exhibits significant divergence across nations, and the concept of homogeneity is nearly absent in this context (Ostrom, 2009; Putnam, 2000; Paxton, 2002; Van et al, 2006). Moreover, variability in the degree of entrepreneurial activities also persists across countries (Acs et al., 2011). Thomas and Mueller (2000) suggest that entrepreneurial attributes differ dramatically across countries, and Batjiargal (2010) contends social capital's functioning diverges based on distinct institutional environments. Owing to these disparities in social capital and entrepreneurship dynamics, the interrelation can significantly fluctuate across different countries.

Another challenge emerges in the realm of empirical findings, largely stemming from the varying definitions of social capital and the utilization of indicators that are often limited or incomplete (Liao and Welsch, 2005; Hidalgo et al, 2024). However, to thoroughly comprehend the influence of social capital on entrepreneurship, it becomes imperative to expand the conceptualization of social capital (Liao and Welsch, 2005; Hidalgo et al, 2024). Notably, substantial empirical research links distinct aspects of social capital, particularly trust, to entrepreneurship (Dasgupta, 2011; Fukuyama, 1995; Hohman and Welter, 2005; Li et al, 2005;

Scarbrough et al., 2013; Hidalgo et al,2024), and social networks (Johannisson et al, 2001; Thornton and Flynn, 2003; DeClercq and Arenius, 2002; Arenius and Clercq, 2005). Even within the entrepreneurship literature, diverse viewpoints exist concerning a singular facet of social capital, like networks (Stam et al,2014). This divergence partly arises from the absence of a universally accepted definition of social capital, coupled with a dearth of comprehensive data to capture the concept of social capital more precisely (Westlund and Adam, 2010). Consequently, empirical investigations face the potential of yielding ambiguous and incomplete outcomes regarding the authentic role of social capital in the entrepreneurial process.

To overcome the initial limitation tied to the restricted focus on individual countries within the framework of social capital theory as applied to entrepreneurship research, especially for developing countries, a more expansive strategy has been adopted. This involves an extensive analysis across a variety of nations and the integration of diverse indicators originating from established theories (Chu et al, 2018; Caceres et al, 2020; Laishram and Haokip, 2022). Through these concerted efforts, the intention is to overcome the limitations discussed above.

The limitations elucidated within existing literature on the relationship between social capital and opportunity-driven entrepreneurship in developing nations have necessitated a more comprehensive and meticulous approach to research. To address these constraints effectively, employing a set of strategic methodologies becomes imperative. First and foremost, a multinational comparative analysis stands as a pivotal strategy, facilitating an indepth exploration across diverse developing countries. This approach mitigates the issue of context specificity, thereby enhancing the applicability and generalizability of findings beyond singular settings. The strategic focus on developing economies serves as a cornerstone, allowing for a granular exploration of unique challenges and opportunities within these contexts. This targeted approach illuminates the role of diverse social capital indicators in shaping entrepreneurial dynamics, offering insights that might not be evident in studies focusing solely on developed nations.

Moreover, the integration of diverse indicators derived from established social capital theories and frameworks serves as a crucial step. Unlike previous studies that often relied on singular or limited indicators, this holistic approach encompassing multiple facets of social capital - including trust, social networks, norms, and reciprocity - ensures a more nuanced

understanding of their impact on opportunity-driven entrepreneurship. Employing robust methodologies, such as quantitative data analysis sourced from reliable repositories like the World Value Survey and Global Entrepreneurship Monitor, stands as another pivotal strategy. Ensuring consistency and accuracy in measuring both social capital and entrepreneurial activities across diverse nations bolsters the reliability and validity of the study's outcomes.

An interdisciplinary approach integrating insights from economics enriches the conceptualization of social capital's implications for entrepreneurial activities in developing nations. This synergy of diverse disciplines enhances the depth and breadth of understanding, contributing significantly to the literature by providing a more comprehensive and holistic perspective. Finally, the integration of policy implications derived from research findings establishes a pragmatic bridge between academia and actionable measures. By elucidating how social capital fosters opportunity-driven entrepreneurship, this research informs policymakers, enabling the design of effective strategies to promote economic growth and support entrepreneurial initiatives in developing countries.

In sum, by adopting these multifaceted strategies, the research paper effectively addresses the limitations observed in previous studies. This comprehensive approach enables a more nuanced, robust, and applicable understanding of how social capital influences opportunitydriven entrepreneurship and economic growth in diverse developing country contexts.

3.3 Empirical Methodology and Data

In this research, the methodological framework employed secondary data and quantitative methodologies to unravel the intricate nexus between social capital, opportunity-driven entrepreneurship, and economic growth in developing nations. Secondary data was chosen due to its accessibility and the vast amount of information available from credible global repositories, which allowed for a comprehensive analysis without the need for costly and time-consuming primary data collection. The use of secondary data also ensured the inclusion of a larger sample size across multiple countries, enhancing the generalizability of the findings. The data was collected online from globally recognized repositories such as the World Value Survey, Global Entrepreneurship data, and the World Bank, ensuring a robust and comprehensive foundation for analysis. This approach is consistent with Decker et al. (2021), who utilized secondary data to investigate macroeconomic trends and entrepreneurship

across countries, and Cader and Leatherman (2021), who highlighted the utility of datasets like the Global Entrepreneurship Monitor in studying entrepreneurship in developing nations.

The research design used was the two-step regression model, meticulously crafted to dissect the nuanced relationships between different facets of social capital, opportunity-driven entrepreneurship, and economic advancement (Beugelsduk and Smolders, 2003). This two-step regression methodology has been widely recognized in addressing complex relationships in cross-country analyses. For instance, Aparicio et al. (2016) employed a similar approach to explore the dynamics of entrepreneurial activity and GDP per capita, emphasizing the importance of controlling for endogeneity in such models.

The construction of various indices encapsulating the dimensions of social capital involved a rigorous amalgamation of pertinent survey questions sourced from the World Value Survey, strategically aligned with prior seminal studies in the field (Chu et al, 2018; Caceres et al, 2020; Laishram and Haokip, 2022) These indices were assembled to capture distinctive elements of social capital. The use of the World Value Survey was particularly effective due to its global coverage and the long history of survey items, which allowed for the consistent measurement of social attitudes such as trust and civic norms across different societies. Similarly, the association membership index was derived by computing the average of relative values ascribed to active and inactive members, striving to quantify the density and strength of social associations within a community. Utilizing responses from the World Value Survey, the generalized trust index was formulated based on the percentage of individuals selecting the belief that 'most people can be trusted,' gauging the prevailing trust levels within societies. The construction of the civic norms index involved a meticulous selection of diverse survey questions, as delineated in Table 1, wherein respondents' attitudes were rated on a scale from 1 to 10, capturing the spectrum from 'never justifiable' to 'always justifiable' for various social norms. Likewise, the close trust index was fashioned by amalgamating multiple survey questions scored on a scale from 1 to 4, encompassing degrees of trust, ranging from 'do not trust at all' to 'trust completely.' Moreover, the formulation of the strong ties index involved a nuanced evaluation of social interactions by gauging the frequency of communication with friends and colleagues, utilizing a scale ranging from 0 (never) to 4 (daily). This approach was inspired by Dakhli and Clercq (2004), An (2021) and Mansyur et al (2008).

Complementing these social capital indices, the study standardized GDP per capita to gauge economic growth, serving as the dependent variable in the regression analyses. Additionally, the study incorporated control variables, drawing upon data from the World Bank, including research and development expenditure (knowledge), gross fixed capital formation (physical capital), human capital index, and population, to contextualize the analyses. Decker et al. (2021) highlighted the necessity of incorporating robust control variables to enhance analytical precision. These control variables were included to ensure that the relationships between social capital, entrepreneurship, and economic growth were not confounded by other factors influencing economic development. The World Bank provides reliable and globally recognized data on these variables**.** These variables were selected following a similar approach to Doh and McNeely (2012) study. The variable on opportunity-driven entrepreneurship was sourced from the Global Entrepreneurship Monitor. The GEM dataset provides specific insights into the prevalence of opportunity-driven entrepreneurial activity, making it particularly relevant for understanding the role of entrepreneurship in economic growth**.**

The study's deliberate focus on the years 2005–2009, 2009–2014, and 2017–2022, across a selection of 24 countries, was collected on the availability of pertinent data from the World Value Survey and the Global Entrepreneurship Monitor, aligning cohesively with the study's emphasis on developing nations. The years chosen (2005–2009, 2009–2014, and 2017–2022) reflect significant periods of global economic change and development, as these intervals correspond to major global events and transitions that have influenced economic and entrepreneurial dynamics. These include: **2005–2009**: This period covers the prelude to and the aftermath of the 2008 global financial crisis, which profoundly impacted global markets and economic structures. As highlighted by Ridwan (2024), this time saw intensified globalization and shifts in economic policies, particularly in developing nations seeking resilience against external shocks. **2009–2014**: This timeframe aligns with the post-crisis recovery phase, marked by increased emphasis on entrepreneurship as a driver of economic growth. Studies like Amoa-Gyarteng and Dhliwayo (2024) demonstrate how entrepreneurial activities played a key role in mitigating unemployment and fostering economic development during this recovery phase. **2017–2022**: This period captures the accelerating trends of digital transformation, globalization, and the economic challenges brought by the COVID-19 pandemic. As Miah et al. (2024) illustrate, these years were pivotal for examining how social

and technological entrepreneurship contributed to sustainable development amidst global uncertainty.

The utilization of STATA software facilitated comprehensive regression analyses, enabling a meticulous exploration of the intricate associations between various social capital dimensions, opportunity-driven entrepreneurship, and economic growth, aiming to illuminate the pivotal role of social capital in fostering development within emerging economies.

This study uses a 2-step regression analysis which is a statistical approach where a regression analysis is conducted in two distinct stages. This approach was adopted to investigate the collective influence of social capital and opportunity entrepreneurship on economic growth. In investigating the impact of various factors on one another, Achen (2005) emphasizes that researchers should employ a method known as a "two-step procedure" in their regression analysis. Recent literature, such as Silva et al, (2022) further validates the adoption of this method in understanding complex socio-economic interdependencies. This method enables a segmented examination of relationships between distinct variables across two separate stages. When researchers aim to discern the reasons behind the varying effects of specific factors across diverse countries or regions, they employ this approach. The focus of interest lies in elucidating the underlying explanations for the observed divergences in effects across different locales while investigating how disparate factors influence each other. By breaking down the analysis into two stages, the method allows for the isolation and comprehension of the individual contributions of factors, such as social capital, to the dynamics of entrepreneurship and, subsequently, to the overall economic growth.

In the initial step, I focused on comprehensively analyzing the relationship between social capital and opportunity entrepreneurship. Social capital, which encompasses the network, trust, and shared norms within a community, was studied alongside opportunity entrepreneurship, which involves the creation of innovative ventures based on identified market opportunities. This step aimed to explore how the strength of social connections, trust, and community cohesion affects the emergence and success of opportunity-driven entrepreneurial activities.

Subsequently, the second step of my research involved assessing the collective impact of social capital and opportunity entrepreneurship on economic growth. The second stage regression

allowed for the assessment of how the independent variables (social capital, entrepreneurship, physical capital, etc.) collectively influence GDP per capita as the dependent variable, providing a clearer understanding of the macroeconomic effects. This involved assessing how the presence of social capital and the prevalence of opportunity-driven entrepreneurial activities contribute to overall economic development. The goal was to investigate whether countries with high levels of social capital and opportunity-driven entrepreneurship tend to experience more significant economic growth compared to those lacking these factors.

The third objective in the research has the potential to enrich findings significantly. By dissecting social capital into bonding and bridging components and exploring their impact on opportunity entrepreneurship and economic growth, a more nuanced understanding of the underlying mechanisms can be achieved. This approach allows for a detailed examination of how each type of social capital distinctly shapes entrepreneurial activities and contributes to broader economic development, ultimately enhancing comprehension of their interconnected dynamics.

In addition, a two-step regression methodology is adopted to address endogeneity concerns within the model (Vella and Verbeek,1999). Endogeneity is a critical issue in regression analysis when there is a possibility that one or more independent variables are correlated with the error term, leading to biased estimates. By using a two-step approach, this concern was mitigated by separating the analysis of opportunity entrepreneurship and GDP per capital**.** In the first stage, the regression equation, OpportunityEntrepreneurship serves as the dependent variable, and HumanCapitalIndex, SocialCapital, Population, and Income Inequality act as independent variables. The error term ϵ captures unobserved factors influencing entrepreneurial opportunities that are not explicitly included in the model. In the context of the two-step regression, the first-stage equation models "OpportunityEntrepreneurship" as a function of certain independent variables, but it may still be influenced by unobserved factors that are not explicitly included in the model. These unobserved factors can lead to a correlation between the error term in the first stage (ϵ) and the dependent variable "OpportunityEntrepreneurship." If not addressed, this endogeneity can result in biased and inefficient estimates of the coefficients in the second-stage GDP equation.

Recognizing the potential endogeneity issues in this equation, the study utilizes the Two-Stage Least Squares (2SLS) approach. The 2SLS method was employed to handle endogeneity by using instrumental variables that are correlated with the independent variables but not with the error term. This approach strengthens the causal inference between entrepreneurship, social capital, and economic growth. This approach is also supported by the Aparicio et al (2016) study which used the three-stage least-square to overcome the issue of endogeneity when studying the relationship between entrepreneurial activity and GDP per capita. The potential endogeneity of "OpportunityEntrepreneurship" in the GDP equation arises from the possibility that entrepreneurial opportunities might be correlated with the error term in the GDP regression model. In the second stage, the 2nd regression equation is introduced. Here, GDP is the dependent variable, and SocialCapital, PhysicalCapital, Knowledge, OpportunityEntrepreneurshipHAT, Population, and IncomeGap act as independent variables. The Opportunity-EntrepreneurshipHAT term, obtained from the first stage, is included to address the potential endogeneity of OpportunityEntrepreneurship in the GDP equation. This twostep approach, encompassing both OpportunityEntrepreneurship and GDP, aims to provide a comprehensive understanding. This two-step approach ensures that the findings reflect the true relationships between the variables, providing robust and reliable results.

What does the first regression model show us?

The first regression model aims to understand the relationship between the dependent variable (opportunity-entrepreneurship) and the independent variables (human capital index and social capital) while controlling for other factors such as population and income inequality.

$$\text{OpportunityEntrepreneurship}=\beta 0+\beta 1\text{HumanCapitalIndex}+\beta 2\text{SocialCapital}+\beta 3\text{Population}+\beta 4\text{ Income Inequality}+\epsilon$$

- Opportunity Entrepreneurship represents the dependent variable.
- The Human Capital Index and Social Capital are the independent variables of interest.
- Population and Income Inequality are the control variables.

The study adopts this model from Dhakli and De Clercq's (2004) study, which looked at the effect of human capital and social capital on innovation and the country level. However, due to the nature of the present study, we replaced the dependent variable with opportunity entrepreneurship. It can be argued that Opportunity-driven entrepreneurship involves the identification and pursuit of new market opportunities, leading to the introduction of innovative products, services, or business models. As such, opportunity-driven entrepreneurship might serve as a reasonable proxy for innovation as it can encompass innovative behaviour. Start-ups or small businesses often engage in innovation by introducing new ideas or technologies to the market. Entrepreneurs pursuing opportunities often act as agents of innovation by implementing novel ideas or concepts. They take risks to bring new products, services, or business models to market, contributing to innovation within industries. Thus, measuring opportunity-driven entrepreneurship does capture aspects of innovative activity.

Control Variables:

Population: This research incorporates country size measured by the total population as a control variable, considering its impact on both country-level entrepreneurship and economic output. The presence of a larger population in a country influences various facets of entrepreneurial activities and economic productivity due to heightened levels of resource exchange across multiple domains. Consequently, larger nations might exhibit a propensity to foster increased entrepreneurial activities and economic output.

Income gap: Previous literature argues that the driving force behind overall productivity in a nation is not solely determined by the average income but rather by the equitable distribution of income among its population (Knack and Keefer, 1997). This argument suggests that in societies characterized by a high-income gap, societal groups may exhibit a greater inclination to impose burdens on the society and are less inclined to engage in high-quality social interactions, thereby impeding opportunity entrepreneurship and economic development. For example, Knack and Keefer (1997) identified an inverse correlation between the level of societal trust and the income gap. To explore the potential impact of income inequality on the relationship between the degree of social capital within a nation and its entrepreneurial

activities and economic output, this study incorporates the 'income gap' as a control variable in the regression models.

What does the 2nd regression show us?

To study the impact of social capital on economic growth this study extends Audretsch and Keilbach's entrepreneurship model (2004) [Y i /Li = □(K i /Li)^{b}1 R ^{b}2 E ^{b}3 e 1i] where Y represents economic output, K physical capital, L labour, R knowledge capital, E entrepreneurship capital and the subscript I regions] with a Cobb–Douglas function form.

The empirical model in this study is expressed as [Yi =□S^{b}1P^{b}2K^{b}3Ê^{b}4e1i]

- Y represents economic growth or output
- K represents knowledge
- S represents social capital
- P represents physical knowledge
- Ê represents predicted opportunity-entrepreneurship

Specifically, the study transforms this Cobb-Douglas form into the log-linear regression on the condition that population size and income inequality (control variables) are controlled in the model to account for important factors of economic development. This approach is similar to Doh and McNeely's (2012) study which also looked at the impact of social capital on economic development. However, our approach is more sophisticated since the present study is looking to fill the literature gap of social capital impacts on opportunity entrepreneurship and then analyse how this relationship can drive economic development in developing economies.

GDP=β0+β1SocialCapital+β2PhysicalCapital+β3Knowldege+β4Opportuinity-EntrepeneurshipHAT+ β5Population+ β6IncomeGap+ϵ

Table 1:
Source: https://www.worldvaluessurvey.org/WVSContents.jsp

Indicators	WVS questions	Study Sources
Bridging Social Capital		
Civic Norms	-Justifiable: Claiming government benefits to which you are not entitled. Justifiable: Avoiding a fare on public transport -Justifiable: Stealing Property -Justifiable: Cheating on taxes -Justifiable: Someone accepting a bribe -Justifiable: Violence against other people	Patulny and Lind (2007) Chu et al (2018) Caceres et al (2020)
Generalised Trust	-Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?	Chu et al (2018)
Bonding Social Capital		
Close Trust	-Trust: People you know personally -How much you trust: Your family -Trust: Your neighbourhood	Chu et al (2018) Caceres et al (2020) Laishram and Haokip (2022)
Association Membership	-Active/Inactive Membership: Church or religious organisation -Active/Inactive Membership: Sport Organization -Active/Inactive Membership: Art, Music or educational organization -Active/Inactive Membership: Political party -Active/Inactive Membership: Charitable/ Humanitarian Organisation	Chu et al (2018) Caceres et al (2020) Laishram and Haokip (2022)
Strong Ties	- Information source- Talk with friends or colleagues - Important in life: Friends - Confidence: Family Member	Patulny and Lind (2007)

Table 2:

Variables	**Description**	**Data Sources**
Dependent		
Opportunity-Entrepreneurship	Entrepreneurial Employee Activity (Opportunity)	GEM Data (2022)
Economic Development	GDP per capital (PPP US$)	World Bank (2022)
Independent		
Knowledge	R&D expenditure (% of GDP)	World Bank (2022)

Social Capital Index	Unweighted SCI – indicators are described in Table 1	World Value Survey (2022)
Physical Capital	Natural log value of gross fixed capital formation per employed person (labour)	World Bank (2022)
Human Capital Index	Knowledge, skills, education, training, and experience of individuals	World Bank (2022)
Control		
Population	Natural log value of the total population of each country	World Bank (2022)
Income Gap	Gini Index	World Bank (2022)

(Personal Collection, 2023)

List of countries

Continent	Countries
Africa	Egypt, Morocco
Asia	Armenia, China, Indonesia, Iran, Jordan, Kazakhstan, Lebanon, Malaysia, Pakistan, Thailand, Turkey
Europe	Belarus, Bosnia and Herzegovina, Poland, Romania
North America	Guatemala, Mexico
South America	Argentina, Chile, Ecuador, Peru, Uruguay

3.3.1 Summary Statistics

Table 3: Descriptive Statistics

	Opp-entrp	Close Trust	Generalised Trust (%)	Assoc Membership	Civic Norms	Political Stability	Inflation	Control of Corruption
count	24	22	22	19	23	24	24	24
mean	1.821563	3.251931818	16.33181818	0.147276828	0.881423188	-0.428766248	12.29049987	-0.28262613
std	0.99076	0.170664618	8.294254257	0.099032793	0.166398182	0.70482756	16.72389877	0.619407807
min	0.53	2.8845	4.2	0.022900882	0.496	-1.996711105	1.304637673	-1.163626611
25%	1.27875	3.163875	11.05	0.067307486	0.7828	-0.646410849	3.202073477	-0.626112811
50%	1.66375	3.269	15.35	0.146716896	0.8445	-0.329482742	5.048254886	-0.381072894
75%	2.1785	3.40025	19.5	0.220476006	1.010383333	-0.056785584	10.63620541	-0.120903346
max	4.335	3.4315	40	0.362574129	1.160833333	1.043254316	61.29001735	1.368517905

Table 4: Correlation table

	Opp-entrp	GDP	Close Trust	Generalised Trust (%)	Assoc Membership	Civic Norms	l Absence of Violence	Inflation	Control of Corruption
Opp-entrp	1	0.064235	-0.23283	0.100231515	0.046445901	0.196197953	0.063405312	-0.225043896	0.140229656
GDP	0.064235	1	0.1955871	-0.167574181	-0.25281785	-0.050273475	-0.212383672	-0.006425214	-0.117864605
Close Trust	-0.23283	0.195587	1	0.653129283	-0.069012346	-0.115386815	-0.116541272	0.172164574	-0.080422033
Generalised Trust (%)	0.100232	-0.16757	0.6531293	1	0.236138408	-0.339025778	-0.116729971	0.197192531	-0.072826051
Assoc Membership	0.046446	-0.25282	-0.069012	0.236138408	1	-0.036066659	-0.290937486	0.048061432	-0.111391716
Civic Norms	0.196198	-0.05027	-0.115387	-0.339025778	-0.036066659	1	-0.070882822	0.058626797	-0.338352563
and Absence of Violence/Te	0.063405	-0.21238	-0.116541	-0.116729971	-0.290937486	-0.070882822	1	-0.440911947	0.771883027
Inflation	-0.22504	-0.00643	0.1721646	0.197192531	0.048061432	0.058626797	-0.440911947	1	-0.296877746
Control of Corruption	0.14023	-0.11786	-0.080422	-0.072826051	-0.111391716	-0.338352563	0.771883027	-0.296877746	1

(Personal Collection, 2023)

The summary statistics and correlation analysis provide a detailed exploration of the data's characteristics and relationships, laying a robust foundation for the two-step regression analysis. The summary statistics reveal substantial variability across key socio-economic and governance indicators, underscoring the diversity of economic and social conditions across countries. For instance, GDP shows a broad range with high standard deviation, reflecting stark differences in economic size and output across the dataset. Similarly, Opportunity Entrepreneurship varies significantly, indicating diverse entrepreneurial dynamics across regions. The high standard deviations observed in variables like inflation signal economic instability in certain contexts, which could have profound implications for entrepreneurial activities and overall growth.

The correlation analysis further deepens understanding by highlighting interdependencies among variables. Generalized Trust is strongly positively correlated with Close Trust (0.653), suggesting a reinforcing relationship between personal and societal trust networks. This

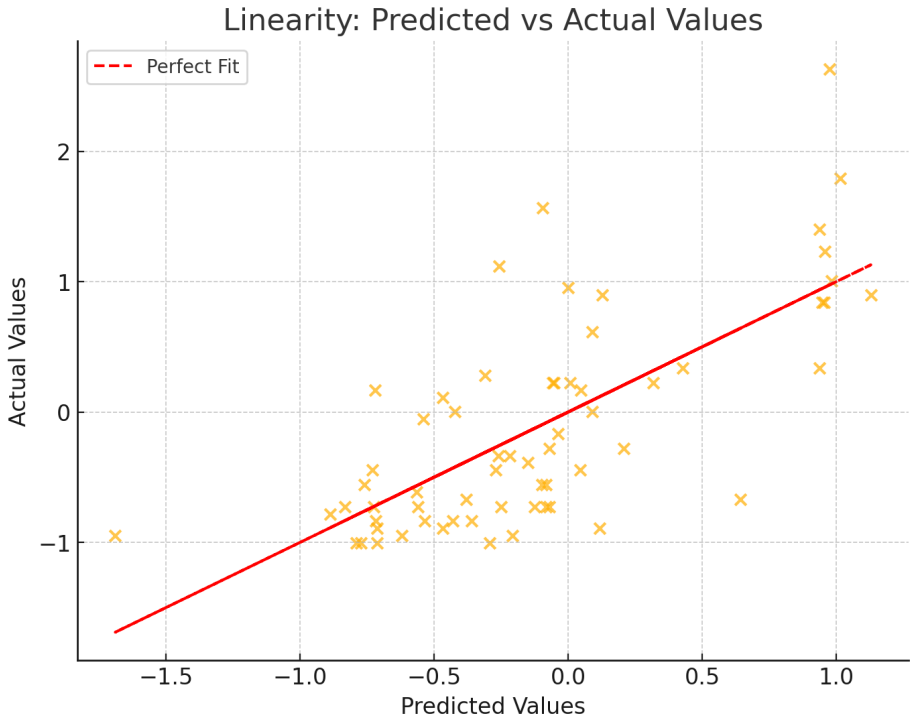
finding aligns with theoretical assertions that cohesive social capital fosters mutual trust, which is instrumental for collaborative economic and entrepreneurial activities. Additionally, Assoc Membership's positive correlation with Generalized Trust (0.236) indicates that societies with higher trust levels tend to have greater civic participation, reflecting a supportive environment for community engagement and shared norms. These relationships are pivotal in understanding how social capital contributes to the foundation of opportunity-driven entrepreneurial activity.

Conversely, some negative correlations point to underlying tensions or challenges. The relationship between Opportunity Entrepreneurship and inflation (-0.225) indicates that high inflation levels can erode economic stability, discouraging entrepreneurship by increasing uncertainty and reducing access to predictable resources. Interestingly, GDP correlates weakly with Control of Corruption (-0.118), suggesting that economic size alone does not guarantee institutional quality, pointing to potential inefficiencies in governance structures.

These statistical observations form the empirical backdrop for the two-step regression analysis by identifying key relationships and potential interdependencies among the variables. They illustrate how elements of social capital and economic conditions interact, thereby guiding the exploration of their impact on entrepreneurship and economic growth. This understanding is crucial for segmenting and analyzing the roles of these variables in subsequent regression stages.

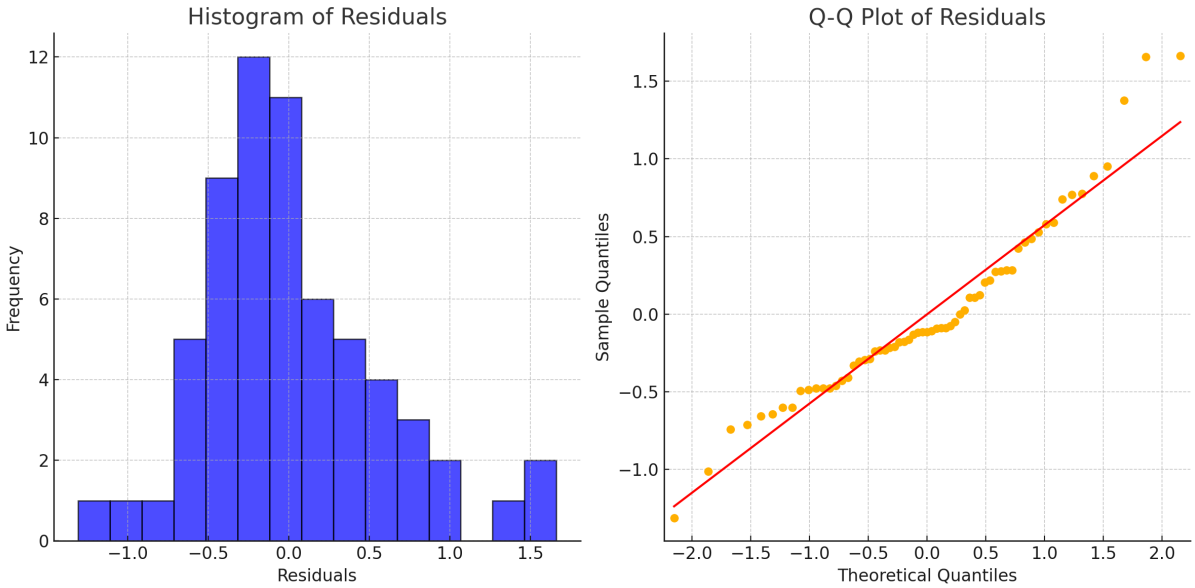
3.3.2 Diagnostic Tests for Assumption Checking

Figure 1:



(Personal Collection, 2023)

Figure 2:



(Personal Collection, 2023)

The regression diagnostic tests confirmed that the model satisfies the key assumptions necessary for robust analysis. Linearity was demonstrated by a consistent relationship between predicted and actual values in the scatterplot. Residuals were approximately normally distributed, as evidenced by the histogram and Q-Q plot, with only minor deviations in the tails. Homoscedasticity was verified using the Breusch-Pagan test (p=0.291p=0.291), indicating no significant heteroscedasticity. The Durbin-Watson statistic (1.796) confirmed the independence of errors, with no evidence of autocorrelation. Finally, multicollinearity was ruled out, as all Variance Inflation Factors (VIFs) were well below the threshold of 5. These results collectively validate the reliability of the regression model.

3.4 Results and Discussion

Table 5: Regression estimates for entrepreneurial activity.

Variables	1	2	3	4	5
Human Capital	4.810***	4.482***	5.007***	4.708***	4.711***
Bridging					
Civic Norms	1.093*				
Generalised Trust		0.008			
Bonding					
Close Trust			1.469*		
Association Membership				0.021*	
Strong Ties					-0.008*
Control					
Population	-0.525***	-0.583***	-0.569***	-0.465**	-0.467**
Income Gap	0.0398**	0.0482**	0.062***	0.047**	0.046**
R2	0.235	0.209	0.246	0.203	0.203
Number of Obvs	72	72	72	69	69

Significance Level Key:
* p < 0.05: Statistically significant at the 5% level.
** p < 0.01: Statistically significant at the 1% level.
*** p < 0.001: Statistically significant at the 0.1% level.
(Personal Collection, 2023)

Table 6: Regression estimates for economic development.

Variables	6	7	8	9	10
OppHat	1.414***	1.628***	1.229***	1.519***	1.456***
Bridging					
Civic Norms	-1.499***				
Generalised Trust		-0.0230**			
Bonding					
Close Trust			-2.588***		
Association Membership				-0.105*	
Strong Ties					1.456***
Physical Capital	0.255***	0.223**	0.285***	0.216**	0.216**
Knowledge	0.379*	0.386*	0.566*	0.308*	0.319*
Population	0.097*	0.398*	-0.034*	0.089*	0.132*
Income Gap	-0.292*	-0.054***	-0.059***	-0.044**	-0.032*
R2	0.500	0.508	0.514	0.505	0.55
Number of Obvs	72	72	72	69	69

Significance Level Key:
* p < 0.05: Statistically significant at the 5% level.
** p < 0.01: Statistically significant at the 1% level.
*** p < 0.001: Statistically significant at the 0.1% level.
(Personal Collection, 2023)

3.4.1 Civic Norms

The analysis yielded a positive coefficient of 1.093 in Model 1 for Civic Norms, indicating a statistically significant and positive association with the dependent variable, opportunity entrepreneurship. This compelling result underscores a substantiated and influential connection between Civic Norms and the emergence of opportunity-driven entrepreneurship. In essence, these findings suggest that higher adherence to civic norms is significantly linked to a greater propensity for individuals to engage in entrepreneurial activities driven by identified opportunities within the studied context. This result can be due to the reason that civic norms cultivate trust and reciprocal relationships among community members. These social networks serve as vital conduits for entrepreneurs to access resources, share knowledge, and garner support. In developing economies where formal institutions are less robust, these informal networks play a pivotal role in enabling entrepreneurial activities by facilitating trust-based transactions and collaboration.

Nevertheless, in step 2 for the analysis of the regression estimates for economic growth in Model 6. The impact of civic norms on economic growth is negative and significant. Civic norms having a negative impact on GDP can be supported by previous research (Knack and Keefer, 1997; Krueger et al.,2000; Ghazinoory et al, 2014). As posited by Knack and Keefer (1997), norms of civic conduct tend to enhance societal efficiency in resource allocation, albeit at times limiting personal interests. Ghazinoory et al (2014) elaborate that people with stronger civic norms were less likely to engage in entrepreneurship at its initial stages. The researchers suggested that civic norms might hinder potential entrepreneurs by limiting their creativity and willingness to take risks which can impact economic development negatively. These norms could create social pressure for individuals to conform to established societal values and norms, potentially discouraging entrepreneurial activity. For instance, behaviours like bending the truth or flouting established societal rules might constitute personal conduct within a particular community that could have positively impacted early-stage entrepreneurship.

The two-step regression process carried out in the present study highlights the significance of combining civic norms with opportunity entrepreneurship. It suggests the predicted opportunity- entrepreneurship which takes social capital into account the impact is significantly positive; they create synergistic effects. Doh and Acs (2010) describe civic norms as the typical inclination of citizens in a particular society to work together and consider the common good in comparison to their self-interest. Opportunity entrepreneurship could leverage the social connections and trust networks nurtured by civic norms, leading to increased economic activities and subsequently, a positive impact on GDP. This finding complements Doh and Acs's (2010) findings which reveal that civic norms play a role in promoting innovation by influencing cooperation and the sharing of ideas and knowledge among individuals from diverse backgrounds. In addition, civic norms encourage dialogue, idea-sharing, and problem-solving within communities. When opportunity entrepreneurship aligns with these discussions, it can lead to innovative solutions to local challenges. Entrepreneurial ventures that emerge from such environments of shared ideas and creativity can contribute significantly to economic development.

3.4.2 Generalised Trust

The analysis in Model 2 revealed that generalised trust was found to be statistically insignificant. This outcome suggests that, within the scope of this study, there isn't a substantial or meaningful relationship between generalised trust and opportunity entrepreneurship. In Model 7, the analysis focused on estimating economic growth. The results revealed that the coefficients associated with predicted opportunity-driven entrepreneurship were notably positive and statistically significant with generalised trust. This suggests that a higher level of opportunity-driven entrepreneurship is linked with increased economic growth within the developing economies in the study. Conversely, the coefficient for generalised trust was found to be significantly negative. This indicates that in developing economies, higher levels of generalised trust are associated with a decrease in economic growth. This unexpected finding suggests a contrasting relationship compared to what the study anticipated and hypothesized.

Generalized trust refers to the level of trust that individuals in a society have towards strangers or people outside their immediate social circle. High levels of generalized trust are often linked to stronger social cohesion, effective institutions, and smoother economic interactions as discussed in Engbers et al. (2017). The negative impact of generalized trust on economic growth is similar to the findings of Roth's (2022) study. In the context of developing countries, initial negative impact might stem from aspects such as potential complacency or lack of critical engagement. A high level of trust might lead to risk aversion or complacency in economic activities. Individuals might rely more on established networks or traditional methods, slowing down the adoption of innovative approaches or ventures that can stimulate economic growth. Over-reliance on trust might lead to a lack of scepticism or critical analysis, affecting the efficiency and effectiveness of decision-making processes. This could impede the adoption of new technologies or the pursuit of unconventional economic strategies. Thus, having a negative impact on the economic development of developing countries.

The shift towards a positive impact when combined with opportunity entrepreneurship suggests a synergistic relationship between trust and entrepreneurial activities in developing countries. High levels of trust might create a conducive environment for entrepreneurs, reducing transaction costs, fostering cooperation, and facilitating access to resources such as funding (Postelnicu and Hermes,2018) or mentorship networks as discussed above. Social capital could serve as a catalyst in leveraging the benefits of opportunity-driven entrepreneurship. In an environment characterized by high trust, where established norms

and networks prevail, entrepreneurial ventures bring in fresh ideas, innovative approaches, and a willingness to take calculated risks. These ventures challenge the status quo by introducing novel products, services, or business models that can disrupt existing markets (Engbers et al., 2017).

Entrepreneurship thrives on adaptability and resilience, traits essential for economic progress (Ayala and Manzano, 2014). In an environment with high trust, entrepreneurial ventures are better positioned to navigate challenges and adapt to market dynamics. This adaptability fosters an ecosystem where individuals and businesses are more open to change and innovation. The presence of innovative and growth-oriented ventures could transform the initial complacency associated with high trust into proactive engagement, driving economic growth. This is also supported by Dakhli and De Clercg (2004) findings.

3.4.3 Close Trust

The results from Model 3 highlight a notable relationship between close trust and opportunity-driven entrepreneurship. The positive coefficient of 1.469, with statistical significance, suggests that in developing economies, higher levels of close trust among individuals are significantly linked to increased engagement in entrepreneurial activities that leverage identified opportunities. This implies that strong bonds and trust within close relationships, such as family or tight social circles, play a substantial role in encouraging and supporting entrepreneurial initiatives when opportunities arise.

Additionally, the analysis unveils an intriguing aspect regarding the impact of close trust on GDP in Model 8. Initially observed as having a negative and statistically significant effect on GDP when considered alone, higher levels of close trust appear associated with a reduction in GDP within the studied context.

However, when close trust is examined alongside opportunity-driven entrepreneurship, the scenario changes significantly. The joint analysis of both variables has a significantly positive impact on GDP. This suggests that while close trust might seemingly exhibit a negative relationship with GDP in isolation, its interaction with opportunity-driven entrepreneurship reverses this effect, contributing positively to GDP.

This outcome underscores the intricate interplay between close trust and opportunity entrepreneurship, particularly in their combined influence on economic growth (GDP). It indicates that the positive impact of opportunity-driven entrepreneurship on GDP might counteract or surpass the negative effect of close trust when considered together. Ultimately, these findings emphasize the importance of understanding the interrelationships between trust, entrepreneurship, and economic growth for a more comprehensive grasp of their collective effects.

Initially, the results of Model 8 show close trust seemingly exhibits a significant negative impact on GDP, which aligns with Growiec and Growiec's (2014) study findings. They found that close trust has a negative impact on society but may have positive effects on the members of the closed group. Close trust is related to strong family ties and they found that it is bad for economic growth. It's crucial to recognize the potential pitfalls associated with heightened levels of close trust. A high level of close trust limits exposure to external knowledge, diverse viewpoints, and global market dynamics. These limitations could potentially limit innovation and global competitiveness which can have a negative impact on the economic growth of the developing economies.

However, the revelation from this study sparks intrigue: the combination of close trust with opportunity entrepreneurship yields a significantly positive impact. Opportunity entrepreneurship centred on identifying and pursuing novel prospects, stands as a potent catalyst for growth in developing nations. Keefer and Knack (2005) argue that close trust compensates for weak institutions in developing countries. When opportunity entrepreneurship is merged with close trust, it's plausible that tightly-knit communities harness their trust networks to forge and seize entrepreneurial opportunities. This is due to close trust enabling easier access to resources, shared knowledge, reduced transactional barriers, and communal support. Close trust nurtured within a community could foster an environment conducive to collaboration and cooperation among entrepreneurs. In the absence of robust formal institutions, individuals heavily rely on social bonds to establish enterprises or navigate economic hurdles (Keefer and Knack,2005). This collective support amplifies opportunity entrepreneurship, driving greater innovation, resource consolidation, and market expansion. Consequently, these dynamics synergistically contribute to bolstering economic growth within developing economies.

This finding implies that while close trust can foster local innovation and cooperation, there's a need to balance this with exposure to external knowledge, diverse viewpoints, and global market dynamics. Overemphasis on close trust might risk isolating communities from global trends and advancements, hindering their long-term competitiveness. The findings suggest that rather than viewing close trust as universally detrimental to economic growth, leveraging its synergies with opportunity entrepreneurship could lead to positive impacts, particularly in developing economies where formal institutions are weak.

3.4.4 Association Membership

The findings derived from the regression analysis yield compelling insights into the dynamics between association membership, opportunity entrepreneurship, GDP, and the anticipated impact of social capital on entrepreneurial endeavours. Notably, association membership exhibits a significantly positive relationship with opportunity entrepreneurship in Model 4, indicating that individuals engaged in associations or groups are more inclined to partake in opportunity-entrepreneurial activity. However, an intriguing negative and significant relationship emerges between association membership and economic development in Model 9. Additionally, a statistically significant positive link between predicted opportunity entrepreneurship, accounting for the social capital impact, and GDP. This positive relationship implies that as the anticipated level of entrepreneurial activities, considering the influence of social capital, increases, there is a corresponding positive effect on the GDP per capita of the developing economies.

This finding is contrary to Putnam's (2015) study which suggested that that public policies should be designed in a way to foster associational membership and observed that a decline in associational membership in America had a negative impact on economic development. The contrary finding can be due to the reason that the present study focuses on developing countries and Putnam's focus was the USA which is a developed economy. Social capital, represented by association memberships, typically fosters networks, trust, and cooperation within a community. In developing countries, it might initially manifest as a diversion of time and resources away from more economically productive activities. This might explain the observed negative impact on GDP initially.

Opportunity entrepreneurship, specifically, is centred around seizing chances to create new ventures based on market gaps or emerging demands. This form of entrepreneurship heavily

relies on networks, information sharing, and trust—qualities inherently ingrained within social capital. The fusion of social capital and opportunity entrepreneurship can yield several advantages. This can be supported by Kwon and Arenius (2010) study. Firstly, it facilitates a more efficient utilization of resources by leveraging strong social ties and connections. These networks often provide access to diverse resources such as funding, knowledge, and mentorship, essential for entrepreneurial success. Secondly, information exchange within social networks allows entrepreneurs to stay abreast of market trends, identify potential opportunities, and acquire critical insights. This continuous flow of information fosters innovation and adaptability, crucial elements in driving entrepreneurial endeavours forward. These combined factors could lead to more effective utilization of resources and innovation, thereby boosting economic growth.

3.4.5 Strong Ties

The analysis demonstrates a statistically significant positive relationship between strong ties and GDP when assessed in conjunction with opportunity entrepreneurship in Model 10. These results suggest that within an environment where individuals engage in entrepreneurial activities driven by identified opportunities and simultaneously possess strong social ties, there is a notable contribution to the overall economic output (GDP). The synergy between robust strong ties and opportunity-driven entrepreneurship seems to foster economic growth.

Contrarily, the findings reveal a statistically significant negative association between strong ties and opportunity entrepreneurship in Model 5. This outcome implies that within the context of opportunity-driven entrepreneurial pursuits, an overreliance on strong social ties might hinder the exploration and exploitation of new opportunities. The prevalence of a close-knit society can discourage individuals from venturing beyond established connections, potentially limiting the diversification and innovation within entrepreneurial activities, and consequently affecting economic development in developing economies.

The empirical evidence provided by Model 5 underscores a profound relationship between strong social ties and economic growth, particularly when intertwined with opportunities in entrepreneurship. This finding is not merely coincidental; rather, it echoes a longstanding

understanding rooted in sociological and economic theories, substantiating the instrumental role of robust social networks in shaping the trajectory of economic development (Granovetter, 1973; Batjargal,2003; Jack,2005; Welter, 2012). Stam et al. (2014) findings also indicated that strong ties exhibit a more pronounced positive impact on the performance of small firms in emerging economies in comparison to their counterparts in established economies. This divergence is attributed to strong ties assisting entrepreneurs in navigating the challenges posed by institutional voids and uncertainties often prevalent in emerging economies.

The essence lies in the depth and quality of these connections, characterized by interpersonal trust, shared values, and reciprocal support within communities. These strong ties serve as the cornerstone for socio-economic progress in developing nations. They create an ecosystem wherein aspiring entrepreneurs find themselves embedded within a network teeming with invaluable resources crucial for business establishment and expansion.

Knowledge, often tacit and region-specific, flows freely within closely-knit networks (Maaranto, 2019). This flow of information is pivotal for entrepreneurial endeavours as it not only assists in identifying market gaps and opportunities but also in understanding consumer preferences and technological advancements. Consequently, this environment becomes a fertile ground for innovation, sparking creativity and driving productivity enhancements that are instrumental for sustained economic growth.

Furthermore, the concept of social capital encapsulates more than just resource-sharing among individuals. It encompasses a shared sense of identity, cooperation, and collective action. In practical terms, this translates to communities leveraging their interconnectedness to collectively address challenges and seize opportunities. From grassroots-level initiatives to large-scale cooperative ventures, these collaborations harness the strengths of individuals knit together by strong social ties to propel local and regional development efforts (Manthata, 2017)

A critical aspect to note is the transformative potential of this social capital in fostering inclusive growth. By bridging socio-economic divides, strong ties create avenues for marginalized groups to access resources, support, and opportunities otherwise inaccessible.

This inclusivity contributes not only to economic prosperity but also to social cohesion, fostering a more equitable and resilient society.

3.4.6 Hypothesis Discussion

The presented findings align with or challenge the initially hypothesized relationships between social capital indicators and opportunity-driven entrepreneurship's contribution to economic growth in developing countries. The section below discusses this.

Civic Norms: The results support the hypothesis that civic norms facilitate opportunity-driven entrepreneurship. The positive association between civic norms and opportunity entrepreneurship suggests that higher adherence to civic norms indeed leads to increased entrepreneurial activities driven by identified opportunities. However, the unexpected negative impact of civic norms on economic growth challenges the hypothesis. The negative influence on GDP might stem from civic norms limiting personal interests and creativity, potentially hindering entrepreneurial activity and, consequently, economic development. The combination of civic norms and opportunity entrepreneurship, though, yields a significantly positive impact on GDP, emphasizing the synergistic effects of these factors.

Generalised Trust: Contrary to the hypothesis, the analysis does not find a substantial relationship between generalised trust and opportunity-driven entrepreneurship. However, the unexpected negative relationship between generalised trust and economic growth challenges the initial hypothesis. The findings suggest that high levels of generalised trust in developing economies are associated with a decrease in economic growth. Nevertheless, when combined with opportunity entrepreneurship, the negative impact of generalised trust on economic growth reverses, indicating a synergistic relationship. This suggests that opportunity-driven entrepreneurship can leverage the benefits of high trust, fostering an environment conducive to economic growth.

Close Trust: The results support the hypothesis that close trust facilitates opportunity-driven entrepreneurship. The positive association between close trust and entrepreneurial activities driven by opportunities confirms that higher levels of close trust among individuals in developing economies lead to increased engagement in such entrepreneurial activities. The initially observed negative impact of close trust on GDP is reversed when considered alongside

opportunity-driven entrepreneurship, emphasizing the positive contribution of these factors when combined.

Association Membership: The findings challenge the hypothesis that association membership facilitates opportunity-driven entrepreneurship. While the positive relationship between association membership and opportunity entrepreneurship is in line with the hypothesis, the unexpected negative association between association membership and economic development challenges it. However, when considering the impact on GDP with the inclusion of social capital, the relationship becomes positive, suggesting that as the anticipated level of entrepreneurial activities, considering the influence of social capital, increases, there is a corresponding positive effect on the GDP per capita of developing economies.

Strong Ties: The results challenge the hypothesis that strong ties facilitate opportunity-driven entrepreneurship. The negative association between strong ties and entrepreneurial activities driven by opportunities challenges the hypothesis. However, when strong ties are assessed in conjunction with opportunity entrepreneurship, a significantly positive relationship with GDP is observed, suggesting that within an environment of strong social ties and entrepreneurial activities focused on recognized opportunities, there is a notable contribution to overall economic output.

3.4.7 Comparative Implications:

The impact of social capital indicators on opportunity entrepreneurship and GDP in developing countries is intriguing. The impact of civic norms and close trust on opportunity entrepreneurship is stronger compared to generalised trust and association membership underscores the significance of localized, interpersonal relationships and community engagement in fostering entrepreneurial opportunities. However, from the results, obtained it can be argued that generalised trust and association membership hold a higher likelihood of fostering beneficial economic output resulting from opportunity entrepreneurship compared to close trust and civic norms within the context of developing countries.

Generalised trust, characterized by the level of trust among strangers in a society, facilitates smoother interactions, collaborations, and transactions. This broader trust creates an environment where individuals are more inclined to engage in entrepreneurial activities with

unfamiliar partners. This increased willingness to cooperate and transact with strangers reduces the costs associated with establishing new ventures and enables more diverse and extensive networks, potentially leading to greater innovation and market expansion. Association memberships offer valuable networks, resources, and knowledge-sharing platforms that play a crucial role in supporting entrepreneurial endeavours. By being part of associations, entrepreneurs gain access to mentorship, information, funding opportunities, and advocacy channels for policies conducive to business growth. These memberships provide a supportive ecosystem where entrepreneurs can thrive, leading to more sustainable and successful ventures. Close trust and civic norms, while essential at a localized level for fostering interpersonal relationships and community cohesion, might have limitations when it comes to expanding entrepreneurial activities. They may primarily facilitate smaller-scale or localized ventures but might not provide the diverse networks and resources necessary for scaling up or reaching larger markets.

In essence, while close trust and civic norms contribute to community cohesion and interpersonal relationships, generalised trust and association memberships have a broader reach and impact on fostering an environment that promotes larger-scale and more impactful entrepreneurial activities. The extensive networks, access to resources, and the ability to engage with a wider array of collaborators and opportunities make generalised trust and association memberships more conducive to generating beneficial economic output from opportunity entrepreneurship within developing countries.

The impact of human capital in Models 1-5 on opportunity entrepreneurship is highly positive and significant. Human capital refers to the knowledge, skills, education, experience, and abilities possessed by individuals, and it plays a crucial role in fostering opportunity entrepreneurship. These results were well anticipated and aligned with the previous literature related to human capital and entrepreneurship (Marvel et al, 2017; Martin et al, 2013; Unger et al., 2011; Qin and Kong, 2021). High levels of human capital often correlate with increased innovation and creativity. Entrepreneurs with diverse skills and knowledge are better equipped to identify market gaps, develop innovative solutions, and create new opportunities (Qin and Kong, 2021).

The results from Models 6-10 assert that Knowledge (R&D expenditure) and Physical capital (gross fixed capital formation per employed person) are both significant factors contributing

positively to the GDP (Gross Domestic Product) of developing countries. These results align with Doh and McNeely's (2012) study. Investing in research and development activities leads to technological advancements, innovation, and the creation of new products and services. In developing countries, where technological gaps often exist, R&D expenditure can bridge these gaps, leading to improved productivity, efficiency, and competitiveness in various industries. This increased efficiency and innovation contribute to economic growth by enhancing the overall productivity of the workforce and fostering a conducive environment for sustainable development. Gross fixed capital formation per employed person represents the investment in physical assets like machinery, equipment, infrastructure, and construction projects. In developing countries, adequate infrastructure is often a bottleneck to economic progress. Increased investment in physical capital directly impacts the productivity of labour. When workers have access to better tools, equipment, and infrastructure, they can produce more efficiently, thereby contributing to higher GDP growth. Additionally, improved infrastructure attracts further investments, fosters business expansion, and enhances the overall economic environment. Both R&D expenditure and GFCF per employed person can trigger a multiplier effect on economic activity. R&D spending, for instance, not only leads to technological advancements but also creates jobs in the research sector, encourages knowledge spillovers, and stimulates related industries. Similarly, increased capital investment leads to job creation, higher incomes, increased consumer spending, and a subsequent rise in demand for goods and services, thereby boosting overall economic growth.

Type of Social Capital	**Description**	**Impact on Opportunity-driven Entrepreneurship/Economic Growth**
<u>Bridging</u>		
Civic Norms	Fosters localized interpersonal relationships.	Strongly impacts opportunity entrepreneurship.
Generalized Trust	Enables trust among strangers	Holds higher potential for driving economic output

Bonding		
Close Trust	Strengthens close-knit relationships.	Strongly impacts opportunity entrepreneurship.
Association Memberships	Offers network and support	Holds higher potential for driving economic output
Strong Ties	Deep, trusting connections foster community cohesion, offer reliable support, and enhance personal wellbeing.	Holds higher potential for driving economic output

(Personal Collection, 2023)

3.5 Conclusion

3.5.1 Original Contribution

This research contributes significantly to the refinement of social capital theories (Bourdieu, Coleman, Putnam, Lin and Granovetter) offering a nuanced understanding of how distinct dimensions—association membership, generalised trust, civic norms, strong ties and close trust—play specific roles in the context of opportunity-driven entrepreneurship and economic growth in developing countries. This challenges simplistic views and encourages scholars to consider the multifaceted nature of social capital, recognizing its diverse influences in various settings. By aligning and extending established theories, the paper has provided valuable insights that refine and deepen our understanding of these dynamics. The findings emphasize the nuanced nature of these relationships, shedding light on the contextual variations that influence the impact of social capital components on economic development.

The study reveals association membership positive association with opportunity-driven entrepreneurship and economic growth in developing nations, echoing Putnam's (2015) and Bourdieu's work which underscores the significance of social networks in community development. The unexpected negative relationship between association membership and

economic growth in isolation challenged conventional findings but took on a positive dimension when coupled with social capital. The negative relationship in isolation might be due to factors such as social inertia or a lack of focus on economic development within certain types of associations. Future studies could go into depth to research the different types of associations. Therefore, policymakers should pay attention to the specific characteristics of associations and social networks. Encouraging the formation and growth of associations that actively support entrepreneurial activities can be a valuable strategy for promoting economic development in developing nations.

Civic norms challenged the previous literature (Knack and Keefer, 1997; Lobrashi, 2014) and exhibited a positive link with opportunity-driven entrepreneurship but presented an unexpected negative impact on economic growth, later reversed when combined with entrepreneurship. This finding further refines Putnam's Social Capital Theory- high levels of social capital can contribute to a vibrant civil society, which, in turn, may create an environment conducive to entrepreneurship and economic growth. This underscores the need for a nuanced understanding of societal norms in shaping entrepreneurial behaviour and contributing to economic development. The study underscores the potential paradox of civic norms, showing a negative impact on economic growth but a positive influence when combined with entrepreneurship. This prompts a revaluation of the role of societal norms, emphasizing the delicate balance needed between adherence to norms and fostering an environment conducive to entrepreneurial activities.

The study’s findings revealed that weak ties have positive links when tied to opportunitydriven entrepreneurship and GDP, but a negative association arises with opportunity entrepreneurship alone this aligns with Granovetter’s and Lin’s theory which suggests weak ties are more valuable to accessing new opportunities. Nevertheless, the present study focused on developing countries to refine the theory further. The depth and quality of connections play a crucial role, in fostering knowledge flow and innovation, particularly in developing nations. Social capital goes beyond resource-sharing, promoting collective action and inclusive growth. In essence, strong social ties contribute significantly to economic progress, fostering innovation and creating a more equitable and resilient society.

The unexpected negative relationship between generalised trust and economic growth, later reversed when combined with entrepreneurship, challenges the conventional understanding of trust as universally positive. The positive influence of generalised trust on opportunitydriven entrepreneurship aligns with Coleman's (1988) social capital theory,

emphasizing the role of trust in fostering cooperation and economic activities. However, the unexpected negative relationship between generalised trust and economic growth in developing economies, reversed when combined with entrepreneurship, adds a nuanced layer to existing literature, suggesting that trust may operate differently in distinct stages of economic development. This highlights the need for a more dynamic and context-dependent view of trust in economic development theories.

In summary, our research not only aligns with established theories but introduces novel insights that enrich and expand existing knowledge. The contextual relevance of our findings within the larger framework of social capital literature provides a foundation for future research and informs policy recommendations for sustainable economic development in developing countries. The multifaceted nature of these dynamics underscores the need for a comprehensive and nuanced approach to harnessing social capital for economic growth, offering avenues for further exploration in academic and policy spheres.

3.5.2 Policy Implications

The findings suggest that policymakers should consider tailoring their strategies to harness the positive aspects of social capital. Policies promoting association memberships and fostering generalised trust can be instrumental in cultivating an environment conducive to opportunity-driven entrepreneurship and economic growth. However, caution is needed in relying solely on close trust, as the study indicates potential limitations in its contribution to larger-scale entrepreneurial activities.

The emphasis on civic norms and close trust highlights the importance of community engagement in fostering entrepreneurial activity. Policymakers may explore ways to leverage these local relationships for economic development. The study underscores the potential trade-off between adherence to societal norms and individual creativity, prompting a reevaluation of the role of cultural norms in shaping entrepreneurial landscapes.

The research highlights the synergistic effects when certain dimensions of social capital are combined with opportunity-driven entrepreneurship. Combining generalised trust with entrepreneurial activities can mitigate its unexpected negative impact on economic growth. Similarly, the positive impact of association membership on opportunity entrepreneurship

becomes apparent when considering the broader social capital context, indicating that fostering multiple forms of social capital simultaneously may yield more significant benefits.

The unexpected negative relationship between generalised trust and economic growth underscores the need for a nuanced understanding of trust dynamics. Trust alone may not guarantee economic development, but when coupled with entrepreneurial activities, it becomes a catalyst for growth. Policymakers and institutions aiming to build trust should recognize its potential as a facilitator for economic growth, especially when integrated with entrepreneurial initiatives.

The study reaffirms the importance of human and physical capital in fostering opportunitydriven entrepreneurship and economic growth. Policymakers should prioritize investments in education, skill development, and research, as these contribute significantly to innovation and productivity. Simultaneously, efforts to enhance physical capital, such as infrastructure development, can further support technological advancements and overall economic development in developing countries.

Examples of policies or initiatives related to social capital in developing countries presently. The following section will critically assess how these policies can be further refined based on the present study's findings:

Bolsa Família Program in Brazil

Source: https://www.worldbank.org/en/news/press-release/2023/12/05/world-bank-tosupport-new-phase-of-brazil-s-bolsa-familia-program)

Bolsa Família is a conditional cash transfer program that aims to reduce poverty and inequality by providing financial assistance to low-income families. The program requires families to meet certain conditions, such as ensuring children attend school and receive vaccinations, fostering a sense of responsibility and community engagement.

- Impact on Social Capital: By linking cash transfers to education and health conditions, Bolsa Família encourages community participation and cooperation in meeting common goals.

Bridging Social Capital

The program successfully integrates social capital by emphasizing community engagement and responsibility. The conditions for cash transfers promote a sense of shared goals, encouraging families to collaborate on education and health objectives.

- Civic Norms: While the program encourages community engagement, there may be challenges in fostering active civic participation beyond meeting the program's conditions.

Possible improvement: Implement community-based projects and activities that encourage active civic participation and collaboration beyond the program's conditions.

- Generalized Trust: The reliance on conditional cash transfers may not necessarily contribute to generalized trust among community members beyond their immediate interactions.

Possible Improvement: Facilitate community events, workshops, or forums that promote interaction and trust-building among diverse community members.

Bonding Social Capital

By linking financial assistance to specific conditions, the program reinforces trust and responsibility within families. The shared commitment to meeting these conditions strengthens close-knit relationships.

- Close Trust: The program's focus on meeting specific conditions might strengthen close trust within families, but it might not necessarily extend to broader community networks.

Possible Improvement: Introduce community-building initiatives that go beyond the individual family level, fostering stronger ties among neighbours and community members.

- Association Memberships: The program's conditions may not directly promote participation in formal association memberships or organizations, limiting opportunities for building strong ties.

Possible Improvement: Establish partnerships with existing local associations or create platforms that encourage families to participate in formal community organizations.

Grameen Bank in Bangladesh

Source: https://grameenbank.org.bd

Grameen Bank is a microfinance institution that provides small loans to rural entrepreneurs, predominantly women, to support income-generating activities. The bank operates on the principle of trust and peer support, with borrowers forming groups that provide mutual assistance and collateral for each other.

Impact on Social Capital: Grameen Bank fosters social capital by building strong social networks among borrowers, promoting solidarity, and empowering women to become active contributors to their communities.

Bridging Social Capital.

Grameen Bank integrates social capital effectively through its group-based lending model. Small entrepreneurs come together, fostering a sense of collective responsibility and mutual support to address common challenges.

- Civic Norms: The emphasis on individual entrepreneurship may not inherently drive community-wide civic norms or participation.

Possible Improvement: Integrate community development projects that involve multiple entrepreneurs working together to address shared challenges.

- Generalized Trust: While the group-based lending model fosters trust within small communities, it might not contribute significantly to generalized trust beyond these groups.

Possible Improvement: Organize events or forums that bring together different lending groups to share experiences and build trust among a broader network.

Bonding Social Capital.

The close trust among group members contributes to social capital by creating a supportive network. The association also encourages solidarity among borrowers.

- Close Trust: While the bank promotes close trust among group members, it may not necessarily lead to broader community bonds.

Possible Improvement: Implement trust-building activities at the community level, focusing on strengthening relationships beyond the lending groups.

- Association Memberships: Participation in formal association memberships might not be directly encouraged or facilitated by the bank's activities.

Possible Improvement: Develop initiatives that link Grameen Bank borrowers with larger community organizations or encourage their involvement in existing associations.

Uganda's Community-Driven Development (CDD) Projects

Source: https://blogs.worldbank.org/impactevaluations/where-and-when-communitydriven-development-cdd-effective

Uganda has implemented community-driven development projects that empower local communities to identify and implement their development priorities. Communities are

involved in decision-making, planning, and project implementation, leading to increased ownership and sustainability of development initiatives.

Impact on Social Capital: The participatory nature of CDD projects strengthens social ties within communities, fostering a sense of unity and collective responsibility for local development.

Bridging Social Capital

The participatory nature of CDD projects ensures the integration of social capital by involving communities in decision-making. This fosters a sense of shared responsibility and collaboration beyond individual households.

- Civic Norms: The success of fostering civic norms may vary across communities, depending on their capacity and willingness to engage in participatory decisionmaking.

Possible Improvement: Provide training and resources to communities to enhance their capacity for effective participatory decision-making, fostering a culture of civic engagement.

- Generalized Trust: The participatory approach may not automatically translate into generalized trust beyond the immediate project context.

Possible Improvement: Create platforms for communities to share successful project experiences and collaborate on broader initiatives.

Bonding Social Capital

The engagement of community members in planning and implementing projects enhances bonding social capital by strengthening relationships within the community.

- Close Trust: In communities with existing internal divisions, the participatory approach might face challenges in building close trust among all members.

Possible solution: Implement community-building activities that address internal divisions, promoting understanding and cooperation among all community members.

- Association Memberships: While community-driven initiatives can strengthen local ties, they might not directly lead to increased participation in formal association memberships.

Possible Improvement: Develop linkages between community-driven projects and formal associations, encouraging community members to join and actively participate.

South Africa's Expanded Public Works Programme (EPWP)

Source: https://www.gov.za/about-government/government-programmes/expandedpublic-works-programme

The EPWP is a public employment program in South Africa that aims to reduce unemployment and alleviate poverty by providing temporary job opportunities in various sectors. The program involves collaboration with local communities and municipalities to identify and implement projects that address community needs.

- Impact on Social Capital: By engaging communities in the planning and implementation of public works projects, the EPWP contributes to the formation of social capital and strengthens community bonds.

Bridging Social Capital

EPWP integrates social capital by involving local communities in the identification and implementation of projects. This collaborative approach promotes a sense of shared responsibility and community involvement.

- Civic Norms: The temporary nature of employment may limit the development of long-lasting civic norms and community engagement.

Possible Improvement: Introduce community development projects that have a lasting impact, encouraging a sense of civic responsibility beyond the duration of temporary employment.

- Generalized Trust: The program's focus on providing temporary job opportunities may not necessarily contribute significantly to generalized trust beyond the immediate working context.

Possible Improvement: Establish mentorship programs or community forums where temporary workers can interact with other community members, fostering generalized trust.

Bonding Social Capital

The temporary job opportunities provided by EPWP contribute to bonding social capital by creating a sense of community among temporary workers. Team-building activities further strengthen relationships.

- Close Trust: The temporary nature of employment might limit the development of close trust among workers, especially if there is frequent turnover.

Possible Improvement: Implement team-building activities and recognition programs to strengthen bonds among temporary workers, enhancing the sense of community.

- Association Memberships: The program may not inherently encourage or facilitate increased participation in formal association memberships.

Possible Improvement: Encourage temporary workers to participate in existing community associations, providing support for their involvement.

Mexico's Oportunidades (now Prospera) Program

Source: https://www.worldbank.org/en/news/feature/2014/11/19/un-modelo-de-mexicopara-el-mundo

Oportunidades, now known as Prospera, is a conditional cash transfer program in Mexico that provides financial assistance to families in poverty, contingent on fulfilling health and education requirements. The program encourages families to attend health clinics and ensure children attend school, promoting community engagement and social cohesion.

Impact on Social Capital: Prospera contributes to social capital by fostering a sense of community responsibility for the well-being and education of its members, creating a supportive network for families in need.

Bridging Social Capital

The program successfully integrates social capital by promoting community responsibility for health and education. It encourages a collective commitment to the well-being of community members beyond individual households.

- Civic Norms: While the program promotes community responsibility, it might not lead to a significant increase in broader civic norms or participation.

Possible Improvement: Support community initiatives that address broader civic issues, encouraging residents to collaborate on projects beyond the program's conditions.

- Generalized Trust: The conditional nature of cash transfers may not automatically contribute to generalized trust beyond the specific conditions.

Possible Improvement: Facilitate community events that bring together residents from different households to build trust and foster a sense of community.

Bonding Social Capital

The conditional cash transfers foster bonding social capital by reinforcing trust and responsibility within families. The program encourages a supportive network for families in need.

- Close Trust: The focus on meeting health and education conditions may strengthen close trust within families but may not necessarily extend to broader community bonds.

Possible Improvement: Implement community-building programs that extend beyond family units, creating opportunities for families to connect and build stronger community ties.

- Association Memberships: The program's conditions may not directly promote increased participation in formal association memberships or organizations.

Possible Improvement: Actively promote participation in formal associations by linking program beneficiaries with existing community organizations and providing information on the benefits of involvement.

3.5.3 Entrepreneurs and Manager's Practise Suggestions and Implications:

Entrepreneurs and managers can strategically harness social capital to enhance their day-today operations by prioritizing relationship-building and fostering a culture of collaboration within their teams.

Network Strategically:

- Actively build and maintain a diverse professional network.
- Attend industry events, conferences, and networking sessions to expand connections.
- Leverage online platforms to connect with industry peers, mentors, and potential collaborators.

→ Implication: Increased network connectivity by actively building and maintaining a diverse professional network, attending industry events, and leveraging online platforms can lead to increased connectivity. This can result in a broader pool of resources, knowledge, and opportunities for the organization.

Encourage Team Collaboration:

- Foster a collaborative and open culture within the organization.
- Encourage team members to build strong relationships with each other.
- Facilitate cross-functional collaboration to enhance knowledge sharing and innovation.

→Implication: Enhanced team dynamics will help in fostering team collaboration and a culture of openness which can strengthen social bonds within the organization. Improved relationships among team members contribute to a positive work environment and increased collective efficacy.

Invest in Employee Development:

- Provide opportunities for professional development and skill-building.
- Support employees in building their individual networks within and outside the organization.
- Recognize and reward collaborative efforts to strengthen internal social capital.

→ Implication: Improved employee engagement and loyalty by investing in employee development and recognizing collaborative efforts can enhance employee satisfaction and loyalty. Employees who feel supported in their growth and valued for their contributions are likely to be more engaged and committed.

Establish Trust Through Leadership:

- Demonstrate trustworthy leadership behaviours.
- Communicate transparently with employees, addressing concerns and sharing company goals.
- Build a culture of trust within the organization, fostering cooperation and loyalty.

→ Implication: Cultivation of trust by demonstrating trustworthy leadership and transparent communication fosters a culture of trust. Trust is a crucial element of social capital, leading to increased cooperation, effective teamwork, and a positive organizational reputation.

Participate in Industry Associations:

- Join relevant industry associations and business groups.
- Engage in discussions, share insights, and collaborate on industry-wide initiatives.
- Tap into the collective knowledge and resources available through these associations.

→ Implication: Enhanced corporate reputation by involvement in social responsibility initiatives and community development aligns the organization's values with broader societal goals. This positively impacts the corporate reputation, contributing to a favourable perception among customers, employees, and stakeholders.

3.5.4 Limitations and Recommendations

Furthermore, it is important to acknowledge the limitations of the study. The research relies on cross-sectional data, capturing only a few years due to the limited availability of the secondary data. This limitation restricts the ability to establish causal relationships between variables, hindering the understanding of how changes in social capital indicators directly influence entrepreneurial activities and economic growth over time. In addition, the study focuses on a selected group of developing countries due to the limited secondary data available, potentially limiting the generalizability of findings to a broader global context. The diverse economic, cultural, and social landscapes across developing nations may not be fully represented in the sample, raising questions about the universality of the identified relationships. Further studies can collect primary data to overcome this limitation and increase the number of countries studied.

While the study acknowledges the multifaceted nature of social capital, it simplifies its measurement by focusing on selected indicators like network size, strong and weak ties, network diversity, generalized trust, association membership, and civic norms. This was due to this research being secondary data and the study had to work with the data which was readily available. The complexity of social capital might not be fully captured by these indicators, leading to an oversimplification of a concept that inherently involves intricate social dynamics. Future studies can consider more social capital indicators by conducting primary research and collecting data for more social capital indicators.

Despite recognizing the influence of contextual factors, the study does not comprehensively account for all potential variables that could impact the relationship between social capital, entrepreneurship, and economic growth. Cultural, historical, and institutional nuances within specific regions might play crucial roles in shaping these dynamics, and their omission limits the depth of understanding.

The study predominantly focuses on economic outcomes, such as opportunity-driven entrepreneurship and GDP growth, potentially overlooking the broader societal implications of social capital. The impact of social capital on aspects like social cohesion, community wellbeing, and individual happiness is not extensively explored, limiting the holistic understanding of its consequences.

3.6 References

1. Aboobaker, N., 2020. Human capital and entrepreneurial intentions: do entrepreneurship education and training provided by universities add value?. On the Horizon, 28(2), pp.73-83.
2. Abrams, D., Hogg, M.A., Hinkle, S. and Otten, S., 2005. The social identity perspective on small groups. *Theories of small groups: Interdisciplinary perspectives*, pp.99-137.
3. Accomak, S., 2009. The impact of social capital on economic and social outcomes.
4. Achen, C.H., 2005. Two-step hierarchical estimation: Beyond regression analysis. *Political Analysis*, *13*(4), pp.447-456.
5. Acs, Z. and Sanders, M., 2021. *Endogenous growth theory and regional extensions* pp. 615-634. Springer Berlin Heidelberg.
6. Acs, Z., Bosma, N. and Sternberg, R., 2011. Entrepreneurship in world cities. The Dynamics of Entrepreneurship. Evidence from the Global Entrepreneurship, pp.125152.
7. Acs, Z.J., Audretsch, D.B. and Lehmann, E.E., 2013. The knowledge spillover theory of entrepreneurship. *Small business economics*, *41*, pp.757-774.

8. Acs, Z.J., Audretsch, D.B., Braunerhjelm, P. and Carlsson, B., 2005. *Growth and Entrepreneurship: An Empirial Assessment*(No. 3205). Papers on Entrepreneurship, Growth and Public Policy.

9. Adler, P.S. and Kwon, S.W., 2002. Social capital: Prospects for a new concept. Academy of management review, 27(1), pp.17-40.

10. Afandi, E., Kermani, M. and Mammadov, F., 2017. Social capital and entrepreneurial process. *International Entrepreneurship and Management Journal*, *13*(3), pp.685716.

11. Afful-Dadzie, E. and Afful-Dadzie, A., 2016. A decision making model for selecting start-up businesses in a government venture capital scheme. Management Decision, 54(3), pp.714-734.

12. Agger, A. and Jensen, J.O., 2015. Area-based initiatives—and their work in bonding, bridging and linking social capital. *European Planning Studies*, *23*(10), pp.204-206.

13. Akçomak, I.S. and Ter Weel, B., 2009. Social capital, innovation and growth: Evidence from Europe. *European Economic Review*, *53*(5), pp.544-567.

14. Akcigit, U. and Ates, S.T., 2021. Ten facts on declining business dynamism and lessons from endogenous growth theory. *American Economic Journal: Macroeconomics*, *13*(1), pp.257-298.

15. Al-Omoush, K.S., Simón-Moya, V. and Sendra-García, J., 2020. The impact of social capital and collaborative knowledge creation on e-business proactiveness and organizational agility in responding to the COVID-19 crisis. *Journal of Innovation & Knowledge*, *5*(4), pp.279-288.

16. Aldrich, D.P., 2017. The importance of social capital in building community resilience. *Rethinking resilience, adaptation and transformation in a time of change*, pp.357-364.

17. Aldrich, H., 1999. *Organizations evolving*. Sage.

18. Aldrich, H., Zimmer, C. and Jones, T., 1986. Small business still speaks with the same voice: a replication of 'the voice of small business and the politics of survival'. *The Sociological Review*, *34*(2), pp.335-356.

19. Alfano, V., 2022. Does social capital enforce social distancing? The role of bridging and bonding social capital in the evolution of the pandemic. Economia Politica, 39(3), pp.839-859.

20. Algan, Y., 2018. Trust and social capital. *For Good Measure: Advancing Research on Well-Being Metrics Beyond GDP; Stiglitz, J., Fitoussi, J., Durand, M., Eds*, pp.283-320.

21. Alvarez, S.A. and Barney, J.B., 2007. Discovery and creation: Alternative theories of entrepreneurial action. *Strategic entrepreneurship journal*, *1*(1-2), pp.11-26.

22. Alvarez, S.A. and Barney, J.B., 2014. Entrepreneurial opportunities and poverty alleviation. *Entrepreneurship theory and practice*, *38*(1), pp.159-184.

23. Amoa-Gyarteng, K. and Dhliwayo, S., 2024. Cultivating success: organizational culture's influence on innovation and performance in SMEs. *Cogent Business & Management*, *11*(1), p.2397070.

24. An, N.H., 2021. Social capital in Vietnam: an analysis of social networks and social trust. Journal of Mekong Societies, 17(2), pp.1-27.

25. An, N.H., 2021. Social capital in Vietnam: an analysis of social networks and social trust. *Journal of Mekong Societies*, *17*(2), pp.1-27.

26. Andrews, D. and Criscuolo, C., 2013. Knowledge-based capital, innovation and resource allocation.

27. Anokhov, I., 2019. Social networking is a catalyst for the formation of social capital and the economic development of a city. *Obshchestvo i ekonomika*, (1), pp.52-68.

28. Antonietti, R. and Boschma, R., 2018. Social capital, resilience and regional diversification in Italian regions.

29. Aparicio, S., Urbano, D. and Audretsch, D., 2016. Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. Technological forecasting and social change, 102, pp.45-61.

30. Ardichvili, A., Cardozo, R. and Ray, S., 2003. A theory of entrepreneurial opportunity identification and development. *Journal of Business venturing*, *18*(1), pp.105-123.

31. Arenius, P. and Clercq, D.D., 2005. A network-based approach on opportunity recognition. *Small business economics*, *24*, pp.249-265.

32. Ateca-Amestoy, V., Aguilar, A.C. and Moro-Egido, A.I., 2014. Social interactions and life satisfaction: Evidence from Latin America. *Journal of Happiness Studies*, *15*, pp.527-554.

33. Audretsch, D.B. and Keilbach, M., 2004. Entrepreneurship and regional growth: an evolutionary interpretation. *Journal of evolutionary economics*, *14*, pp.605-616.

34. Audretsch, D.B., Aldridge, T.T. and Sanders, M., 2011. Social capital building and new business formation: A case study in Silicon Valley. *International Small Business Journal*, *29*(2), pp.152-169.

35. Ayala, J.C. and Manzano, G., 2014. The resilience of the entrepreneur. Influence on the success of the business. A longitudinal analysis. *Journal of economic psychology*, *42*, pp.126-135.

36. Bahmani, S., Galindo, M.Á. and Méndez, M.T., 2012. Non-profit organizations, entrepreneurship, social capital and economic growth. *Small Business Economics*, *38*, pp.271-281.

37. Batjargal, B., 2003. Social capital and entrepreneurial performance in Russia: A longitudinal study. *Organization studies*, *24*(4), pp.535-556.

38. Batjargal, B., 2010. Network dynamics and new ventures in China: A longitudinal study. Entrepreneurship and Regional Development, 22(2), pp.139-153.

39. Bauernschuster, S., Falck, O. and Heblich, S., 2010. Social capital access and entrepreneurship. Journal of Economic Behavior & Organization, 76(3), pp.821-833.

40. Baumol, W.J., 1993. Formal entrepreneurship theory in economics: Existence and bounds. Journal of business venturing, 8(3), pp.197-210.

41. Baycan, T. and Öner, Ö., 2023. The dark side of social capital: a contextual perspective. The Annals of Regional Science, 70(3), pp.779-798.

42. Bennett, R.J. and Robson, P.J., 1999. The use of external business advice by SMEs in Britain. Entrepreneurship & Regional Development, 11(2), pp.155-180.

43. Berraies, S., Lajili, R. and Chtioui, R., 2020. Social capital, employees' well-being and knowledge sharing: does enterprise social networks use matter? Case of Tunisian knowledge-intensive firms. Journal of Intellectual Capital, 21(6), pp.153-183.

44. Beugelsdijk, S. and Smulders, S., 2009. Bonding and bridging social capital and economic growth.

45. Beugelsduk, S., & Smolders, S. 2003. Bridging and bonding social capital: which type is good for economic growth? In The cultural diversity of European unity, pp. 147184.

46. Bhandari, H. and Yasunobu, K., 2009. What is social capital? A comprehensive review of the concept. Asian Journal of Social Science, 37(3), pp.480-510.

47. Bjørnskov, C. and Sønderskov, K.M., 2013. Is social capital a good concept?. *Social indicators research*, *114*, pp.1225-1242.

48. Blundel, R. and Smith, D., 2001. Business networks SMEs and inter-firm collaboration: a review of the research literature with implications for policy.

49. Borgatti, S.P., Jones, C. and Everett, M.G., 1998. Network measures of social capital. Connections, 21(2), pp.27-36.

50. Boschma, R.A., 2005. Social capital and regional development: an empirical analysis of the Third Italy. In Learning from Clusters: A Critical Assessment from an Economic Geographical Perspective pp. 139-168.

51. Bosma, N.S., & Levie, J. 2010. Global Entrepreneurship Monitor 2009 Executive Report.

52. Boudreaux, C.J. and Nikolaev, B., 2019. Capital is not enough: opportunity entrepreneurship and formal institutions. Small Business Economics, *53*, pp.709-738.

53. Boudreaux, C.J., & Nikolaev, B. 2019. Capital is not enough: opportunity entrepreneurship and formal institutions. Small Business Economics, 53, pp.709-738.

54. Bourdieu, P., 1985. The social space and the genesis of groups. Social Science Information, 24(2), pp.195-220.

55. Bradley, S.W., McMullen, J.S., Artz, K. and Simiyu, E.M., 2012. Capital is not enough: Innovation in developing economies. Journal of Management Studies.

56. Braman, S. (2006). The micro- and macroeconomics of information. Annual Review of Information Science and Technology.

57. Bruns, V., Holland, D.V., Shepherd, D.A. and Wiklund, J., 2008. The role of human capital in loan officers' decision policies. *Entrepreneurship Theory and Practice*, *32*(3), pp.485-506.

58. Bürcher, S. and Mayer, H., 2018. Are there differences in social capital related to corporate regional engagement in dynamic and less dynamic non-core regions?. European Planning Studies, 26(2), pp.342-364.

59. Burgess, R. & Venables, A. (2004). Towards a microeconomics of growth. *London School of Economics*.

60. Burt, M.G., 1992. The justification for applying the effective-mass approximation to microstructures. Journal of Physics: Condensed Matter, *4*(32), p.651.

61. Burt, R.S., 2000. The network structure of social capital. Research in organizational behavior, *22*, pp.345-423.

62. Buta, S. (2016). The social capital: From macro to microeconomic. The USV Annals of Economics and Public Administration.

63. Bygrave, W. and Minniti, M., 2000. The social dynamics of entrepreneurship. *Entrepreneurship theory and practice*, *24*(3), pp.25-36.

64. Cáceres-Carrasco, F.R., Santos, F.J. and Guzmán, C., 2020. Social capital, personal values and economic development: effect on innovation. An international analysis. *Innovation: The European Journal of Social Science Research*, *33*(1), pp.70.

65. Carson, D., Cromie, S., McGowan, P. and Hill, J., 1995. *Marketing and* entrepreneurship in SMEs: An innovative approach. Pearson Education.

66. Ceci, F., Masciarelli, F. and Poledrini, S., 2020. How social capital affects innovation in a cultural network: Exploring the role of bonding and bridging social capital. European Journal of Innovation Management, 23(5), pp.895-918.

67. Chan, Y.E., Bhargava, N. and Street, C.T., 2006. Having arrived: the homogeneity of high-growth small firms. Journal of Small Business Management, *44*(3), pp.426-440.

68. Chell, E. and Baines, S., 2000. Networking, entrepreneurship and microbusiness behaviour. Entrepreneurship & regional development, *12*(3), pp.195-215.

69. Chen, Y. and Zhou, X., 2017. Entrepreneurial self-efficacy and firms' innovation behavior: The negative mediating role of social capital. *Social Behavior and Personality: an international journal*, *45*(9), pp.153-162.

70. Chetty, R., Jackson, M.O., Kuchler, T., Stroebel, J., Hendren, N., Fluegge, R.B., Gong, S., Gonzalez, F., Grondin, A., Jacob, M. and Johnston, D., 2022. Social

capital I: measurement and associations with economic mobility. *Nature*, *608*(7921), pp.108-121.

71. Chu, Y., Shen, C. and Yang, J., 2018. Country-level bonding, bridging, and linking social capital and immigrants' life satisfaction. Applied Research in Quality of Life, 13, pp.745-759.

72. Chuong, H.N. and Chi Hai, N., 2023. Measuring household social capital in rural Vietnam using MIMIC approach. Cogent Economics & Finance, 11(2), p.2268758.

73. Claridge, T., 2018. Functions of social capital–bonding, bridging, linking. Social capital research, 20(1), pp.1-7.

74. Coffé, H. and Geys, B., 2007. Participation in bridging and bonding associations and civic attitudes: Evidence from Flanders. Voluntas: International Journal of Voluntary and Nonprofit Organizations, 18, pp.385-406.

75. Coleman, J.S., 1988. Social capital in the creation of human capital. American journal of sociology, 94, pp.S95-S120.

76. Coleman, J.S., 1994. Foundations of social theory. Harvard university press.

77. Cook, K.S., 2005. Networks, norms, and trust: the social psychology of social capital 2004 cooley mead award address. Social psychology quarterly, pp.4-14.

78. Corbett, A.C., Neck, H.M. and DeTienne, D.R., 2007. How corporate entrepreneurs learn from fledgling innovation initiatives: Cognition and the development of a termination script. Entrepreneurship theory and practice, 31(6), pp.829-852.

79. Cortinovis, N., Xiao, J., Boschma, R. and van Oort, F.G., 2017. Quality of government and social capital as drivers of regional diversification in Europe. Journal of Economic Geography, 17(6), pp.1179-1208.

80. Cox, K.C., Lortie, J. and Dheer, R.J., 2021. Influence of national and regional level social capital on entrepreneurial activity. Cross Cultural & Strategic Management, 29(1), pp.195-218.

81. Crescenzi, R., Gagliardi, L. and Percoco, M., 2015. Social capital and the innovative performance of Italian provinces. In The economics of knowledge, innovation and systemic technology policy (pp. 170-199). Routledge.

82. Crescenzi, R. and Giua, M., 2020. One or many Cohesion Policies of the European Union? On the differential economic impacts of Cohesion Policy across member states. Regional Studies, 54(1), pp.10-20.

83. Cvetanović, S., Mitrović, U. and Jurakić, M., 2019. Institutions as the driver of economic growth in classic, neoclasic and endogenous theory. Economic Themes, 57(1), pp.111-125.

84. Dakhli, M. and De Clercq, D., 2004. Human capital, social capital, and innovation: a multi-country study. *Entrepreneurship & regional development*, *16*(2), pp.107-128.

85. Dasgupta, P. and Serageldin, I. eds., 2000. *Social capital: a multifaceted perspective*. World Bank Publications.

86. Dasgupta, P., 2011. A matter of trust: Social capital and economic development. ABCDE, p.119.

87. Davidsson, P. and Honig, B., 2003. The role of social and human capital among nascent entrepreneurs. Journal of business venturing, 18(3), pp.301-331.

88. Davidsson, P. and Wiklund, J., 2017. Conceptual and empirical challenges in the study of firm growth. The Blackwell handbook of entrepreneurship, pp.26-44.

89. De Carolis, D.M., & Saparito, P. 2006. Social capital, cognition, and entrepreneurial opportunities: A theoretical framework. Entrepreneurship theory and practice, 30(1), pp.41-56.

90. De Clerq, D. and Arenius, P., 2002. Effects of human capital and social capital on entrepreneurial activity. In Babson College, Babson Kauffman Entrepreneurship Research Conference (BKERC) (Vol. 2006).

91. Dearmon, J. and Grier, K., 2009. Trust and development. Journal of Economic Behavior & Organization, 71(2), pp.210-220.

92. DeFilippis, J., 2001. The myth of social capital in community development. *Housing policy debate*, *12*(4), pp.781-806.

93. Delmar, F., Wennberg, K. and Hellerstedt, K., 2011. Endogenous growth through knowledge spillovers in entrepreneurship: an empirical test. *Strategic Entrepreneurship Journal*, *5*(3), pp.199-226.

94. Dimov, D., 2010. Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning. Journal of management studies, 47(6), pp.123-153.

95. Dodd, S.D., 1997. Social Network Membership and Activity Rates: Some Comparative Datal. International Small Business Journal, 15(4), pp.80-87.

96. Doh, S. and Zolnik, E.J., 2011. Social capital and entrepreneurship: An exploratory analysis. African journal of business management, 5(12), p.461.

97. Doh, S., & Acs, Z.J. 2010. Innovation and social capital: a cross-country investigation. Industry and Innovation, 17(3), pp.241-262.

98. Doh, S., & McNeely, C.L. 2012. A multi-dimensional perspective on social capital and economic development: an exploratory analysis. The Annals of regional science, 49, pp.821-843.

99. Edwards, B. and Foley, M.W., 1998. Civil society and social capital beyond Putnam. American behavioral scientist, 42(1), pp.124-139.

100. Eklinder-Frick, J., Eriksson, L.T. and Hallén, L., 2011. Bridging and bonding forms of social capital in a regional strategic network. Industrial Marketing Management, 40(6), pp.994-1003.

101. Engbers, T., Rubin, B. and Aubuchon, C., 2013. Social capital and metropolitan economic development.

102. Erlandsen, M. and Svendsen, G.L.H., 2023. 'Getting along'or 'getting ahead'? How urban-to-rural newcomers employed at Danfoss in south Denmark build bridging, bonding and linking social capital. Journal of Rural Studies, 97, pp.202-213.

103. Escandon-Barbosa, D., Urbano-Pulido, D., & Hurtado-Ayala, A. 2019. Exploring the relationship between formal and informal institutions, social capital, and entrepreneurial activity in developing and developed countries. Sustainability, 11(2), p.550.

104. Estrin, S., Mickiewicz, T. and Stephan, U., 2013. Entrepreneurship, social capital, and institutions: Social and commercial entrepreneurship across nations. Entrepreneurship theory and practice, 37(3), pp.479-504.

105. Evald, M.R., Klyver, K. and Christensen, P.R., 2011. The effect of human capital, social capital, and perceptual values on nascent entrepreneurs' export intentions. Journal of International Entrepreneurship, 9, pp.1-19.

106. Fafchamps, M. and Minten, B., 1999. Social capital and the firm: Evidence from agricultural trade. World Bank, Social Development Family, Environmentally and Socially Sustainable Development Network.

107. Fairlie, R.W., & Fossen, F.M. 2020. Defining opportunity versus necessity entrepreneurship: Two components of business creation. In Change at home, in the labor market, and on the job, pp. 253-289. Emerald Publishing Limited.

108. Farole, T., Rodríguez-Pose, A. and Storper, M., 2007. Social capital, rules, and institutions: A cross-country investigation.

109. Feldman, M.P., Ozcan, S. and Reichstein, T., 2019. Falling not far from the tree: Entrepreneurs and organizational heritage. *Organization Science*, *30*(2), pp.337360.

110. Felício, J.A., Couto, E. and Caiado, J., 2012. Human capital and social capital in entrepreneurs and managers of small and medium enterprises. Journal of Business Economics and Management, 13(3), pp.395-420.

111. Ferragina, E., 2012. Social capital in Europe: A comparative regional analysis. Edward Elgar Publishing.

112. Fine, B., 2010. Theories of social capital: Researchers behaving badly. Pluto press.

113. Fisher, G., Stevenson, R., Neubert, E., Burnell, D. and Kuratko, D.F., 2020. Entrepreneurial hustle: Navigating uncertainty and enrolling venture stakeholders through urgent and unorthodox action. Journal of Management Studies, 57(5), pp.1002-1036.

114. Florida, R., 2003. Entrepreneurship, creativity, and regional economic growth. The emergence of entrepreneurship policy, pp.39-58.

115. Forte, A., Peiró-Palomino, J. and Tortosa-Ausina, E., 2015. Does social capital matter for European regional growth?. European Economic Review, 77, pp.47-64.

116. Friedman, B.M., 2017. The moral consequences of economic growth. In Markets, morals, and religion (pp. 29-42). Routledge.

117. Fukuyama, F., 1995. Social capital and the global economy. Foreign Aff., 74, p.89.

118. Gamage, S.K.N., Prasanna, R.P.I.R., Jayasundara, J.M.S.B., Ekanayake, E.M.S., Rajapakshe, P.S.K., GAKNJ, A., Kumudumali, S.H.T. and Nedelea, A.M., 2020. Social capital and SME: A systematic literature review and research directions. Ecoforum Journal, 9(3).

119. Gannon, B. and Roberts, J., 2020. Social capital: exploring the theory and empirical divide. Empirical Economics, 58(3), pp.899-919.

120. Gannon, B. and Roberts, J., 2020. Social capital: exploring the theory and empirical divide. Empirical Economics, 58(3), pp.899-919.

121. Gartner, W.B., Carter, N.M. and Reynolds, P.D., 2010. Entrepreneurial behavior: Firm organizing processes. Handbook of entrepreneurship research: An interdisciplinary survey and introduction, pp.99-127.

122. Gedajlovic, E., Honig, B., Moore, C.B., Payne, G.T. and Wright, M., 2013. Social capital and entrepreneurship: A schema and research agenda. *Entrepreneurship theory and practice*, *37*(3), pp.455-478.

123. Ghazinoory, S., Bitaab, A., & Lohrasbi, A. 2014. Social capital and national innovation system: a cross-country analysis. Cross Cultural Management, 21(4), pp.453-475.

124. Glaeser, E.L. and Redlick, C., 2009. Social capital and urban growth. International Regional Science Review, 32(3), pp.264-299.

125. Glaeser, E.L., & Laibson, D. 2002. An economic approach to social capital. The economic journal, 112(483), pp.437-F458.

126. Glaeser, E.L., Laibson, D.I., Scheinkman, J.A. and Soutter, C.L., 2000. Measuring trust. The quarterly journal of economics, 115(3), pp.811-846.

127. Granovetter, M., 2000. The economic sociology of firms and entrepreneurs. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.

128. Granovetter, M.S., 1973. The strength of weak ties. American journal of sociology, 78(6), pp.1360-1380.

129. Greve, A. and Salaff, J.W., 2003. Social networks and entrepreneurship. Entrepreneurship theory and practice, 28(1), pp.1-22.

130. Greve, A., 1995. Networks and entrepreneurship—an analysis of social relations, occupational background, and use of contacts during the establishment process. Scandinavian journal of management, 11(1), pp.1-24.

131. Grilo, I. and Irigoyen, J.M., 2006. Entrepreneurship in the EU: to wish and not to be. Small business economics, 26, pp.305-318.

132. Growiec, K. and Growiec, J., 2014. Social capital, trust, and multiple equilibria in economic performance. Macroeconomic Dynamics, 18(2), pp.282-315.

133. Guga, E., & Peta, E. 2023. Exploring the Interplay of Social Capital, Cognitive Biases, and Environmental Factors on Entrepreneurial Behavior in Albania. International Journal of Professional Business Review.

134. Guiso, L., Sapienza, P. and Zingales, L., 2004. The role of social capital in financial development. American economic review, 94(3), pp.526-556.

135. Gulati, R., Nohria, N. and Zaheer, A., 2000. Strategic networks. Strategic management journal, 21(3), pp.203-215.

136. Halpern, D., 2005. Social capital. Polity.

137. Hasan, I., He, Q. and Lu, H., 2020. The impact of social capital on economic attitudes and outcomes. Journal of International Money and Finance, 108, p.102162.

138. Häuberer, J., 2014. Social capital in voluntary associations: Localizing social resources. European Societies, 16(4), pp.570-593.

139. He, S. 2019. Social networking is a catalyst for the formation of social capital and the economic development of a city. Obshchestvo Iekonomika, 1, pp.52-68.

140. Hernández-Carrión, C., Camarero-Izquierdo, C. and Gutiérrez-Cillán, J., 2017. Entrepreneurs' social capital and the economic performance of small businesses: The moderating role of competitive intensity and entrepreneurs' experience. Strategic Entrepreneurship Journal, 11(1), pp.61-89.

141. Hoang, H. and Antoncic, B., 2003. Network-based research in entrepreneurship: A critical review. Journal of business venturing, 18(2), pp.165-187.

142. Höhmann, H.H. and Welter, F. eds., 2005. Trust and entrepreneurship: A West-East perspective. Edward Elgar Publishing.

143. Hooghe, M., 2007. Social capital and diversity generalized trust, social cohesion and regimes of diversity. Canadian Journal of Political Science/Revue canadienne de science politique, 40(3), pp.709-732.

144. Hoyman, M., McCall, J., Paarlberg, L. and Brennan, J., 2016. Considering the role of social capital for economic development outcomes in US counties. Economic Development Quarterly, 30(4), pp.342-357.

145. Hidalgo, G., Monticelli, J.M. and Vargas Bortolaso, I., 2024. Social capital as a driver of social entrepreneurship. Journal of Social Entrepreneurship, 15(1), pp.182-205.

146. Hunt, S.D., 2000. A general theory of competition: too eclectic or not eclectic enough? Too incremental or not incremental enough? Too neoclassical or not neoclassical enough?. Journal of Macromarketing, 20(1), pp.77-81.

147. Igwe, P.A., Odunukan, K., Rahman, M., Rugara, D.G. and Ochinanwata, C., 2020. How entrepreneurship ecosystem influences the development of frugal innovation and informal entrepreneurship. Thunderbird International Business Review, 62(5), pp.475-488.

148. Iyer, M.B., Mattu, U., Grafman, J., Lomarev, M., Sato, S. and Wassermann, E.M., 2005. Safety and cognitive effect of frontal DC brain polarization in healthy individuals. Neurology, 64(5), pp.872-875.

149. Jack, S.L., 2005. The role, use and activation of strong and weak network ties: A qualitative analysis. Journal of management studies, 42(6), pp.1233-1259.

150. Jackson, T., Amaeshi, K. and Yavuz, S., 2008. Untangling African indigenous management: Multiple influences on the success of SMEs in Kenya. Journal of World Business, 43(4), pp.400-416.

151. Jameaba, M.S., 2022. Social Capital in Development: Why the Government Matters. In Social Capital in Development: Why the Government Matters: Jameaba, Muyanja-Ssenyonga. [Sl]: SSRN.

152. Johannisson, B. and Ramirez-Pasillas, M., 2001. Networking for entrepreneurship: building a topography model of human, social and cultural capital. Frontiers of Entrepreneurship Research, 21.

153. Keefer, P. and Knack, S., 2005. Social capital, social norms and the new institutional economics. In Handbook of new institutional economics (pp. 701-725).

154. Khazami, N., Nefzi, A. and Jaouadi, M., 2020. The effect of social capital on the development of the social identity of agritourist entrepreneur: A qualitative approach. Cogent Social Sciences, 6(1), p.1787680.

155. Kim, B.Y., & Kang, Y. 2014. Social capital and entrepreneurial activity: A pseudo-panel approach. Journal of Economic Behavior & Organization, 97, pp.47-60.

156. Klein, C. (2013). Social capital or social cohesion: What matters for subjective well-being? Social Indicators Research.

157. Klein, E., 2017. The World Bank on mind, behaviour and society. Development and Change, 48(3), pp.481-501.

158. Koellinger, P., 2008. Why are some entrepreneurs more innovative than others?. Small Business Economics, 31, pp.21-37.

159. Koniordos, S.M. ed., 2017. Networks, trust and social capital: Theoretical and empirical investigations from Europe. Routledge.

160. Kramin, T.V., Grigoryev, R.A., Timiryasova, A.V. and Vorontsova, L.V., 2016. The contribution of the intellectual and social capital in economic growth of Russian regions. Actual Probs. Econ. & L., p.66

161. Krueger Jr, N.F., Reilly, M.D. and Carsrud, A.L., 2000. Competing models of entrepreneurial intentions. Journal of business venturing, 15(5-6), pp.411-432.

162. Kwon, S.W. 2013. Community social capital and entrepreneurship. American Sociological Review, 78(6), pp.980-1008.

163. Kwon, S.W., & Arenius, P. 2010. Nations of entrepreneurs: A social capital perspective. Journal of Business Venturing, 25(3), pp.315-330.

164. Kwon, S.W., Heflin, C. and Ruef, M., 2013. Community social capital and entrepreneurship. American Sociological Review, 78(6), pp.980-1008.

165. Kyne, D. and Aldrich, D.P., 2020. Capturing bonding, bridging, and linking social capital through publicly available data. Risk, Hazards & Crisis in Public Policy, 11(1), pp.61-86.

166. Kyne, D. and Aldrich, D.P., 2020. Capturing bonding, bridging, and linking social capital through publicly available data. Risk, Hazards & Crisis in Public Policy, 11(1), pp.61-86.

167. La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W., 1996. Trust in large organizations.

168. Laishram, C. and Haokip, K., 2022. Implications of Social Capital on Life satisfaction in a Stratified Society: Gendering the Bonding, Bridging, and Linking framework using representative samples of India. Quality & Quantity, pp.1-25.

169. Lancee, B., 2010. The economic returns of immigrants' bonding and bridging social capital: the case of the Netherlands 1. International Migration Review, 44(1), pp.202-226.

170. Leite, E.M.D.A., Audretsch, D. and Leite, A., 2024. Redefining Entrepreneurship: Philosophical Insights in a Post-individualist Era. The Journal of Entrepreneurship,

171. Lawrence, P.R. and Lorsch, J.W., 1967. Differentiation and integration in complex organizations. Administrative science quarterly, pp.1-47.

172. Lewis, W.A., 2013. Theory of economic growth. Routledge.

173. Li, Y., Pickles, A. and Savage, M., 2005. Social capital and social trust in Britain. European sociological review, 21(2), pp.109-123.

174. Liao, J. and Welsch, H., 2005. Roles of social capital in venture creation: Key dimensions and research implications. Journal of small business management, 43(4), pp.345-362.

175. Light, I. and Dana, L.P., 2013. Boundaries of social capital in entrepreneurship. Entrepreneurship theory and practice, 37(3), pp.603-624.

176. Lin, N., 2017. Building a network theory of social capital. Social capital, pp.3-28.

177. Liñán, F. and Santos, F.J., 2007. Does social capital affect entrepreneurial intentions?. International Advances in Economic Research, 13, pp.443-453.

178. Lindbeck, A., Nyberg, S. and Weibull, J.W., 1999. Social norms and economic incentives in the welfare state. The Quarterly Journal of Economics, 114(1), pp.1-35.

179. Lipsey, R.G., Carlaw, K.I. and Bekar, C.T., 2005. Economic transformations: general purpose technologies and long-term economic growth. Oup Oxford.

180. Li, K., Huang, R., Liu, G., Shrestha, A. and Fu, X., 2022. Social Capital in Neighbourhood Renewal: a holistic and state of the art literature review. Land, 11(8), p.1202.

181. Low, Murray B., and Ian C. MacMillan. "Entrepreneurship: Past research and future challenges." Journal of management14, no. 2 (1988): 139-161.

182. Luthans, F., Stajkovic, A.D. and Ibrayeva, E., 2000. Environmental and psychological challenges facing entrepreneurial development in transitional economies. Journal of World business, 35(1), pp.95-110.

183. Lyu, K., 2023. Social Capital and Self-Employment Dynamics in China. The Chinese Economy, 56(6), pp.459-485.

184. Maaranto, I., 2019. On Iniö-The Impact of Social Networks on Rural Entrepreneurs.

185. Malecki, E.J., 2012. Regional social capital: Why it matters. Regional Studies, 46(8), pp.1023-1039.

186. Mansyur, C., Amick, B.C., Harrist, R.B. and Franzini, L., 2008. Social capital, income inequality, and self-rated health in 45 countries. Social science & medicine, 66(1), pp.43-56.

187. Manthata, G.T., 2017. Social capital and cooperative enterprise development: a case study in Mpumalanga, South Africa. Masters of Arts in Sociology, University of South Africa.

188. Markowska-Przybyła, U., 2020. Does social capital matter for total factor productivity? Exploratory evidence from Poland. Sustainability, 12(23), p.9978.

189. Martez, A.C. and Rodriguez, C.L., 2004. Church membership, social capital, and entrepreneurship in Brazilian communities in the US In CH Stiles, & CS Galbraith. Ethnic Entrepreneurship: Structure and Process, pp.149-175.

190. Martin, B.C., McNally, J.J. and Kay, M.J., 2013. Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. Journal of business venturing, 28(2), pp.211-224.

191. Marvel, M.R., 2013. Human capital and search–based discovery: A study of high–tech entrepreneurship. Entrepreneurship theory and practice, 37(2), pp.403419.

192. Marvel, M.R., Davis, J.L. and Sproul, C.R., 2016. Human capital and entrepreneurship research: A critical review and future directions. Entrepreneurship Theory and Practice, 40(3), pp.599-626.

193. McKeever, E., Anderson, A., & Jack, S. 2014. Entrepreneurship and mutuality: social capital in processes and practices. Entrepreneurship & Regional Development, 26(5-6), pp.453-477.

194. Meek, S., Ryan, M., Lambert, C. and Ogilvie, M., 2019. A multidimensional scale for measuring online brand community social capital (OBCSC). Journal of Business Research, 100, pp.234-244.

195. Mendoza-Botelho, M., 2013. Social capital and institutional trust: Evidence from Bolivia's popular participation decentralisation reforms. The Journal of Development Studies, 49(9), pp.1219-1237.

196. Miller, N.J., Besser, T. and Malshe, A., 2007. Strategic networking among small businesses in small US communities. International Small Business Journal, 25(6), pp.631-665.

197. Milliken, F.J., 1987. Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. Academy of Management review, 12(1), pp.133-143.

198. Mishchuk, H., Bilan, Y., & Androniceanu, A. (2023). Social capital: Evaluating its roles in competitiveness and ensuring human development. Journal of Competitiveness.

199. Mitchell, B.C. and Co, M.J., 2004. Entrepreneurial networks: findings from a South African study. South African Journal of Economic and Management Sciences, 7(4), pp.589-600.

200. Mohammadzade, H., Sarukhani, B. and Adhami, A., 2021. Designing a model for the relationship between social capital and economic development in free trade zones. Sociological studies, 13(49), pp.7-29.

201. Molina-Morales, F.X. and Martínez-Fernández, M.T., 2010. Social networks: effects of social capital on firm innovation. Journal of small business management, 48(2), pp.258-279.

202. Moreno-Hurtado, C.A., Ochoa-Jimenez, D.A. and Izquierdo-Montoya, G.L., 2018. A simplified endogenous economic growth model with social capital: Evidence for Ecuador. Business and Economic Horizons, 14(2), pp.168-184.

203. Muringani, J., Fitjar, R.D. and Rodríguez-Pose, A., 2021. Social capital and economic growth in the regions of Europe. Environment and Planning A: Economy and Space, 53(6), pp.1412-1434.

204. Muringani, J., Fitjar, R.D. and Rodríguez-Pose, A., 2021. Social capital and economic growth in the regions of Europe. Environment and Planning A: Economy and Space, 53(6), pp.1412-1434.

205. Muringani, J., Fitjar, R.D. and Rodríguez-Pose, A., 2021. Social capital and economic growth in the regions of Europe. Environment and Planning A: Economy and Space, 53(6), pp.1412-1434.

206. Murphy, K.M., Shleifer, A. and Vishny, R.W., 1991. The allocation of talent: Implications for growth. The quarterly journal of economics, 106(2), pp.503-530.

207. Murray, A. and Palladino, R., 2021. Developing human capitals in today's entrepreneurs: a practitioner perspective. Journal of Intellectual Capital, 22(4), pp.681-702.

208. NAALA, M.N.I., 2016. MODERATING AND MEDIATING ROLES OF HUMAN CAPITAL AND COMPETITIVE ADVANTAGE ON ENTREPIENEUR4AL ORIENTATION, SOCIAL NETWORK, AND PEWORIMANCE OF SMEs IN NIGERIA.

209. Nahapiet, J. and Ghoshal, S., 1998. Social capital, intellectual capital, and the organizational advantage. Academy of management review, 23(2), pp.242-266.

210. Narayan, D. and Pritchett, L., 1999. Cents and sociability: Household income and social capital in rural Tanzania. Economic development and cultural change, 47(4), pp.871-897.

211. Naude, W., Gries, T., Wood, E. and Meintjies, A., 2008. Regional determinants of entrepreneurial start-ups in a developing country. Entrepreneurship and regional development, 20(2), pp.111-124.

212. Ndhlovu, N.H., Social Capital as a pathway to Small and Medium-sized Enterprises' performance in North-West Province (Doctoral dissertation).

213. Negura, E. and Asiminei, R., 2021. The Bright and Dark Sides of the Social Capital Concept. Social Work Review/Revista de Asistenta Sociala, (2).

214. Nieto, M. and González-Álvarez, N., 2016. Social capital effects on the discovery and exploitation of entrepreneurial opportunities. International Entrepreneurship and Management Journal, 12, pp.507-530.

215. O'Donnell, P., Leger, M., O'Gorman, C. and Clinton, E., 2024. Necessity entrepreneurship. Academy of Management Annals, 18(1), pp.44-81.

216. Oh, Y., Lee, I.W. and Bush, C.B., 2014. The role of dynamic social capital on economic development partnerships within and across communities. Economic Development Quarterly, 28(3), pp.230-243.

217. Oliver Huidobro, J., Antonioni, A., Lipari, F. and Tamarit, I., 2022. Social capital as a network measure provides new insights on economic growth. Plos one, 17(8), p.e0273066.

218. Olson, M., 1982. The rise and decline of nations Yale University Press. New Haven.

219. Onyimadu, C.O., 2015. An overview of endogenous growth models: Theory and critique. International Journal of Physical and Social Sciences, 5(3).

220. Ostrom, E., 2009. What is social capital. Social capital: Reaching out, reaching in, pp.17-38.

221. Pangarkar, N., 2008. Internationalization and performance of small-and medium-sized enterprises. Journal of world business, 43(4), pp.475-485.

222. Patulny, R., 2009. The sociability of nations: international comparisons in bonding, bridging and linking social capital. Handbook of social capital, pp.402-427.

223. Patulny, R.V. and Lind Haase Svendsen, G., 2007. Exploring the social capital grid: bonding, bridging, qualitative, quantitative. International journal of sociology and social policy, 27(1/2), pp.32-51.

224. Paxton, P., 2002. Social capital and democracy: An interdependent relationship. American sociological review, pp.254-277.

225. Peiró-Palomino, J. and Tortosa-Ausina, E., 2015. Social capital, investment and economic growth: some evidence for Spanish provinces. Spatial economic analysis, 10(1), pp.102-126.

226. Peretto, P.F., 2018. Robust endogenous growth. European Economic Review, 108, pp.49-77.

227. Peters, M.P. and Brush, C.G., 1996. Market information scanning activities and growth in new ventures: A comparison of service and manufacturing businesses. Journal of Business Research, 36(1), pp.81-89.

228. Petrakis, P.E., Valsamis, D.G., Kafka, K.I., Petrakis, P.E., Valsamis, D.G. and Kafka, K.I., 2020. Innovation, Creativity and Economic Growth. Economic Growth and Development Policy, pp.235-263.

229. Pillai, K.G., Hodgkinson, G.P., Kalyanaram, G. and Nair, S.R., 2017. The negative effects of social capital in organizations: A review and extension. International Journal of Management Reviews, 19(1), pp.97-124.

230. Pio, J.G., 2020. Effects of innovation and social capital on economic growth: empirical evidence for the Brazilian case. International Journal of Innovation, 8(1), pp.40-58.

231. Pio, J.G., 2020. Effects of innovation and social capital on economic growth: empirical evidence for the Brazilian case. International Journal of Innovation, 8(1), pp.40-58.

232. Pollard, D.J. and Šimberová, I., 2002. Researching the internationalization of SMEs in transformation economies: some initial considerations. Transformations in Business and Economics, 1(2), pp.45-58.

233. Portes, A. and Landolt, P., 1996. The downside of social capital.

234. Portes, A., 2014. Downsides of social capital. Proceedings of the National Academy of Sciences, 111(52), pp.184-188.

235. Portes, A., 2024. Social capital: Its origins and applications in modern sociology. New Critical Writings in Political Sociology, pp.53-76.

236. Portes, A. and Vickstrom, E., 2015. Diversity, social capital, and cohesion. SERIES «ETUDESEUROPEENNES, 41.

237. Portes, A., 1998. Social capital: Its origins and applications in modern sociology. Annual review of sociology, 24(1), pp.1-24.

238. Postelnicu, L. and Hermes, N., 2018. Microfinance performance and social capital: A cross-country analysis. Journal of Business Ethics, 153, pp.427-445.

239. Prasetyo, P.E. and Kistanti, N.R., 2020. Human capital, institutional economics and entrepreneurship as a driver for quality & sustainable economic growth. Entrepreneurship and Sustainability Issues, 7(4), p.2575.

240. Purwati, A., Budiyanto, B., Suhermin, S. and Hamzah, M., 2021. The effect of innovation capability on business performance: The role of social capital and entrepreneurial leadership on SMEs in Indonesia. Accounting, 7(2), pp.323-330.

241. Putnam, R., 1993. The prosperous community: Social capital and public life. The american, 4.

242. Putnam, R.D. ed., 2002. Democracies in flux: The evolution of social capital in contemporary society. Oxford University Press, USA.

243. Putnam, R.D., 1994. Social capital and public affairs. Bulletin of the American Academy of Arts and Sciences, pp.5-19.

244. Putnam, R.D., 2015. Bowling alone: America's declining social capital. In The city reader (pp. 188-196). Routledge.

245. Qian, H., 2018. Knowledge-based regional economic development: A synthetic review of knowledge spillovers, entrepreneurship, and entrepreneurial ecosystems. Economic Development Quarterly, 32(2), pp.163-176.

246. Qin, N. and Kong, D., 2021. Human capital and entrepreneurship. Journal of Human Capital, 15(4), pp.513-553.

247. Radjenović, T. & Krstić, B. 2017. The microeconomic perspectives of intellectual capital measurement. Facta Universitatis.

248. Raiser, M., 1999. Trust in transition (Vol. 39). London: European Bank for Reconstruction and Development.

249. Ridwan, M., Akther, A., Al Absy, M.S.M., Tahsin, M.S., Ridzuan, A.R., Yagis, O. and Mukhtar, K.J., 2024. The Role of Tourism, Technological Innovation, and Globalization in Driving Energy Demand in Major Tourist Regions. International Journal of Energy Economics and Policy, 14(6), pp.675-68

250. Reynoso-Vallejo, H., 2003. The relationship between social capital and substance abuse treatment utilization among drug-using Puerto Rican women.

251. Robison, L.J., Schmid, A.A. and Siles, M.E., 2002. Is social capital really capital?. Review of social economy, 60(1), pp.1-21.

252. Rodríguez-Pose, A. and Storper, M., 2006. Better rules or stronger communities? On the social foundations of institutional change and its economic effects. Economic geography, 82(1), pp.1-25.

253. Roth, F., 2022. Does Too Much Trust Hamper Economic Growth?. In Intangible Capital and Growth: Essays on Labor Productivity, Monetary Economics, and Political Economy, Vol. 1 (pp. 141-165). Cham: Springer International Publishing.

254. Sabatini, F., 2008. Social capital and the quality of economic development. Kyklos, 61(3), pp.466-499.

255. Sacerdote, B., 2002. The nature and nurture of economic outcomes. American Economic Review, 92(2), pp.344-348.

256. Sánchez-Arrieta, N., González, R.A., Cañabate, A. and Sabate, F., 2021. Social capital on social networking sites: A social network perspective. Sustainability, 13(9), p.5147.

257. Sandefur, R.L. and Laumann, E.O., 2009. A paradigm for social capital. In Knowledge and social capital (pp. 69-87). Routledge.

258. Santarelli, E. and Tran, H.T., 2013. The interplay of human and social capital in shaping entrepreneurial performance: the case of Vietnam. Small Business Economics, 40, pp.435-458.

259. Savic, N., Pitic, G., & Konjikusic, S. 2014. Microeconomic and macroeconomic determinants of competitiveness of East European countries. International Journal of Economics and Policy.

260. Sawyerr, O.O., McGee, J. and Peterson, M., 2003. Perceived uncertainty and firm performance in SMEs: The role of personal networking activities. International Small Business Journal, 21(3), pp.269-290.

261. Scarbrough, H., Swan, J., Amaeshi, K. and Briggs, T., 2013. Exploring the role of trust in the deal–making process for early–stage technology ventures. Entrepreneurship Theory and Practice, 37(5), pp.123-128.

262. Schuller, T. and Field, J., 2013. Social capital, human capital and the learning society. In From Adult Education to the Learning Society pp. 354-365.

263. Schumpeter, J.A. and Opie, R., 1934. The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle. Harvard University Press.

264. Sequeira, T.N. and Ferreira-Lopes, A., 2011. An endogenous growth model with human and social capital interactions. Review of Social Economy, 69(4), pp.465493.

265. Serageldin, I. and Grootaert, C., 2017. Defining social capital: an integrating view 1. In Evaluation and Development, pp. 201-217.

266. Silva, P.M., Moutinho, V.F. and Moreira, A.C., 2022. Do social and economic factors affect the technical efficiency in entrepreneurship activities? Evidence from European countries using a two-stage DEA model. Socio-economic planning sciences, 82, p.101314.

267. Solow, R.M., 1957. Technical change and the aggregate production function. The review of Economics and Statistics, 39(3), pp.312-320.

268. Sørensen, J.F., 2016. Rural–urban differences in bonding and bridging social capital. Regional Studies, 50(3), pp.391-410.

269. Sredojević, D., Cvetanović, S. and Bošković, G., 2016. Technological changes in economic growth theory: neoclassical, endogenous, and evolutionary-institutional approach. Economic Themes, 54(2), pp.177-194.

270. Stam, W., Arzlanian, S. and Elfring, T., 2014. Social capital of entrepreneurs and small firm performance: A meta-analysis of contextual and methodological moderators. Journal of business venturing, 29(1), pp.152-173.

271. Stephan, U. and Uhlaner, L.M., 2010. Performance-based vs socially supportive culture: A cross-national study of descriptive norms and entrepreneurship. Journal of International Business Studies, 41, pp.1347-1364.

272. Stoica, O., Roman, A. and Rusu, V.D., 2020. The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. Sustainability, 12(3), p.1186.

273. Stone, W. and Hughes, J., 2002, September. Measuring social capital: towards a standardised approach. In Paper presented at the (Vol. 3, No. 921, p. 782).

274. Storper, M., 2005. Society, community, and economic development. Studies in comparative international development, 39, pp.30-57.

275. Storper, M., 2013. Keys to the city: How economics, institutions, social interaction, and politics shape development. Princeton University Press.

276. Suryahadi, A., Rishanty, A. and Robert Sparrow, R., 2020. Social capital and economic development in a large multi-ethnic developing country: Evidence from Indonesia.

277. Szreter, S. and Woolcock, M., 2004. Health by association? Social capital, social theory, and the political economy of public health. International journal of epidemiology, 33(4), pp.650-667.

278. Tahlyan, D., Stathopoulos, A. and Maness, M., 2022. Disentangling social capital–Understanding the effect of bonding and bridging on urban activity participation. Transportation research interdisciplinary perspectives, 15, p.100629.

279. Tang, S., Hu, Z. and Li, Y., 2016. Knowledge, Institution, Power, and Economic Growth: Toward a Unified Economics of Growth. Institution, Power, and Economic Growth: Toward a Unified Economics of Growth (April 17, 2016).

280. Teckchandani, A., 2014. Do membership associations affect entrepreneurship? The effect of type, composition, and engagement. Nonprofit and Voluntary Sector Quarterly, 43(2_suppl), pp.84S-104S.

281. Thomas, A.S. and Mueller, S.L., 2000. A case for comparative entrepreneurship: Assessing the relevance of culture. Journal of international business studies, 31, pp.287-301.

282. Thompson, M., 2018. Social capital, innovation and economic growth. Journal of behavioral and experimental economics, 73, pp.46-52.

283. Thornton, P.H. and Flynn, K.H., 2003. Entrepreneurship, networks, and geographies. Handbook of entrepreneurship research: An interdisciplinary survey and introduction, pp.401-433.

284. Umar, M., Sial, M.H., Ali, S.A., Bari, M.W. and Ahmad, M., 2023. Trust and social network to boost tacit knowledge sharing with mediation of commitment: does culture moderate?. VINE Journal of Information and Knowledge Management Systems, 53(6), pp.135-158.

285. Unger, J.M., Rauch, A., Frese, M. and Rosenbusch, N., 2011. Human capital and entrepreneurial success: A meta-analytical review. Journal of business venturing, 26(3), pp.341-358.

286. Uslaner, E.M., 2008. Trust as a moral value. The handbook of social capital, pp.101-121.

287. Uslaner, E.M., 2008. Trust as a moral value. The handbook of social capital, pp.101-121.

288. Van Oorschot, W., Arts, W. and Gelissen, J., 2006. Social capital in Europe: Measurement and social and regional distribution of a multifaceted phenomenon. Acta sociologica, 49(2), pp.149-167.

289. Van Staveren, I. and Knorringa, P., 2007. Unpacking social capital in economic development: How social relations matter. Review of social economy, 65(1), pp.107-135.

290. Vella, F. and Verbeek, M., 1999. Two-step estimation of panel data models with censored endogenous variables and selection bias. Journal of Econometrics, 90(2), pp.239-263.

291. Vlados, C. and Chatzinikolaou, D., 2024. The emergence of the new globalization: the approach of the evolutionary structural triptych. Journal of Global Responsibility.

292. Villalonga-Olives, E. and Kawachi, I., 2015. The measurement of bridging social capital in population health research. Health & place, 36, pp.47-56.

293. Walker, G., Kogut, B. and Shan, W., 1997. Social capital, structural holes and the formation of an industry network. Organization science, 8(2), pp.109-125.

294. Warren, M.R., Thompson, J.P. and Saegert, S., 2001. The role of social capital in combating poverty. Social capital and poor communities, 3, pp.1-28.

295. Welter, F. and Smallbone, D., 2006. Exploring the role of trust in entrepreneurial activity. Entrepreneurship Theory and Practice, 30(4), pp.465-475. 275. Welter, F., 2012. All you need is trust? A critical review of the trust and entrepreneurship literature. International Small Business Journal, 30(3), pp.193-212.

296. Weiss, J., Anisimova, T. and Shirokova, G., 2019. The translation of entrepreneurial intention into start-up behaviour: The moderating role of regional social capital. International Small Business Journal, 37(5), pp.473-501.

297. Westlund, H. and Adam, F., 2010. Social capital and economic performance: A meta-analysis of 65 studies. European planning studies, 18(6), pp.893-919.

298. Westlund, H. and Larsson, J.P. eds., 2016. Handbook of social capital and regional development. Edward Elgar Publishing.

299. Westlund, H., Andersson, M. and Karlsson, C., 2014. Creativity as an integral element of social capital and its role for economic performance. Handbook of research on entrepreneurship and creativity, 60.

300. Williams, N., Huggins, R. and Thompson, P., 2020. Entrepreneurship and social capital: examining the association in deprived urban neighbourhoods. International Journal of Urban and Regional Research, 44(2), pp.289-309.

301. Williamson, O.E., 1993. Calculativeness, trust, and economic organization. The journal of law and economics, 36(1, Part 2), pp.453-486.

302. Wong, P.K., Ho, Y.P. and Autio, E., 2005. Entrepreneurship, innovation and economic growth: Evidence from GEM data. Small business economics, 24, pp.335350.

303. Woolcock, M., 2010. The rise and routinization of social capital, 1988– 2008. Annual review of political science, 13, pp.469-487.

304. Wulandhari, N.B.I., Gölgeci, I., Mishra, N., Sivarajah, U. and Gupta, S., 2022. Exploring the role of social capital mechanisms in cooperative resilience. Journal of Business Research, 143, pp.375-386.

305. Xie, G.H., Wang, L.P. and Lee, B.F., 2021. Understanding the impact of social capital on entrepreneurship performance: the moderation effects of opportunity recognition and operational competency. Frontiers in Psychology.

306. Xue, X., Reed, W.R. and van Aert, R.C., 2023. Social Capital and Economic Growth: A Meta-Analysis.

307. Yamamura, E., 2012. Social capital, household income, and preferences for income redistribution. European Journal of Political Economy, 28(4), pp.498-511.

308. Zacharakis, A.L. and Meyer, G.D., 2000. The potential of actuarial decision models: can they improve the venture capital investment decision?. Journal of Business venturing, 15(4), pp.323-346.

309. Zak, P.J. and Knack, S., 2001. Trust and growth. The economic journal, 111(470), pp.295-321.

310. Zhang, H., Han, R., Wang, L. and Lin, R., 2021. Social capital in China: A systematic literature review. Asian Business & Management, 20, pp.32-77.

311. Zheng, W., 2010. A social capital perspective of innovation from individuals to nations: where is empirical literature directing us?. International Journal of Management Reviews, 12(2), pp.151-183.

312. Zhou, M., 2005. Ethnicity as social capital: Community-based institutions and embedded networks of social relations. Ethnicity, social mobility and public policy: Comparing the US and UK, pp.131-159.

Chapter 4: Conclusion

This thesis explored the dynamic interplay between institutional frameworks, social capital, and entrepreneurship in fostering economic and human development in developing economies. The findings underscore the importance of supportive institutions and diverse social networks in enhancing entrepreneurial activity and its developmental outcomes. Two studies formed the core of this research, examining distinct but interconnected aspects of this nexus.

Study 1 analyzed how institutional quality—represented by ease of doing business, political stability, and corruption control—affects opportunity-driven and necessity-driven entrepreneurship across 51 developing countries. It further examined the contribution of these entrepreneurial activities to the Human Development Index (HDI) and its dimensions: Gross National Income (GNI) per capita, literacy rates, and life expectancy. Study 1 examined the role of institutional quality measured by ease of doing business, political stability, and corruption control in shaping different types of entrepreneurial activity in developing economies. The findings indicate that opportunity-driven entrepreneurship is significantly influenced by a supportive regulatory environment, with a higher ease of doing business encouraging individuals to pursue business ventures based on innovation and market opportunities. In contrast, necessity-driven entrepreneurship was found to be largely unaffected by business regulations, as individuals engaged in this form of entrepreneurship out of financial necessity rather than strategic choice.

The study also assessed the impact of these entrepreneurial activities on human development, as measured by the Human Development Index (HDI) and its key components: life expectancy, literacy rates, and Gross National Income (GNI). The findings suggest that opportunity-driven entrepreneurship has a positive impact on HDI, primarily through improvements in literacy rates and life expectancy (World Bank, 2020; Nave et al.,

2023). This is attributed to its role in job creation, income generation, and investment in education and healthcare, which contribute to broader socio-economic progress. However, despite these positive contributions to human development, opportunity-driven entrepreneurship was found to have a negative effect on GNI, possibly due to structural barriers in developing economies, such as limited access to finance, market constraints, and institutional inefficiencies, which may hinder its immediate economic impact.

Conversely, necessity-driven entrepreneurship exhibited a negative relationship with HDI, particularly in relation to life expectancy and literacy rates. Since necessity-driven businesses often operate within the informal sector with limited growth potential, they do not contribute meaningfully to broader socio-economic development. However, the study found that necessity-driven entrepreneurship was positively associated with GNI, likely because it provides an alternative source of income in economies characterized by high unemployment and limited formal employment opportunities. Despite this, its contribution to long-term economic development remains limited, as it lacks the innovation and scalability necessary to drive sustainable growth (Bosma et al., 2008; Urbano et al., 2020).

Overall, these findings highlight the need for policies that promote opportunity-driven entrepreneurship by improving institutional quality and ensuring access to resources that enable business growth. While necessity-driven entrepreneurship may serve as a short-term mechanism for economic survival, it does not contribute substantially to broader human development outcomes. These insights highlight the need for policies that not only improve the ease of doing business but also address barriers to entrepreneurial success, ensuring that business activities translate into meaningful human development outcomes.

Study 2 examined the impact of social capital on opportunity-driven entrepreneurship in developing economies, with a focus on its bonding and bridging dimensions. Bonding social capital, characterized by close ties within homogenous groups, was found to primarily support necessity-driven entrepreneurship. These tight-knit networks provided immediate, localized support essential for sustaining small-scale businesses but limited scalability and innovation due to their insular nature (Granovetter, 1983; Burt, 2005). Conversely, bridging social capital—characterized by diverse social networks and generalized trust emerged as a crucial enabler of opportunity-driven entrepreneurship. Entrepreneurs leveraging bridging social capital could access broader resources, information, and markets, fostering environments conducive to innovation and growth (Putnam, 2000; Woolcock, 1998).

The findings further highlight the complex relationship between different forms of social capital and entrepreneurial activity, revealing both enabling and constraining effects. The results show that civic norms and close trust positively influence opportunity-driven entrepreneurship, suggesting that stronger community engagement and interpersonal trust encourage individuals to pursue market-driven ventures. However, civic norms were found to have a negative effect on economic growth (GDP), possibly due to their tendency to promote social cohesion at the expense of risk-taking and innovation. Similarly, generalized trust, while fostering social cohesion, was found to have a negative impact on economic growth in developing economies, potentially because excessive trust may lead to complacency and discourage critical engagement with economic activities. Interestingly, when opportunity-driven entrepreneurship is considered alongside civic norms and generalized trust, the overall impact on GDP becomes positive. This suggests that while social capital alone may not directly stimulate economic growth, its interaction with entrepreneurship creates conditions conducive to business success and long-term economic benefits.

The study also found a negative relationship between association membership and economic growth, indicating that while participation in professional or social groups may support networking, it does not always translate into productive economic outcomes. However, when association membership is combined with opportunity-driven entrepreneurship, the effect on GDP becomes positive, suggesting that entrepreneurial ventures benefit from the knowledge-sharing and collaborative networks offered by associations.

Strong ties, typically associated with close-knit family and community relationships, were found to have a dual effect. They had a negative impact on opportunity-driven entrepreneurship, likely due to their restrictive nature, which may limit exposure to new opportunities and innovation. However, when strong ties were considered alongside opportunity-driven entrepreneurship, the relationship with GDP became significantly positive, suggesting that these relationships can serve as crucial support systems for entrepreneurs in weak institutional environments.

Additionally, the study found that human capital (education, skills, and experience) had a strong positive effect on opportunity-driven entrepreneurship, reinforcing the idea that higher education and skills development are critical for fostering innovative and growth-oriented

businesses. Similarly, investment in physical capital (infrastructure) and research and development (R&D) were key drivers of economic growth, highlighting the importance of technological advancement and productive assets in stimulating entrepreneurship and broader economic development.

The findings suggest that social capital plays a crucial but nuanced role in fostering opportunity-driven entrepreneurship and economic growth in developing economies. While social networks, trust, and community engagement can create supportive environments for business development, they may also impose constraints when they discourage innovation or reinforce traditional norms that limit risk-taking. The study underscores the importance of balancing social capital with access to human capital, financial resources, and institutional support to maximize entrepreneurship's contribution to sustainable economic development.

4.1 Original Contributions of the Studies

This thesis makes several unique contributions to the fields of development economics, entrepreneurship, and social capital theory. The findings advance both theoretical understanding and practical applications, shedding new light on the mechanisms through which entrepreneurship influences human and economic development in developing contexts.

Expanding the Developmental Impact of Entrepreneurship Beyond GDP

By employing HDI as a measure of development, this thesis moves beyond GDP-centric analyses to provide a more holistic perspective on entrepreneurship's contributions. The findings illustrate that opportunity-driven entrepreneurship, supported by effective institutions, significantly enhances dimensions of human development, such as education, health, and income. This shift aligns with calls within development economics to prioritize well-being and quality of life as central metrics of progress, particularly in developing nations where GDP alone often fails to capture societal advancements (Dreze & Sen, 1999; Acs et al., 2015).

Studying Social Capital's Differential Impact on Entrepreneurial Types

Study 2 offers a refined understanding of how bonding and bridging social capital influence different types of entrepreneurship. While bonding social capital supports necessity-driven

entrepreneurship, bridging social capital proves essential for fostering opportunity-driven ventures with high growth potential. This distinction contributes to social capital theory by providing a nuanced view of how specific forms of social ties shape entrepreneurial outcomes. These insights are particularly relevant for policymakers and organizations seeking to harness social capital to drive impactful entrepreneurial activity (Putnam, 2000; Granovetter, 1983).

Integrating Institutional and Social Capital Frameworks

By integrating institutional theory with social capital theory, this research offers a novel framework for understanding the interplay between structural and relational factors in shaping entrepreneurial ecosystems. The findings suggest that institutional quality and social capital dimensions interact dynamically, collectively influencing entrepreneurial motivation, success, and developmental outcomes. This integrative approach lays the foundation for future research to explore these interactions further and develop targeted interventions for fostering entrepreneurship in developing economies.

4.2 Limitations of the Studies

While the findings provide valuable insights, certain limitations must be acknowledged to contextualize the conclusions and guide future research efforts.The reliance on secondary datasets, such as the World Bank, GEM, and World Value Survey, introduces limitations in terms of scope and granularity. These datasets may underrepresent informal or small-scale entrepreneurial activities that dominate many developing economies. Additionally, the cross-sectional nature of some variables restricts the ability to infer causality definitively, emphasizing the need for primary data collection and longitudinal designs in future research.

The diverse contexts of the 51 developing countries included in the sample, while offering robust insights into general trends, may limit the applicability of findings to specific national or regional conditions. Variations in cultural, political, and economic environments mean that institutional or social capital configurations effective in one context may not yield the same results elsewhere. Furthermore, the measurement of social capital remains a challenge due to its subjective and culturally embedded nature. Constructs like trust and civic norms may be influenced by deep-seated historical factors, complicating the comparability of results across contexts.

Finally, the study does not account for the growing influence of digital technologies on social capital and entrepreneurship. Digital platforms increasingly enable entrepreneurs to form networks and access resources across geographic boundaries, potentially altering traditional social capital dynamics. Future research should explore these digital dimensions to understand their impact on entrepreneurial outcomes in developing economies.

4.3 Future Research Directions

Building on the findings and addressing the identified limitations, several promising avenues for future research emerge. Longitudinal studies could investigate the effects of institutional and social capital changes over time, offering more precise causal inferences and capturing lagged impacts. Comparative studies focusing on specific regions, such as Sub-Saharan Africa or South Asia, would provide deeper insights into the interplay of institutional and social factors in distinct cultural contexts.

The role of digital social capital in shaping opportunity-driven entrepreneurship warrants further exploration, particularly in the context of emerging online networks and platforms. Experimental research, such as randomized controlled trials, could test the impact of targeted interventions on trust-building or network expansion, providing evidence-based recommendations for policymakers. Lastly, evaluating the effectiveness of institutional reforms aimed at improving regulatory environments and reducing corruption would yield actionable insights for enhancing the entrepreneurial ecosystem in developing economies.
By addressing these directions, future research can further elucidate the mechanisms through which entrepreneurship contributes to sustainable and inclusive development, building on the foundations laid by this thesis.