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Institutional Context And Entrepreneurial Dynamism: Corruption, Distance To Frontier, Perceived Opportunity And Entrepreneurial Activity

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INSTITUTIONAL CONTEXT AND ENTREPRENEURIAL DYNAMISM:
CORRUPTION, DISTANCE TO FRONTIER, PERCEIVED OPPORTUNITY
AND ENTREPRENEURIAL ACTIVITY

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2013

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AND ENTREPRENEURIAL ACTIVITY

By

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DISSERTATION

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To Marshall, Demo, and Myint Than, this life is not enough for me to pay back what I have failed as a father and a husband. I will be indebted for the rest of my life for what you all have suffered while I have been selfishly focusing only on my study. I won't be writing this acknowledgement without your sacrifices.

Abstract

The purpose of this dissertation is to explore and test a model that explains how the levels of corruption and the absolute quality of regulatory environment in ease of doing business influence entrepreneurial opportunity, and to explore the process leading to entrepreneurial intention to start a new business venture.

This dissertation hypothesizes that corruption has both beneficial and detrimental effects on the entrepreneurial opportunity, and that such relationships is contingent on different levels of overall regulatory condition in ease of doing business. Beneficial effects and positive relationship can be seen in countries with poor regulatory procedures and the opposite is true for the countries with well-established ones, a complex relationship which could be visualized as a U-shaped relationship. This dissertation further proposes that entrepreneurial perceived opportunity in turn positively relates to entrepreneurial intention, and this relationship is moderated by the facilitating effects of corruption to overcome the uncertainties and barriers in doing business.

Drawing on institutional theory, structuration theory, theory of planned behavior, and employing legacy dialog tools and regression analysis, 45 countries from different regions, political systems, economies, and population sizes are examined employing multiple data from the Global Entrepreneurial Monitor (GEM), Transparency International's Corruption Perception Index (CPI), and the World Bank Global Indicators for the period 2011. Empirical results support the *greasing the wheels hypothesis* of corruption on entrepreneurial opportunity which competes with the *sand the wheels hypothesis*, a generally accepted negative consequences perception of corruption on the economic development. A second single cross sectional data set that consists of 88

countries for the period that covers 2008-2011 is again employed to test the robustness of the results. The findings contribute to a deeper understanding of the complex influences of corruption on the process of entrepreneurship, especially on the entrepreneurial perceived opportunity and intention to start a new business venture, which further can lead to the development of optimal policies, entrepreneurial theories and practices, both in controlling corruption and promoting entrepreneurship across countries.

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Chapter One

Introduction

Entrepreneurship is described as creative process where “opportunities to create future goods and services are discovered, evaluated, and exploited” (Shane and Venkataraman, 2000, p. 218). The importance of such creative process has long been recognized as a force that generates economic growth by innovation and technological revolution (Schumpeter, 1934), a process that creates an equilibrium for supply and demand (Kirzner, 1997), that transforms knowledge into products and services (Shane and Venkataraman, 2000), and an increasingly important vocation for the development of human and intellectual resources and capabilities (Zahra and Dess, 2001). A stream of research works that lend support for such important contributions of entrepreneurship to a country’s eventual economic growth have been documented by scholars (Romer, 1994).

According to Shane and Venkataraman, the root of entrepreneurial process originates from opportunity and as such opportunity is a key construct of entrepreneurship discipline where it defines the boundary and exchange conditions of entrepreneurship field, and renders an important link especially in theory development, paradigm building and empirical analysis of entrepreneurship discipline (Busenitz et al., 2003). It is even argued that there won’t be entrepreneurial activities in the absence of opportunity (Short, et al., 2010).

On one hand it is argued that institutions influence economic development through entrepreneurship (Sobel and Hall, 2008) where entrepreneurs are the resources allocator, and at the same time act as the change agents of economic development (Schumpeter, 1934).

On the other hand, corruption, an informal institution, has been a prevailing problem for the eventual economic development across nations (World Bank, 2013). One common piece of news in recent years has been a scandal of corruption in different countries and regions around the globe. This type of news has become so pervasive that it causes little surprise when read. Simultaneously, we see information about the importance that creation of new enterprises has in promoting economic development and how policies and regulations directed at easing creation of new organizations are common policies in many countries. In observing both phenomena, the author began to question the effects of the former in the latter.

In other words, it is important to explore how corruption does influence the perception and following of entrepreneurial opportunities and what are the factors influencing corruption and perception of entrepreneurial opportunities in different institutional contexts and levels of entrepreneurial dynamism. Top scholars in Iberoamerica have expressed similar opinions on the importance of entrepreneurship and entrepreneurship education in promoting and enhancing quality of life and economic development in the “A life in Research” section of *Management Research*; the official Journal of the Iberoamerican Academy of Management (Ibarreche & Mesquita, 2010; Ibarreche, 2011, 2013).

While entrepreneurship acts as an important driver of the economic growth and prosperity for a country, corruption, simply defined by World Bank as “the abuse of public power for private benefit”, has been generally recognized as a complex and malignant inhibitor having negative impact on the economy and society (Tanzi, 1998). However, corruption is arguably such a complex phenomenon (Svenson, 2005) that some scholars assert that it has beneficial effects in certain type of political, cultural and social environment (Asiedu and Freeman, 2009; Dreher and Gassebner, 2007; Tanzi, 1998). Being accepted as one key element of a country’s institutions, corruption and

its relationship to other macroeconomic indicators have been widely studied by scholars where institutional theory (North, 1990; Scott, 1995) has been one foundational theory to explain these relationships and associated phenomena of corruption (Anokhin and Schulze, 2009; Blankart and Kirchner, 2003; Kaufmann and Kraay, 2003; Lambsdorff, 2003; Mauro, 1995; Rose-Ackermann, 1978, Svenson, 2005).

Policy development that attempts to tackle the chronic problem of corruption and the one that promotes entrepreneurship is one daunting challenge in many countries around the world (World Bank, 2013). The importance of entrepreneurial endeavors in creating new business ventures, promoting economic development, and determining how policies and regulations should be crafted to facilitate creation of new organizations are vital themes to policy development agendas in most countries. This dissertation intends to further examine whether there is a relationship between these two phenomena, especially how corruption influences the entrepreneurial process between perceived opportunity and intention to start a new business.

In doing so, this dissertation further focus its attention on the moderating effect of corruption on the relationship between opportunity and the resulting intention to start a new business venture. I argue that to expand our knowledge on such relationships are important for the field of entrepreneurship as a whole, and entrepreneurship education, practice, and policy development in particular, to promote and enhance quality of life and economic development of countries (Ibarreche & Mesquita, 2010; Ibarreche, 2011, 2013).

On the other hand, the roles of regulatory environment on the economic development and business activities of a country have long been recognized by scholars (North, 1990; Scott, 1995; Peng, 2003). As an index that portrays the generalized picture of a country business environment, and as a comparative measure to other countries in doing business, economic ranking of countries developed by World Bank is one of the established set of indicators that provides essential information about on business and regulatory environment on ease of starting and operating a new business in a particular country from different dimensions (Dreher and Gassebner, 2007).

Especially, “distance to frontier”, a specific ranking of a country which is an absolute measure of how far the distance of a country standing for different criteria in doing business, comparing to the best performer in that particular criteria, provides a direct and simple comparative information on “how easy or difficult to start a business” (World Bank Doing Business, 2012), and an indirect information on overall regulatory and institutional context of that particular country. An index of 100 is the best frontier a country could achieved and a country with the scores of 80 is 20 points away from the best practices. However, whether there is a significant difference in levels of opportunity perceived by entrepreneurs in different levels of corruption and regulatory environment, and the exact nature of the process the opportunity influences on entrepreneurial intention and resulting activities is still unexplored research area.

As mentioned above, entrepreneurship is indeed a process which begins with identifying opportunity where opportunity, according to Locke and Latham (2004), is “a certain aspects of the environment that represent potentialities for profit making”. Shane and Venkataraman (2000, p. 220) define entrepreneurial opportunities as “situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than the cost of their production”. Shane (2009) acclaims that opportunities determine the entrepreneurial process since

it is the starting point for an entrepreneur to exploit these opportunities to realize potential tangible or intangible benefits.

On the other hand since different people have different resources and capabilities, not all people have same level of intention to pursue nor able to take advantage such opportunities. In such situation perceived opportunities even may become irrelevant (Aldrich and Zimmer, 1986). According to Venkataraman (1997), an opportunity is only valuable when it has potential to generate profit by earning “revenue that exceeds the entrepreneur’s opportunity cost, a premium for the illiquidity of money, time, and effort expended, and a premium for bearing risk and uncertainty”, a phenomena that can be explained by institutional theory.

People in countries with different level of corruption and regulatory environments influencing on the risk, uncertainty and cost of opportunity, may have different level of perception on opportunities. Further, depending on the differences in capabilities possessed and level of intention to engage in a process of entrepreneurial activities, supported by social influence, could determine the outcome of entrepreneurial activities.

Extant researches on entrepreneurship have well documented the relationships among macro level environmental forces (Aldrich, 2000), the entrepreneurial traits and their characteristics and entrepreneurial activities (Christiansen, 1997). While such researches have expanded existing knowledge on entrepreneurial process contributing to the eventual economic development of a country, it fails to consider the one specific role of regulatory and institutional context; how people’s perception on corruption and its ranking on “distance to frontier” of doing business influence on the perceived opportunity and the entrepreneurial process between

opportunity identification and the eventual development of entrepreneurial activities across countries. This is the specific knowledge gap this dissertation intends to focus.

Drawing from theory of planned behavior (Ajzen, 1991), the intention to start a new business is a function of entrepreneurial perceived opportunity, entrepreneur perception about his or her abilities, and the intensity of social norm which in turn being influenced by external environmental factors such as corrupt business and regulatory environment (Locke and Latham, 2004).

This study proposes that the entrepreneurial activity is directly related to entrepreneurial intention which in turn is partially a function of perceived opportunity, perceived capabilities, social influence and, and partially moderated by a function of institutional context, in which corruption is one important element, and regulatory environment, particularly, distance to frontier is one important indicator.

Although constructs related to corruption, global economic ranking in doing business and entrepreneurial activities have been analyzed independently, research on their relationship, specifically to the process between perceived opportunity and entrepreneurial activity, regarding to the ranking of “distance to Frontier” and corruption level of a country is, to the best of author’s knowledge, a research gap. To fill in this gap, this study proposes that a timely scholarly investigation to into this research area is imperative and has important implications and contribution on the existing knowledge of entrepreneurship and institution.

Drawing from institutional theory (North, 1991), structuration theory (Giddens, 1984), and theory of planned behavior (Ajzen, 1988), this study employs a set of regression analyses to test the propositions, using multiple data from Transparency International’s Corruption Perception

Index (CPI), World Bank's "Distance to Frontier" ranking, and data from Global Entrepreneur Monitor (GEM), focusing on two sets of sample data. The first data set includes a sample of forty-five countries for the year 2011, and the second data set covers a cross-sectional panel data of 88 countries for the period that covers from 2008 to 2012 is employed to test the robustness of the findings from first data set.

In the remaining parts, chapter two provides literature review, theory development and proposed conceptual research model on variables under investigation which are: corruption based on the perception of corruption, regulatory environment proxy to World Bank's distance to frontier index, entrepreneurial perceived opportunity, perceived capabilities, entrepreneurial intention, and nascent entrepreneurial activity. In chapter three, development of sample data sets will be explained and proposed model of the relationships will be tested. The last chapter of this dissertation discusses the results of the empirical analysis and their implication and contribution on theoretical development and practical aspects such as policy development issues, and it concludes with discussion on limitations and future research potential.

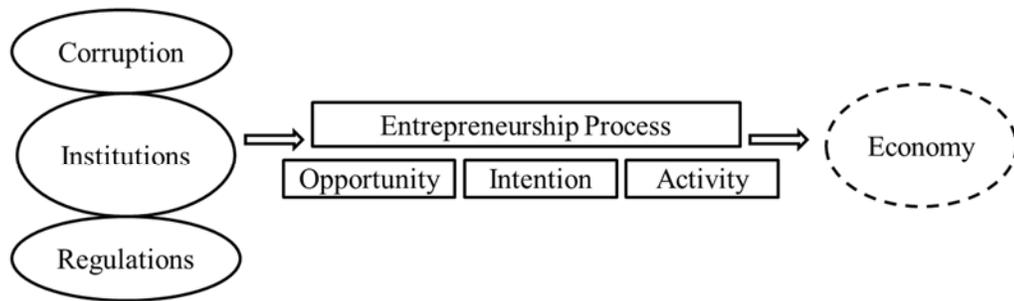


Fig. 1 Conceptual Model

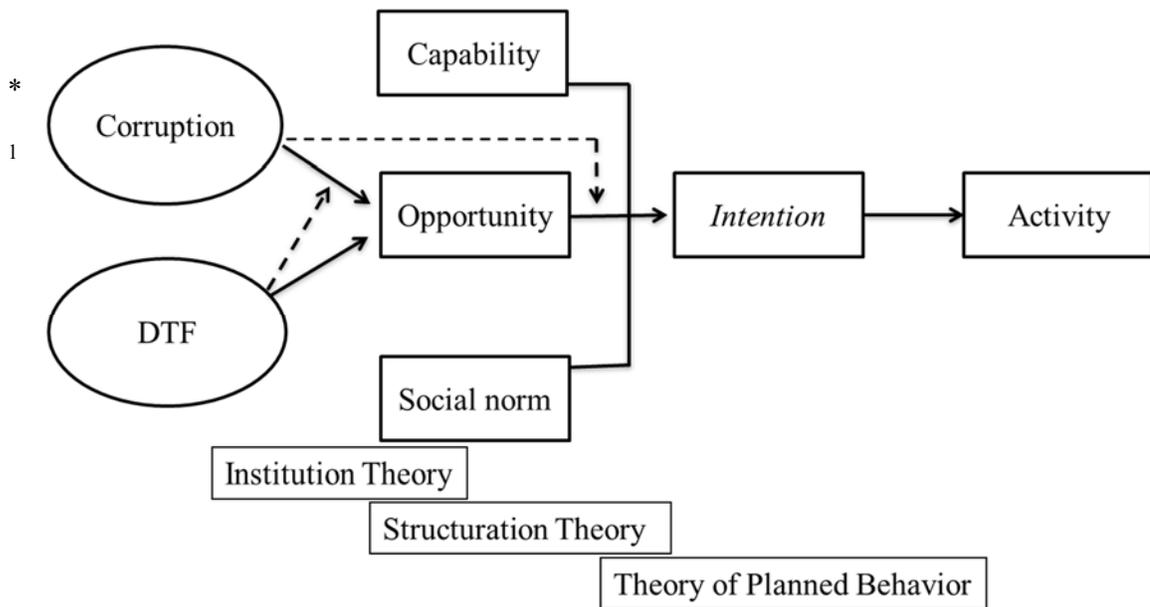


Fig.2 Hypothesized Model

- DTF = Distance to Frontier

¹ The hypothesized model doesn't propose opportunity as a mediator

Chapter Two

Theoretical Background and Hypothesis Development

2.1 Entrepreneurial opportunity

Extant entrepreneurship literature has been mainly focused on entrepreneurs, their personal characteristic and behavioral traits as the fundamental building blocks in creating new business ventures (Baum and Locke, 2004). Recently, however, the opportunities construct has been received increasing scholarly attention. In their seminal theoretical paper, Eckhardt and Shane (2003) point out that researchers have shifted their approach from primarily focusing on identifying potential entrepreneurs in the society to understanding the coevolution of entrepreneurs and opportunity, and as such explaining the entrepreneurial process based on opportunities, whether such opportunities are discovered or created, becomes an important task for the scholars. Given the importance of such paradigm shift which focus on opportunity concept, there is a need to expand the existing knowledge about this intriguing concept as the foundation for setting the stage for further exploration for scholars in entrepreneurial discipline. That is one of the goals of this study.

Moreover, conceptual and operational definitions of the opportunity construct, and the theories which attempt to explain opportunities, have been fragmented and as such attempts for consolidating existing knowledge are urgently warranted to set a solid foundation for future scholarly works on entrepreneurial research (Hansen et al., 2011). While Shane and Venkataraman (2000, p. 220) define entrepreneurial opportunities as “situations in which new goods, services, materials, and organizing methods can be introduced and sold at greater than the cost”, Kirzner (1979) defines opportunity as “underutilized resources or a loosely defined market need” which is

the most significant characteristic of entrepreneurial dynamism. Some studies have described the process of identification and actualization of entrepreneurial opportunity as a key attribute to understand entrepreneurial activity (Stevenson and Jarillo-Mossi 1986; Shane and Venkataraman 2000). “Opportunity” possesses the qualities of being “attractive, durable, timely and is anchored in a product or service which creates or adds value for its buyer or end user” (Timmons and Spinelli, 1994: p. 87).

According to Singh (2001 p.11), an entrepreneurial opportunity is “a feasible, profit-seeking, potential venture that provides an innovative new product or service to the market, improves on an existing product/service, or imitates a profitable product/service in a less-than-saturated market” (. Entrepreneurial opportunities can be from an opportunity to introduce incremental market improvement to creation of new innovation in products and services to new markets (Singh, 2001).

These theoretical perspectives highlight the critical primer of the entrepreneurship process: the opportunity identification, discovery, and exploitation (Christensen, Madsen, and Peterson, 1994). Oviatt & McDougall describe entrepreneurial opportunities as the launching pad for a model of entrepreneurship and internationalization (2005), and it is argued that understanding the nature of opportunities antecedents, process, and their outcome is essential for the empirical analysis and testing the entrepreneurial dynamism, leading to more advanced theory building and research modeling. Such statements are in line with Busenitz et al. (2003) who posit that “opportunities define the boundary and exchange conditions of the entrepreneurship field”.

Extant literature attempt to develop new or apply existing theories to explain the opportunities construct. Structuration theory (Giddens, 1984) is one particular theory that posits

“opportunities arises via coevolution among the entrepreneur and social systems” (Sarason, Dean, & Dillard, 2006), whereas contextual environment determines the identification and exploitation of opportunities and exploiting these opportunities in turn reshapes the environmental context that create the opportunities.

Recent studies have focused on discovery, identification, actualization, and exploitation of entrepreneurial opportunity as a fundamental process and a key attribute to understand overall entrepreneurial dynamism (Stevenson and Jarillo-Mossi 1986; Shane and Venkataraman 2000). Particularly, drawing from resource based view (Barney, 1991), strategic entrepreneurship, an emerging sub-set of entrepreneurship discipline, suggests that opportunities are an important resources of a firm and as such striking a balance between exploitation of the identified opportunities (Ireland, Hitt, Camp, & Sexton, 2001) and discovery or creation of new of opportunity (Ketchen, Ireland, & Snow, 2007) become increasingly important dual challenge and fundamental core of the successful entrepreneurial firm.

Drawing on the research of Kirzner (1997), Gaglio and Katz (2001) state that there are differences among people in how they perceive and identify opportunity by gaining and observing obscure relationships and patterns in a given situation, and integrating conflicting information to a clearer conceptual framework, both positively and negatively. Prior studies find that such cognition is one important factor for an individual to perceive opportunities and defined as “all processes, through which sensory input is transformed, reduced, elaborated, stored, recovered, and used” (Neisser 1967).

Drawing from above mentioned literatures, it is clear that opportunity identification and recognition is an important construct under the domain of entrepreneurial dynamism and should

be explored to understand the process of entrepreneurship (Shane and Venkataraman, 2000). Research has indicated there are differences in the way information is processed between individuals (Chatterjee, Kang, and Mishra, 2005; Hoffmann and Soyez 2010; Lee and Thorson 2009). One of such differences is the ability to “perceive and make sense of conflicting stimuli” associated with a set of information (Sojka and Deeter-Schmelz 2008). Individuals with this ability may understand and engage conflicting and contradictory situation and information (Cacioppo et al. 1996) such as high level of corruption and poor regulatory environment and identify it as an opportunity.

There are several competing statements about the opportunities. One statement argues that opportunities are discovered (Ardichvili et al., 2003), whereas the other statement contends that opportunities are created (Alvarez & Barney, 2007). Some compromise that the reality would be both discovery and creation. They could be either products of creation of new ideas, or that of a gradual creative process overtime (Dimov, 2007). Opportunities have been defined either from the dimension of introducing innovative goods, services, or processes (Gaglio, 2004), or as an important precondition in creating new ventures which continues for the sustainability to growth of the established ventures (Baron, 2008).

While some scholars try to borrow existing theories from other disciplines to explain the opportunity construct, others have attempted to develop frameworks for building new theory that can better explain the opportunity-related phenomenon and dynamic process, such as opportunity discovery, creation, exploitation and extension Ardichvili et al. (2003). Social Cognition theory (Gaglio, 2004), which explains the mechanism of mental simulation and counterfactual thinking, is one example of a borrowed theory applied to explain which opportunities are discovered and which are created. According to Baron (2008), opportunity recognition can be driven by a

cognitive process of individual perception and judgment, and such process is strongly influenced by individual's mood and feeling (affect). Theory of entrepreneurial alertness posits readiness to recognize market disequilibrium can lead to discovery of opportunities (Kirzner, 1973). Network theory further posit that elements of observation, questioning, experimenting behavior are important for entrepreneur's ability to generate novel ideas for innovative new businesses (Dyer et al., 2008).

Early studies tended to posit that changes in environmental contexts, such as industrial de-regulation, determine the existence of opportunities (Wiklund & Shepherd, 2003). In their seminal paper, Raisch and Birkinshaw (2008) discuss extensively on the antecedents, outcomes, and moderators of opportunity-related processes such as, opportunity identification, recognition, creation, and exploitation. They state that one important determinant of the opportunities is "timing". The importance of timing has been proposed in his literature of "creative destruction" by Schumpeter (1954), which is further supported by Kirzner (1997) that opportunities come as surprises to alert individuals. Other determinants of opportunities include knowledge stock and distribution, individual or organizational learning process, and experience. Who discovers opportunities and the quality of opportunities will be partly determined by prior distribution of knowledge (Shane, 2001; Shepherd and De Tienne, 2005). It is widely accepted that individual behavioral characteristic also play important role in discovering of an opportunity.

It is widely recognized that opportunity creation, discovery, and recognition are influenced by cognitive processes associated with thinking and learning, and that organizational learning processes such as intuiting, interpreting, integrating, and institutionalizing are necessary for "discovering, developing, and implementing entrepreneurial opportunities" (Dutta and Crossan, 2005). According to Vera and Crossan (2004), one of the key drivers of the effective opportunity

development is learning. Previous studies on the antecedent of opportunities have focused mainly on the characteristic, and knowledge stocks of individual who discover or create the opportunity. On the other hand, social capital plays an important role in the exploitation process of opportunities (De Carolis and Saporito, 2006). Baron and Ensley (2006) have proved that experiences is a deterministic element between entrepreneurs and novice in opportunity recognition. Understanding opportunities partly depend also on level of analysis. Most extant literatures have mainly been focused on individual level and as such further investigations are warranted not only at organizational level and country level, but also internal and external environmental contexts which will be effective antecedents in understanding opportunity construct (Short et al., 2007). This study, for the purpose of operationalization, will adopt the definition of the GEM project on “perceived opportunity”; which is described as “Percentage of 18-64 who see good opportunities to start a firm in the area where they live” (GEM, 2005).

Changing trends of variables under study in selected countries

The following graphs show the overall trend of variables under study; perceived opportunity, perceived capabilities, know start up entrepreneurial rate, entrepreneurial intention, and nascent entrepreneurial rate in selected countries from 2007 to 2011. These trends indicate not only the differences across countries, but also the intensity of changes are heterogeneous and nonlinear in some sector which warrants for scholarly investigation.

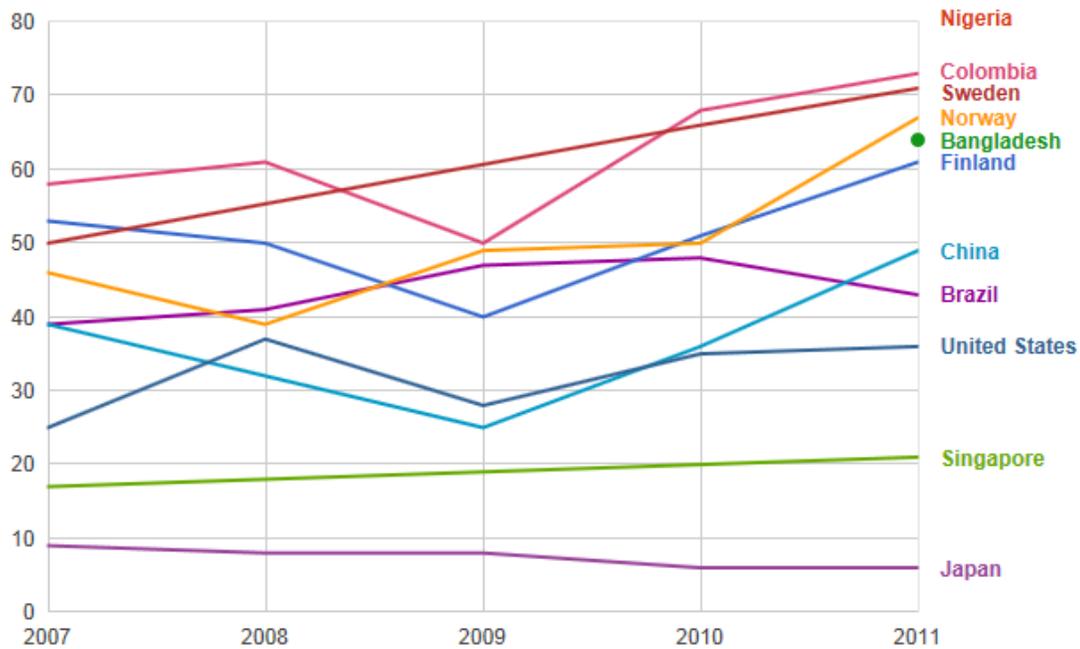


Fig. 3 Perceived Opportunities

Sources: Transparency International (2012); Global Entrepreneurship Monitors - GEM (2012)

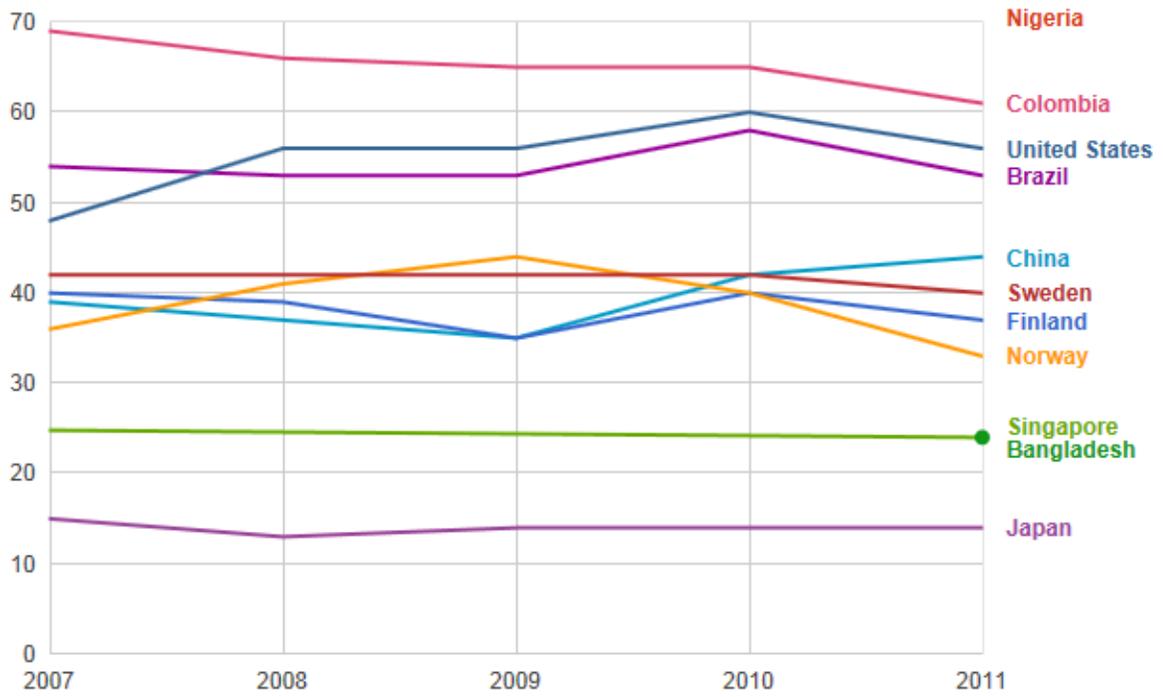


Fig. 4 Entrepreneurial Capabilities

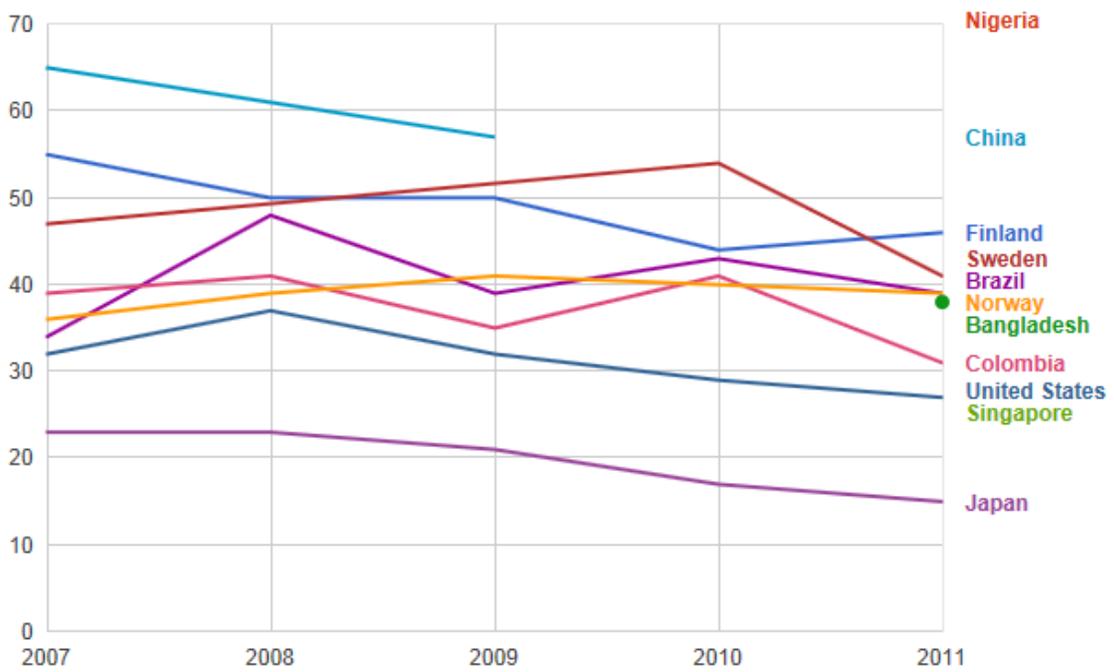


Fig. 5 Know Startup Entrepreneur Rate

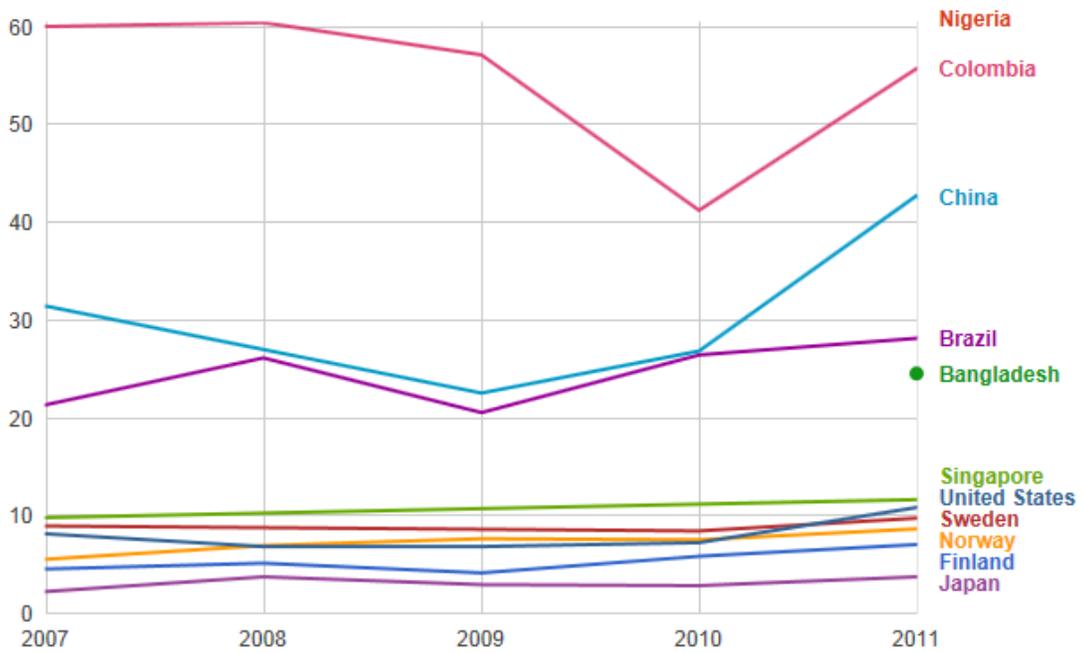


Fig. 6 Entrepreneur Intention

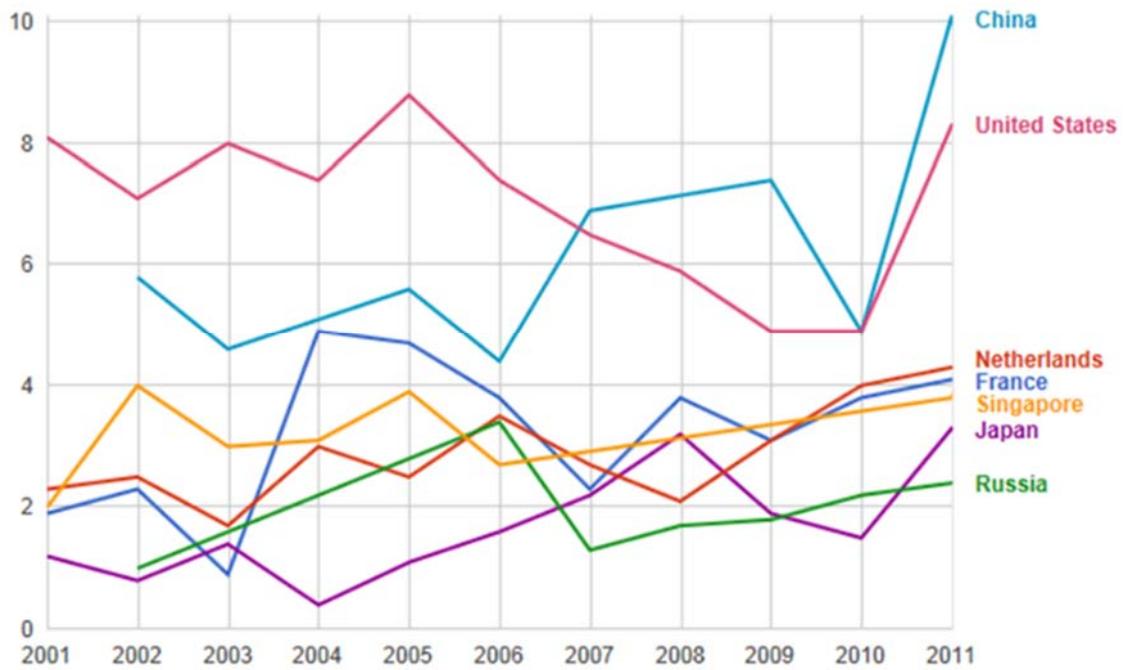


Fig. 7 Nascent Entrepreneurship Rate

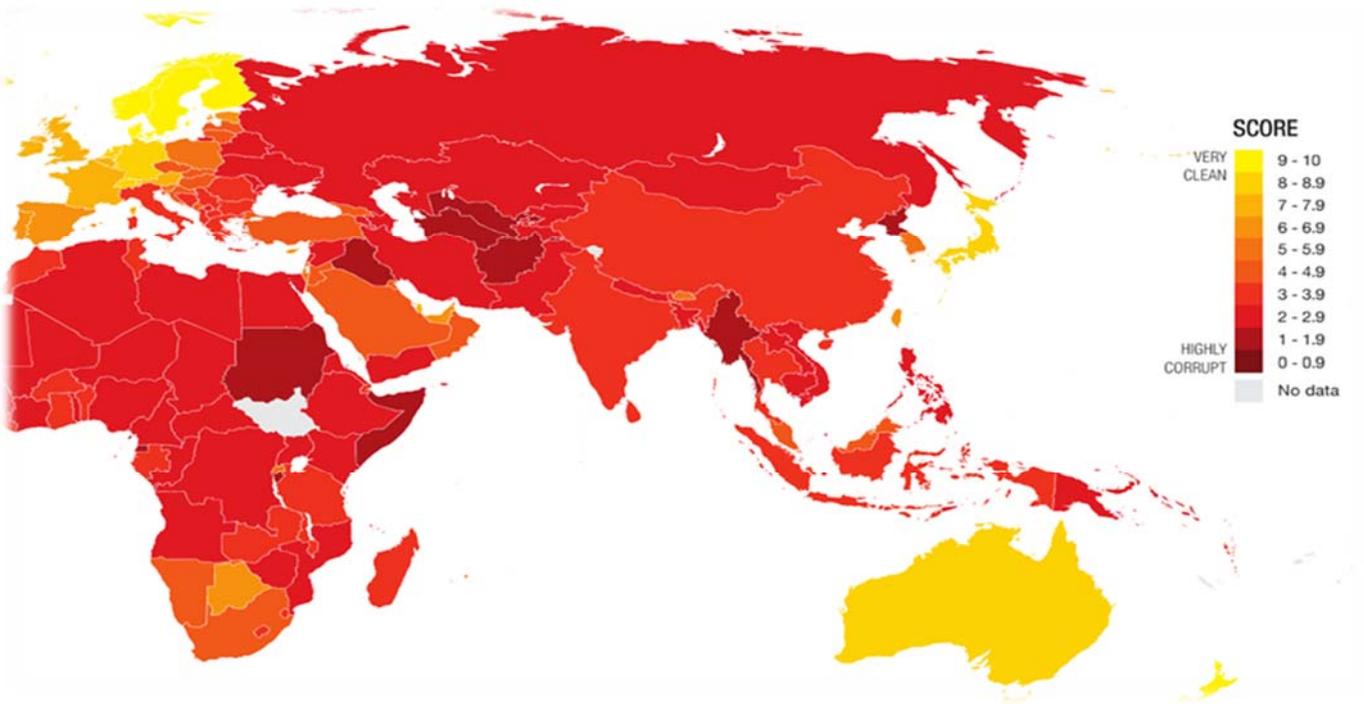


Fig. 8 Corruption Perception Index (CPI) 2012

2.2 Institutional Context and Corruption

Institutional context is the focus of this paper as the extant literature identified different magnitude of importance of institutional quality and regulations for the degree of entrepreneurial activity across countries. Institutional theory (North, 1990) posits that institutions “create order, and reduce uncertainty in exchange”, “determine transaction and production costs”, and “provide the structure of an economy, in which incentives for entrepreneur embodied”.

Institutions influence on entrepreneurial opportunities, and activities (Estrin et al., 2012; Aidis et al., 2012; Baumol 1990; Bowen and DeClercq, 2008). Formal institutions are constitutions, regulations, laws, property rights, whereas codes of conduct, custom, traditions, and taboos are informal institutions (North, 1990). Influences of formal and informal institutions on entrepreneurship have been documented by several research works (Estrin et al., 2012; Aidis et al., 2012; Autio and Acs, 2010; Baumol 1990; Boettke and Coyne, 2009; Bowen and DeClercq, 2008). Most of these research have focused on understanding “how, under what circumstances, to what extent, and in what ways” (Powell, 1996: p. 297); however, how corruption, one key element of informal institutions, influences entrepreneurial process is still an under-researched area. Institutional theory posited by North conceptualizes institutions as “the rules of the game in a society” (North, 1990: p. 3; Scott, 1995) and defines them as “the humanly devised constraints that structure human interaction”.

Exploring entrepreneurial dynamism across countries with different institutional contexts, not only advanced economies but also emerging and transition economies (Scott, 1995), would help in understanding the process how entrepreneurs perceived and engage with both formal and informal institutions, develop knowledge and capabilities, and create new business (Oliver, 1992).

According to International Monetary Fund (IMF), advanced economies are highly industrialized nations with high level of gross domestic products per capita and Human Development Index. Emerging economies are "low-income, rapid-growth countries using economic liberalization as their primary engine of growth" (Peng, 2003; Hoskisson et al., 2000: 249) and "emerging economies include transition economies from Latin America, the Middle East, Southeast Asia, and Africa". World Bank defines transition economies as "a subset of emerging economies, are formerly socialist countries in East Asia, Central and Eastern Europe, and the newly independent states of the former Soviet Union" (Peng, 2003, World Bank, 2002).

Institutions are intended to improve economies by establishing well-structured and disciplined business interaction and reducing the cost of transactions, increasing production and lessening the risk associated with uncertainties (Peng, 2003). Institutions, especially, in emerging economies are in a state of transition in regulatory environments characterized as turbulent water with full of uncertainties for entrepreneurs, which warrant proper navigation (Peng, 2003). It is argued that in such situation, informal institutions, such as cultural and social influence, and corrupt practices play a much important role in regulating business and economic activities in these countries than developed countries; consequently, they also play an important role in creation of new business (Peng & Heath, 1996), and hence entrepreneurship.

One important element of institutions that influences on entrepreneurship is the existence of corruption (Estrin et al., 2012, Baumol and Strom, 2007; Anokhin and Schulze, 2009), which is more prevalence in emerging economies where existing business regulations and policies may become obsolete and difficult to enforce, and the informal customs and widely accepted social behavior replace the role of formal regulations to such an extent that these patterns started to be widely practiced and shared that they become informal regulatory norms (Estrin et al., 2012).

Corruption is a complex phenomenon with two competing hypothesis: Sand the wheels hypothesis (Mauro, 1995; Tanzi, 1998; Méon and Sekkat, 2005) and Grease the wheels hypothesis (Leff, 1964, Leys 1965, Huntington, 1968). While some scholars argue that corruption can alleviate the degree of uncertainty and facilitate inefficient regulatory practices, as proposed by greasing the wheel principle (Dreher and Gassebner, 2007), other researches prove that it indeed deteriorates the level of uncertainty by depleting trust among transacting parties and increasing the level of risk (Mauro, 1995) thereby increasing the cost of transaction (Mauro, 1995), producing the effect defined as sanding the wheels hypothesis. Similar negative findings of corruption were documented by other research (Brunetti and Weder, 1998). One key element of a country's institutions is corruption, which is defined as "abuse of public power for private benefit" (World Bank, 2002), and is widely studied by scholars drawing from institutional theory (Anokhin and Schulze, 2009; Blankart and Kirchner, 2003).

Complex, inherently malignant and sometime controversial implications of corruption on politics, economies, management, international business, and trade and investments have been an increasing interest for entrepreneurs, general public, domestic and multinational enterprises, research scholars and government policy makers for past decades (Dreher and Gassebner, 2007; Tanzi, 1998). While corruption, by its nature, depletes and deteriorates the economy and living standards of an economy (Mauro, 1995), in certain parts of the world corrupt practices have been so extensive and profound in daily lives that it is not only tolerated but also becomes part of business practices and social norms (Dreher and Gassebner, 2007). Hence the importance of understanding and researching how corruption can influence the economic growth and welfare of a country not by direct impact on the allocation of a nation's resources, but indirectly via influencing on entrepreneurial opportunities, incentives and activities (Jain, 2001).

Corruption is defined as “the abuse of public roles and resources for private benefit or the misuse of office for nonofficial ends” (Bardhan, 1997; Goudie & Stasavage, 1997; Rose-Ackerman, 1978; Shleifer & Vishny, 1993; Spinellis, 1996; Tanzi, 1998). Corrupt practices encompass business and personal transactions in both public and private sectors of a given civilization (Goudie & Stasavage, 1997; Spinellis, 1996; Svenson, 2005). While some scholars argue that fraud, money laundering, informal business engaged by ordinary people may not be considered corruption because they do not engage in the use of public power (Mongay and Fillipescu, 2012), there is a contradicting argument which states that insider trade, money laundering, and embezzlement of public money can be described as corruption (Eizenstat, 1998; Spinellis, 1996).

Sand The Wheels Hypothesis

According to this hypothesis, corruption is described as “negatively associated with the investment” (Mauro, 1995), acts like a progressive tax, and thus reduces the returns and incentives to entrepreneurship (Desai and Acs, 2007; Hunt and Laszlo, 2012). Existence of corruption significantly reduces firms’ entry in Central and Eastern European countries, (Desai et al., 2003) and “significantly reduce the number of new enterprises per 1000 capita” (Ovaska and Sobel, 2004).

Grease The Wheels Hypothesis

This hypothesis argues that corruption has beneficial effects in certain types of political, cultural and social environments (Dreher and Gassebner, 2007; Leff, 1964). While corruption has proved to have negative and significant effects on firms in most of the transition economies, Asiedu and Freesman, (2009) find in their study that these effects are insignificant in Latin America and

sub-Saharan Africa. In the same token, Desai et al., (2003) have found that the negative impact of corruption is not significant in their sample countries and also in European zone.

Previous works have been focused on antecedents and consequences of corruption with regards to socioeconomic indicators such as Per capita Income and GDP growth (Kaufmann and Kraay, 2003); emerging bond market (Ciocchini et al., 2003); income equality (Carmignani, 2005); Foreign Direct Investment (FDI) and Trade (Lambsdorff, 2003; Mauro, 1995), and factors of production (Lambsdorff, 2003; Rivera-Batiz, 2002). While the negative effects of corruption on firms (Uhlenbruck et al., 2006), ethics (Hannafey, 2003), privatization (Lenway and Murtha, 1994), and in internationalization process (Rodriguez, Uhlenbruck and Eden, 2005) have been well documented, less studies have been focused on how entrepreneur perceives and identify opportunity in the midst of corruption (Bailey and Paras, 2006; Karklins, 2005; Redlawsk and McCann, 2005). Little has been learned so far about how entrepreneurs think about corruption and, to the authors' knowledge, research on the impact of corruption on the perceived opportunity across countries is nonexistence.

In a corrupt business environment, corrupt officials try to get personal benefits at the expense of business people. Further, there will be attempts to institutionalize corrupt practices and consistent exploitation for private interest. As such, corruption impacts on new or incumbent business as a progressive tax, incurring higher transaction costs that discourage economic activities related to high entrepreneurship levels (Anokhin and Schulze, 2009). As such, according to Anokhin and Schulze, during the process of corruption, there is a violation of trust people placed on government officials which destabilizes and deteriorates the interpersonal relationships leading to increasing risk level for entrepreneurial activity (2009). Such negative impact of corruption could have a heavier burden on entrepreneurs (Desai and Acs, 2007; Hunt and Laszlo, 2012) and

thus, corruption reduces the incentive and the returns to all types of entrepreneurs to engage in entrepreneurial activities.

Interestingly, while influences of institutional context, specifically corruption, on economic development and entrepreneurship has been researched by many scholars (Boettke and Coyne, 2009; Hwang and Powell, 2005) and while corruption has been generally accepted as negatively related to economic development of a country, not everybody thought corruption was particularly bad, especially in developing countries where some scholars defend corruption as an act to grease the otherwise unproductive bureaucracy and it indeed promotes and provides economic benefits the public at large (Huntington, 1968).

These scholars support their argument by putting forward the example of the success of newly industrialized countries such as South Korea, Indonesia, and others during their economic resurgence in 1990s with highly publicized and criticized prevalence practices of corruption. However, such corruption-induced growths are mostly unsustainable for long run and as such should not be a preferable strategy in the development of a country economy (Eigen, 1998; Brunetti and Werder, 1998). Similar positive effects of corruption have been recorded by Asiedu and Freeman in their seminal work in which they find that while corruption mostly has negative and significant effects on firms in most of the transition economies, in Latin America and sub-Saharan Africa these effects are surprisingly insignificant (Asiedu and Freeman, 2009).

On the other hand, in developed countries characterized with well-established and business friendly regulatory system, entrepreneurs may naturally perceive the negative consequences of corruption (sanding effects) more seriously than positive benefits (grease effects). Cognitive errors (Baron, 2004) explain the tendency to out-weight the negative impact over positive one; the

entrepreneurs may naturally perceive the negative image of corruption on socioeconomic environment more seriously in developed countries, whereas in emerging economies, the negativity of poor regulatory environment would be more serious than that of engaging in a corrupt practice. Emerging economies with institutional voids; which is defined as a state of “poor legal protection, inadequate disclosure, weak corporate control, inefficient financial market” (Khanna and Palepu, 1999, North, 1990), are characterized by “political tension, high corruption and institutional chaos” (Oliver, 1992; Skott, 1999), leading to uncertainty, higher risk and increased transaction costs for doing business (Oliver, 1992).

Therefore, in such countries with high level of unpredictability and obstacles, the greasing effects of corruption might prevail to overcome uncertainty and regulatory barriers in doing business, and creates more opportunity than without corruption. In advance economies with well-structured regulatory environment, however, the existence of corruption might have more negative institutional consequences, and as such higher levels of opportunity will be observed with lower level of corruption.

Higher level of perception in corruption in emerging economies would be positively related to higher level of perceived opportunity, and lower level of perception in corruption in advanced economies would be positively related to higher level of perceived opportunity: a distinctive phenomenon which can be manifested in a U-shaped relationship. According to grease the wheels hypothesis, the effects of corruption to facilitate and overcome the barriers of weak regulatory structures in developing countries will encourage in identifying more opportunity, whereas the presence of opportunity in developed countries is not created by corruption, as argued by sand the wheels hypothesis. Therefore, the following hypothesis is presented:

Hypothesis 1: Levels of perceived corruption will be related to perceived opportunity in a U-shape relationship in which extreme levels of perceived corruption will exhibit high levels of perceived opportunity, and its inverse cusp will exhibit less significant effect.

2.3 Distance to Frontier

World Bank has as one of its purposes to provide information that allows comparisons among different countries in terms of economic development and “doing business” indicators. A comparative measure to other countries in doing business, economic ranking of countries developed by World Bank is one of the established set of indicators that provides essential information on business and regulatory environment, and ease of starting and operating a new business in a particular country from different dimensions (Dreher and Gassebner, 2007). Of special interest for this study is the measure “distance to frontier”, a specific ranking of a country which is an absolute measure of how far the distance of a country standing for different criteria in doing business, comparing to the best performer in that particular criteria, provides a direct and simple comparative information on “how easy or difficult to start a business” (World Bank Doing Business, 2012), and an indirect information on overall regulatory and institutional context of that particular country.

Potentiality of profit making will be generally scarce in poor regulatory environment characterized with uncertainty, unpredictability, and turbulence (Peng, 2003). Prevailing regulations on a business environment are one key element influencing the potentiality of creating profit from an entrepreneurial process which in turn impact on identification and exploitation of entrepreneurial opportunity. Authors propose that whether the existing regulatory environments

are encouraging or discouraging, the perception of an entrepreneur on an opportunity will be changed. The better the quality of business regulations and enforcement, the more opportunities can be perceived by an entrepreneur. Hence the following hypothesis is proposed.

Hypothesis 2: A country ranking in quality of regulatory environment for doing business is positively related to perceived entrepreneurial opportunity.

Further, I argue that the beneficial or detrimental effects of corruption and its relationship to entrepreneurial opportunity will be contingent to the existence of level of the established regulatory environment in doing business. When there are good regulatory procedures and ease of doing business, there will be no use of corruption as a facilitating tool. As such, countries with higher ranking ease of doing business will be associated with lower level of corruption, and higher level of entrepreneurial opportunity. On the other hand, corruption would be a facilitating practice in countries where regulatory practices for doing business are inefficient or poorly established. Concluding, I hypothesize that the relationship between corruption and opportunity is contingent upon the level of the quality of regulatory environment. As such, I forward the following hypothesis:

Hypothesis 3: The relationship between corruption and opportunity is moderated by the level of the quality of regulatory environment for doing business such that there is a positive relationship at lower level and negative relationship at higher level of the quality of regulatory environment for doing business.

2.4 Entrepreneurial intention

According to theory of planned behavior (Ajzen, 1991), intention precedes action. An intention is a core driver in the process of engaging an activity. Intention to pursue an identified entrepreneurial opportunity is the second step in the process of entrepreneurship (Gartner et al., 1994).

There are three antecedents:

- (1). Attitude
- (2). Perceived behavioral control
- (3). Subjective (social) norms (Ajzen, 1991).

Entrepreneurial intention is defined as “the conscious state of mind that precedes action and directs attention towards a goal such as starting a new business” (Bird, 1988; Krueger et al., 2000). Theory of planned behavior (Ajzen, 1988) argues that intention precedes action. An entrepreneurial intention is a core driver in the process of engaging in entrepreneurial behavior (Kolvereid & Isaksen, 2006). Intention to pursue an entrepreneurial career is the first step in the long process of entrepreneurship (Gartner et al., 1994). While extant cross-national studies of entrepreneurial intentions (Lin˜a˜n and Chen, 2009; Moriano et al., 2011; Engle et al., 2010) find differences in entrepreneurial intentions across countries, none of these studies have explored how it is related to perceived opportunity in different level of corruption and different regulatory environments in doing business. The role of intention on entrepreneurial activity has been studied (Shapero and Sokol, 1982; Bird, 1988; Katz and Gartner, 1988) and research has proved that intentional frameworks are one of the important determinants of the entrepreneurial process (Shapero and Sokol, 1982; Bird, 1988; Krueger et al., 2000; Souitaris, Zerbinati, and Al-Laham, 2007).

A person's choice to become an entrepreneur is recognized as a "deliberate and conscious decision process" (Krueger et al., 2000), where entrepreneurial intentions act as a deciding factor in this process of identifying opportunities to engaging in entrepreneurial behavior and activities (Kolvereid & Isaksen, 2006). For an entrepreneur, starting a new firm warrants considerable levels of intention (Baron, 2008), and as such the intention to perform entrepreneurial activity is strongly related to the level of perceived opportunities in a given situation (Ajzen, 1991). Hence, this study proposes that:

Hypothesis 4: Entrepreneurial intention is positively related to the perceived entrepreneurial opportunities across countries.

On the other hand, the intention to exploit the identified or created opportunities could depend on the presence or absence of different entry barriers. In such situation, the greasing effects of corruption might prevail to overcome these uncertainties and regulatory barriers in doing business and as such encouraging higher entrepreneurial intention to start a new business. Especially, it would occurred only in institutions characterized by low level of formal regulations. Therefore, the following hypothesis is forwarded:

Hypothesis 5: Positive relationship between perceived opportunities and entrepreneurial intention is moderated by corruption such that higher levels of corruption will strengthen the relationship between perceived opportunity and entrepreneurial intention.

2.5 Perceived capabilities

Drawing from the resource-based view (Barney, 1991), prior studies prove that the importance of possession of knowledge, skill, social networks, and cognition and capabilities in starting and operating business (Fraboni and Saltstone 1990; Gaglio and Katz 2001; Young and Francis 1991). Perceived capabilities are defined by Global Entrepreneurship Monitor (GEM) as “the belief in possessing required skills and knowledge to start a business” (GEM, 2012). Capabilities are defined as a special type of resource that can “improve or transform other resources to become more productive” (Makadok, 2001).

Capabilities are “abilities to absorb, integrate and transform internal and external resources” to get a superior performance (Lu et al., 2009), whereas, resources are stock of tangible or intangible assets such as information, technology, fixed assets, and human capital necessary as input for products or services (Barney, 1991).

The roles of the capabilities in transforming resources into sustainable competitive advantages have been documented in international entrepreneurship literature (Peng and Jiang 2009). According to Lu et al., (2009), capabilities are abilities to “absorb, integrate, and transform internal and external resources into competitive advantages”.

Especially, the importance of adaptive capability in internationalization of entrepreneurial firms has been explained by previous literature (e.g., Cavusgil et al., 1993, Dow, 2006). Bygrave (1993) views the founding of a new firm as the outcome of “the successful pursuit of an entrepreneurial opportunity”. Successful entrepreneurship can only take place when there is a fit among entrepreneurs, opportunity, the capabilities and resources, and intention required to create a firm (Timmons and Spinelli, 1994). As such, the author proposes that the level of perceived

capabilities play an important role in entrepreneurial process especially on the intention to create a new business venture.

Hypothesis 6: There is a positive relationship between perceived capabilities and entrepreneurial intention.

2.6 Social norm

In entrepreneurship research, the roles of family, friends and social trends have been researched for how they influence on start-up activity of an individual (Krueger et al., 2000). Ajzen's (1991) theory of planned behavior has been used by entrepreneurship scholars to analyze social influence constructs related to entrepreneurial intention (Krueger et al., 2000; Engle et al., 2010).

Drawing from the theory of planned behavior (Ajzen, 1991), the social influence construct suggests that individuals are influenced by family and close friends in adopting a specific behavior, especially when such behavior are valued and respected others (Bandura, 1977). Prior research shows mixed results of social influence; while some find positive effects of social influence on entrepreneurial intention leading to behavior (Carr and Sequeira, 2007; Souitaris et al., 2007), others fail to identify such positive effect (Krueger et al., 2000; Autio and Acs., 2010; Boissin et al., 2009).

As such, the contradictory findings on the role of social norms have been an important focus in studying in the process of startup companies (Armitage and Conner, 2001). Cialdini and Trost argue that social norms have greatest impact when environmental conditions are perceived

as uncertain (1998); a situation often faced in engaging in entrepreneurial activity and starting a new business especially in the presence of corruption and poor regulatory environment. Hence the following hypothesis is forwarded;

Hypothesis 7: There is a positive relationship between social norm and entrepreneurial intention.

2.7 Nascent Entrepreneurial Activity

Overall entrepreneurial activity of a given country can be measured by nascent entrepreneurial activity (GEM, 2011) which is an aggregate indicator of entrepreneurial dynamism. This activity shows the percentage of the population who are very recently and actively involving in setting up a business. There is a difference in levels of intention and entrepreneurial activities across countries (GEM, 2011). Prior research has proved that intentional frameworks are important for entrepreneurial process (Shapiro and Sokol, 1982; Bird, 1988; Krueger et al., 2000). According to Ajzen (1991) intention precedes action, and it is argued that the likelihood of an entrepreneur to find and act is related to the degree of intention they have (Souitaris et al., 2007). Further, there's a need to empirically test the relationship between intention and action in the entrepreneurship field (Nishimura and Tristan, 2011; Souitaris et al., 2007). Therefore I forward the following hypothesis;

Hypothesis 8: There is a positive relationship between entrepreneurial intention and entrepreneurial activity.

Chapter Three

Methodology

3.1 Data and Measures

The following chapter explains how this study conducted a series of empirical analyses on two sets of data at country level as it intends to study the relationships among constructs under study in a global approach. The first data set consists of 45 countries for the year 2011, and the second set of data covers the sample of 88 countries for the period 2008-2012 to find out whether and to what extent the corruption and absolute quality of regulatory environment proposed in the previous chapter robustly affect entrepreneurial perceived opportunity, entrepreneurial intention and nascent entrepreneurial activity.

This study tests the proposed hypotheses using a set of regression analyses and SPSS Legacy Dialog tool to visualize the relationship among variables, employing data developed from a collection of sample data from previously established and validated multiple data sets. These data sets are corruption perception index (CPI) from Transparency International (TI), distance to frontier index (DTF) from World Bank's economic ranking in ease of doing business, and data for entrepreneurial dynamism which include perceived opportunity, perceived capability, know startup entrepreneur rate, and entrepreneurial perceived opportunity are derived from Global Entrepreneurship Monitor GEM (Reynolds et al., 2005).

The first sample data includes 45 countries from different regions, economies, political systems, population sizes for the year 2011. Following prior studies which employ GEM data (e.g., De Clercq et al., 2012), to increase the sample size from 45 countries to 88 countries, to offset the problems of missing values, and effects of strong cyclical nature of data relating to

entrepreneurship along with short-run economic cycle (Reynolds et al., 2005), to increase the stability, and to further the robustness, a second set of data was developed from single cross-sectional data developed from panel data sets (De Clercq et al., 2012) for a five years period that covers from 2008-2012.

The study period 2008-2012 is the most recent year in which all the data for the necessary variables is available. Multicollinearity is excluded by checking the variance inflation factor (VIF) during the regression analysis. Technically, VIF factor 10 and above indicates the presence of serious multicollinearity and there is no high VIF factor indicating the presence of such multicollinearity. Direct and moderating effects of absolute level of ease of doing business, and moderating effect of corruption are tested following Baron and Kenny (1996) and Aiken and West (1991).

Independent variables consist of the corruption perception index and the distance to frontier ranking in ease of doing business in the first half of the proposed model, and later, drawing from theory of planned behavior (Ajzen, 1991), the process of entrepreneurial activity is tested by regressing perceived entrepreneurial opportunity, perceived capability, and social norm to entrepreneurial intention. Finally, the relationship between entrepreneurial intention and nascent entrepreneurial activity is tested by simple linear regression.

Following Aiken and West (1991), moderating effects of distance to frontier in three different levels are tested separately. The dependent variable is entrepreneurial opportunity measured by perceived opportunity. This study controls GNI per capita as the country level control variables as suggested by Aidis et al., (2012). The roles of income level of countries are checked separately using two level interaction test (Aiken and West, 1991), to further validate the effects of ease of doing business ranking.

3.2 Perceived corruption: Corruption Perception Index

Corruption is an act which is difficult to measure objectively due to its seclusive nature (Anderson and Heywood, 2009; Olken, 2009; Reinikka and Svensson, 2003; Seligson, 2006). This study uses the Transparency International (TI) Corruption Perception Index (CPI) 2011 to measure the perceived corruption for the first data set, and from 2008 to 2012 for second data set.

The CPI is a composite index of several polls of international businesspersons and financial journalists from 175 countries on the overall perception on corruption in a respective country. It has been widely used by extant research studies in international business, economic, politics, entrepreneurship and business ethics (Husted, 1999; Volkema, 1997; Volkema & Chang, 1998). The CPI is not an objective measure of existing actual corruption level. It's a subjective assessment of the level of corruption perceived by businesspersons as how it prevails it is in doing business and its effect on business.

The scale of CPI is indicated from 0 to 10 where 10 represents most corrupted. CPI has been supported and validated by several studies (Wilhelm, 2002). Although Transparency International's Corruption Perceptions Index is a measure of public perceptions of how widespread corruption is in a given country, scholars agree that it is a validated measure of the level of corruption (Lancaster and Montinola, 1997; Treisman, 2000). As described by Seligson, CPI is “the best measure currently available for a worldwide ranking” along with the World Bank Institute's Corruption Control Index (Seligson, 2006: 386). (Source: Transparency International).

3.3 Regulatory environment: Distance to Frontier

World Bank Doing Business is a project that studies 185 economies using 11 indicator sets that measures the business regulatory environment. The frontier is developed from “the best scores ever achieved on each component in Doing Business Indicator sets (excluding the employing workers and getting electricity indicators) by any economy since 2005” (World Bank Doing Business, 2013). Distance to frontier is an absolute measure and it is different from “ease of doing business” which is a comparative measure. Distance to frontier of an economy is provided on a scale from 0 to 100, where 0 represents the poorest performance and 100 is the frontier. A score of 60 in 2011 means an economy was 40 percentage points away from the best performances ever recorded by an economy. ²

3.4 Entrepreneurial activity and attitude: Perceived opportunity, perceived capability, Entrepreneurial intention, Social influence, and Nascent Entrepreneurial activity

These data are collected from the Global Entrepreneurship Monitor (GEM) project (GEM, 2011). GEM is the largest study that has been monitoring the entrepreneurial dynamics in the world since 2005. It assesses “the entrepreneurial activity, aspirations and attitudes of individuals”

²Note: The dimensions the project measures include the number of “procedures, time and cost required for a small to medium-size limited liability Company to start up and operate formally”. (Source: World Bank Doing Business, 2013)

every year since 2005 and it covers total 88 countries in 2012. GEM explores the characteristic of entrepreneurial activities and the roles of entrepreneurship in country economic development.

The purpose of GEM is “to measure individual involvement in venture creation” and it is the main difference between GEM and other firm-level data sets. GEM studies the behavior of individuals regarding with starting a new business and managing an existing one. Adult Population Survey (APS) is one sub-set of GEM that measures “the entrepreneurial activity, attitudes and aspirations of individuals”.

1. Perceived Opportunities: “percentage of 18-64 who see good opportunities to start a firm in the area where they live”.
2. Perceived Capabilities: “percentage of 18-64 population who believe to have the required skills and knowledge to start a business”.
3. Social norm: There are four different measures that describe the dimension of entrepreneurial attitudes, and each of them has been used as a proxy to social norm in previous literatures (Nishimura and Tristan, 2011). These existing four measures of GEM related to social norm are;
 - a. Entrepreneurship as Desirable Career Choice: “percentage of 18-64 population who agree with the statement that in their country, most people consider starting a business as a desirable career choice”.
 - b. High Status Successful Entrepreneurship: “percentage of 18-64 population who agree with the statement that in their country, successful entrepreneurs receive high status”.
 - c. Know Startup Entrepreneur Rate: “percentage of 18-64 population who personally know someone who started a business in the past two years”.

- d. Media Attention for Entrepreneurship: “percentage of 18-64 population who agree with the statement that in their country, you will often see stories in the public media about successful new businesses”.

This study employs know startup entrepreneur rate as a proxy to social norm in the first place and later the other three measures are replaced to check the robustness of the empirical results of social norm.

4. Entrepreneurial Intention: “percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years”.
5. Nascent Entrepreneurship Rate: “Percentage of 18-64 population who are currently a nascent entrepreneur, i.e., actively involved in setting up a business they will own or co-own; this business has not paid salaries, wages, or any other payments to the owners for more than three months” (Source: GEM, 2011).

3.5 Control variable

Gross National Income: Wennekers et al., (2005) have suggested that there is a U-shaped relationship between a country level of economy and entrepreneurial activity. They argue that there is an increase in the degree of service sectors in higher income countries. As such this study control level of economy proxy to by gross national income (GNI) per capita which is derived from World Bank’s World Development Indicators.

Chapter Four

Empirical Analysis and Results

Empirical results

First, a sample data set which consist of 45 countries is employed to test the proposed hypotheses. Descriptive statistic and correlation matrix among the variables for the first sample data set of 45 countries is shown in table 1. The correlation matrix shows preliminary support for the proposed hypotheses where correlation between entrepreneurial perceived opportunity and its determinants are significant. Especially, the correlation between corruption and perceived opportunity is negative but statistically not significant and as such it warrants for testing non-linear relationship.

Table 1. Descriptive Statistics and Correlations Matrix of 45 countries

	1	2	3	4	5	6	7	8
1 Corruption Perception Index (CPI)		.488**	.849**	-0.005	-.374*	-0.206	-.481**	-.445**
2 Distance to Frontier (DTF)			.451**	-0.084	-.361*	-0.013	-.346*	-.339*
3 Gross National Income (GNI)				-0.005	-.394**	-0.13	-.606**	-.498**
4 Perceived Opprtunity (PO)					.407**	.358*	.489**	.531**
5 Capability						.448**	.462**	.668**
6 Know Startup Entrepreneur Rate							0.136	0.239
7 Entrepreneurial Intention								.769**
8 Nascent Entrepreneurial Rate (NAS)								
N	45	45	45	45	45	45	45	45
Min	1.889497	46.5	780	6	14	0	2.4	1.9
Max	9.403927	97.9	88870	73	81	57	55.8	17.9
Mean	5.277625	81.418	21773.09	40.31	48.11	32.91	19.858	6.6
SD	2.354095	11.5657	19323.17	17.532	14.94	13.003	12.6359	3.9852

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The hypothesized relationship between corruption and entrepreneurial opportunity is tested by a set of regression analysis in linear and quadratic terms. There is a negative linear relationship between corruption and opportunity supporting the widely accept negative impact of

corruption on opportunity. However, I found that statistical fit of the quadratic specification (U-shape relationship) ($\beta = 2.582$, $**p < 0.001$) is more significant than linear relationship ($\beta = -2.062$, $*p < 0.05$), and this finding supports proposed U-shaped relationship between the variables (Table. 2) thereby supporting hypothesis 1.

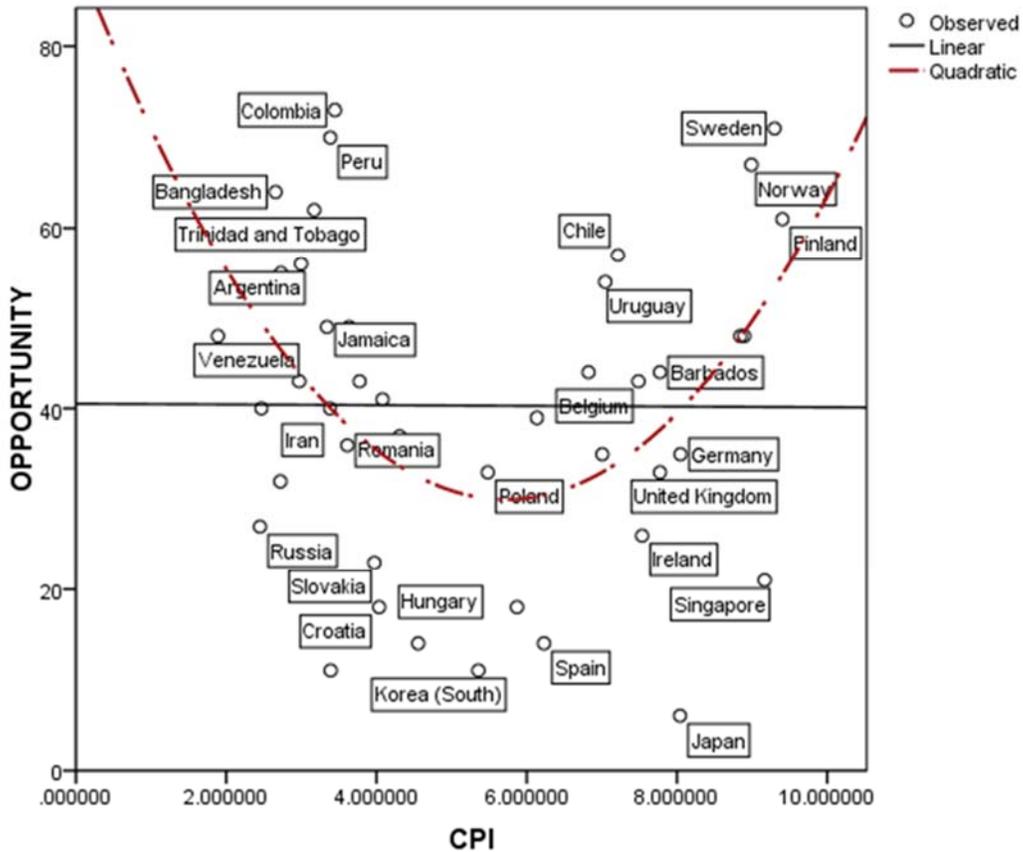


Figure. 9 U-shaped relation between opportunity and corruption in 45 countries

Table 2. Regression analysis Coefficients of Perceived Opportunity

Variables	β	t	ρ
(Constant)		4.529	0
Corruption Perception Index (CPI)	-2.062 *	-2.107	0.041
Distance To Frontier (DTF)	-0.078	-0.507	0.615
Gross National Income_Log Form (lnGNI)	-0.561 *	-2.39	0.022
CPI_Quadratic Term (CPI_Q)	2.582 **	2.772	0.008
Model F	3.847		
N	45		
Adjusted R ²	0.206		

a. Dependent Variable: Perceived Opportunity

b. Predictors: (Constant), CPI_Q, DTF , lnGNI, CPI

The coefficients are standard regression coefficients

* $\rho < 0.10$; ** $\rho < 0.05$

(CPI= Corruption Perception Index, CPI_Q = Quadratic Term of CPI, DTF = Distance to Frontier, lnGNI = Gross National Income in log form)

Hypothesis 1 stated that higher level of perception in corruption in emerging economies is positively related to higher level of perceived opportunity, and lower level of perception in corruption in advanced economies is positively related to higher level of perceived opportunity and accordingly I proposed that such a complex phenomenon can be manifested as a U-shaped relationship where extreme level of corruption on both high and low ends will be positively associated with high level of entrepreneurial perceived opportunity.

Using the regression analysis and legacy curve estimation tool, I visualize the nature of the relationships among corruption and perceived opportunity (Fig. 9).

This phenomenon is clearly visualized by curve estimation tool where perceived opportunity is high in countries with lower level of corruption and also in higher level of corruption. The U-shaped graph supports my hypothesis that both extreme levels of corruption are positively associated with the high level of entrepreneurial perceived opportunity.

The graph indicates that highly corrupt countries such as Bangladesh, Algeria, Nigeria, Venezuela, Argentina, Columbia, and China have high level of perceived opportunity whereas countries very low level of corruption such as Finland, Sweden, and Norway have also show high level of perceived opportunity. In contrast to these two group of the opposite axis, moderately corrupted countries such as United Kingdom, Germany, and United Arab Emirate show almost insignificant relationship.

The findings support proposed hypothesis 1 which argument is founded on the rationale of both beneficial effect (grease the wheel) and detrimental effect (sand the wheel) of corruption on perceived opportunity. The results are still significant after controlling the GNI, given that there is a U-shaped relationship between level of economic development and nascent entrepreneurship (Wennekers, Vanstel, Thurik, and Reynolds, 2005).

Hypothesis 2 stated that there is a positive linear relationship between the level of ease of doing business in a given country and the level of entrepreneurial opportunity. Contrary to my proposition, results from table 2 show that there is a negative but insignificant relationship ($\beta = -0.078$, $\rho = 0.615$). Thus hypothesis 2 is not supported. The plausible explanation could be the fact that when there are no regulatory and procedural barriers in starting a business, the less the ability a particular entrepreneur will gain from being particularly situated to overcome such barriers, or sustain a competitive advantage in relation to others that do not have access to the system. In other

words, if there are no barriers to overcome, no special access can exist for certain entrepreneurs. Another possible rationale is that potential opportunities might have already been identified and exploited by incumbent businesses.

Table 3. Regression Analysis Coefficients of Entrepreneurial Intention

Variables	β	t	ρ
(Constant)		-0.255	0.8
Opportunity	0.397 **	2.805	0.008
Capability	0.379 *	2.564	0.014
Know Startup Entrepreneur Rate	-0.176	-1.215	0.231
Adjusted R ²	0.298		
Model F	7.214		
N	45		

a. Dependent Variable: Entrepreneurial Intention

b. Predictors: (Constant), Opportunity
The coefficients are standard regression coefficients

* $\rho < 0.10$; ** $\rho < 0.05$

Hypothesis 4, 6, and 7 proposed that there is a linear relationship between the predictor variables opportunity, capability, and social norm to criterion entrepreneurial intention. The empirical results in table 3 support the relationship between opportunity ($\beta = 0.397$, ** $\rho < 0.001$), and capability ($\beta = 0.379$, * $\rho < 0.05$). But there is no significant relationship between social norm and entrepreneurial intention ($\beta = -0.176$, $\rho = 0.231$). As such the empirical evidence of social norm fails to support the one of the key components of theory of planned behavior.

To rectify this empirical finding, assuming whether other measures of GEM data such as media attention or social status of entrepreneur better can be employed as a proxy to social norm,

the existing proxy measure is replaced by these data and run the regression analysis again. However, the results are still negative and insignificant.

Table 4. Regression Analysis Coefficients of Nascent Entrepreneurial Activity in 45 Countries

	β	t	p
Constant		0.427	0.672
Corruption Perception Index	-0.104	-0.57	0.574
lnGNI	0.042	0.224	0.824
Distance to Frontier(DTF)	-0.054	-0.46	0.645
Entrepreneurial Intention	0.725 **	5.843	0
Model F	15.105		
Adjusted R ²	0.562		
N	45		

a. Dependent Variable: NAS

b. Predictors: (Constant), Corruption Perception Index, lnGNI, Distance to Frontier (DTF), Entrepreneurial Intention

The coefficients are standard regression coefficients

* $\rho < 0.10$; ** $\rho < 0.05$

Failure to find statistically significant relationship between social norm and entrepreneurial intention is in line with the finding of Nishimura and Tristan (2011) in their study on testing the theory of planned behavior employing data collected from the Global Entrepreneurship Monitor (GEM) research program conducted in Peru.

Regression analysis was used to test hypothesis 3, which posited a moderating effect of regulatory environment proxy to n distance to frontier index (DTF) on the relationship between corruption and opportunity. Empirical results from table 9 support my hypothesis that the interaction effect is above and beyond the individual effect of opportunity and corruption ($\beta = 0.758, t = 2.624$). Following two-way interaction slopes test proposed by Aiken & West (1991), to validate regression results, sample countries are divided into 3 separate groups with high, medium

and low distance to frontier index (DTF) and employing SPSS legacy tool to detect and visualize the moderating effect. See “Appendix” for the list of the countries.

Fig. 2 shows a positive relationship between corruption and perceived opportunity in countries with low and medium index, and a negative relationship in country with high frontier index. This supports hypothesis 3 which proposes that a better regulatory environment deters the applicability of corruption as a facilitating practice in doing business or greasing the wheels effect of corruption can only be detected in countries with poor regulatory environment.

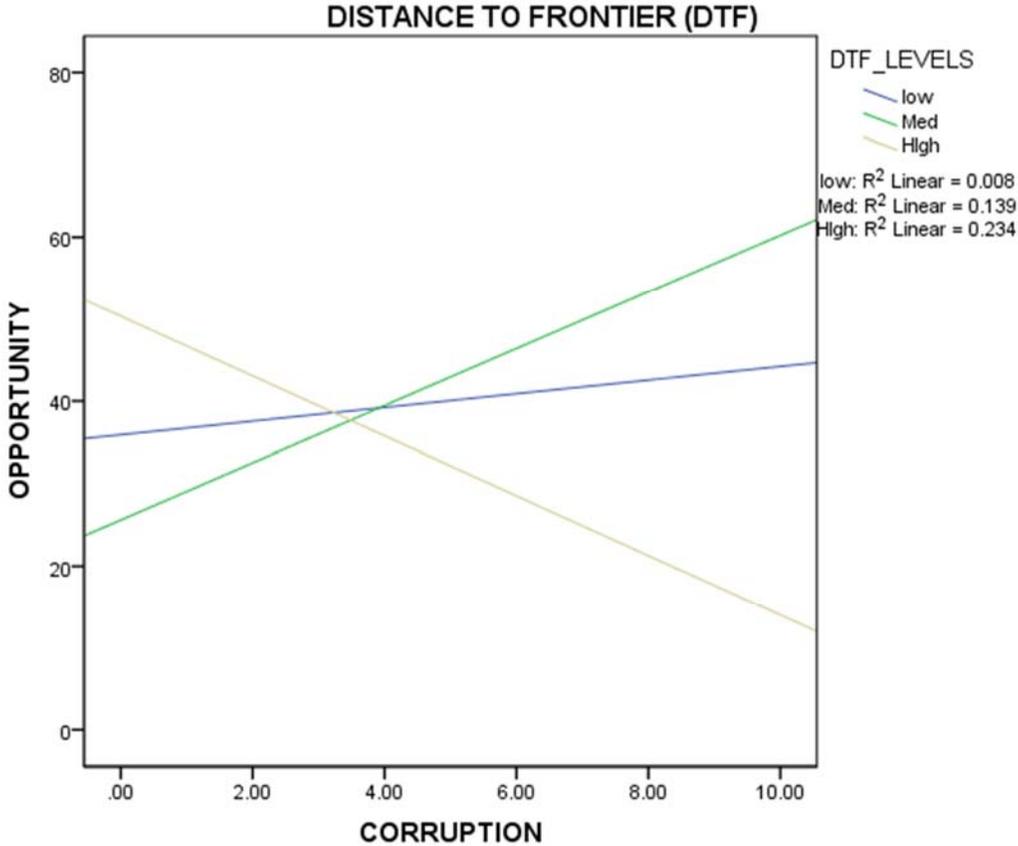


Figure 10. Relationship between corruption and opportunity at 3 levels of DTF

In the same manner, I try to explore the influence of GNI in two different group interaction (Fig. 11) to validate the findings of the effect of corruption on opportunity in different level of GNI per capita among countries. Sample countries are divided into two groups with high income countries, and low and medium income countries defined by International Monetary Fund (IMF). See “Appendix” for the list of the countries.

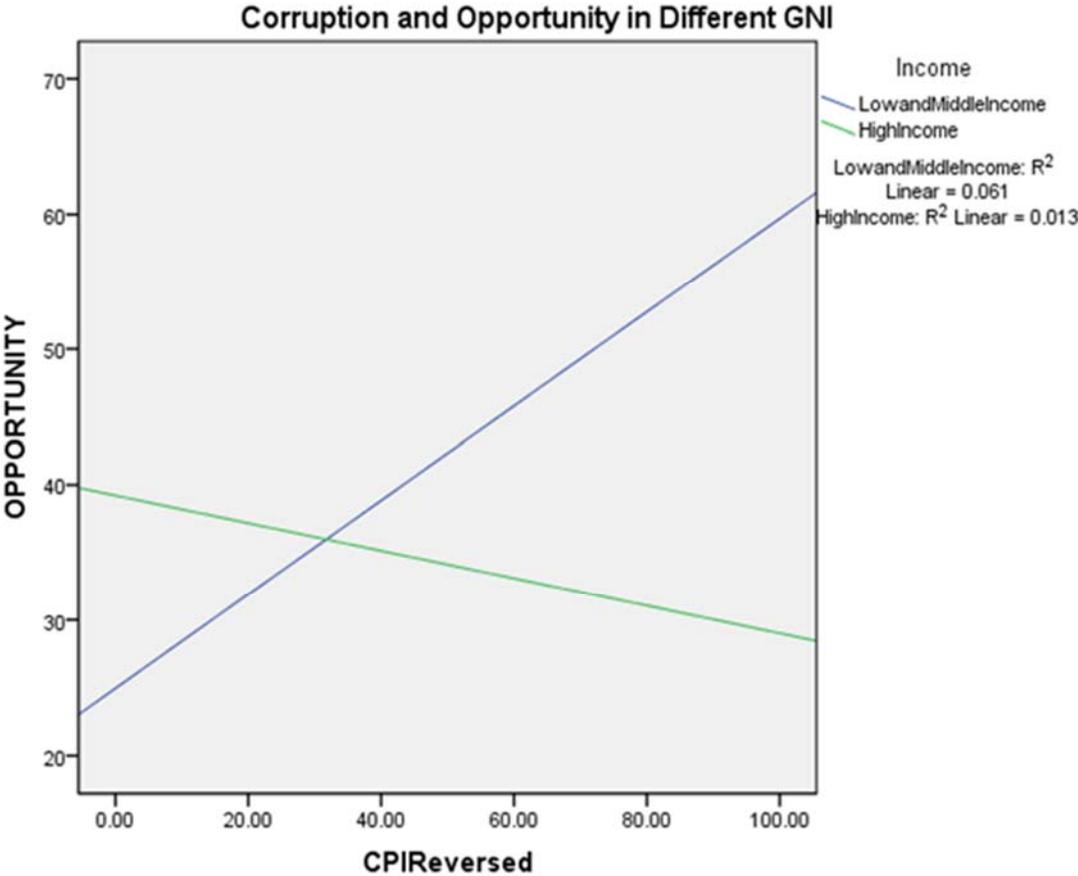


Figure 11. Corruption and Opportunity at High, and Medium and Low GNI

.It clearly shows that the positive relationship between corruption and opportunity is strongest in countries with low and medium income countries whereas this effect becomes negative in high income countries. This findings further validate the effect of corruption on entrepreneurial perceived opportunity after GNI is controlled.

To test hypothesis 5 which proposed moderating effects of corruption on the relationship between opportunity and intention, following Aiken and West's (1991) different level interaction effects, this study divides the sample countries in to three groups and employs SPSS legacy dialogs tool to detect and visualize the moderating effect of corruption. In ordinal interaction, when the slope of the lines are not parallel and not cross to each other, it is argued that the interaction effects are significant (Stevens, 2000).

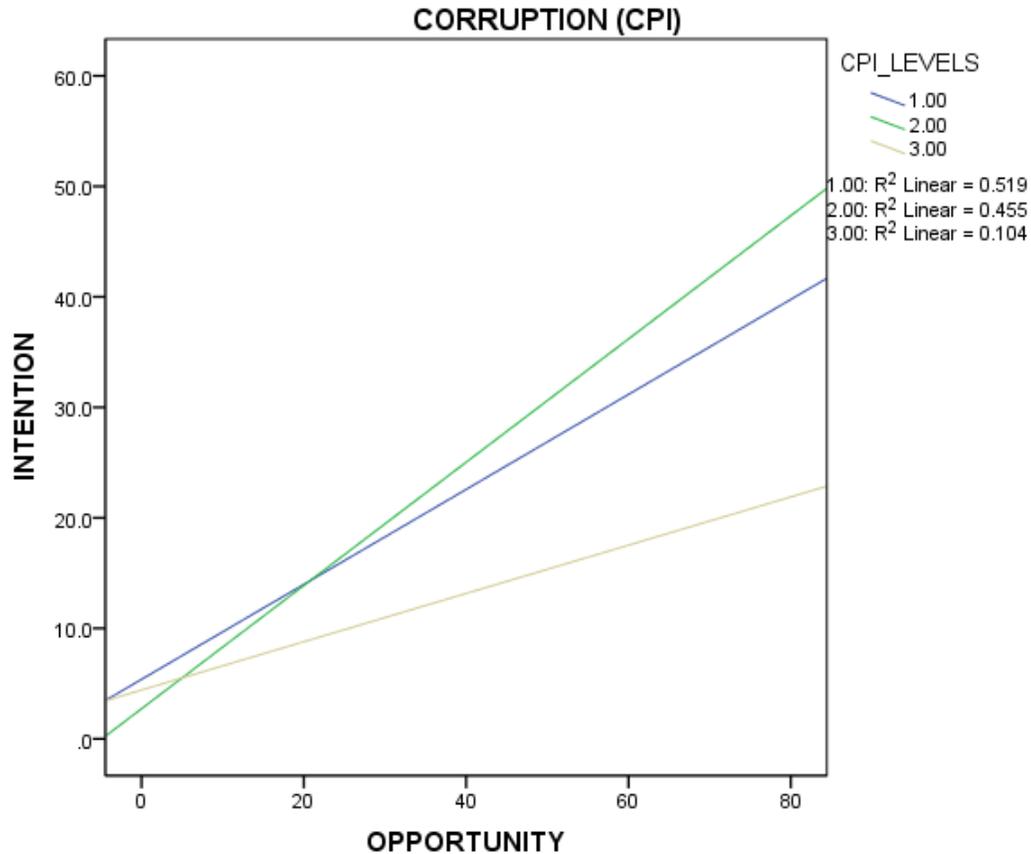


Fig 12. Moderating effects of Corruption on Opportunity and Intention at 3 different levels of Corruption

Results from table 9 provide empirical support for the moderating effects of corruption on the relationship between opportunity and intention. The moderating effects can be visualized by different level group interaction effect (Aiken and west, 1991). Figure. 12 shows a positive relationship between entrepreneurial intention and perceived opportunity in countries with low, medium, and high corruption levels. This supports hypothesis 5 which argues that that corruption has a greasing the wheels effect on the relationship between opportunity and intention. One advantage of using the legacy dialog tool is to detect the presence of outliers in the sample. By excluding the outliers this study can find more parsimonious and consistent results.

The empirical results from table 8 show the positive linear relationship between entrepreneurial intention and nascent entrepreneurial activity thereby supporting hypothesis 8.

To check the robustness of the model, following (De Clercq et al., 2010), a second set of single cross sectional data from a sets of panel data that covers the period 2008-2012 is developed and employed again. The rationale behind is to increase the sample size, to stabilize the data, to offset the inconsistency and seasonal fluctuation of the entrepreneurial data with the economic cycle. The sample size increase 88 countries from 45.

Correlation matrix among the variables for the first sample data set of 88 countries is shown in table 5. The correlation matrix indicates preliminary support for the proposed hypotheses where correlation between entrepreneurial perceived opportunity and its determinants are similarly significant and in the expected direction. Especially, the correlation between corruption and perceived opportunity is negative but statistically becomes significant and as such it warrants for further testing non-linear relationship.

The regression coefficients in table 6 show significant relationship between corruption and opportunity both in linear ($\beta = -1.117$, $*\rho < 0.10$) and squared term ($\beta = 1.017$, $*\rho < 0.10$) supporting hypothesis 1. Further, there is a significant and negative relationship between distance to frontier (DTF) and entrepreneurial opportunity ($\beta = -0.256$, $**\rho < 0.05$).

Table 5. Descriptive Statistics and Correlation Matrix of 88 countries

	1	2	3	4	5	6	7	8
1 Corruption Perception Index (CPI)		.562**	.780**	-.280**	-.495**	0.098	-.503**	-.422**
2 Distance To Frontier (DTF)			.436**	-.375**	-.461**	0.138	-.512**	-.458**
3 Gross National Income (GNI)				-.264*	-.462**	0.056	-.519**	-.419**
4 Perceived Opportunity (PO)					.677**	-0.056	.709**	.527**
5 Capability						-0.089	.711**	.648**
6 Know Startup Entrepreneur Rate							-0.082	-0.049
7 Entrepreneurial Intention								.615**
8 Nascent Entrepreneurial Activity (NAS)								
N	88	88	88	88	88	86	88	88
Mean	48.28	78.71	8774.4	43.53	54.41	23.86	23.83	7.86
SD	21.467	12.05	9774.69	17.613	16.749	12.305	16.614	5.905

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

(CPI= Corruption Perception Index, CPIRQ = Quadratic Term of CPI, DTF = Distance to Frontier, GNI = Gross National Income, PO = Perceived Opportunity, CAP = Capabilities, KNOW = Know Startup Entrepreneur Rate, INTENT = Entrepreneurial Intention, NAS = Nascent Entrepreneurial Activity)

Table 6. Regression Analysis Coefficients of Opportunity

	β	t	ρ
(Constant)		5.015	0
Distance To Frontier (DTF)	-0.256 **	-2.177	0.032
Gross National Income_Log Form(lnGNI)	-0.336 **	-2.232	0.028
Copruption Perception Index (CPI) Reverse Coded	-1.117 **	-2.327	0.022
Copruption Perception Index Reverse Coded in Quadratic Term (CPIR-Q)	1.017 **	2.136	0.036
Model F	6.545		
Adjusted R ²	0.203		
N	88		

a. Dependent Variable: Perceived Opportunity (PO)

b. Predictors: (Constant),DTF, lgGNI, CPIR, CPIR_Q

The coefficients are standard regression coefficients

* $\rho < 0.10$; ** $\rho < 0.05$

Fig. 13 shows the visual diagram of the quadratic relationship between corruption and entrepreneurial perceived opportunity in 88 countries. The diagrammatic pattern still holds the U-shaped relationship, and the statistical results shows significant quadratic effects than linear effect ($\beta = 1.2$, $**p < 0.05$ in quadratic form, and ($\beta = -0.895$, $*p < 0.10$ in linear form) which provides further support for the robustness of hypothesis 1.

Empirical results from table 5, 6, 7, and 8 continue to provide the empirical supports for the proposed hypotheses and thus the robustness of the overall model is validated.

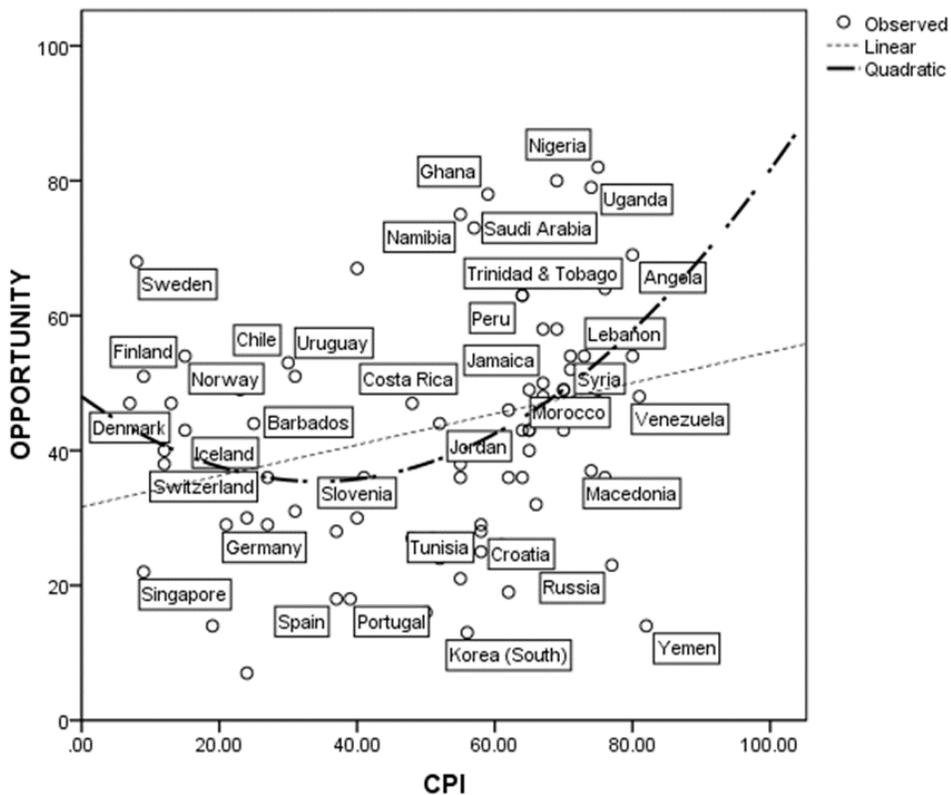


Fig. 13 U-shaped relationship between Corruption and Opportunity in 88 countries

Table 7. Regression Analysis Coefficients of Entrepreneurial Intention

	β		t	ρ
(Constant)			-3.471	0.001
Perceived Opportunity	0.416	**	4.453	0
Capability	0.433	**	4.62	0
Know Startup Entrepreneur Rate	-0.021		-0.296	0.768
Model F	42.005			
Adjusted R2	0.591			
N	88			

a. Dependent Variable: Entrepreneurial Intention

b. Predictors: (Constant), Perceived Opportunity, Capability, Know Startup Entrepreneur Rate

The coefficients are standard regression coefficients

* $\rho < 0.10$; ** $\rho < 0.05$

Table 8. Regression Analysis Coefficients of Nascent Entrepreneurial Activity in 88 Countries

	β		t	p
Constant			2.384	0.02
Corruption Perception Index	-0.012		-0.087	0.93
lnGNI	-0.119		-0.836	0.41
Distance to Frontier(DTF)	-0.157		-1.468	0.15
Entrepreneurial Intention	0.457	**	4.135	0
Model F	14.77			
Adjusted R ²	0.388			
N	88			

a. Dependent Variable: NAS

b. Predictors: (Constant), Corruption Perception Index, lnGNI, Distance to Frontier (DTF), Entrepreneurial Intention

The coefficients are standard regression coefficients

* $\rho < 0.10$; ** $\rho < 0.05$

Table 9. Régression Analysais Coefficients of Moderating Effets in 88 Countries

Variables	Model 1		Model 2	
	β	p	β	p
Perceived Opportunity (PO)	0.445	0.000 **	0.075	0.492
Capability (CAP)	0.297	0.000 **	0.298	0.003 **
Know Startup Entrepreneur Rate (KNOW)	-0.007	0.914	0.002	0.979
Corruption Perception Index (CPI)	0.244	0.002 **	-0.11	0.588
PO_CPI			0.587	0.062 *
N	88		88	
Adjusted R ²	0.651		0.645	
Model <i>F</i>	37.74		31.865	

- a. Dependent Variable: Intention
- b. Predictors: Opportunity, Capability, CPI
- c. Moderator: PO_CPI
- d. The coefficients are standard regression coefficients;
- e. * $p < 0.10$; ** $p < 0.001$

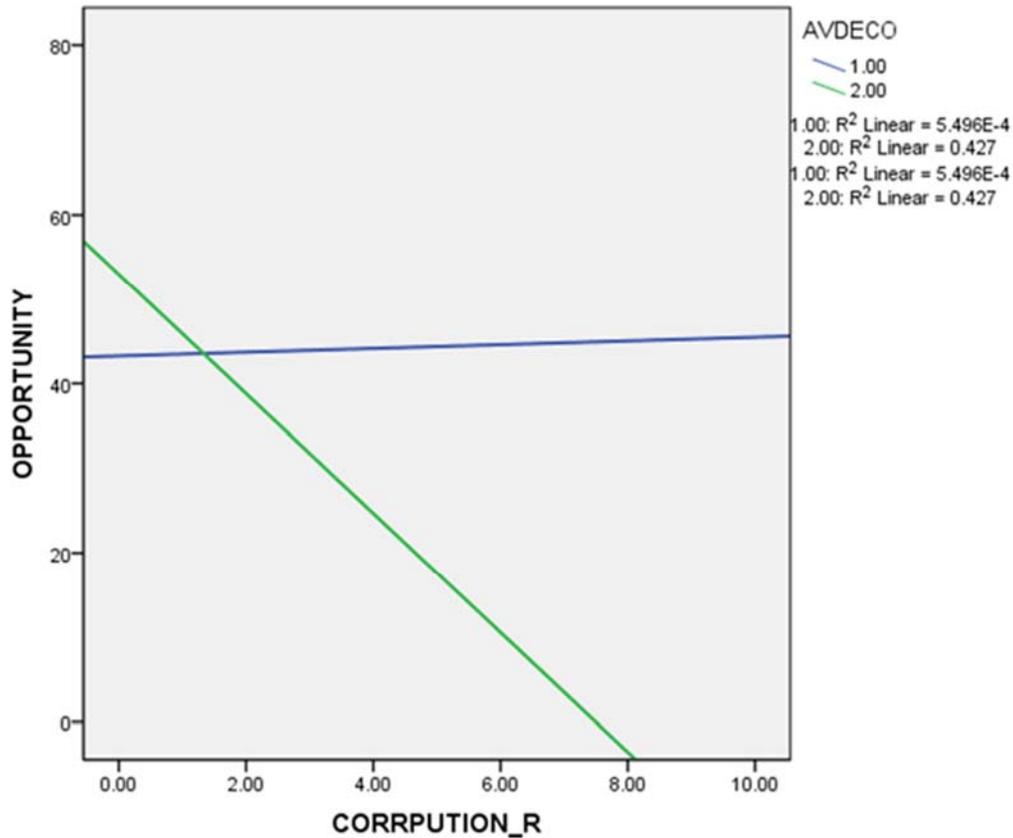


Fig 14. Opportunity and Corruption in Advanced Economies and Non-Advanced Economies

Finally, to validate the generally accepted argument of corruption that it is not a prevailing phenomenon in wealthy countries (Mauro, 1995), this study divided the sample countries in to advanced economies and non-advanced economies following the definition of International Monetary Fund (IMF). These two groups are tested by two levels interaction effects (Aiken and West, 1991). Since the lines of the different group are not parallel, there is significant interaction effects or group level difference (Aiken and West, 1990; Stevens ,2000), there is a clear indication of moderating effect of the level of a country economy (Fig 14.) which further provides additional evidence to the importance of the relationship among economic development, entrepreneurial opportunity and corruption.

Chapter Five

Discussion

Discussion

A stream of research studies has explored the beneficial or adverse impact of corruption and regulatory environment mostly on economic indicators of countries. Other explores the contribution of entrepreneurship on the economic development. To the best of author's knowledge, there are few studies that focus on the impact of corruption and absolute quality of regulatory environment on the entrepreneurial process in general, and entrepreneurial perceived opportunities in particular. Specifically, how the corruption impacts on the entrepreneurial perception on opportunities, and hence on the entrepreneurial process, has never been explored.

This study seeks to offer both theoretical and practical contributions in this aspect. The theoretical contributions are described as the expansion of the existing knowledge or introduction of new paradigm which can better explain the phenomenon under study. First, it provides a comprehensive review of the entrepreneurial perceived opportunity construct, its antecedents, the processes surrounding it, and the outcomes explained by stream of entrepreneurship research. This can apply to set up a stage for future exploration based on existing knowledge foundations. In particular, I believe that opportunity construct holds a great promise in pursuit of theory building and empirical analysis in entrepreneurial research. This dissertation further addresses some unresolved issues on entrepreneurial dynamism across countries especially on a phenomena of how people's perception on corruption and the quality of regulatory environment in ease of doing business expressed in distance to frontier index could have effects on the entrepreneurial process through perceived opportunity.

From that aspect, it is one of the first study of its kind which focuses on the institutional context; corruption, absolute quality of regulatory environment expressed in distance to frontier, and entrepreneurial perceived opportunity; which is the launching point of entrepreneurial process. While corruption has been generally recognized as an evil to economies, ethics, international trade, and entrepreneurship, there are still room to consider the argument that corruption is not totally evil, especially for those scholars who favor and highlight the “grease the wheel” phenomenon of corruption (Dreher and Gassebner, 2007). Above findings suggest that corruption has both “grease the wheel” and “sand the wheel” effects, both of which are contingent upon the level of a business regulatory environment quality, which is further validated by the findings in the difference between high income and low and medium income countries.

Second, this study has important practical contributions for policy makers in both government and private sectors. The empirical findings offer some new insights on how corruption and regulatory environment impact entrepreneurship through perceived opportunity. Such findings provide additional knowledge to policy makers on how to develop, introduce, and implement corruption control policy, at the same time developing the policies that intend to improve regulatory procedures promoting entrepreneurship especially in developing and emerging economies. There are three different types of policies. The first one is policies facilitating the entrepreneurial entry process such as policies promoting the ease of doing business. The second group of policies intend to support the existing activities by introducing structural changes such as changes intend to transform institutional in fracture, capital market, and intellectual property right. The third group of policies provide activities intended to develop the capacity building activities such as training, entrepreneurial education, and R&D. Government and institutions should focus

on how different public policy approaches serve as antecedents by creating opportunities for entrepreneurs.

The multiple data sets of GEM, CPI, and Distance to Frontier Index supplemented by the global economic indicator from World Bank is the strength of this study, there are still limitation to be noted, such as the cross-sectional nature of the data, the limited number of the countries in the sample, missing data, the complex nature of the constructs which could have two way relationship, and the possibility of the presence of both direct and moderating effects of constructs in the model. Both corruption and opportunities constructs are inherently complex phenomenon and as such deploying different entrepreneurial indicators as dependent variables may yield in different results. Another limitation are that not all country specific variables are included, and this study assumes that effects are uniform across countries.

Corruption and poor regulatory environments may have a more complex influence on the entrepreneurial process as a whole and not only entrepreneurial opportunity, per se. As such, moderating effects of corruption and regulatory environment on different types and levels of entrepreneurial activity should be explored in the future. This will provide a framework which will provide more insight to understand the “process” of entrepreneurship. More advanced statistical procedure such as structural equation modeling could produce better statistical results.

On one hand, the effects of cultural dimensions have been well documented in the literature of entrepreneurship. Future studies should include the effects of different cultural dimensions on entrepreneurial perceived opportunity. The influences of different cultural dimensions both on opportunities and corruption should become a great future research potential as it can provide answers to the questions like “how is the concept of opportunity conceived of in different cultures

and different languages” and “how these different conceptions shape subsequent entrepreneurial behavior do” (Short et al., 2010) . On the other hand, to better explore the other antecedents and consequences, future research should employ longitudinal data, with further consideration on some important dimensions. For example, technological regimes, internet diffusion, and level of education of a particular country can still play important roles in the process of entrepreneurial opportunities could add further knowledge into the other antecedents and consequences of the opportunity construct.

Another area of potential future research is studying the opportunities at different level of analysis such as how opportunities at the national level of analysis shape the nature of opportunities at the firm level (Short et al., 2010) and how individual level opportunities fit in to the organizational level opportunities for different types of entrepreneurs and entrepreneurial process.

The differences in the nature of the corruption practices, entrepreneurial opportunities and it related process, such as antecedent, contextual influences, exploitation process, and outcome in both formal and informal economies, which is defined as “an economy where exchange activities take place outside the legal sanctions but within the boundaries of what some groups deem legitimate as defined by their norms, values, and beliefs” (Short et al., 2011) is one interesting research area since 17% of economic activity in developed countries and 40% in developing countries are informal economies (Schneider, 2002).

Finally, this study doesn't explore in-depth to distinguish between different natures of opportunities such as whether it is created or discovered (Alvarez and Barney, 2007) and also does not employ different types of entrepreneurial activity such as whether entrepreneurs are necessity based or opportunity based.

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Appendix: Table of Countries

Country Name	Low and Medium Income Countries	High Income Countries	Distance To Frontier Score		
			Low	Medium	High
Algeria	X		X		
Angola	X		X		
Argentina		X	X		
Australia		X			X
Austria		X		X	
Bangladesh	X		X		
Barbados		X		X	
Belgium		X			X
Bolivia	X		X		
Bosnia & Herzegovina	X		X		
Botswana	X		X		
Brazil	X		X		
Chile	X			X	
China	X		X		
Colombia	X			X	
Costa Rica	X		X		
Croatia	X			X	
Czech Republic	X			X	
Denmark		X			X
Dominican Republic	X			X	
Ecuador	X		X		
Egypt	X				X
El Salvador	X		X		
Estonia	X				X
Ethiopia	X		X		
Finland		X			X
France		X			X
Germany		X		X	
Ghana	X			X	
Greece	X		X		
Guatemala	X		X		
Hong Kong		X			X
Hungary	X				X
Iceland		X			X
India	X		X		
Iran	X			X	
Ireland		X			X
Israel		X			X
Italy		X			X
Jamaica	X				X
Japan		X		X	
Jordan	X			X	
Korea (South)		X	X		

Country Name	Low and Medium Income Countries	High Income Countries	Distance To Frontier Score		
			Low	Medium	High
Latvia	X				X
Lebanon	X			X	
Lithuania		X		X	
Macedonia	X				X
Malawi	X		X		
Malaysia	X			X	
Mexico	X			X	
Montenegro	X			X	
Morocco	X				X
Namibia	X		X		
Netherlands		X			X
Nigeria	X		X		
Norway		X			X
Pakistan	X			X	
Panama	X				X
Peru	X		X		
Poland	X		X		
Portugal	X				X
Romania	X				X
Russia	X			X	
Saudi Arabia		X		X	
Serbia	X			X	
Singapore		X			X
Slovak Republic	X			X	
Slovenia	X				X
South Africa	X			X	
Spain		X	X		
Sweden		X			X
Switzerland		X			X
Syria	X		X		
Taiwan		X		X	
Thailand	X			X	
Tonga Islands	X				X
Trinidad & Tobago	X			X	
Tunisia	X			X	
Turkey	X				X
Uganda	X		X		
United Arab Emirates		X		X	
United Kingdom		X			X
United States of America		X			X
Uruguay	X		X		
Vanuatu	X		X		
Venezuela	X		X		
Yemen	X		X		
Zambia	X			X	

Vita

Thaung Han was born in Mogok, Myanmar, formerly known as Burma. He earned his medical degree from University of Medicine Mandalay and become a successful entrepreneur when Myanmar transformed into free market economy from a socialist state. Later he earned Diploma in Business Law and Master in Business Administration in Myanmar.

He earned a second degree of Master in Business Administration from Purdue University before continuing his pursuit for Ph.D. in International Business at The University of Texas at El Paso (UTEP).

He has a strong management experiences in business both in privately owned and foreign joint venture for more than 15 years. He worked as a director in a semi-government joint venture corporation, a founding member of a capacity building center in Myanmar, and was also executive committee member of Myanmar National Karate-do Federation leading the national team to international competitions.

He worked as a visiting faculty in Purdue University Calumet Campus before studying Ph.D. at UTEP. His publications include topics that cover on economic sanction and Islamic finance, and also conference proceedings at national and international meetings on international entrepreneurship, international business strategy and policy, and organizational behavior.

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