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Becoming Formal or Informal Entrepreneurs: How Institutions Matter

Joël Luc Raveloharimisy
Western Michigan University

BECOMING FORMAL OR INFORMAL ENTREPRENEURS:
HOW INSTITUTIONS MATTER

by

Joël Luc Raveloharimisy

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BECOMING FORMAL OR INFORMAL ENTREPRENEURS:
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Joël Luc Raveloharimisy, Ph.D.

Western Michigan University, 2011

This research explains the factors behind the variation of enterprise creation across countries by looking at the roles of formal and informal institutions and their interactions in the distribution of start-up enterprises in the formal and informal sectors. It tests two competing hypotheses about the individual versus mixed effects of formal institutions (measured by entry regulations) and informal institutions (measured by social capital) on entrepreneurship. The research uses quantitative analysis of data from 48 countries and a qualitative case study of Madagascar.

The findings from the quantitative and qualitative analyses are consistent regarding the independent effects of each set of institutions in the distribution of entrepreneurship in both sectors while controlling for political and economic variables (level of economic development, political stability, and control of corruption). They confirm the hypothesis that the formal institution is inversely related to formal entrepreneurship and the informal institution is positively related to informal entrepreneurship. The findings from the two studies disagree on the role of institutional interaction on entrepreneurship. The quantitative analysis did not find any relationship, whereas the case study finds that the interaction of entry regulations and the informal institutions of *fihavanana* (Malagasy social capital), *tsiny* (reproach), and *tody* (retribution) determines the distribution of entrepreneurship in the formal and informal

market. The interaction occurs in the bureaucratic arena, which handles business entry procedures, and is driven by the imbalance between the strength of the two institutions.

The findings from the research help us understand in a better way the mechanism that explains the distribution of entrepreneurship in the formal and informal sector in Africa and especially the predominance of informal sector in the region. They also provide new insights about the ways to handle and promote institutional reforms when formal and informal institutions diverge.

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Joël Luc Raveloharimisy

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CHAPTER I

INTRODUCTION

1.1. Research Question

There is a significant discrepancy in entrepreneurship across the world in light the data of enterprise creation as a percentage of GDP from 66 countries during the period of 2001 to 2008.[1] The average rate of global enterprise creation is 10.6% of GDP, with the developing countries surprisingly having higher rate than the developed ones. Peru has the highest rate of entrepreneurship (33% of GDP), whereas Japan has the lowest (3.2% of GDP). The variation is even puzzling when we look at the differences among regions, as illustrated in Figure 1.1.[2] The average rate among between regions is 12.98% of GDP, with Sub-Saharan Africa (SSA) having has the highest rate (19.87% of GDP) and the OECD countries having have the lowest (7.08% of GDP). These statistics apparently contradict the conventional wisdom according to which better institutions (both formal and informal) and higher levels of economic development as well as political stability are positively associated with entrepreneurship.

For that purpose, this research will attempt to explain the institutional factors behind the variation in enterprise creation across the world by answering the following

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[1] International Entrepreneurship Organization & the Global Entrepreneurship Monitor Data.
[2] The regions are Asian Pacific, Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, OECD, and Sub-Saharan Africa.

question: Do individual institutions (formal and informal institutions) or their interactions

matter for the distribution of entrepreneurship in the formal and informal sector?

Total Entrepreneurship Activity Per Region

Region	Percentage
Asian Pacific Countries	14.69 %
Europe and Central Asian Countries	7.15 %
Latin America and Caribbean Countries	18.2 %
Middle East and North African Countries	10.86 %
OECD Countries	7.08 %
Sub Saharan Countries	19.87 %
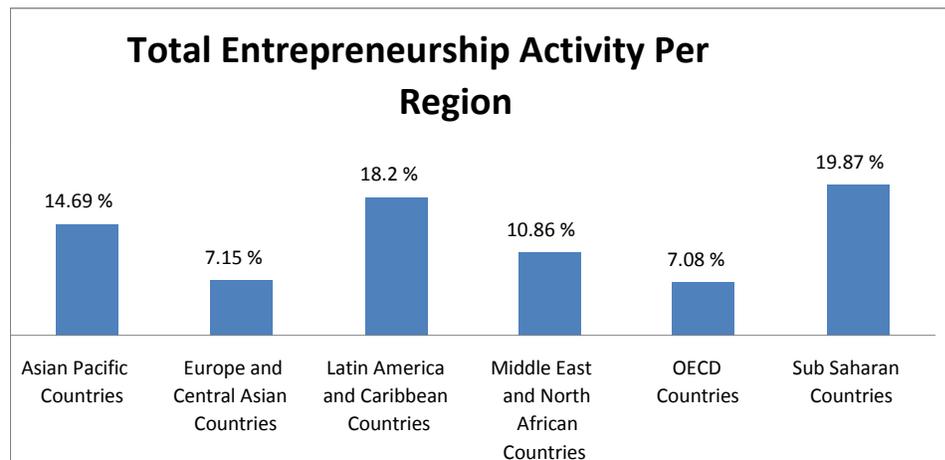
Figure 1.1. Total Entrepreneurship Activity per Region (International Entrepreneurship 2009)

The dissertation tests competing hypotheses about the individual versus

interaction effects of formal institutions (measured by entry regulations) and informal

institutions (measured by social capital) on entrepreneurship in the formal and informal

market. It uses two methods to conduct the analysis. The first method is a quantitative

analysis of data from 48 countries during the period of 2004 to 2006, whereas the second

is a qualitative case study of Madagascar. Special attention will be given to SSA

countries where institutions are weak and detrimental to the economic sectors (e.g.,

Bayart 1993; Fosu 1992; Hyden 2008), yet the statistics about the worldwide total

entrepreneurship shows that SSA has the highest rate of enterprise creation. The

dependent variable in this study is entrepreneurship or business entry in the formal and

informal sector, whereas the independent variables are entry regulations as formal

institutions, social capital as informal institutions, and institutional interactions. The control variables consist of level of economic development, political stability, and control of corruption.

1.2. Contribution of the Research

The main contribution of this research is to fill the gap in the study of the roles of formal and informal institutions on entrepreneurship. Previous researches looked at the individual and independent effects of each institution on entrepreneurship (e.g., Black and Strahan 2002; Hause and Du Rietz 1984; Klapper, Laeven, and Rajan 2006; Djankov et al. 2002). These studies seem to omit or underrate some of the important characteristics of institutions such as the process and outcomes of the interactions of informal and formal institutions. Their findings were not clear whether the effect of institutions on entrepreneurship using the interaction term is similar or different when the two institutions are used separately. The use of quantitative analysis of data from 48 countries as well as the qualitative case study of Madagascar should clarify the issue related to the individual versus interaction effects of formal and informal institutions on entrepreneurship.

The research also contributes to our understanding of the individual and interaction effects of institutions on entrepreneurship in SSA. This topic is relevant to the study of African institutions and African political economy because of the strength imbalance between formal and informal institutions in Africa. Formal institutions are weak, and informal institutions are more prevalent in determining people's behavior and decisions (e.g., Bates 1984; Bratton 2007). The qualitative case study of Madagascar

provides better explanation about the roles of formal institution (business entry regulations) and the informal institutions of *fihavanana* (Malagasy social capital), *tsiny* (blame and reproach), and *tody* (retribution) on entrepreneurship. It shows the multi-dimensions of each set of institutions, the complexity of their interactions and their effects on entrepreneurship.

Overall, this research is then relevant to political science, political economy, and is helpful for practitioners. Democracy and entrepreneurship are closely linked because they are two dimensions of freedom.[3] On the one hand, the ability to start and have a business is an expression of individual rights to exploit his initiative and control the fruits of his labor, which makes democracy important for entrepreneurship. On the other hand, entrepreneurship is important for democracy because entrepreneurs provide choices to consumers by putting new products and ideas in the market place and challenge government roles in creating and ensuring effective policy that promote growth and prosperity. Understanding institutions and their interactions is crucial in the design and delivery of institutional arrangements that promote the creation of enterprise in different political systems. Determining institutional combinations that foster business creation matters to democracy and development. The success in enterprise creation may contribute to a country's overall economic growth through the ripple effects of job and wealth creation, poverty reduction, hence reaching the Millennium Development Goals. Finally, understanding the institutional context, its roles and synergy will allow entrepreneurs to make informed decision in their investment plan.

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[3] Steyaert (2000), Johnson (2005), and others fully addressed this issue.

1.3. Literature Review

Institutions are rules and procedures that structure human behavior, and have sanction mechanisms when they are not followed. They are "the rules of the game" (Kreps 1990; North 1990) that govern, shape, and influence relations among individuals (Lin and Nugent 1995). They structure people's interactions by constraining and enabling actors' behavior and actions especially establishing the incentive structure and economic performance of a society (Carey 2000; Helmke and Levitsky 2004; Knight 1992; North 1990, 1994). They include the formal constraints (laws, constitutions) and informal constraints (culture, customs, values, traditions) that form and influence the interactions of economic actors (North 1990).

Formal and informal institutions are extremes on the institution continuum, even though most institutions combine both elements (Pande and Udry 2006). Their interactions lead to stronger and more defined human behavior. On the one hand, formal institutions are official rules and procedures. They are "created, communicated, and enforced through channel widely accepted as official: state institutions, state-enforced rules, and 'organizational rules'" (Helmke and Levitsky 2004, 727).[4] On the other hand, informal institutions are socially shared rules, values, and norms. They are shared subjective knowledge in a society, which are usually unwritten (Licht and Siegel 2006). They "are created, communicated, and enforced outside of officially sanctioned channels" (Helmke and Levitsky 2004, 727). They are "important in business

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[4] Extensive discussions about formal institutions are found in Aidis, Estrin, and Michiewicz 2007; Buchanan and Tullock 1962; North 1990; and Rodrick 1995.

transactions in both rich countries and poor countries" (World Bank 2002, 4) because of their subtle effects (Veblen 1970).[5]

Both formal and informal institutions shape economic activities. Therefore, they matter for entrepreneurship. In this context, entrepreneurship covers any entrepreneurial activities both in the formal and informal market and in all economies. To this end, entrepreneurship is defined "the manifest ability and willingness of individuals, on their own, in teams, within and outside existing organizations" to perceive and exploit economic opportunities into the market in face of uncertainty (Wennekers and Thurik 1999, 46-47). This definition covers the general concepts of entrepreneurship mentioned in the literature.[6]

The literature shows that institutions help determine whether somebody can become entrepreneur or not, whether the environment is favorable for entrepreneurship or not, and whether an entrepreneur should take risk or not. Institutions form economic actors: "their preferences, values, internalized norms, intrinsic motivation, etc." (Held and Nutzinger 2003, 237). Entry regulations as a measure of formal institutions (e.g., Rodrik 1990, 2000; Soto 1990; World Bank 2002; van Stel, Storey, and Thurik 2006) and

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[5] They also "shape the performance of formal institutions in important and often unexpected ways" (Helmke and Levitsky 2004, 726). Their change is very slow and occurs more indirectly and usually as a result of accidents, learning, and natural selection and in the passage of time (North 1990, 88).

[6] Scholars do not agree on the definition and measure of entrepreneurship (Hébert and Link 1989; Bull and Willard 1993; Lumpkin and Dess 1996; Praag 1999). The Knightian approach defines entrepreneurship as risk-taking activities, which assume uncertainties (Knight 1921). The Schumpeterian approach considers entrepreneurial activity as a process of innovation, which is a critical part of the process of creative destruction that ensures the dynamism of the modern economy (Schumpeter 1934, 1943, 1949, 1991). The Kirznerian and Schlutz approach sees entrepreneurship as exploitation of opportunities and the ability to deal with economic disequilibrium (Kirzner 1973; Schlutz 1975). Most of the recent approaches suggest entrepreneurship as the combination of the presence of lucrative opportunities and entrepreneurs (Shane and Venkataraman, 2000; Casson 2003). Despite the lack of unanimity, most scholars agree that entrepreneurship involves initiative taking, the organizing and reorganizing of social and economic mechanisms to turn resources and situations to practical account, and the acceptance of risk or failure (Hisrich, Peters, and Shepherd 2005).

social capital as a measure of informal institutions (e.g., Svendsen and Svendsen 2004; Fukuyama 1995, 2001) have been identified to have significant effects on entrepreneurship when analyzed separately.

Much of the literature on entrepreneurship examines the individual role of formal and informal institutions on business start-ups. It argues that each set of institutions affects the distribution of entrepreneurship in the formal and informal sector. Theoretical and empirical evidences show that regulations, even though necessary, hinder entrepreneurship and its formalization.[7] Burdensome or excessive regulations are disincentive to entrepreneurship in the formal sector because of the cost of uncertainties that accompany them (e.g., Desai, Gompers, and Lerner 2003; Klapper, Leaven, and Rajan 2006; Scarpetta et al. 2002). As a consequence, higher levels of bureaucratic inefficiency promote corruption, which in turn leads to the expansion of the informal sector (e.g., Djankov 2009; van Stel, Storey, and Thurik 2006). Regulatory entry burdens are a major variable that explains the low entry rates in developing countries (Soto 1990). Even though it is accepted that an inverse relationship exists between regulation and entrepreneurship, the effect is complex due to the different arguments about the purpose of entry regulations either they are necessary to reduce market inefficiencies or they provide benefits to special interests.[8]

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[7] Both cross country and single country studies (e.g., Brazil, Mexico, Russia) show the negative relationship between entry regulations and entrepreneurship (e.g., Bruhn 2008; Djankov 2009; Kaplan, Piedra, and Seira 2007; Monteiro and Assuncao 2006; Yakovlev and Zhuravskaya 2007).

[8] The Public Interest theory advances that regulation is a screening system of new entrants to ensure consumer satisfaction and prevent externalities that might harm the public (e.g., Djankov 2009; Pigou 1938). The Public Choice theory argues that regulation provides benefits to special interest groups such as industries, politicians, and bureaucrats at the cost of efficiency and well-being (e.g., Djankov 2009; Stigler 1971; Tullock 1967).

The relationship between social capital and entrepreneurship has been documented in the literature. The argument is that social capital positively affects economic activities, thus contributing to enterprise creation. From this perspective, social capital is a set of social network and attitude that provide social cohesion, which in turn affect people's action. It includes both structural (networking) and attitudinal (values, norms) components.[9] The concept of networking and norms of trust generate expectations of cooperation between actors, which has effects on economic activities by lowering transaction costs (Arrow 1972, 1974; Fukuyama 1995). Empirical studies show that social capital induces entrepreneurship both in the formal or informal sector because of its multiple effects (e.g., Deakins et al. 2007; Davidsson and Honig 2003; Landry, Amara, and Lamari 2000, 2002). It influences trust-based behavior that facilitates cooperation, ensures information flow through networking, forms and enforces the entrepreneur's credibility vis-à-vis partners and customers, thus reducing transaction costs (e.g., Arrow 1972, 1974; Fukuyama 1995, 1999, 2001).

Even though the literature is unanimous about the individual effects of formal institutions (entry regulations) and informal institutions (social capital) on entrepreneurship, this trend shifts attention away from the interactions of institutions. However, we know that institutions interact in different ways and provide different

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[9] Even though scholars are not unanimous about its exact definition and/or conceptualization, most of them agree that social capital includes both structural and attitudinal components (Hooghe 2008). The definition of social capital used in this research comprises the horizontal and vertical dimensions of social capital implied in Putnam's (1995) work. The horizontal dimension refers to the networks and associations that "enable participants to act together more effectively to pursue shared objectives." The vertical dimension refers to "social connections and the attendant norms and trust". It "links agents in asymmetric relations of hierarchy and dependence" (Putnam 1993, 173). Extensive discussion about social capital is found in Baum and Ziersch 2003; Bordieu 1983; Coleman 1990; and Grootaert, van Bastelaer, and World Bank 2001.

outcomes (Helmke and Levitsky 2004).[10] Similarly, previous literature has unveiled

different combinations of institutions that matter for economic performance (e.g.,

Acemoglu, Johnson, and Robinson 2001; Williamson and Kerekes 2008). The emergence

of institutional interaction in shaping people's behavior suggests that it is possible to

explain the distribution of entrepreneurship through the institutional interaction theory

even though the subject is relatively less well studied. Most existing studies in this trend

are theoretical or anecdotal, and look at one aspect of the institutional interactions such as

the substitutive roles of informal institutions only.[11] This perspective claims that informal

institutions are just as important as the formal institutions by substituting the weak formal

institutions in shaping people's actions (North 1990).

The findings about the independent/individual effects of entry regulation and

social capital on entrepreneurship, coupled with the current findings (even though

limited) about the effects of institutional mix on entrepreneurship, provide some insights

that the interplay of institutions may determine the distribution of entrepreneurship in the

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[10] According to their theory, the informal institutions drive the interactions, which constitute the foundation of their typology of informal institutions: complementary, accommodating, competing, and substitutive. Informal institutions are *complementary* to formal institutions when they coexist with effective formal institutions and the outcomes converge. Informal institutions play significant roles in enforcing the formal rule of the game in this scenario. Informal institutions are *accommodating* the formal institutions when they coexist with effective formal institutions but both institutions diverge. In this case informal institutions "create incentives to behave in ways that alter the substantive effects of formal rules, but without directly violating them" (Helmke and Levitsky 2004, 729). This is the "'second best' strategy for actors who do not like the outcomes generated by the formal rules but are unable to change or openly break those rules" (Helmke and Levitsky 2004, 729). Informal institutions are *competing* when they co-exist with ineffective formal institutions and the outcomes diverge. Informal institutions structure incentives that are incompatible with the formal ones. It means that "to follow one rule, actors must violate another" (Helmke and Levitsky 2004, 729). Informal institutions are *substitutive* when formal institutions are ineffective but the outcomes converge. Informal institutions replace the ineffective formal institution and "achieve what formal institutions were designed, but failed, to achieve" (Helmke and Levitsky 2004, 729).

[11] Peng (2003) and Ahlstrom and Cook (2005) argue that in developing countries, where formal institutions are weak, personal relations as informal institutions substitute for the formal ones when commercial and professional norms are not well established. The study of the growth of Tanzanian firm sector shows that informal institutions have substitutive role for formal ones by rendering business relations more predictable (Eeckhout 2006, 13).

formal and informal sector. Treating the formal and informal institutions separately might not be sufficient to explain this issue, especially when the literature acknowledged that a good combination of formal and informal rules ensures successful economic outcomes (e.g., Boettke et al. 2008; Williamson 2009). It is then necessary to add the roles and effects of the interactions of the formal and informal institutions because the interactions of the two institutions affect the levels of transaction costs that the entrepreneurs have to pay, thus influencing their decision to enter the formal or the informal sector. From this perspective, the institutional interactions approach allows us to understand the fitness between the two institutions, or lack thereof, as well as to find out the mechanism of the rules in use that influence the outcomes.

1.4. Thesis

Formal and informal institutions matter for entrepreneurship. The distribution of entrepreneurship between the formal and informal sector rests upon the ability of the institutions to create an appropriate framework that can provide the least transaction costs to allow entrepreneurs to pursue their goals. Entrepreneurs are strategic and choose the framework that provides the least transaction costs, which allow them to generate higher profits from their investments and achieve maximum utility (Kirzner 1973). For that purpose, I shall propose the following theses.

Thesis for the individual effects of institutions: Formal and informal institutions independently affect entrepreneurship when each institution can provide the best solution to allow entrepreneurs to reach their goals. Entrepreneur evaluates the transaction costs and chooses between the sector (formal vs. informal) that provides the highest benefits.

Thesis for the effects of the institutional interactions: The existence of institutional compatibility is crucial for the interplay of formal and informal institutions. Institutional interaction only matters when it can provide the best solutions to socio-economic interactions and coordination. If the entry regulation controls an entrepreneur's decision to enter the formal or informal market, social capital facilitates the decision. According to this perspective, the outcomes of institutional mix are influenced by the relative strength of each institution. This argument deviates from Helmke and Levitsky's (2004, 2006) position that informal institutions drive the interactions. The stronger the institution is, the higher will be its ability to drive the mechanism of the interactions and to determine the interactions' outcomes. In this context, stronger institutions are those that can provide the least transaction-costs and highest rewards. The synergy of the interactions will determine whether an entrepreneur will either choose to enter the formal or informal sector or not to engage in any entrepreneurial activity at all. Entrepreneurs are strategic in their decision, which is influenced by the outcomes of the interactions of entry regulation and social capital.

1.5. Research Design

1.5.1. Hypotheses

This research has four hypotheses that can be grouped into two categories. The first category consists of Hypotheses 1 and 2 (individual model), and explores the direct and independent relationship between formal institutions measured by entry regulation and informal institutions measured by social capital on entrepreneurship. The second

category includes Hypotheses 3 and 4 (interaction model), and investigates the effect of the interactions of formal institutions and informal institutions on entrepreneurship.

Entry regulation is one of the transaction costs that entrepreneurs have to assimilate when starting a firm. Simplified or low-cost regulation has a direct and indirect effect on entrepreneurship creation in the formal sector. The direct effect is that it reduces transaction costs in firm creation (e.g., Djankov 2009; Klapper et al. 2007; Klapper, Laeven, and Rajan, 2006). The indirect effect is that simplified regulation reinforces the importance and the benefits of operating in the formal sector. Entrepreneurs that are in the formal sector have easier access to government support such as financing, information, training, etc. (Djankov et al. 2008; Kenyon 2007a, 2007b; Klapper, Laeven, and Rajan, 2006). Entrepreneurs look for opportunities. As strategic actors, they evaluate the overall costs and benefits in engaging entrepreneurial activities. This leads to the following hypothesis:

H_1: Formal institution measured by entry regulation is negatively related to formal entrepreneurship.

Social capital provides cooperative solutions to problems of collective choice. It enables collective action to manage a common resource effectively (Krishna and Uphoff 1999; Uphoff 1990). It provides quick fix to investment problems by reducing the overall transaction costs of running a business: strong social network and mutual trust facilitate people's access to resources related to business transactions, such as lending and borrowing money, information sharing, product development, etc. (UN Human Settlements Programme 2003). Similarly, social capital has a self-enforcement mechanism that promotes cooperation because of the existence of mutual trust within the

social network. People who choose to enter the informal market have to rely on trust and social network because business transactions are characterized by the dealings with anonymous actors. However, they may not be able to rely strongly on formal institutions to enforce their dealings because they have failed to comply with legal requirements. Exchange within the informal market has then to depend on mutual trust, strong ties within the social network, and interdependence among the members of the social network. This leads to the following hypothesis:

H_2: Informal institution measured by social capital is positively related to

informal entrepreneurship.

The effect of institutions on economic activities does not depend solely upon formal or informal institutions. The combination or the interaction of the two institutions provide an institutional mix that shapes the actors' behavior. The interaction is influenced by the relative strength of each institution. A country's institutional mix will determine the prevalence of entrepreneurship in the formal market or informal market.

When the interactions of social capital and entry regulation contribute to the reduction of transaction costs from formalization, entrepreneurship in the formal market should be high. The presence of high levels of mutual trust (Miguel 2003; Castiglione, Van Deth, and Wolleb 2008), supported by effective cooperation from social capital (Fukuyama 1999), sustained by the access to resources through networking (e.g., Aldrich and Zimmer 1986; Granovetter 1985, 1992; Jenssen 2001), and mixed with efficient bureaucracy, hence lower level of entry regulations (Djankov 2009; Klapper et al. 2007), can reduce the overall costs of business transactions (Cersosimo and Nistico 2008).

From a different perspective, in the environment where social capital is low, the presence of low entry regulation becomes an incentive to enter on the formal sector. The low cost of and the benefits from formalization outweigh the absence of tangible benefits from social capital. All of the above become incentives to formalize the business. Lower transaction costs in business formalization influence decision to enter the formal market (Nelson and De Bruijn 2005). In other words, the existence of low transaction costs coupled with the desire to receive the benefits of formality can increase the motivation to enter the formal market. This leads to the following hypothesis:

> H_3: The relationship between social capital on formal entrepreneurship depends on the conditional effects of entry regulation on the institutional mix. I expect this relationship to be negative as the formal institution influences the interaction.

When the interactions of entry regulation and social capital make it harder and more costly for entrepreneurs to formalize their business, entrepreneurs might choose to practice in the informal market. Excessive regulations, which increase the level of transaction costs of formalization, may be an incentive to practice in the informal sector (Djankov 2009; Djankov et al. 2002; World Bank 2005). Informal entrepreneurship can provide investment opportunities (Yanagihara 1997) in spite of its limitations because it offers some benefits such as the feeling of accomplishment and personal satisfaction (Sullivan and Miller 1996), evasion from rules and regulations costs (Kaplan, Piedra, and Seira 2007; Spiro 1997), and source of income (USAID 2005). The presence of high social capital complicates the problem of formalization due to the high level of entry regulation because it can offer solutions that allow an individual to pursue his/her

entrepreneurship goal outside the formal market. Those who do not want or cannot comply with formal regulations may get support from their social network to start their business. Some people also might not simply care about getting formalized because they have a strong support system from their social network. As a consequence, the informal sector may be filled with enterprising individuals linked by social network and tied by mutual trust (Yanagihara 1997, 79). All of the above arguments lead to the following hypothesis:

H_4: The relationship between entry regulation and informal entrepreneurship depends on the conditional effects of social capital on the institutional mix. I expect this relationship to be positive as it is driven by the strength of the informal institution.

1.5.2. Data Description

Dependent Variable: Entrepreneurship

Two categories of datasets will be used to measure entrepreneurship due to the absence of single and universal dataset about entrepreneurship in the formal and informal sector. The two categories are (1) the World Bank Group Entrepreneurship Survey for the formal entrepreneurship, and (2) the Multiple-Indicators-Multiple-Causes by Schneider and Buehn (2009) index for the informal entrepreneurship.

Formal Entrepreneurship Measure. The World Bank Group Entrepreneurship Survey dataset provides information about formal business formation in developed and developing countries under a legal form of LLC establishment only (World Bank Group Entrepreneurship Survey 2008). The use of the World Bank Group Entrepreneurship

Survey is beneficial to this research because it provides higher level of comparability across countries by considering the different legal economic systems in constructing the index.[12] The World Bank Group Entrepreneurship Survey has been used to explain barriers to entrepreneurship (Klapper, Laeven, and Rajan 2004) and different firm formations across countries (Klapper et al. 2007).

Informal Entrepreneurship Measures. The use of proxy measure is common and necessary to capture business formation in the informal sector due to the difficulty in getting data about the informal sector.[13] This research will use the indirect estimation methods of informal sector called MIMIC approach developed by Schneider and Buehn (2009) as a proxy measure of informal sector for 120 countries.[14] The Schneider and Buehn Index (SBI)[15] consists of two parts: the causal variables such as the burden on direct and indirect taxation, burden of regulations, and tax morality; and the indicator variables such as development of monetary indicators, labor market, and production

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[12] The main source of the data is national business registries or alternative sources such as statistical agencies, tax and labor agencies, chambers of commerce, and private vendors. It is collected through telephone interviews, email/fax correspondences with business registries in over 120 countries. The dataset contains data on the year-end stock of total registered firms and new firms registered in form of LLC. It has more data for developed countries than the developing countries.

[13] Different approaches have been proposed to measure the size of the informal economy; all of them have strengths and weaknesses and are likely to understate its true size (La Porta and Shleifer 2008). Three main categories of informal sector measures have been proposed in the literature (Krakowski 2005): indirect estimation methods (e.g., Cagan 1958; Giles 1999; Tanzi 1983; Schneider and Buehn 2008; Schneider 2002), direct estimation methods (e.g., Feinstein 1999; Maligalig and Guerrero 2008), and the perceptions of informed economic agents (e.g., Salai-i-Martin 2004, 487).

[14] The indirect estimation methods of the informal sector is one of the widely used as proxy measure of informal sector. They rely on the comparison of various sources using different data sources and statistical models. They are based on the residual balance technique which consists in choosing a specific definition of the informal sector from which the size of the sector can be inferred (Charmes 2006): empirical investigation based on electricity consumption (e.g., Lizzeri 1979; Portes 1996), currency demand approach (e.g., Cagan 1958; Tanzi 1983), and the MIMIC—Multiple Indicators, Multiple Causes (e.g., Schneider and Buehn 2008; Schneider 2000; Giles 1999). Even though this approach is based on strong assumptions and lacks accuracy, it still provides the global scope of the informal sector (non-observed economy) and is the most widely used approach for estimating the extent of the hidden economy (Krakowski 2005).

[15] MIMIC approach, its development and weaknesses: Bajada and Schneider (2005), Schneider and Enste (2000, 2002) and Alm, Martinez-Vazquez, and Schneider (2004), and Kazemier (2005).

market. Even though this measure of informal economy is only as good as the model that supports it (La Porta and Shleifer 2008), it has been used by different scholars to study the informal sector and economic activities especially in the developing countries (e.g., La Porta and Shleifer 2008; Krakowski 2005; Ihrig and Moe 2000).

Independent Variables

This study has three independent variables: formal institutions, informal institutions, and institutional mix.

Formal Institutions: Entry Regulations. This research uses the "number of procedures required to start a new business," which is one of the index in entry regulation as a measure of formal institutions.[16] The data are retrieved from the World Bank Doing Business Indicator, which provides annual consistent cross-country data on 10 specific aspects of a country's regulatory framework.[17] The number of procedures consists of the total of official requirements for an entrepreneur to obtain a business license (Djankov et al. 2002). The number of procedures required to start a new business index is a better measure of entry regulations compared with the three other indices for different reasons.

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[16] Entry regulation is a combination of four indices that pertain to business start-up requirement: the number of procedures required to start a new business; the number of days required to start a new business; the cost of starting a new business as a percentage of the economy's income per capita (e.g., all official fees and fees for legal or professional services, etc.); and the paid-in minimum capital required to start a new business that the entrepreneur needs to deposit in a bank or with a notary before registration. The entry regulation variable is widely used to study entrepreneurship and business start-up (e.g., Djankov 2009; Dreher and Gassebner 2007; Klapper, Laeven, and Rajan 2006, etc.). Even though the accuracy of the data depends on the types and quality of the source of information, it attempts to provide objectives, quantifiable measures of institutional and administrative barriers to business start-up. The dataset is widely used for indicators that benchmark the quality of the business environment across countries.

[17] The following assumptions were used to make the data comparable across countries. The company is a limited company, i.e., a corporation, domestically owned by five individuals, none of whom is a legal entity. The completion of the procedures was done without intermediaries unless required by law. The company has at least 10 and up to 50 employees, which are all national, one month after the commencement of operations. It operates in the country's most populous city. It has a start-up capital of 10 times income per capita at the end of the starting year, paid in cash.

Enterprises have to go through this process only once. It is compulsory and is more likely difficult to avoid or skip because of its legal ramifications. Meeting the requirements will provide the benefits from formalizing the business such as legal status, access to business services, finance or government procurement, which can increase the chances for productivity gains and growth (De Sa 2005). For that reason, entry procedure is the first obstacle that an entrepreneur faces in starting a business (World Bank 2007).

Informal Institutions: Social Capital. This research uses social capital as a measure of informal institutions. It is defined as a set of social structure (network) and attitude (values) that provides social cohesion, which in turn affect people's actions. The norms of networking, cooperation, and trust allow people to access power and gain resources that are instrumental in decision-making and shaping people's actions, which affect economic activities (e.g., Seragelding and Grootaert 2000; Aaltio, Kyrö, and Sundin 2008).

Social scientists are not unanimous about the best indicator of social capital because of its structural and cultural aspects and the ambiguity of the concepts, and the number of different types of norms or conventions that characterize social capital (Van Deth 2008, 152).[18] For that purpose, I will construct a theoretical framework of Social Capital Index for Entrepreneurship Growth based on the two forms of social capital, as suggested in the literature, that influence economic activities, development, and economic growth (e.g., Grootaert, van Bastelaer, and World Bank 2002; Zak and Knack

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[18] The existing measures of social capital have flaws because of the problem of separating the source, form, and consequences (Adam and Roncevic 2003; Sobels, Curtis, and Lockie, 2001). It is difficult and impossible to measure social capital directly. As a consequence Collier (2002) suggests that for empirical purposes the use of proxy indicators for social capital is necessary. The choice of the indicator depends on the concept to be analyzed and the construct associated with it (Narayan and Cassidy 1999, 2001; Collier 2002; Grootaert et al. 2002).

2001). The two forms of social capital consist of structural and cognitive forms of social capital.

$$\text{Social Capital Index for Entrepreneurship Growth} =$$
$$\text{Structure (Social Network)} + \text{Cognitive (Trust)}$$

The interactions of structural and cognitive social capital were suggested to lead to cooperative behaviors that produce mutual benefits (Grootaert, van Bastelaer, and World Bank 2002; Uphoff 2000) such as the reduction of transaction costs, which unlocks the secret of entrepreneurial activities (Jones 2002). The data to construct Social Capital Index for Entrepreneurship Growth are taken from the World Value Survey developed by Inglehart and reported in Pippa Norris Data in Spring 2009[19] for all countries except the African countries that are taken from the Afrobarometer data.[20] The two surveys use the same questionnaires and scales.

Structural form of social capital indicator: Associational or organization membership is an appropriate indicator for a structural form of social capital because social network membership is a significant source of social capital (Glaeser, Laibson, and Sacerdote 2002; Newton 1997; Skocpol 1999). Associational membership facilitates the learning and the consolidation of cooperative attitudes and behavior including reciprocity and trust (e.g., Almond and Verba, 1963; Hooghe, 2008; Seligson, 1999). Trust and cooperation generated by associational membership are relevant to entrepreneurship. The

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[19] Norris, Pippa. Democracy Crossnational Data, Release 3.0 Spring 2009. http://www.hks.harvard.edu/fs/pnorris/Data/Data.htm. Accessed on Oct. 30, 2009
[20] The data from Afrobarometer for the 8 Sub-Saharan countries can be accessed at <http://www.jdsurvey.net/afro/AnalizeSample.jsp>

indicator for the structural form of social capital represents the percentage of respondents answering that they belong to at least one association or organization.[21]

Cognitive form of social capital indicator: The level of generalized trust is the most used measure of cognitive form of social capital or social capital in general. Trust represents well the stock of social capital and can capture the different aspects of social capital effects resulting from networks and cooperation (Baliamoune-Lutz 2009; Baliamoune-Lutz and Lutz 2004; Knowles 2005). It is also relevant to entrepreneurial decision especially because of the uncertainty of future outcomes (Dasgupta 1988; Axelrod 1984; Barber 1983). It is part of the components of the environment that can determine business start-up. Most studies found that a high level of trust supports norms and values that promote cooperation; and cooperation, in turn, is more likely to encourage innovation and productivity (Lee 2004).

Generalized trust index was constructed by computing the percentage of individuals who responded "Yes" to the following question, a question taken from the World Value Survey and Afrobarometer: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" The percentage of people who answer "most people can be trusted" (treating the "don't

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[21] Associational membership question from WVS: "Now I am going to read out a list of voluntary organizations; for each one, could you tell me whether you are a member, an active member, an inactive member or not a member of that type of organization?" The categories include church or religious organizations, sports or recreational organizations, political parties, art, music, or educational organizations, labor unions, professional associations, charitable organizations, environmental organizations, and any other voluntary organizations. Putnam made this approach popular in his 1995 'Bowling Alone' study of American civic life by computing people's membership in formal social groups (organization or associations) to measure social capital. This approach has received many criticisms because of its failure to measure the changing patterns, growth, and other characteristics of civic engagement (e.g., Pollitt 1999; Skocpol 1999). Despite these criticisms, the use of people's associational membership to measure structural social capital or part of social capital in general is a frequently used method in social capital research (Sabatini 2009; Stone 2001; Krishna and Shrader 1999).

know" responses as missing values) represents the cognitive form of social capital indicator.[22]

Institutional Mix. The main explanatory variable in this research is the institutional mix, which measures the interaction between entry regulations and social capital. Studying the interactions is very significant because the interactions of formal and informal institutions have a stronger and more defined impact on human behavior and decisions (Pande and Udry 2006). I will use an interaction term of the number of procedures required to start a new business and Social Capital Index for Entrepreneurship Growth using OLS equation to test the effect of the institutional mix on entrepreneurship (number of procedures required to start a new business*Social Capital Index for Entrepreneurship Growth). The interaction model is based on the theoretical foundations that the relative strength of each institution determines the outcomes of the interactions.

Control Variables

The control variables used in this research are levels of economic development, political stability, and corruption.

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[22] The literature has addressed the limitations and the criticism of the generalized trust question. Besides being subjective, the index can reveal the indirect impact of the quality of formal institutions (Narayan 1999). It also conflates the concepts of trust and caution, which reduces the significance of the trust measure. The existence of high level of generalized trust does not necessarily mean the absence of the need to be cautious when dealing with other people. In other words, choosing caution and prudence does not imply the presence of distrust behavior (Miller and Mitamura 2003; Yamagishi, Jin, and Kiyonari 1999; Yamagashi 1998). Regardless of these limitations, the generalized trust question is still the most widely and internationally used and the best proxy for cognitive form of social capital, making international comparison possible (Sabatini 2006). It is probably the only and best indicator of the overall concept available and is used in the literature to measure cognitive social capital or social capital in general (Stone 2001; Knack and Keefer 1997). Single item measures such as the WVS item, may be more relevant and meaningful for our understanding of the development of social trust and its relationship with social capital because trust is trust regarding the context (Stewart-Weeks and Richardson 1998).

Level of Economic Development (GDP). The Gross Domestic Product (GDP) at purchasing power parity (PPP) per capita will be used to measure the level of economic development and control for economic development because of the relationship between economic development and entrepreneurship. It provides a relative measure that enables comparison across the variations of the development levels in the countries covered in this study. GDP PPP per capita is one of the main sources for qualifying economic development (Wennekers et al. 2005). The different stages of economic development lead to different structural transformations of a country, which gradually change economic activities (Syrquin 1988; Rostow 1960) and influence demand, hence entrepreneurship. The changes contribute to enterprise creations (Porter, Sachs, and McArthur 2002) as it increases the demand for goods and services, which stimulates new business start-ups (Ciccone and Papaioannou 2007; Reynolds et al. 2002; Reynolds, Storey, and Westhead 1994). They also influence the amount of capital available in an economy that is crucial for entrepreneurial activities (Reynolds et al. 1994). GDP PPP per capita has been used as control variable for the study of entrepreneurship or business start-ups (e.g., Dreher and Gassebner 2007, Wennekers et al. 2005). The GDP PPP per capita data will be retrieved from the World Development Indicator (WDI).

Political Stability. Political stability is vital for entrepreneurship. Economic activities require stable environment (Kuznets 1966, 451). Instability increases uncertainties and the risk of investment failure (Fosu 1992). Stability will allow entrepreneurs to predict future investments and some level of certainties in economic activities. I use the "political stability and absence of violence" data from the World Bank

Governance Indicator[23] to measure political stability. The indicator measures "the perceptions of likelihood that the government will be destabilized or overthrown by unconstitutional or violent means" (Kaufmann et al. 2007). This factor has highly detrimental effect on policy continuity and economic environment stability. Stable business environment, which is an outcome of political stability, fosters business start-up and growth. Other studies have found a correlation between stability and entrepreneurship (e.g., Amoros 2009; Klapper et al. 2007).

Control of Corruption. The effect of corruption on entrepreneurship is complex. On the one hand, the practice of corruption can be an incentive for entrepreneurial activity as it is beneficial in highly regulated economies (Dreher and Gassebner 2007). On the other hand, it can be a disincentive as it undermines the foundations of institutional trust that are needed for the development of entrepreneurial activity (e.g., Kaufmann and Kraay 2003; Lambsdorff 2003; Anokhin and Schulze 2009). The World Bank Governance Index "control of corruption" will be used to measure the corruption control. It measures "the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (Kaufmann et al. 2007). The literature has identified corruption as both incentive (Dreher and Gassebner 2007) and disincentive to

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[23] The data for the other two control variables (Political Stability and Control of Corruption) will be taken from the World Bank Governance Indicator (WBGI). The aggregate indicators are based on hundreds of specific and disaggregated individual variables measuring various dimensions of governance, taken from 33 data sources provided by 30 different organizations. They are measured following a normal distribution with a mean of zero and a standard deviation of one in each period. It ranges between –2.5 to 2.5, with higher scores corresponding to better outcomes. Even though the WBGI have received some critiques, they have in recent years become among the most widely-used indicators of governance by policymakers and academics.

entrepreneurship (e.g., Kaufmann and Kraay 2003; Lambsdorff 2003; Anokhin and Schulze 2009).

1.5.3. Methodology

This research has two parts. The first part uses quantitative analysis of data from 48 countries to analyze the global picture of entrepreneurship. The second part is an in-depth analysis of the relationship between institutions and entrepreneurship using qualitative case study of Madagascar. The combination of the two methods should provide better understanding of issue addressed in this dissertation.[24]

First Stage: Analysis of Global Picture of Institutions and the Distribution of Entrepreneurship

The dataset used in the first stage covers a three year period from 2004-2006 and contain information 48 countries due to the lack of comparable cross-country data about entrepreneurship (dependent variable), business regulation and social capital (independent variables). The 48 countries (Table 1.1) span a wide range of income levels, political systems, and geographic locations.[25] The data from the 48 countries show the

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[24] Qualitative data will be used when they are available to complement the lack of quantitative data. The combination of the two methods has been found useful and rewarding in the analysis of political phenomena (Bennett and Braumoeller 2006; Bennett and George 2001; Greene and Caracelli 1997; Jick 1979; Tarrow 2004). It provides opportunities to exploit the complementary strengths of the two methods and a more comprehensive understanding of phenomena than using a single method alone (Austvik 2009). According to Lin and Lotifs (2005), the combination of the two methods is most suited when the state of knowledge about the research question is intermediate: "when some theoretical expectations have been established, and/or when the limitations of the data that have been used to explore a question have become more obvious." That is the case of this research: the data used to explore the effects of institutional interactions of entrepreneurship are limited.

[25] The sample includes 6 low-income economies, 5 lower middle income economies, 13 upper middle income economies, and 24 high income economies. It has 4 Asian Pacific countries, 5 Eastern European and Central Asian countries, 3 Middle East and Northern African countries, 5 Southern and Central Latin American countries, 7 Sub-Saharan African countries, and 23 OECD countries.

disparity of the level of entrepreneurship between economies. India and Malawi have the lowest level of formal entrepreneurship with a density rate of 0.04 per 1,000 population, whereas the highest is found in New Zealand with an average density rate of 23.54 per 1,000 population. The mean of density rate of formal entrepreneurship of the 48 countries is 4.59 per 1,000 population with a standard deviation of 4.22 per 1,000 population. The USA has the lowest level of informal entrepreneurship with 7% of its GDP, whereas Uganda has the highest level with 48.8% of its GDP. The mean of the informal entrepreneurship is 20.87% of the GDPs with a standard deviation of 10.20% according to the Schneider and Buehm Index. The number of procedures required to start a business between the 48 countries varies between 2 procedures for Australia, Canada, and New Zealand and 19 for Columbia. The mean for the number of procedures required to start a business is 7.88 procedures with a standard deviation of 4.25 procedures. The Philippines have the lowest level of social capital index for entrepreneurship growth with 4.2% of those who participated in the WVS, whereas Sweden has the highest level with 41.04%. The mean of the social capital index for entrepreneurship for the 48 countries is 26.78% with a standard deviation of 9.60%.

The mean of GDP PPP per capita for all 48 countries is $18,153.6 with a standard deviation of $11,759.86. Malawi has the lowest GDP PPP per capita—$216.00, whereas Japan has the highest GDP PPP—$40,000.00. The most unstable country is Indonesia with –1.57 points; whereas the most stable country is Iceland with 1.68 points. The mean of political stability is 0.53 points with a standard deviation of 0.733 points. Kenya has the lowest index of control of corruption with –1 score, whereas Finland has the highest

index with 2.49 score. The mean of control of corruption is 0.97 score with a standard

deviation of 1.10 score.

Table 1.1

Classification of Countries Based on Level of Income[26]

Low Income Economies	Lower-Middle Income Economies	Upper-Middle-Income Economies	High-Income Economies	
Kenya	Egypt, Arab Rep.	Argentina	Australia	Austria
Madagascar	India	Brazil	Belgium	Canada
Malawi	Indonesia	Chile	Croatia	Denmark
Tanzania	Jordan	Colombia	Finland	France
Zambia	Philippines	Dominican Rep.	Germany	Greece
Uganda		Israel	Hungary	Iceland
		Latvia	Ireland	Italy
		Mexico	Japan	Korea
		Romania	New Zealand	Slovenia
		Russian Federation	Spain	Sweden
		Singapore	Switzerland	The Netherlands
		South Africa	United Kingdom	U.S.A
		Turkey		

Second Stage: Analysis of Institutions and the Distribution of Entrepreneurship in Madagascar

Deeper analysis about the effect of institutional mix will be conducted in the

second stage of this research using a qualitative case study of Madagascar. The use of

case to explain and study the processes of phenomena is familiar in political science (e.g.,

Bates et al. 1998; Lieberman 2001; Wendt 1998). In spite of its weaknesses, the process-

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[26] The Classification is based on the World Bank Atlas Method. Economies are divided according to 2008 GNI per capita. The groups are: **low income**, $975 or less; **lower middle income**, $976 - $3,855; **upper middle income**, $3,856 - $11,905; and **high income**, $11,906 or more. Source: The World Bank Country Classification.

tracing in a case study can establish evidence for causal inferences (George and Bennett 2005) that are crucial in understanding political phenomena and are useful to inform policy decisions (Crasnow 2009). I believe the causal inferences can be reached by thorough analysis of the relationship between the formal and informal institutions with the distribution of entrepreneurship in the formal and informal sector in Madagascar.

The institutional setting of Madagascar provides a good background to study the relationship between institutions and entrepreneurship. Madagascar is a low-income country. [27] According to the Governance Index classification,[28] the level of their political stability and control of corruption falls in the 25-50 percentiles (even though Madagascar is slightly higher), which is a reflection of relatively low level of political stability and a significant level of corruption. In spite of these weaknesses, the country has conducted different institutional reforms to improve business environment and facilitate business start-ups registration since the mid 1980s. Its informal institutions called *fihavanana* (Malagasy social capital), *tsiny* (reproach), and *tody* (retribution) play very important roles in shaping the behavior of the Malagasy people. The intertwined relationship between these informal institutions captures the principles of social capital and the concept of reward and sanction mechanisms found in institutions. The entrepreneurship in Madagascar, which is marked by a dual economy where the informal enterprise co-

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[27] The World Bank country classification is only used to classify the size of the economy, whereas GDP PPP per capita is used for analysis purposes in this research. The World Bank favors GNI per capita Atlas measure for accurate measurement of poverty and well-being; it substitutes global prices for local measured prices, thereby more accurately reflecting the real value of the goods or service in question. Countries that have GNI per capita of $825 or less was classified low income in 2004, whereas $875 or less in 2005. Madagascar's GNI per capita was $300 in 2004 and $310 in 2005.

[28] The Governance Index classification has six categories, which moves from low being the worst to high being the best: 0-10th percentile, 10th-25th percentile, 25th-50th percentile, 50th-75th percentile, 75th-90th percentile, and 90th-100th percentile.

exists and outnumbers the formal enterprise, has evolved around these formal and informal institutional contexts.

I use secondary data from different sources such as interview surveys, personal experience, and archival works to conduct the analysis. The surveys include the World Bank Enterprise Surveys of Madagascar conducted in 2009 and the interviews of rural household in the commune of Masindray, Antananarivo conducted by Dr. Andrianjafy-Andriamiandrisoa in 2001.[29] The Enterprise Surveys are applied to a representative sample of firms in the non-agricultural economy.[30] Other data about entrepreneurship, entry regulations, *fihavanana*, *tsiny*, and *tody* are obtained from secondary sources published by the different stakeholders involved in business creation and civil society promotion.[31]

The findings from Madagascar have the following implications. They should provide better clarification about the mechanism behind the relationships between institutions and entrepreneurship. In addition, it should help us understand the institutional factors that determine the distribution of entrepreneurship between the

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[29] The interviews of 147 rural households were collected by Dr. Andrianjafy-Andriamanindrisoa in the commune of Masindray, Antananarivo, Madagascar in 2001. Survey methodology and scripts can be found in her book entitled *Economie populaire, territoires et développement à Madagascar: Les dimensions historiques, économique et socio-culturelles du fokonolona. Etude de cas: la commune rurale de Masindray et la commune urbaine d'Anosibe*. 2004. Masindray is a rural commune, 20 miles outside Antananarivo, capital of Madagascar. It has a population of 1,178 inhabitants. Even though people are predominantly farmers, most of them have a small business. Examples of small businesses found in the Masindray are dairy, tannery, trading, construction, restaurant and fast-food, embroidery, carpentry and woodwork, pottery, etc. 80% of those who were interviewed own a small business as a secondary activity and additional source of income. 20% of them have a small business as their primary activity and source of income.

[30] Enterprise Surveys collect a wide array of qualitative and quantitative information about the formal and informal firms through face-to-face interviews with firm managers and owners regarding the business environment in their countries and the productivity of their firms. The data and detailed information on the sampling methodology are accessible at www.enterprisesurveys.org.

[31] For example, USAID; IMF; OECD; Chamber of Commerce, Industry, and Agriculture; government agencies; etc.

formal and informal sector in Sub Saharan Africa (SSA). Similar to Madagascar, most SSA countries have weak formal institutions and dominant informal institutions (e.g., Bratton 2007; Hyden 2008; Lyakurwa 2007). They also have a dual economy marked by the predominance of the informal sectors (e.g., King and McGrath 1999; Sandefur, Serneels, and Teal 2007).

1.6. Plan of This Dissertation

My dissertation has the following plan. Chapter I served as an introduction of the dissertation. It situates the research in a global perspective, presents the research questions, and specifies the contribution of this research. It reviews the literature about the relationship between institutions and entrepreneurship, and identifies what remains unsolved. It then develops the theses of the research in explaining the effect of individual institutions (formal and informal) as well as their interaction on entrepreneurship. And finally, it presents the methodological approaches that I use to conduct the research.

Chapter II will contain the first part of my analysis. It uses quantitative analysis to explain the effect of the individual institutions and their interactions on entrepreneurship. It is an attempt to draw a general picture of the distribution of entrepreneurship across the world. Country level data from 48 countries are used to test both the individual and interaction effect of institutions on entrepreneurship. The study is relevant to the understanding of the distribution of entrepreneurship across the world and provides new perspective about the different dimensions of institutions.

Chapter III presents the second part of my analysis. It extends my discussion by specifically studying the relationship between institutions and the distribution of

entrepreneurship in Madagascar. It explains the evolutions of formal institutions (entry regulations), gives detailed explanations about the informal institutions of *fihavanana* (Malagasy social capital), *tsiny* (reproach), and *tody* (retribution), and presents an overview of entrepreneurship in Madagascar. It then shows that the interactions of institutions provide a better explanation about the distribution of entrepreneurship than the individual set of institutions.

Chapter IV, which is the last chapter, summarizes the main findings, drawing on the theoretical arguments and empirical results from the preceding chapters. It presents the significance of the findings and discusses their theoretical and methodological implications and indicates potential future research.

1.7. Conclusion

This research explains the factors behind the variation of enterprise creation across countries by looking at the roles of formal and informal institutions and their interactions in the distribution of start-up enterprises in the formal and informal sectors. It tests competing hypotheses about the individual versus mixed effects of formal institutions (measured by entry regulations) and informal institutions (measured by social capital) on entrepreneurship. The research uses quantitative analysis of data from 48 countries and a qualitative case study of Madagascar.

The findings from the quantitative and qualitative analyses should allow us to be able to explain the factors behind the differences of entrepreneurship or business start-up levels across countries and regions, and understand institutional combinations that are more likely to foster business creation and growth. The case studies of Madagascar

should improve our understanding about the synergy of institutional interaction and the

state of entrepreneurship not only in Madagascar but in Africa also.

CHAPTER II

DETERMINING THE GLOBAL PICTURE OF
ENTREPRENEURSHIP DISTRIBUTION

2.1. Introduction

This chapter analyzes the global picture of entrepreneurship. It empirically

addresses the research question of this study using OLS regression models: do individual

institutions (formal and informal institution) or their interactions affect entrepreneurship?

This question can be translated into two main competing approaches about the effect of

institutions on entrepreneurship: (a) effects of individual institutions on formal and

informal entrepreneurship, and (b) effects of institutional mix on formal and informal

entrepreneurship. This chapter is relevant to the understanding of the distribution of

entrepreneurship across the world using the two different estimations (individual

estimation and interaction estimation) and provides better understanding about the

different dimensions of institutions and their effects on entrepreneurship.

2.2. Methodology

2.2.1. Variable Lists

Table 2.1 summarizes the variables used in this dissertation, which have been

described in Chapter I. It has two dependent variables: formal entrepreneurship and

informal entrepreneurship. The proxy measure for the formal entrepreneurship is business

Table 2.1

Variable Lists

Variables	Proxy Measures	Description	Unit of Observation	Scale	Mean	Standard Deviation
Formal Institutions	Entry Regulations	Number of procedure without any intermediaries required to start a business	Number	2 to 19 procedures	8 procedures	4.3
Informal Institutions	Social Capital Index	Combination of structural (voluntary organization membership) and cognitive (generalized trust) social capital.	Percentage of survey participants	4.2 to 41.04	26.78	9.60
	Trust of other people	Percentage of people who responded "Yes" to the question, "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" (European Value Study Group and World Value Survey Association 2006).	Percentage of survey participants	7% to 78.87%	46,45%	21
	Voluntary Organization Membership	Percentage of respondents answering that they belong to at least one associational category: church or religious organizations, sports or recreational organizations, political parties, etc. (European Value Study Group and World Value Survey Association 2006).	Percentage of survey participants	0.3% to 46%	6%	12
Fihavanana	Malagasy social capital	Malagasy social capital	Qualitative analysis of the concept			
Tsiny	Concept of reproach or blame	Reinforcement of *fihavanana*	Qualitative analysis of the concept			
Tody	Concept of retribution	Reinforcement of *fihavanana*	Qualitative analysis of the concept			
Formal Entrepreneurship	Business Registration Density	Business Registration Density out of 1,000 people	Number of newly registered limited companies per 1,000 working age population (those ages 15-64)	0.04 to 23.54/1,000 people	4.10/1,000 people	4.20

Variables	Proxy Measures	Description	Unit of Observation	Scale	Mean	Standard Deviation
Informal Entrepreneurship	Informal Sector Index by Schneider, Buehn, and Montenegro (2010)	"All market-based production of goods and services that are deliberately concealed from public authorities to avoid payment of income, value added or other taxes; to avoid payment of social security contributions; having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc; and complying with certain administrative procedures, such as completing statistical questionnaires or administrative forms" (Schneider, Buehn, and Montenegro 2010, 444).	Percentage of 'official' GDP	7 % to 58.8% of GDP	23.60% of GDP	12.62
Level of Economic Development	GDP per PPP	GDP per PPP	$ value	$204 to $40,000	$16,389.89	$12,354
Level of Political Stability	Level of Political Stability Index	Measure of political stability by Governance Indicator: "The likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism" (Kaufmann et al. 2010, 4).	Range of -2 to 2, 2 being the best	-1.57 to 1.68	0.43	0.77
Control of Corruption	Level of Control of Corruption	Measure of levels of control of corruption by Governance Indicator: "The extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests" (Kaufmann et al. 2010, 4).	Range of -2 to 2, 2 being the best	-1 to 2	0.93	1.10

(LLC establishment) registration density out of 1,000 people, whereas the proxy for informal entrepreneurship is the informal sector index developed by Schneider, Buehn, and Montenegro (2010). The two independent variables consist of formal institution measured by the number of procedure required to start a business and informal institution measured by social capital. It has three control variables: level of economic development, level of political stability, and level of control of corruption.

2.2.2. Model Specification

I present in this chapter the results from what I called "Simplified Model."[32] It has the following variables: formal entrepreneurship and informal entrepreneurship as dependent variables; number of procedure to start a business (proxy measure of formal institutions) and voluntary organization membership (proxy measure of informal institution) as independent variables; and political and economic development index (as control variables).

I chose the variable "voluntary organization membership" as one of the independent variable because of its fundamental role in the formation of social capital (Wollenbaek and Selle 2002, 32). I dropped the variable "trust," which is the other variable that constitutes the social capital, from this model because it is correlated with

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[32] I carried out variable selection process (Appendix A) from three different model specifications to select the best model to conduct the analysis. The three specifications are the "Original Model," "Comprehensive Model," and "Simplified Model." This approach was motivated by the fact that the outputs from the original model have multicollinearity problems. Some of the important variables that matter to entrepreneurship such as informal institutions measured by social capital index, control variables measured by the level of economic development and political stability are not statistically significant. Second, there is inconsistency between the hypothesized coefficient sign and the actual sign of some variables reported in the statistical outputs.

the formal institutions (procedures to start a business) (Mishler and Rose 2001; Newton and Norris 2000).

The control variable is an index of economic and political factors that affect entrepreneurship. The index is a combination of the level of economic development, political stability, and control of corruption. I used factor analysis to create the index (e.g., Hamilton 2006; Jack 1971). The rotated factor loading has one factor only, which is mostly defined by the variable "control of corruption."

I use bootstrapping regression model to test the hypothesis in the Simplified Model. Bootstrapping procedures estimate the sampling distribution of a statistic, treating the sample as population (Anderson and Tverdova 2003, 16). Bootstrap is beneficial when one relies on limited number of observations, which is the case in this research (Mooney 1996). This research relies on existing data from 48 countries from 2004 to 2006, which are limited to 90 observations.[33] The boostrap estimates and standard errors in this research are computed using resampling of the residuals with 5 sets of 50 replicates.

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[33]Data sample limitation that leads to the use of small data sample is a common problem in political studies. Schedler and Mudde (2010) found from their survey of 559 comparative politics articles published in leading academic journals between 1989 and 2007, that about a quarter of all quantitative studies in comparative politics use small sample size of 20 to 100 countries. It is one of the characteristics of cross country comparative politics despite the improvement of cross national data availability and access. Thus, reliance on available numerical information ("data") is common in quantitative empirical research (Schedler and Mudde 2010) even though methodologists advocate the desirability of political science studies being method driven, theory driven, or problem driven (Shapiro, Smith, and Masoud 2004). As a consequence, "a significant portion of quantitative research is data-driven. The availability of established global datasets conditions the type of questions asked, the variables selected, their indicators, and the techniques of analysis" (Diehl 1992, 334). Even though the use of limited number of observations might present measurement and general inference challenges, its merits and usefulness are worth considering. It can provide better understanding of the phenomena to be studied and the results can potentially provide valuable findings and knowledge (e.g., Bates 1981; Katzenstein 1985; King, Keohane, and Verba 1994; and Laitin 1995).

2.3. Data Analysis

2.3.1. Relationships Between Formal Institutions and Formal Entrepreneurship

Hypothesis 1 predicted that formal institution measured by entry regulations is negatively related to formal entrepreneurship. The output from the bootstrap regression supports this prediction. An inverse relationship exists between formal institutions measured by entry regulation and formal entrepreneurship. Each additional procedure to start a business (proxy measure of formal institution), leads to 1.8 decrease in the number of newly registered limited companies per 1,000 working age population (proxy measure of formal entrepreneurship) within Inter Quartile Range (IQR) of 25 to 75 percentile[34] holding other variables constant. Table 2.2 shows the outputs of the regression results.

Table 2.2

Test of Hypothesis 1

Dependent Variable: Formal Entrepreneurship Explanatory Variables:	Coefficient
Formal Institutions	–0.30* (0.16)
Informal Institutions	–0.02 (0.02)
Political and Economic Development Index	1.26** (0.74)
Constant	6.71* (1.53)
Adjusted R^2-Value	0.31

Notes: *Significant at $p<0.05$, **Significant at $p<0.10$. Standard error in parentheses. $n = 88$. *Estimated obtained from STATA 9.0. Source: The World Bank. The World Value Survey and Afrobarometer* (World Bank 2008a).

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[34] The Inter Quartile Rage is a robust measure of variability of the independent variables.

The relationship between the second explanatory variable (informal institutions measured by voluntary organization membership) and formal entrepreneurship is not statistically significant. The relationship between the political and economic development index (control variables) and formal entrepreneurship is statistically significant and positive. Higher level of economic development, political stability, and control of corruption combined contribute to higher level of formal entrepreneurship.

2.3.2. Relationship Between Informal Institution and Informal Entrepreneurship

Hypothesis 2 predicted that informal institutions (as measured by voluntary organization membership) are positively related to informal entrepreneurship. The results from the bootstrap regression (Table 2.3) support this prediction. The relationship was statistically significant and positive. In other words, higher level of informal institutions in form of voluntary organization membership leads to higher level of informal entrepreneurship. For each percentage increase in voluntary organizational membership, a 0.36 increase in size of informal entrepreneurship (as a percentage of "official" GDP) is predicted within IQR of 25 to 75 percentile holding all other variables constant.

The second explanatory variable—formal institutions measured in number of procedures required to start a new business was not statistically significant. As far as the index of economic and political control variable, its relationship with informal entrepreneurship was significant and negative. Lower level of economic development, political instability, and low level of control of corruption contributes to higher level of informal entrepreneurship.

Table 2.3

Test of Hypothesis 2

Dependent Variable: Informal Entrepreneurship Explanatory Variables:	Coefficient
Informal Institutions	0.18* (0.06)
Formal Institutions	0.01 (0.21)
Political and Economic Development Index	−10.74* (1.09)
Constant	22.75* (1.97)
Adjusted R^2-Value	0.31

Notes: *Significant at $p<0.05$, **Significant at $p<0.10$. Standard error in parentheses. $n = 90$. *Estimated obtained from STATA 9.0. Source: The World Bank. The World Value Survey and Afrobarometer* (World Bank 2008a).

2.3.3. Relationship Between Institutional Mix and Formal Entrepreneurship

Hypothesis 3 predicts that the relationship between informal institutions (measured by voluntary organization membership) and formal entrepreneurship depends on the conditional effects of formal institution (measured by entry regulation) on institutional mix. I expect this relationship to be negative as the formal institution influences the interaction. The result (Table 2.4) does not support this prediction. Institutional mix is not statistically significant. It does not have any effects on formal entrepreneurship holding all other variables constant.

In addition, the interaction estimation shows that the effect of informal institutions measured by voluntary organization membership is not statistically significant. This finding is similar with the finding from the individual estimation addressed in Hypothesis 1. We can conclude from the individual and interaction estimation that informal

institution does not determine formal entrepreneurship, according to the sample in this

study.

Table 2.4

Test of Hypothesis 3, Interaction Hypothesis

Dependent Variable: Formal Entrepreneurship Explanatory Variables:	Coefficient
Institutional Interaction[35]	–0.01 (0.01)
Informal Institutions	–0.11 (0.07)
Formal Institutions	–0.34* (0.17)
Political and Economic Development Index	1.16 (0.77)
Constant	7.16* (1.68)
Adjusted R^2-Value	0.35

Notes: *Significant at $p<0.05$, **Significant at $p<0.10$. Standard error in parentheses. $n = 88$. *Estimated obtained from STATA 9.0. Source: The World Bank. The World Value Survey and Afrobarometer* (World Bank 2008a).

The output from the interaction estimation shows that formal institutions (number

of procedures required to start a business) has a significant and negative effect on formal

entrepreneurship like in the individual model (Hypothesis 1). The direction of the

relationship is similar with the model estimation. Fewer procedures required to start a

business leads to higher level of formal entrepreneurship. The relationship between the

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[35] Institutional mix (interaction of formal and informal institutions)

political and economic development index (as control variables) and formal institutions is not statistically significant.

2.3.4. Relationship Between Institutional Mix and Informal Entrepreneurship

The prediction in H_4 is that the relationship between formal institutions measured by the number of procedures to start a business and informal entrepreneurship depends on the conditional effects of informal institutions measured in voluntary organizational membership on the institutional mix. I expect this relationship to be positive as it is driven by the strength of the informal institution. The results (Table 2.5) failed to support the prediction. Institutional mix is not statistically significant and does not have any

Table 2.5

Test of Hypothesis 4, Interaction Hypothesis

Dependent Variable: Informal Entrepreneurship Explanatory variables:	Coefficient
Institutional Interaction[36]	–0.01
	(0.02)
Informal Institutions	0.22
	(0.24)
Formal Institutions	0.01
	(0.22)
Political and Economic Development Index	–10.70*
	(1.11)
Constant	22.54*
	(1.93)
Adjusted R^2-Value	0.78

Notes: *Significant at $p<0.05$, **Significant at $p<0.10$. Standard error in parentheses. $n = 88$. *Estimated obtained from STATA 9.0. Source: The World Bank. The World Value Survey and Afrobarometer* (World Bank 2008a).

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[36] Institutional mix (interaction of formal and informal institutions)

effects on informal entrepreneurship holding all other variable constant. It is the same for the other two explanatory variables. Informal institutions and formal institutions are not statistically significant.

The political and economic development index (control variables) was found to be inversely related to informal entrepreneurship. Lower levels of economic development, political stability, and control of corruption leads to higher rate of informal entrepreneurship. This is consistent with the previous model estimation and what was predicted in Hypothesis 2.

2.4. Discussion of the Findings

2.4.1. Research Question and Thesis

This research attempts to explain the factors behind the variation of cross-country enterprise creation by answering whether formal and informal institutions individually or their interactions affect entrepreneurship. I presented two theses based on competing hypotheses about the role of institutions on the distribution of entrepreneurship between the formal and informal sector. The first thesis argues that each set of institution determines the distribution of enterprise because each institution can provide the best solution to allow entrepreneurs to reach their goals. The second thesis posits that institutional interaction matters for the distribution of entrepreneurship. According to this perspective, the outcomes of institutional mix are influenced by the relative strength of each institution.

2.4.2. Findings and Discussion

Two major conclusions can be drawn from the analysis of the sample I used in this research. First, it shows that each set of institutions determines the distribution of entrepreneurship in the formal and informal sector. The findings did not support the theses about the roles of institutional interactions in the distribution of entrepreneurship. Second, economic and political conditions together contribute to the growth of businesses in the formal and informal sector.

Individual Effect of Formal and Informal Institutions on Formal and Informal Entrepreneurship

The results from the estimations show that each set of institution has a definitive and independent role in determining the distribution of entrepreneurship between the formal and informal sector. Formal institutions influence those who enter the formal sector and informal institutions influence those who enter the informal sector.

Formal Institution and Formal Entrepreneurship. The findings from the test of Hypotheses 1 and 3 demonstrate that formal institutions measured by the number of procedures to register a business negatively affect formal entrepreneurship. Fewer procedures required to register a new business are associated with higher level of entrepreneurship in the formal market.[37] Using the bootstrap regression outputs from H_1, I found that for each decrease in the number of procedure to start a business, we expect to see 1.8 increase in the number of newly registered limited companies per 1,000 working

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[37] This conclusion is supported by the outputs from the three models (Appendix B) showed that there was a negative significant relationship between formal institutions and formal entrepreneurship. This finding is similar for the individual model (H_1) as well as the interaction model (H_3). The output is almost identical in the individual model (H_1) when we look at the coefficient values of the three models.

age population (those ages 15-64) (proxy measure of formal entrepreneurship) within

IQR of 25 to 75 percentile holding other variables constant. The inverse relation between

formal institution and formal entrepreneurship is illustrated in Figure 2.1.
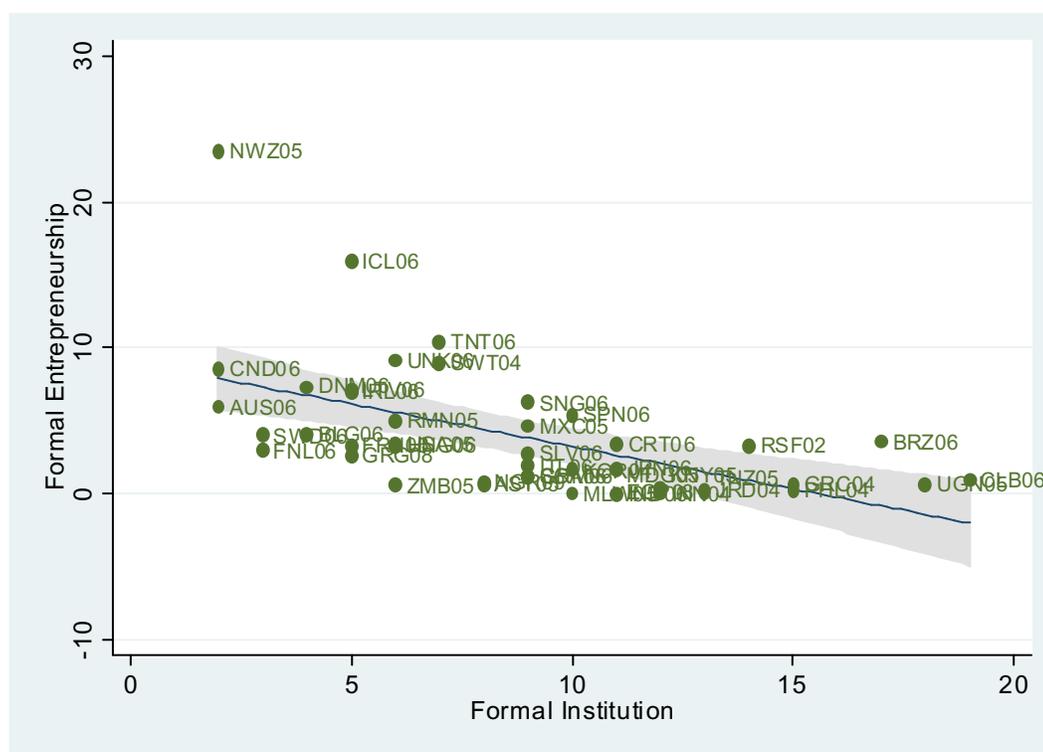
Figure 2.1

Relationship Between Formal Institutions and Formal Entrepreneurship[38]

Table 2.6 classifies the relationship between the formal institutions and the formal

entrepreneurship based on the median[39] of the formal entrepreneurship (3.26 density per

1000 persons) and the number of procedure to start a business (8 procedures) into four

categories.

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[38] The graph uses one observation only per country for the graph clarity purposes.
[39] Median is used for formal entrepreneurship and formal institutions as the central tendency measure because the samples are significantly skewed.

Table 2.6

**Country Classification Based on Formal Entrepreneurship
and Formal Institution Relationship**

		Number of Procedures Median: 8 procedures	
		High	*Low*
Formal Entrepreneurship **Median: 3.26 density per 1000 population**	*High*	*Category 1* Spain, Mexico	*Category 2* Austria, Australia, Belgium, Canada, Denmark , Hungary, Iceland, Ireland, Latvia, New Zealand, Romania, Singapore, Sweden, The Netherlands, UK, USA
	Low	*Category 3* Argentina, Brazil, Chile, Colombia, Germany, Greece, India, Italy, Japan, Jordan, Kenya, Madagascar, Malawi, Philippines, Russian Federation, Slovenia, South Africa, Tanzania, Turkey, Uganda	*Category 4* Finland, France, Switzerland, Zambia

The first category only has two countries: Spain and Mexico. It is a combination of formal entrepreneurship that has equal value of or greater value than the median of business entry density rate out of 1,000 population and formal institution that has equal value of or greater value than the median of the number of procedure to start a business.

The second category has a total of 15 countries, most of which are high income economies. This category includes countries with a high levels of formal entrepreneurship (those with a business entry density rate greater than or equal to the median value) and low formal institutional barriers (those countries where the number of procedures to start a business less than or equal to the median).

The third category consists of the 21 countries in the data set that have low levels of formal entrepreneurship and high formal institutional barriers.

The countries in the fourth category are those that have formal entrepreneurship equal or lower than the median of business entry density rate out of 1,000 populations and have formal institution equal of or lower than the median of number of business to start a business. These countries are Finland, France, Switzerland, and Zambia.

The finding that entry regulations can affect entrepreneurship is consistent with the literature (van Stel, Storey, and Thurik 2006). Regulations, even though necessary, can become an obstacle to entrepreneurship and its formalization, especially when they are burdensome. Through regulations, government can ease or complicate economic activities (Heckelman 2000). Excessive regulations in the different stages of business activities can become a disincentive to entrepreneurship because of the cost of uncertainties that accompany them (Miller and Holmes 2009). Burdensome entry regulations prevent entrepreneurship and the entry to the formal market (e.g., Kaplan, Piedra, and Seira 2007; Bruhn 2008; Klapper, Leaven, and Rajan 2006; Scarpetta et al. 2002).

Informal Institutions and Informal Entrepreneurship. I found from the analysis that informal institutions—volunteer organization membership is positively related to informal entrepreneurship. It determines business formation in the informal sector.[40] The higher the level of voluntary organization membership, the higher the level of informal entrepreneurship. For each percentage increase in voluntary organizational membership, a 0.36 increase in size of informal entrepreneurship (as a percentage of

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[40] The relationship of informal institution with the informal entrepreneurship is mixed in the other two models. For the Original Model, the Social Capital Index is significant but negative at the ten percent level in the individual estimation. It was not significant in the interaction model. For the individual hypothesis for the Comprehensive Model, trust is not statistically significant but voluntary organization membership is and the relationship is positive at the ten percent level. The two variables are not statistically significant in the interaction model.

"official" GDP) is predicted within IQR of 25 to 75 percentile holding all other variables constant. The positive linear relationship between the two variables is evident from Figure 2.2.
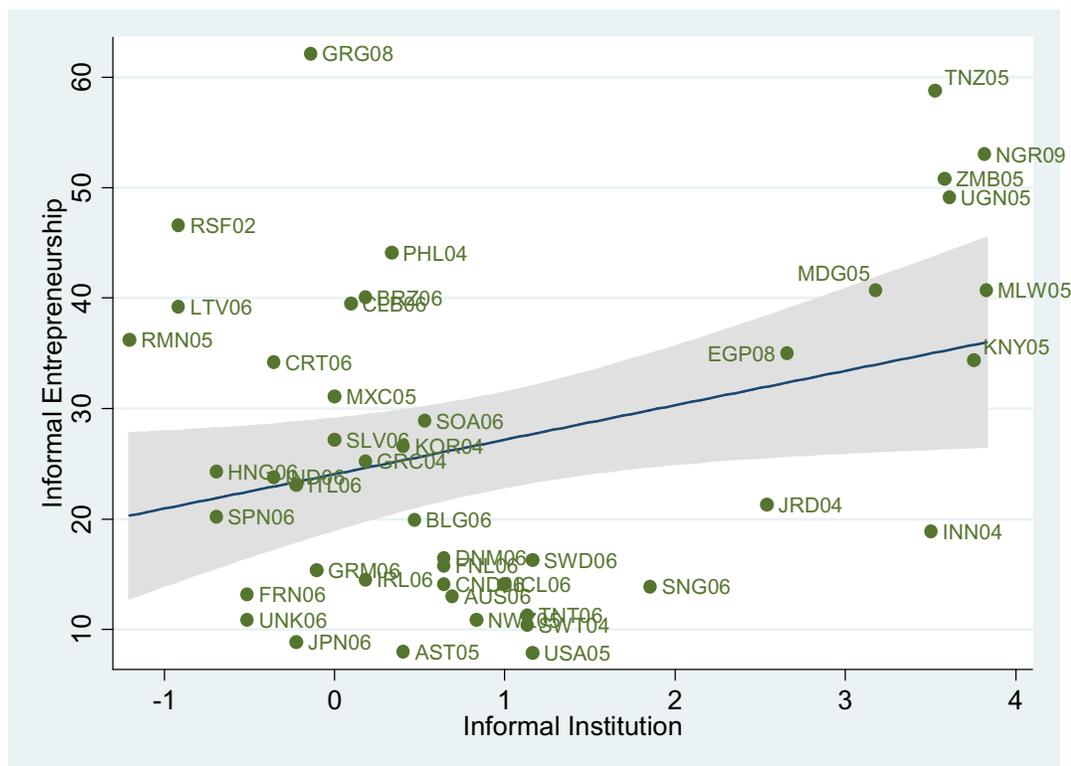
Figure 2.2

Relationship Between Informal Institutions and Informal Entrepreneurship

The second category includes countries that have high informal entrepreneurship but low voluntary organization membership. It has a total of 17 countries, in which most of them are middle income economies except Belgium, Greece, and Spain. The third category consists of countries that have low informal entrepreneurship but high voluntary organizational membership. It has 10 countries which are all high-income economies.

The countries in the fourth category are those that have low informal entrepreneurship and low voluntary organization membership. It has 6 high-income economies.

The 48 countries in the sample can be grouped into four categories (Table 2.7) using the median of informal entrepreneurship and informal institution as central tendency measures.[41] The first category consists of countries that have high informal entrepreneurship and high voluntary organization membership. It has 7 countries, which are all Sub Saharan African countries.

Table 2.7

Country Classification Based on the Relationship Between Informal Institution and the Level of Voluntary Organization Membership

		Voluntary Organization Membership Median: 1.5% of the interview participants	
		High	*Low*
Informal Entrepreneurship **Median: 19.3% of GDP**	*High*	*Category 1* Kenya, Madagascar, Malawi, South Africa, Tanzania, Uganda, Zambia	*Category 2* Argentina, Brazil, Chile Colombia, Greece, Hungary, India, Italy, Latvia, Mexico, Philippines, Romania, Russian Federation, Slovenia, Spain, Turkey
	Low	*Category 3* Austria, Australia, Belgium, Canada, Denmark, Finland, Iceland, New Zealand, Singapore, Sweden, The Netherlands, USA	*Category 4* France, Germany, Ireland, Japan, Switzerland, U.K.

We can draw two important conclusions from the findings about the positive relationship between the informal institutions in form of social capital and informal

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[41] Median is used as the central tendency measure because the sample is significantly skewed.

entrepreneurship. First it echoes the previous research that informal institutions can be a contributing factor to the growth of informal sector. These studies suggest that informal institutions shape and govern entrepreneurship through their informational, enforcement, incentive, substitutive, and competing or dominant roles. They consist of "collection of social norms, conventions, and moral values that constrain individuals and organizations in pursuit of their goals…and coordinate peoples' expectations of one another" (Raiser 2001, 218, 19). By providing information to firms, informal institutions can reduce transactions costs of undertaking economic, political, and social initiatives (Proctor 2007, 132). They play significant roles in providing "economic efficiency by reducing transaction costs in the presence of imperfect information and uncertainty" (Raiser 2001, 219).[42]

According to Table 2.7 and 2.8, all of the countries that exhibit high level of informal institutions and high level of informal entrepreneurship are Sub-Saharan countries: Kenya, Madagascar, Malawi, South Africa, Tanzania, Uganda, and Zambia. When we look at the control variables, these countries, except South Africa, have some similarities. They have low level of economic development and are classified as low income economies by the World Bank. They are relatively unstable with level of political stability below zero according to the Governance Index data. Also, they have high level of corruption, with level of corruption control below zero according to the Governance

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[42] However, in spite of the low cost of the informal institutions, they have a limited scope, volume, and a low "calculability" (Guseva and Rona-Tas 2001) in reducing transaction costs and enforcing economic exchange (Proctor 2007, 132).

Index. The similarities in the characteristics of these countries suggest that informal

institutions help fill the gap created by economic and political uncertainty.

Table 2.8

**List of Countries that Have High Informal Entrepreneurship
and High Social Capital**

Country	Informal Sector (% of GDP)	GDP PPP ($)	Political Stability Index[43]	Control of Corruption Index[44]	Organizational Membership (% of participants)
Kenya 2004	34.10	428	−1.05	−0.87	43
Kenya 2005	34.40	442	−1.19	−1.00	43
Madagascar 2004	40.70	286	0.10	−0.12	24
Madagascar 2005	40.10	255	0.10	−0.12	24
Malawi 2004	40.60	204	−0.10	−0.76	46
Malawi 2005	40.70	216	0.09	−0.80	46
South Africa 2004	28.60	3,300	−0.22	0.44	1.7
South Africa 2005	28.80	3,429	−0.06	0.55	1.7
Tanzania 2004	58.70	311	−0.44	−0.67	34
Tanzania 2005	58.80	324	−0.38	−0.70	34
Uganda 2004	48.80	263	−1.42	−0.74	37
Uganda 2005	49.10	263	−1.40	−0.80	37
Zambia 2004	50.80	350	−0.10	−0.80	36
Zambia 2005	50.80	339	−0.10	−0.86	36

Source: *World Bank Database and Afrobarometer*

The second conclusion that can be drawn related to the role of informal

institutions is that informal institutions, specifically voluntary organizations contribute to

the creation and growth of enterprise in the informal sector. From this perspective,

informal institutions pave the way to the informal sector. The pre-existing status of

informal institutions in form of social network or voluntary organization membership

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[43] The composite measures of Political Stability are generated by an Unobserved Components Model. They are in units of a standard normal distribution, with mean zero, standard deviation of one, and running from approximately −2.5 to 2.5, with higher values corresponding to better governance.
[44] Idem.

becomes a catalyst to the process of business creation. As a structural element of social

capital, voluntary organization membership contributes to the growth of informal sector

by facilitating the development of trust and the building of a society that values

cooperation between individuals (inside or outside the associations) with different

purposes (e.g., Almond and Verba, 1963; Brehm and Rahn, 1997; Hooghe, 2008;

Seligson, 1999; Stolle and Rochon, 1998). The trust and cooperation generated by

associational membership are important for entrepreneurship. Because interaction among

voluntary association members can create the conditions that facilitate information

sharing, knowledge exchange, and collaboration that might lead to business creation in

the informal sector.

Effect of Institutional Mix on Formal and Informal Entrepreneurship

The interaction of formal institution (number of procedures) with informal

institutions (voluntary organization membership) does not have any effect on

entrepreneurship either in the formal or informal sector according to the findings from the

analysis. The outputs failed to support H_3 (relationship between institutional mix with

formal entrepreneurship) and H_4 (relationship between institutional mix with informal

entrepreneurship) because they are not statistically significant. The interactions of entry

regulations based on the number of procedures required to start a new business with

social capital based on voluntary organization membership do not determine business

creation. The findings from this study suggest that even though informal and formal

institutions matter for entrepreneurship, their effect is defined by the unique characteristic

of each set of institution but not their interactions. Formal institutions negatively affect

formal entrepreneurship, whereas, informal institution positively affect informal entrepreneurship.

Assessment of the Relationship Between the Control Variables Index and Entrepreneurship

The results support the thesis that the control variable index determines the distribution of entrepreneurship between the formal and informal sector. It is positively related with the formal entrepreneurship but negatively related with the informal entrepreneurship. The finding is consistent both in the individual and interaction estimation. The control variable index is a combination of the level of economic development (GDP per PPP), level of political stability, and level of control of corruption.

Composite Index of Control Variables and Formal Entrepreneurship. The higher the level of economic development, political stability, and control of corruption combined, the higher the level of entrepreneurship in the formal sector. Figure 2.3 shows the linear positive relationship between formal entrepreneurship and the control variables combined. According to the trends in the graph, the countries that have high level of economic development, political stability, and control of corruption have higher level of formal business and vice versa. For example: Australia, Belgium, Canada, Denmark, Ireland, New Zealand, Singapore, Sweden, The Netherlands, etc.
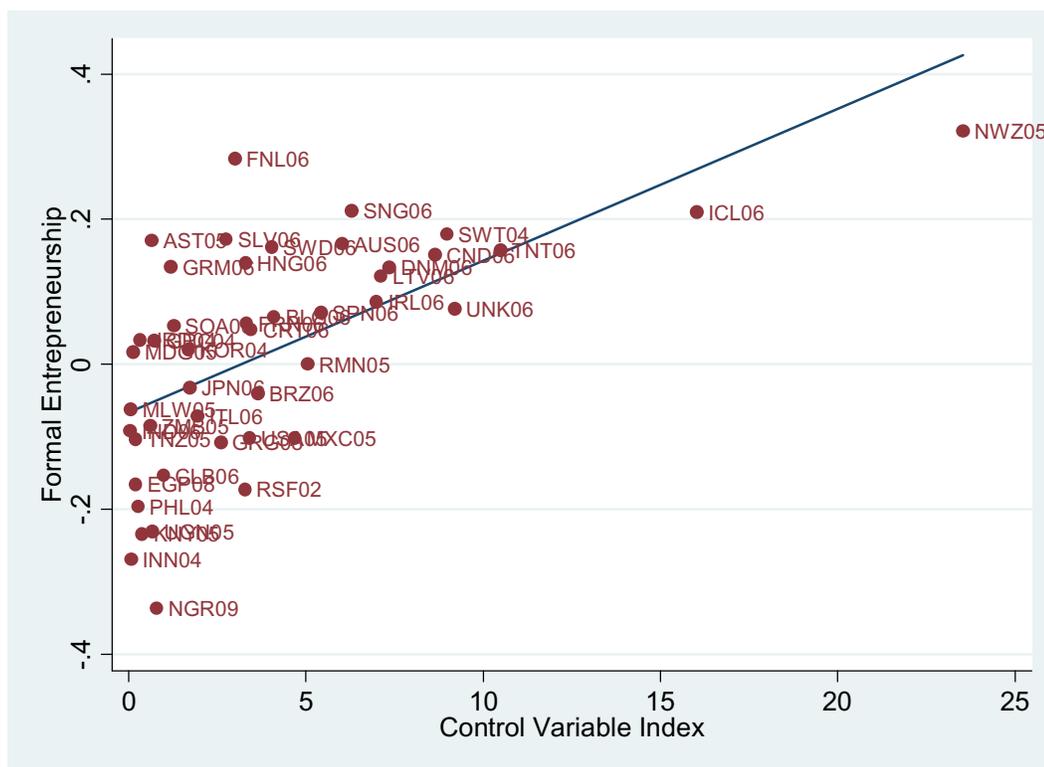
Figure 2.3

**Relationship Between Formal Entrepreneurship and Political
and Economic Control Variables**

Composite Index of Control Variables and Informal Entrepreneurship.

Inverse relationship exists between the political and economic development index (as

control variables) with the business formation in the informal sector. The combination of

low economic development, lack of political stability, and low level of corruption control

contribute to high level of entrepreneurship in the informal sector. Figure 2.4 shows the

linear negative relationship between informal entrepreneurship and the control variables

combined. We can see from this graph that countries that have low level of economic

development, political stability, and control of corruption have high level of informal

sector and vice versa, for example, Colombia, Chile, India, Indonesia, Madagascar, and
Philippine.

Figure 2.4

**Relationship Between Informal Entrepreneurship and
Political and Economic Control Variables**

2.5. Conclusion

The purpose of this chapter was to analyze the global picture of entrepreneurship.
It looked at the role of formal and informal institutions and their interactions on business
formation and creation in the formal and informal market using data from 48 countries
within the period of 2004-2006. It explained the significant differences between
entrepreneurship across countries or regions.

The findings from this study support the thesis that institutions play important roles in the formation of enterprise in the formal and informal sector by controlling the political and economic variables constant. It supported the first thesis that formal and informal institutions individually and independently affect entrepreneurship. However, it failed to support the second thesis that institutional mix determines the distribution of entrepreneurship between the formal and informal market. Even though the findings from this research support the trends in the literature that institutions matter for entrepreneurship, it goes further to demonstrate that each set of institutions (formal vs. informal) is unique and designs different path for entrepreneurship. It is the characteristic and strength of formal and informal institutions that determine the business formation in the formal market vs. informal market but not their interactions.

Formal institution is inversely related to formal entrepreneurship but does not have any relationship with informal entrepreneurship. Less cumbersome business entry procedures encourage entry into formal entrepreneurship. Informal institution is positively related to informal entrepreneurship but is not related to formal entrepreneurship. Social capital measured by voluntary organization facilitates the practice in the informal entrepreneurship. Higher level of social capital contributes to the growth of informal entrepreneurship. The findings from the effect of formal and informal institutions on entrepreneurship implies that only the formal institutions determine business creation and entry to the formal sector; whereas informal institutions determine the entry to the informal sector holding the level of economic development, political stability, and control of corruption combined (Control variable index) constant.

CHAPTER III

INSTITUTIONAL DETERMINANTS OF THE DISTRIBUTION
OF ENTREPRENEURSHIP IN THE FORMAL AND
INFORMAL SECTOR IN MADAGASCAR

3.1. Introduction

This chapter uses Madagascar (Figure 3.1) as a case study to analyze the roles of institutions on entrepreneurship. It uses qualitative data to test competing hypotheses about the relationship between formal and informal institutions with the distribution of entrepreneurship in the formal and informal sector. The first two hypotheses posit that formal and informal institutions have a direct and independent effect on the distribution of entrepreneurship between the formal and informal sector. It means that a formal institution (number of procedures to start a business) is negatively related to formal entrepreneurship, whereas informal institution (social capital) is positively related to informal entrepreneurship. The last two hypotheses contend that institutional interactions determine entrepreneurship distributions. The relationship of institutional interaction with the distribution of entrepreneurship depends on the conditional effect of each set of institutions (formal vs. informal) on the institutional mix.

This chapter is organized in such a way that it will answer the question about the roles of individual institutions vs. institutional interactions on entrepreneurship distribution between the formal and informal sector. Part one briefly discusses the main arguments presented in this chapter. Part two presents an overview of entrepreneurship in Madagascar. Part three gives a thorough analysis of the formal institutions (number of

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procedures required to start a business) and informal institutions of *fihavanana* (social capital) in Madagascar. Part four tests the hypotheses and discusses the findings. Part five concludes the chapter.

Figure 3.1

Map of Madagascar (CIA World Factbook 2007)

3.2. Institutional Determinants of Entrepreneurship Distribution in Madagascar

Madagascar is characterized by a dual economy where the informal enterprise co-exists and outnumbers the formal enterprise. The Malagasy government has conducted different reforms to improve business environment and facilitate business formalization since the mid 1980s. More aggressive reforms were conducted since 2003 and have classified Madagascar as one of the best reformers (World Bank 2006a). Even though the successive reforms have ameliorated the business environment and business formalization, a pertinent question still remains: what explains the distribution of entrepreneurship in Madagascar, which is marked by the prevalence of informal entrepreneurship?

The answer to this question requires an analysis of the business entry regulations[45] as formal institution and *fihavanana* (Malagasy social capital) as informal institution in Madagascar. Business start-up regulations reflect the trajectory of the country's political and economic development, whereas the norms and the values of interpersonal relationship established by *fihavanana* govern people's daily interactions. The two institutions have an enduring interaction because the Malagasy people always act according to the unwritten rules from *fihavanana*.

From this perspective, I will show in this chapter that even though each set of institutions determines the distribution of entrepreneurship between the formal and informal sector, the institutional interaction argument provides a better explanation about this effect. It implies that the quantitative data analysis might not be the best approach to

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[45] Business regulations and procedures to start a business are interchangeably used in this chapter because of their association (e.g., Djankov et al. 2002; Djankov 2009; Desai et al. 2003; Klapper, Leaven, and Rajan 2006; De Soto 1990).

capture the institutional interaction mechanism that constrains entrepreneurs and the civil servants who enforce business entry regulations. I believe that the interactions of formal institutions measured by business start-up regulations with the informal institutions measured by *fihavanana* determine the distribution of entrepreneurship in Madagascar. It is the imbalance between the strength of each set of institutions that drives the interaction mechanism. The lack of enforcement mechanism in the formal institutions allows the informal institutions to influence the outcomes of the interactions. Formal institution is weak because it does not have any enforcement mechanism, whereas the informal institution is strong because of its unwritten rules of enforcement. The failure of bureaucracy, which handles business entry procedures increases the transaction cost of formalization, which in turn filters the entrance to the formal market and at the same time promotes entrepreneurship in the informal market due to the resources available through the interpersonal values emanating from *fihavanana*.

3.3. Overview of Entrepreneurship in Madagascar

According to the most recent census published by the National Institute of Statistics of Madagascar (INSTAT) in 2005, the Malagasy formal enterprise comprises 211,315 registered businesses. The businesses are limited in scope as regards their activities, and highly concentrated regionally in the province of Antananarivo, capital of Madagascar, and in terms of size, with monopolies or oligopolies in many sectors.[46] Almost 63% (62.8%) of them are implanted in Antananarivo, 11.1% in Toamasina (East coast of Madagascar), and 9.4% in Antsiranana (North coast of Madagascar) (INSTAT

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[46] This assessment was made by the World Bank in its different reports (1995, 1997, and 2008).

2006, 6). These enterprises are organized into three types (Ministry of Economy, Trade and Industry 2007). The first type is a large scale of modern national and foreign enterprise (e.g., Export Processing Zone). It provides employment to skilled labor, has access to the global market, and constitutes the export sector. The second is a relatively average size national owned enterprise. It serves the domestic market but may be involved in export activities and constitutes the intermediary sector. The third is a multitude of micro and small enterprises, which is a source of employment for unskilled labor and relies on traditional technology. It constitutes the traditional sector and dominates the domestic market by providing services or by producing basic goods such as food, clothing, housing, etc.

Providing precise quantitative estimation of the informal enterprise is impossible because of the nature of the informal sector. However, it has been estimated to represent a significant percentage of business activities in the country. In terms of employment, the informal sector dominates the labor market, which provides employment for 64.5% of the 1.2 million wage laborers or 95% of the 8.3 million working age adults considering the total workforce, including non-wage workers in Madagascar (Stifel et al. 2007, vii). The informal enterprises consist of small-scale and indigenous enterprise. They operate mostly in farm activities in rural areas, whereas non-farm activities take place in urban areas in general.

3.4. Formal Institution—Business Start-Up Regulations

In Madagascar, business entry regulations are defined by the procedures that an entrepreneur has to comply with to formally register a business. The procedures consist in

of any interaction of the entrepreneur with external parties such as government agencies,

lawyers, auditors and notaries (World Bank 2005). They can be put into three categories:

(1) pre-registration (e.g., name verification or reservation, notarization); (2) registration

in the economy's largest business city; and (3) post-registration (e.g., social security

registration, company seal).[47] Even though the procedures seem to be few, they have been

reported to be unfriendly to business creation (e.g., World Bank 1999; Shah et al. 2005).

Table 3.1 shows the significant reforms that the government has made to improve

business registration procedures. The reforms have cut the number of procedures from 15

in 2004 to 2 in 2011 and have reduced the number of days from 67 in 2004 to 7 in 2011.

It is true that these reforms have facilitated business formalization; however, entry

regulations still constitute a constraint to business creation in the formal sector (e.g.,

World Bank 1995, 1999; Shah et al. 2005).

Table 3.1

Historical Data—Business Registration Regulations in Madagascar[48]

	2004	2005	2006	2007	2008	2009	2010	2011
Procedures (number)	15	13	11	10	5	5	2	2
Time (days)	67	44	38	21	7	7	7	7

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[47] This research uses the category established by The World Bank Doing Business Indicator to allow comparison between countries. Extensive information about this methodology can be found at www.doingbusiness.org/methodology/starting-a-business#time

[48] Historical data was retrieved from The World Bank Doing Business Indicator Report for Madagascar. It has other indicators that are not included in this table: cost (% of income per capita) and paid-in minimum capital (% of income per capita). Source: www.doingbusiness.org/Custom-Query/madagascar. Accessed March 23, 2011.

Entry regulations in Madagascar are cumbersome, not streamlined, and costly because of the numerous forms, signatures, and stamps that are required for each procedure. Bureaucracy is slow and "difficult at best, an impossibly complicated waste of time and money at worst" (Cole 2010, 149). These issues are supported by the reports from different international organizations that assess government and public service effectiveness. Malagasy Government Effectiveness Index has been always within the 25th–50th percentile since 1996, which is a reflection of a relatively low level of government effectiveness according to The World Bank Governance Index.[49] The country's quality of public administration is moderately weak, with an average rating of 3.4 during the period of 2005-2009 based on the Country Performance and Institutional Assessment (CPIA) report for public sector management and institutions cluster measures in 2010.[50]

The lack of bureaucratic effectiveness becomes a major obstacle to investment because cumbersome bureaucracy begets burdensome entry regulations, which become an obstacle to business creation in the formal sector.[51] To understand this issue, one

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[49] The Governance Index classification has six categories, which moves from low being the worst to high being the best: 0-10th percentile, 10th-25th percentile, 25th-50th percentile, 50th-75th percentile, 75th-90th percentile, and 90th-100th percentile. The Country Data Report for Madagascar during the period of 1996-2009 can be found at www.info.worldbank.org/governance/wgi/pdf/c139.pdf. Accessed March 22, 2011.

[50] The public sector management and institutions cluster includes property rights and rule-based governance, quality of budgetary and financial management, efficiency of revenue mobilization, quality of public administration, and transparency, accountability, and corruption in the public sector (1=low to 6=high). The following are broad representations of the various rating categories: "1" Very weak for 2 years or more; "2" Weak; "3" Moderately weak; "4" Moderately strong; "5" Strong; and "6" Very strong for 3 years or more (African Development Bank Group 2008). The ratings for Madagascar can be found at the World dataBank, World Development Indicators (WDI) & Global Development Finance (GDF). www.data.worldbank.org/indicator/IQ.CPA.PUBS.XQ/countries?display=default. Accessed March 22, 2011.

[51] U.S. Department of State 2011 Investment Climate Statement reports that "Excessive complexities and inconsistently applied bureaucratic regulations are an impediment to investment and can be a breeding

needs to look at the relationship between business entry regulations and the Malagasy

bureaucratic and administrative systems[52] since entry regulations reflect the bureaucratic

and administrative systems of the country (e.g., Djankov, 2009; Djankov et al. 2002;

Klapper et al. 2004, 2007). The excessive nature of the Malagasy bureaucracy has its

roots from the post-independent political and structural legacies of the country. It is a

political base to ensure a long term of governance for the party in power and an

instrument of rules to exclude the oppositions.

3.4.1. Structural Legacies

The excessive nature of the Malagasy bureaucracy, which handles business

formalization, can be explained through the structural legacies of the public service. The

Malagasy bureaucracy and public administration are highly centralized both

administratively and fiscally in the capital city, where the government is located. They

employ "about 0.8 percent of the country's population or 146,000 agents in 2004 and

only 0.75 civil servants per 100 inhabitants work in rural areas—as compared to 2 per

inhabitants in urban centers" (Heidenhof, Teggemann, and Sjetnan 2007, 4). The central

administration is not efficient because of its composition, centralization, and management

(e.g., African Development Fund 2005; IMF 1999). Around 60% of total staff is support

staff; while the technical level—which typically forms the backbone of a good civil

service—accounts for only 30% (Heidenhof, Teggemann, and Sjetnan 2007, 4).

Administrative decision-making is extremely hierarchical and procedural frameworks are

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ground for corrupt practices. The lack of transparency in government regulatory decisions has generated
complaints from current investors."
[52] Some scholars have argued that entry regulations reflect the bureaucratic and administrative systems
of the country (e.g., Djankov 2009; Djankov et al. 2002; Klapper et al. 2004, 2007, 2008).

complex, non-transparent, and corrupt (Dahl 1999; Heidenhof, Teggemann, and Sjetnan 2007).

The centralization of the administration started first under the Merina Kingdom. It was sustained under French colonial rule and carried over during the post-independence era. To some extent, this structure disfranchises and penalizes those who live in the provinces because most of the major decisions must come from the central government. This is still true even after the decentralization and de-concentration of the administration.[53] The autonomous provinces lack administrative initiative, coordination, economic integration, political power, and resources (African Development Fund 2005, ii).

Malagasy bureaucracy is weak even though the central administration appears stronger than those that are in the regions. The general causes of the weakness include weak institutional capabilities; ill-defined rules; lack of frames of reference and criteria for individuals and society; a steady decline in oversight and regulation mechanisms; the mismatch between structures and goals; and inadequate, incoherent and obsolete laws and regulations (UNDP 2001, 2).

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[53] Madagascar's territorial administration is based on the principles of deconcentration and of decentralization. The deconcentrated administration is at the level of Autonomous Provinces (6), Regions (22) where the deconcentrated services of a few ministries (health and agriculture) are now present, districts (116) as well as administrative subdivisions. The decentralized administration comprises three levels: Autonomous Provinces, Regions and Councils (1557 including 45 urban councils). Autonomous Provinces are currently managed by officials appointed by the Central authority (Special Delegations). Regions, in their capacity as decentralized territorial entities, have legal personality and financial autonomy. Currently, during a transitional phase, the members of the Regional Executive (4 persons) managed by Heads of Region are officials appointed by Decree issued in Council of Ministers. A Regional Committee, the decision-making organ of the Region composed, in equal number, of members of Parliament of the Region, representatives of Mayors as well as representatives of economic operators and civil society, is set up in each Region. Councils, which are the grass-roots entity, also have legal personality and financial authority" (African Development Fund 2005, 5, 6).

The bureaucratic weakness is reflected in the lack of public service ethics and the absence of enforcement and accountability system that govern public servant. Even though public service standards have existed for many years, they are very broad, are not accessible to everybody, and remain as policy reference only.[54] Bureaucratic failure, poor performances, incompetence, and unethical practices such as absenteeism and disregard of working hours go unpunished because of the absence of effective performance appraisal mechanism (UNDP 2001b). In general, public agents are free from their actions, except in the case of fraud and misappropriation of the public purse where some indictments and convictions of civil servants have been delivered (UNDP 2001a, 46). However, the indictments and convictions are usually used to attack political opponents. In addition, civil service users' complaints are not usually taken in consideration or do not really have any weight even though public complaints procedures do exist. They are put on file and are less likely to be addressed.

The absence of enforcement and accountability system and the dysfunction in the Malagasy public service influence civil servants' attitude and morale in a negative way, and detrimentally affect their service output. They promote illicit personal enrichment, family or ethnic favoritism, political patronage, and especially poor customer service. These issues affect motivation and performance of civil servants who handle business registration. The situation penalizes entrepreneurs and discourages investment (World Bank 2008b).

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[54] They came from three different sources: the Constitution, Government circular, and public servant regulations. The 1992 Constitution addresses the requirement of integrity and political neutrality of the public service. The circular of the Prime Minister in September 13, 1990 defines public relations in the public service. The regulations for public services concern the disciplinary regime and codes. These regulations have undergone many reforms since the late 90s. The reforms led to the adoption of Code of Ethics of Civil Servants in the late 1990s (UNDP 2001a, 2001b).

3.4.2. Political Legacies

The formal institutions in Madagascar are improving but still place considerable limits on development of formal enterprises due to burdensome and unprofessional bureaucracy. The political legacies of Madagascar play very important roles in creating this situation as this section demonstrates. The Malagasy bureaucracy inherited the heavy administration and cumbersome regulations, which characterized the colonial bureaucratic system (Randrianja and Ellis 2009). The post independence political legacies of Madagascar can be classified into three epochs: nation-building (1960-1972), socialism and self-reliance (1972-1982), and economic and political reforms (1983 to date). The epochs are characterized and defined by the political ideologies that have determined the economic and political development of the country. Even though the ideologies adopted by the political leaders of each epoch are different, they share one similarity when it comes to business entry regulations. The political leaders of each epoch have used bureaucracy to deliver policies that principally benefit their personal economic interests and their political base.

The first epoch (1960-1972) was marked by nation-building based on colonial and capitalist model of production and administrative system inherited from the colonial power in spite of President Tsiranana's nationalism conviction (Marcus 2004). The political structure of the First Republic was characterized by the dominance of a single party (Parti Social Démocrate—PSD). The bureaucracy of the First Republic was built on a top-heavy administration that was subsidized by France and heavy taxation (Thompson

and Adloff 1965).[55] The adoption of the colonial administrative system was not

surprising because most of the colonial institutions and establishments were maintained

due to Tsiranana's political choice to protect the French interests and adopt a pro-

Western and anticommunist course (e.g., Allen 1995; Thompson and Adloff 1965; Covell

1987). In addition, the leaders during that period only knew the cumbersome colonial

government due to their education.[56] As a consequence, the Malagasy bureaucratic

system, which administered business creation and promotion, reflected the mixed

outgrowth of interdependent cultures, that is the French in whose country a significant

number of new civil servants took their training, the colonial administrative and

bureaucratic system, and the PSD party. The pro-government and PSD actors such as

landowners and farmers with capital, the small urban functionaries, wage earners and

entrepreneurs were the principal beneficiaries of the system (Chaigneau 1981).

The legacy of burdensome bureaucracy was not really changed after the fall of

Tsiranana even though the new government led by General Ramanantsoa embarked in

"tabula rasa" approach to completely wipe out the neo-colonial regime. This second

approach (1972-1982) was centered on the policy of Malgachization, which had three

components (Cole 2010, 39): replacement of the "foreign ways" (*fomba vazaha*) to the

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[55] The French government provided $70 million annually in direct assistance to mainly keep the bureaucratic and import-export machinery functioning (Allen 1995, 58).

[56] The first president of the new nation and the Malagasy civil servants received their training in France or from the public administration school that Galliéni established in Antananarivo (Pryor 1990). In addition, the agreements and conventions of Franco-Malagasy cooperation gave France access to manage and provide certain services for the new Republic. One of these services was the higher education sectors, where government officers and civil servants were trained. Only selected and small group of people coming from the inner circle or the new elites benefited from the higher education system and become very influential and powerful civil servants and administrators. They took advantage of state institutions to benefit from the system. "Landholders and a new bourgeoisie created by party rule dominated access to higher education and civil service jobs, public contracts, and social prestige. The PSD and its key personnel fused political and administrative roles into one function, one aim, a single identity" (Allen 1995, 52).

Malagasy ways (*fomba gasy*); replacement of all foreigners who held official positions by Malagasy nationals; and adoption of the Malagasy language as the official language for teaching and administration to replace the French language. These reforms did not alleviate bureaucratic load but rather created new layers of administration on top of the previous ones.

The Second Republic inherited the heavy bureaucracy but permeated it with the socialist ideology mixed with the celebration of local and nationalist culture (Cole 2010). The socialist regime of Ratsiraka "requires bureaucrats to undergo indoctrination sessions on the tenets of the Revolutionary Charter, and urges them to join AREMA party" (Covell 1987, 114). The socialist revolution brought with it the creation of different bureaucratic posts that reward close friends and relatives, who did not have any expertise in public service (De Gaudusson 1976). As a consequence, new layers of bureaucratic procedures where created to sustain and justify the creation of the new positions. This situation explains the lengths of procedures and the numerous signatures, stamps, and notarizations necessary for any administrative work in Madagascar. Each position is equivalent to a signature to legitimize its relevance and show the power that comes with it. The lack of expertise of the bureaucrats who were recruited through personal affiliation created tensions among civil servants, between them and bureaucratic users, and is a fertile soil for corruption and extortion (Covell 1987).

The challenge of heavy and centralized administration was carried over to the third epoch (1983 to date), which began with the birth of the Third Republic in 1992. This epoch was characterized by the different reforms to liberalize the economy through significant private sector investment and entrepreneurship promotion. However, in spite

of these efforts, the Malagasy civil service still suffered from a number of organizational and regulatory weaknesses, as well as lack of motivation (IMF 1999). The civil service is highly bureaucratized where rules, red-tape and personal status are more important than service and contribution (Kabell 2006, 24). Bureaucratic procedures remain burdensome because the successive governments adopted the same practice in creating new positions and adding new layers for their supporters with a view to getting personal and collective enrichment. As a consequence, the level of corruption perception in Madagascar for the last nine years (Table 3.2) was never passed the 3.4 index. Corruption due to conflict of interests exist almost in all sectors of public services.

Table 3.2

Transparency International Corruption Perception Index (CPI)[57]

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
CPI	1.7	0.6	3.1	3.8	3.1	3.2	3.4	3.0	2.6

Effort to reduce bureaucratic burden have been conducted by the successive governments during the Third Republic. The Center for Facilitation of Enterprise Creation (CFEC) for private investors was created to house the key services involved in the processing of administrative and business entry procedures in the late 1990s. These reforms were necessary because one of the government's strategies was to follow the IMF recommendations to privatize state-owned enterprises and promote private

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[57] Ten (10) point being the least corrupt and 0 point being the most corrupt.
www.transparency.org/policy_research/surveys_indices/cpi/2009. Accessed March 15, 2011.

investment, and the plan to launch Enterprise Processing Zone promotion as part of its global effort to promote entrepreneurship.

With the goal to establish a strong economy with free market approach, President Ravalomanana embarked in aggressive reforms to reduce bureaucratic burdens and modernize the business environment. His government created the Guichet Unique des Investissements et de Development des Entreprises (GUIDE) through decree No. 2003/938 to facilitate and alleviate the formal administrative procedures. The GUIDE and the Enterprise Creation Facilitation Center have largely contributed to reducing the number of procedures to start a business from 15 in 2004 to 11 in 2006 and the number of days to set up a business from 67 in 2004 and 38 in 2006 (World Bank 2006b). The government pursued its goal to improve the conditions of the development of private sector and created the Economic Development Board of Madagascar (EDBM)[58] to ensure investment promotion in Madagascar and serve as a one-stop administrative center for business creation procedures. EDBM's duties encompass all aspects of business activities from the start-up, to management, and closure.

The gradual ease of business entry regulation due to different successive reforms since 1996 has significantly improved the business environment, thus encourages business formalization in Madagascar. For example, the number of registered industries in the Enterprise Processing Zones has found an increase of 34 times since its inception in 1990 until 2004 as reported in Table 3.3. The entry was reduced in 2002 because of the

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[58] This new institution is the outcome of a merging of two previous institutions that used to promote private sector: the second Project for the Private Sector Development [Projet de Développement du Secteur Privé (PDSP-2), namely the Committee for Supporting the Steering of Enterprises [Comité d'Appui au Pilotage de la Relance de l'Entreprise (CAPE)] and the One Stop Shop for Investments and Enterprise Development [Guichet Unique des Investissements et de Développement des Entreprises (GUIDE)].

6 months of political crisis in Madagascar. However, the registration has picked up in 2003.

Table 3.3

Historical Data of EPZs Number in Madagascar

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Registered EPZs	12	20	73	106	138	177	209	241	259	267	283	335	355	395	405

Source: Republique de Madagascar (2004)

An important increase also was found in the domestic business. The report about the total of new registered enterprise in Madagascar shows an increase of 45% since the establishment of GUIDE in 2003 until 2008 as we see in Table 3.4. The statistics about the business entry regulations and the entry to the formal sector confirm the hypothesis that formal institution measured by entry regulation is inversely related to formal entrepreneurship. The number of business entering the formal sector has increased as the government pursues different reforms to facilitate business registration.

3.5. Informal Institutions—*Fihavanana* and *Tsiny* and *Tody*

I demonstrated in the previous chapter that the weaknesses of formal institutions have contributed to the low entry to the formal sector in Madagascar in spite of the successive reforms made by government. However, putting the blame on the formal institutions alone does not provide the full picture of the distribution of entrepreneurship

Table 3.4

Comparison of Change in Business Entry Regulations, EPZ's Registration, and Overall Business Registration in Madagascar (2004-2009)

Year	Business Entry Regulations		Overall Business Created
	Procedures (number)	Time (day)	
2004	15	67	817
2005	13	44	882
2006	11	38	1,028
2007	10	21	1,050
2008	5	7	1,183
2009	5	7	724

Source: World Bank (2009a) *Doing Business in Madagascar (2004-2009)*; World Bank Entrepreneurship Data (2010)

in Madagascar. This section shows that the informal institutions also play significant roles in this issue.

The informal institution concerning *fihavanana* enfolds the concept of social capital as social network and norms of reciprocity and trust. It shapes Malagasy's actions and behavior because of the norms and values of mutual help and support. These norms and values are enforced by the informal institution of *tsiny* (guilt, reproach) and *tody* (punishment, retribution). The intertwined relationship between *fihavanana* and *tsiny* and *tody* are important for entrepreneurship because they construct norms and values that shape people's behavior in their interactions with others. They generate collective

expectations such as value introjections, reciprocity transactions, bounded solidarity, and enforceable trust that affect individual economic behavior.[59]

3.5.1. *Fihavanana* Institutions

The notion of social capital in Madagascar refers to the principle of *fihavanana. Fihavanana* is one of the main foundations of all aspects of human relations of Malagasy people. It underlines the intertwined relations between the Malagasy based on kinship of any form, which can be genealogical that is traceable through family kin or artificial that is constructed through social network (Dahl 1995). It implies a close tie between individuals and a belonging to a large family; the family is the Malagasy people. It is "the outermost protective social layer for the individual. It includes any and all persons to whom an individual could trace a real, or an imagined, kinship link" (Dahl 1995, 104). The sense of belonging rests on the principles of reciprocity, which generates social expectations such as tolerance, social harmony, mutual respect, mutual help, solidarity, relationship, and trust. These values of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity are called social capital (Dekker and Uslaner 2001; Uslaner 2001).

Fihavanana Malagasy encloses the two elements of social capital: structural (social network) and attitudinal (principle of trust) social capital. It determines the scope of social network that people belong to, and defines the boundary of trust between them.

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[59] Portes and Sensenbrenner (1993, 1325) suggest that social capital determines economic actions through the operating principle of the following elements: value interjection (socialization into consensually established belief), reciprocity exchanges (norm of reciprocity in face-to-face interaction), bounded solidarity (situational reactive sentiments), and enforceable trust (particularistic rewards and sanctions linked to group membership).

It is the glue that unifies the Malagasy people amidst their diversity as reflected in many proverbs such as: "*Tsihy be lambanana ny ambanin'ny lanitra*," which means "all who live under the sky are woven together like one big mat."[60] As an informal institution, the values and norms associated with *fihavanana* have great influence on individuals' and groups' behavior, decisions, and actions. On the one hand, the strong ties between people affect collective actions as they foster mutual dependence, trust, and reciprocity (Fritz-Vietta, Röttger, and Stoll-Kleemann 2009). On the other hand the traditional norms and strong personal relationships and solidarity are often used in favor of elites, which might lead to favoritism, corruption, bribery and abuse of power (e.g., Dahal and Adhikari 2008).

Structural Element of *Fihavanana*

The structural element of *fihavanana* refers to the Malagasy social network, which is delimited by the two aspects of *havana*: *"genealogical havana" and "cooperative/artificial havana"* (Dahl 1995, 1999; Ramaroson 1997). It implies interactions within a system of horizontal linkage among individuals (Fritz-Vietta, Röttger, and Stoll-Kleemann 2009; Sirven 2006). Even though hierarchy exists between the two aspects of Malagasy social networks, both of them imply the same meaning of *fihavanana*, i.e. the bond and unity between people within their network. The foundation of social network is *fihavanana*, which makes Malagasy social capital rich and broad because of its inclusive characters.

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[60]Proverb translation was taken from Malagasy Proverbs by MadaCamp.com. www.madacamp.com/Malagasy_proverbs. Accessed May 9, 2011

Genealogical Havana. The genealogical *havana* implies natural kinship and blood relatives. It is a personal relationship between people based on filiations and siblingship (Bloch 1971, 1986; Ramaroson 1997; Randriambololona 1990). It reflects the personal network of Malagasy that is composed largely of members of their kindred, which people who share a common usually ancestry entertain (Kottak 1980). It applies to real kin, ancestors or people who share one or more ancestors with ego (Kottak 1980, 183). Not only do people's genealogical relations connect and attach them to each other, but they also determine the social network that they belong to and its size.[61] Having kin and being with kin are important because not only does it provide security, but it also ensures access to different resources. According to genealogical *havana*, kins are expected or obligated to help one another; and this cooperation is one of the expectations found in social network. For that purpose, the genealogical *havana*, as a social network, has endless moral value such as "the duty of mutual love and help, cooperation, and family solidarity" (Bloch 1971, 59). These values influence people's behavior during their interactions with others, and allow them to have access to different resources.

Cooperative Havana. The cooperative *havana* is a non-genealogical *havana* or artificial *havana*. They are *havana* because of the value of the practical cooperation that they can provide (e.g., Bloch 1971, 1986; Kottak 1980; Ramaroson 1997; Randriambololona 1990). Cooperation and coordination for mutual benefits are features of structural social capital based on social network (Fukuyama 1995). *Havana* can be neighbors who do not have any lineage relationship, or a distant relative i.e. a remote

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[61] "The ties that bind descendants are thought to be the strongest of any interpersonal relationship" (Keenan 1974, 61).

kinship formed through marriage. The cooperative *havana* also is extended to the community through the notion of *fokon'olona*. *Fokon'olona* refers to the political and administrative village council. "It is primiraly a local-level organization that regulates village affairs" (Kottak 1980, 179). People in the same community have permanent relationship by living together in the same area. They are *mpihavana* or linked together because they form community kinship and share resources together. Cooperation is expected from the *fokon'olona* in the same community because of the greater good of *fokontany* (village or community) and the same resource that they are sharing together (e.g., Bloch 1971; Condominas 1962). Here, kinship, common residence, and cooperation mean the same thing.

As a social network, the cooperative *havana* is composed of the people whom a Malagasy regularly interacts with in his/her community. The necessity of cooperation among the people who live in the same community emphasizes the relevance of this type of social network. From this perspective, "cooperation is thought of less as an economic service than as a demonstration of a moral link" (Bloch 1971, 98). This type of social network is called in the literature cooperative social network, which arises from repeated interactions between pairs or groups of agents (Mobius et al. 2004).

Fihavanana as social network here means "the intimate and close relations between members of a family, extended to a deeper friendship between people of the same community and lastly with people of the same land. In other words, *fihavanana* is not limited to one's immediate relatives" (Gastineau 2006, 3). It goes beyond the family lineage because the Malagasy people believe that God has assigned them to share life together in the island of Madagascar. From this perspective, "all *havana* are equal—they

all share the same substance equally, they are thought of as being consubstantial" (Bloch 1986, 138). Thus, the ideal found in the Malagasy social network reinforces the values of inclusiveness and reciprocity.

Independently of the category of *fihavanana*, genealogical or not, mutual assistance among villagers is something altogether natural, from the most casual help up to some kind of organized cooperation. While visiting, or simply on a way to some destination, it would be good form for a person to lend a helpful hand to a neighbor whom he or she catches right in the midst of his/her daily activity. The gesture, meant to express the visitor's "commiseration," and to prove the long-standing love that unites the villagers, fosters friendship, and reinforces the bonds that tie them together. This assistance can last only a few minutes, or half a day, or even a day (if the visitor is free for the day). But no matter how long it takes, the helper is happy to have fulfilled his sacred duty in behalf of his/her neighbor, and the one being helped cannot be otherwise but highly appreciative. A profusion of kind, thankful words and well-wishes will express the latter's gratitude and appreciation.

But cooperation can also be carried out in a half-casual and half-organized manner. In the northern part of Madagascar, for example, the *fandriaka* is an agreement between two or more friends to help one another in their work, mostly a seasonal activity (like rice farming) where timing is of the essence, and in which synergy is understood to bring about more efficient result. It consists in working together on an alternate basis in each of the contractors' fields for the same amount of time. The amount of time agreed on can be one day, or two days, or a week, or more. Suppose X and Y have contracted a *fandriaka.* Today X and Y will work in X's field. Tomorrow, both of them will work

together in Y's field. Or, this week, they will work together in Y's field. Next week, they

will work together in X's field... In any case, the host will always take care of the food

part of the deal. But that does not prevent X or Y to bring along "something to eat," to

help or to please his/her host, because *fihavanana* is based on trust and courtesy and

selfless love and altruism, not on rigid, hermetic clauses for fear of being cheated by the

other.

The *lampogno* is another form of country-life cooperation. It consists in a one-

afternoon bout of field work, to which the host invites his male friends or neighbors. The

host does not feed his guests, but provides them with *betsa*, or *laimadio*.[62] The trick of

the trade consists, for the host, in serving the guests with drinks, while working, with a

well studied balance between generosity and parsimony. Otherwise, either the host will

incur the guests' remonstrance from being too niggardly about the drinks, or the guests

get drunk before any job at all is done. At the fall of the day, everybody who can goes

home. If not (because they are too drunk), they will spend the night under the roof, or in

the backyard, of their host, himself drunk enough to take care of anybody.

The *tamby-rô* consists in inviting the whole community, far and near, to a whole-

day, vast piece of field-work (for example: rice harvesting on hectares of paddies), during

which one or even two zebus are killed for the guests to eat with rice. It is associated with

the idea of huge feast, with plenty of meat (beef), which is a rare commodity in rural

areas. The name *tamby-rô* connotes the notion that the community has been enticed, or

tricked, into coming to work by the enticing medium of the meaty feast! Only villagers

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[62] Two kinds of strong homemade beer: the *betsa* is made of sugar-cane juice, or diluted honey, mixed with a bitter tree-bark called *bilahy*, and is left in a container to ferment. The *laimadio* (the-clean-one) is made of fermented banana, and has a clean-looking purity, hence its name, but is very high in alcoholic density.

who have a certain economic means (big landowners, with tens or hundreds of head of cattle, etc.) can afford to have a *tamby-rô*. But undoubtedly, the *tamby-rô* is a huge village festivity, and, along with other events, like balls and *tsikafara*,[63] constitutes a joyful event that gives the villager a huge thrill in his/her otherwise monotonous life.[64] In that capacity, it definitely represents a unifying factor, in addition to its economic fallouts.

Cognitive Element of *Fihavanana*

The cognitive element of *fihavanana* embodies interpersonal trust and establishes the norms of interactions. *Fihavanana* and trust are inseparable concepts in the Malagasy culture. In this respect, mutual trust ensures social harmony and good relationship. The Malagasy people believe that all *havana* are trustworthy until the contrary is proven. This statement stands on the four categories of *fihavanana* based on the notion of trust. These four categories are *tapaka* (kin)*, namana* (acquaintance)*, havana* (distant relative or/and neighbor)*, and *sakaiza* (very close friend) (Rakotoharintsifa 2002; Ramasindraibe 1971).[65]

Tapaka (kin) is the first category of *fihavanana* as cognitive social capital. This type of *fihavanana* is based on biological ties from marriage and family lineage. The source of trust from this perspective is the ties or the links that bind those who share the same blood because they come from the same parents or same origins. The relationship

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[63] Celebration events, in which one or two zebus are immolated.
[64] Inspired from Rakotovao's (2011) unpublished book called "*Iahay*: Cahier biographique et généalogique de la famille Gilima," p. 47.
[65]Extensive explanation of "*tapaka sy namana, havana aman-tsakaiza*" can be found in the work of Rakotoharintsifa (2002) and Ramasindraibe (1971).

that led to the existence of the offspring came from the trust between the couples when building their marriage. This trust is transmitted to their children and descendents through education, relationship, and socialization (e.g., Bloch 1986; Dahl 1995).

Namana (acquaintance) is *fihavanana* based on friendship through similarities (e.g., Rakotoharintsifa 2002; Ramasindraibe 1971). This expression, as a type of cognitive social capital, is used to identify people who share the same ideas, values, beliefs, and life style. These people are not related biologically. The sources of trust from *namana* are the similarities that the acquaintances have and the issues that unite them. *Namana* is dependable because of these reasons. This friendship can be built on self-interests or altruism. It ends when the similarities or commonalities do not exist anymore or the issues/things that unite the two entities are dissolved.

Havana (distant relative and/or neighbor) is *fihavanana* based on neighborhood (e.g., Rakotoharintsifa 2002; Ramasindraibe 1971). People in this category can be distant relatives or just neighbors. Everyone sharing the same environment and resources (land, air, water) is included in this category of *fihavanana.* Here, the belongingness to the same environment and resources is the source of trust. The size of *havana* is then defined by the proximity between the different individuals that live in the same areas, which share almost the same resources. Mutual trust and solidarity among those who live in the same community are expected here.

Sakaiza (very close friend) is a friend by choice based on long-term friendship (e.g., Rakotoharintsifa 2002; Ramasindraibe 1971). It is another type of friendship. On the one hand *namana* is a friend/acquaintance through commonalities or similarities; on the other hand *sakaiza* is a friend by choice based on long-term friendship. *Sakaiza* (close

friend) is higher or stronger than *namana* (acquaintance) because it is only used for those who have very close relationship. The source of trust in *sakaiza* comes from the ability of a person to choose his/her close friend and the length of their relationship. This type of *fihavanana* is expected to last forever; otherwise it is similar as *namana* or acquaintance.

As explained above, trust as a cognitive element of social capital is embedded in the Malagasy social capital. It is reflected in the four categories of *fihavanana*: "*tapaka* (kin) *sy namana* (acquaintance), *havana* (distant relative or/and neighbor) *aman-tsakaiza* (very close friend)." Interpersonal trust based on the four-fold of *fihavanana* treats all people on the same level because of the ties or links that bond them together either through blood (*tapaka*—kin), acquaintance by commonalities (*namana*—acquaintance), relative by geographic location (*havana*—distant relative or/and neighbor), and close friendship by choice and lasting relationship (*sakaiza*—close friend) (e.g., Rakotoharintsifa 2002; Ramasindraibe 1971).

However, this trust is not blind because of the following reasons. Malagasy always strive for social harmony. They believe in universal order of justice, which demands an equal return or *tsiny* (blame) and *tody* (punishment) institutions (will be addressed later). Their awareness and avoidance of imperfections cause them to be very cautious them to be very cautious with their actions. From this perspective, trust built in *fihavanana* does not represent personal traits or characteristics, but it shows the type of expectations from relationships. More clearly, Wilson (1992, 101,102) explains it this way:

> People who are *havana* to each other are not, by that definition, good or bad. *Havana* are people one can most likely trust (or mistrust) not because they are by definition trustworthy but because one either knows them directly, in that they

may be understood to be like the people one knows as kin. This is not the same as assuming that *havana* are "good."

Fihavanana and Corporate Community

I have demonstrated that the two elements of social capital as structural (social network) and attitudinal (principle of trust) social capital are embedded in the *fihavanana Malagasy*. The implication of this concept is that *fihavanana* determines the scope of social network that a person belongs to, and defines the boundary of trust between people and solidifies it. From this perspective, *fihavanana,* as informal institutions, shape the Malagasy's actions because of the rights and obligations associated with it.

Fihavanana provides the rights to corporate equality because of its different dimensions that combine everybody as one unit of *havana.* The concept of the "one unit," in spite of the different dimensions of *fihavanana*, is expressed in the following proverb: "*Ny olombelona hoatry ny ladim-boatavo, ka raha fotorana, iray ihany*" or, "Men are like the creeping stem of the pumpkin, and if traced, are found to be one."[66] The belonging to social network, which can be both restrictive through genealogical kinship and extensive through artificial kinship, makes all *havana* equal. Also, the corporate equality is reflected in the trust that springs from the four different categories of *havana.* Trust is solidified because everybody belongs, at least, to one of the categories of *fihavanana* (kin, friend/acquaintance, relatives, and close friends) in any shape or form.

Fihavanana requires the Malagasy people to meet the obligation of solidarity and cooperation. These obligations can be individual and corporate because of the restrictive (genealogical kinship) and extensive (artificial kinship) scope of *fihavanana*. **Solidarity** is

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[66] English translation, Houlder in: Sibree 1929: nr.11

expressed through different proverbs such as: *Trano atsimo sy avaratra, ka izay tsy mahalen-kialofana* or "Of two houses next to each other, the one that does not leak provide a shelter for all." Solidarity is "a common property and ultimately a common obligation" (Spindler 2003, 109). "The acts of solidarity have the sole aim of maintaining and if possible, increasing life in its double meaning of vital impulse and social existence" (Raharilalao 1990; Spindler 2003, 109). It is illustrated through individuals' participation in traditional rites and customs, which strengthen the link within the community and empower its members. **Cooperation** is expected from everybody especially in time of needs, and takes different forms. It is based on a spirit of free giving and mutual help and the belief that what you do for others will come back to you in different ways. Cooperation based on *fihavanana* allows one to "ask money, recommendations, help, and services from those who are better off. It is not necessary to pay back unless the other one or his dependents are in trouble" (Dahl 1999, 86).

3.5.2. *Tsiny* and *Tody* Institution

The rights to corporate equality and the obligations of solidarity and cooperation, which are associated with norms of mutual support and mutual trust, are important to entrepreneurship. The presence of the atmosphere of amity and solidarity is necessary for sincere cooperation. No transaction is possible without certain amount of cooperation and certain level of trust between actors. Trust and solidarity are important to secure transactions. However, the rights and obligations found in *fihavanana* are insignificant without any enforcement mechanism, which is reflected in the informal institutions of *tsiny* any *tody*.

Tsiny (guilt, blame) and *tody* (punishment) are other influential informal institutions in Madagascar. I called them institutions of enforcement because not only do they influence and moderate people's behavior, but they have the ability to make people comply with societal rules, norms, standards, and obligations like what we have found about *fihavanana*. They share the reward/punishment mechanism that characterizes institutions. They have powerful influence in Malagasy people's thought and actions.

Tsiny and *tody* have their source from customs and taboos, which define norms of behavior and actions. Customs are very important because they reflect Malagasy respect to their ancestors, who were the originators and guardians of customs. These customs provide norms and frameworks for everyday behavior. They are sources of *fady* (taboos) that are "considered commands of the ancestors that must be avoided under peril of incurring their wrath and inviting calamities" (Nelson et al. 1973). The respect of customs and taboos are transferred from generations to generations through parents' education and socialization. There are many taboos for everything, and it is impossible to know all of them; therefore *tsiny* and *tody* are omnipresent in the Malagasy thought and actions.

Tsiny

Tsiny means the guilt, blame, and offense that come from the neglect or disrespect of ancestors, taboos, customs, and moral law of universe. It is the guilt that a person feels and receives because of any action of non-conformity to societal rules. The guilt and the sadness from the transgression are believed to turn into a negative force for the sake of

justice. Andriamanjato (1957) explains this very well in his thesis of *Tsiny* in Malagasy thought:

> the *tsiny* presents itself as blame, the censure that one risks when one fails to behave in this or that manner, or follow this or that custom. Briefly, if you happen to forget some of the multiple rules that govern acts and thoughts in their manifestations, you are subject to *tsiny* (14)…The *tsiny* is, on the one hand, an imperfection of the acting person, and on the other hand the consequence of this imperfection, the more or less supernatural force that acts to sanction this imperfection. It is within the person with a blemish and at the same time it goes beyond the individual that is victim of *tsiny*, if he tries to accomplish something when the forces of the universe unite against him (59).[67]

It expresses a fault that a person makes, or a wrong done to someone. "It carries with it a burden of guilt that remains with a person, family, community, or other group" (Rich 2008, 245). Because of the *tsiny*, people behave in a certain way to avoid any offense to somebody, especially to the one who intends to do good. The blame may manifest in tangible or intangible forms such as failure in business, sanctions, tragic accidents, family conflict, illness even sudden death to the extreme, or sometimes a feeling of an indefinite guilt (Dahl 1999, 61).

Tody

Tody is the extension of *tsiny* and the expression of the concept of universal accountability in the Malagasy culture. It expresses the Malagasy's moral law of cause and effect (Fox 1990, 31). It "is understood to be the working out of cosmic retributive justice. Good and evil deeds have their ways of repaying their authors in kind"

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[67] The English translation of Andriamanjato (1957) was taken from Dahl (1995, 61).

(Rasolondraibe 1989, 347).[68] It implies the retribution from the disrespect or negligence of societal rules. It means "result," or "response," the consequence of one's actions—immanent justice (Dahl 1999: 62).

In other words, the Malagasy believe that everybody is accountable in everything that he/she does. No bad action is irreprehensible, and one always has to face the consequences of one's actions" (Dahl 1999, 70). *Tsiny* is the "appropriate consequences to human actions according to an order which is part of our world, or, as we know it, justice, like sooner or later retribution of a wrongful action" (Niekerk 2006, 39). "…*Tody*, 'requital, return, recompense,' is a complex metaphysical concept very similar to the Hindu or Buddhist *karma*. Essentially, it postulates that every act—good or evil—is requited in kind" (Fox 1990, 418). The punishment or the result of one's actions is conducted by impersonal force through other people or by the universal order of justice (e.g., Andriamanjato 1957; Dahl 1999; Navone 1987; Rajaona 1963).[69]

Power of *Tsiny* and *Tody*

Tsiny and *tody* are usually associated. "The offense or *tsiny* will eventually find retribution or *tody*" (Kus and Raharijaona 2001, 130). They imply that all deeds will be rewarded or sanctioned. They can be brought to oneself and one's family depending on the actor's deeds. The concept suggests that Malagasy people believe in implied Divine sanctions. Rogers (1985, 218) explains this concept very well:

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[68] "An evil act may or may not evoke *tsiny*, but it always brings about a *tody*. A good deed may be thankless, but its *tody* is forthcoming. Malagasy Christians also believe in *tody*—not only its existence but also its legitimacy as a cosmic form of justice" (Rasolondraibe 1989, 347).

[69] The concept of tody is illustrated in many Malagasy proverbs and hain-teny (oral literature) such as Todin-*karena harena, todim-pitia fitia, todin'aina aina*—"The *tody* of wealth is wealth, the *tody* of love is love, the *tody* of life is life." *Raha todim-paty aza manody fa raha todim-pitia manodiava*—"If the *tody* is death, may it not return, but if the *tody* is love, may it return." (Fox 1990, 31).

"Implied Divine sanctions" has a twofold meaning. Firstly it refers to the direct intervention of God (or *Andriamanitra*), and secondly it refers to the function of the Ancestors (or *razana*)… *Andriamanitra* (the Fragrant Lord) or *Zanahary* (the Creator) is the ultimate source of all beings and all order….The *razana* (ancestors) determine the patterns of society, approve or disapprove of marriages, and are closely involved in the daily life of the living.

The reward and punishment can be personal as well as collective or extended to the *havana* (genealogical or artificial). People are reminded about them all to the time as we can see in the most popular Malagasy proverbs:

- Proverbs that convey the concept of personal reward and retributions:

  o *"Ny tody tsy misy, fa ny atao no miverina"*: "The *tody* is none other than the retribution of your own deed."

  o *"Mandrora mitsilany ka mahavoa tena"*: "If you spit when lying on your back it will land on yourself." [70]

  o *"Ny atao toy ny salaka: soa atao manodidina, ratsy atao manodidina"*: "Deeds are like a loindoth: well worn, it snakes around you; badly worn, it snakes around you."

- Proverbs that convey the concept of collective reward and retributions:

  o *"Jejo reny ka botry anaka"*: "Loose mother: indigent children."

  o *"Zaza mivalana am-pandriana: voa ray voa reny"*: if a baby messes the family bed, father and mother are dirtied.

The transgression of customs and taboos inflict *tsiny* and *tody*. Malagasy people have a constant fear of incurring *tsiny* (blame) and *tody* (punishment) because of the preeminent role of the norms and values from *fihavanana*. Therefore, the fear of *tsiny* and

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[70] Proverb translation was taken from Rogers (1985).

tody has many ripple effects on Malagasy behavior. First, it makes them cautious or even

over cautious in what they do because of the fear to break the customs that define taboos.

Sometimes, the two institutions push people to take extreme positions, by not doing

anything because of the fear of making crude mistakes. Second, it leads to

circumspection, moderation, and even a certain fatalism (Nelson et al. 1973). Third, it is a

source of interpersonal respect as each individual tries to avoid anything that may cause

any offense. That explains "the extreme politeness that the Malagasy exhibit toward one

another and their reluctance to contradict" (Nelson et al. 1973). Any confrontation has to

be dealt carefully to respect *fihavanana* and save everybody's face.

Fihavanana, Tsiny, *Tody*, and Entrepreneurship

Fihavanana, tsiny and *tody* promote informal entrepreneurship in different ways.

It is an important asset for entrepreneurs, especially in the rural areas, where the concept

of formal entrepreneurship is less important. The analysis of interview surveys conducted

by Andrianjafy-Andriamiandrisoa in 2001 shows the different roles that *fihavanana* plays

in promoting informal entrepreneurship.[71] On the one hand, it provides intangible

resources such as moral and informational supports for entrepreneurs. The moral and

informal supports are in forms of advice about the types of business activities necessary

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[71] The interviews of 147 rural households were collected by Dr. Andrianjafy-Andriamanindrisoa in the commune of Masindray, Antananarivo, Madagascar in 2001. Survey methodology and scripts can be found in her book entitled *Economie populaire, territoires et développement à Madagascar: Les dimensions historiques, économiques et socio-culturelles du fokonolona. Etude de cas: la commune rurale de Masindray et la commune urbaine d'Anosibe*.2004. Masindray is a rural commune, 20 miles outside Antananarivo, capital of Madagascar. It has a population of 1,178 people. Even though people are predominantly farmers, most of them have a small business. Examples of small businesses found in the Masindray are dairy, tannery, trading, construction, restaurant and fast-food, embroidery, carpentry and woodwork, pottery, etc. 80% of those who were interviewed own a small business as a secondary activity and additional source of income. 20% of them have a small business as their primary activity and source of income.

in the community, the way to start a business or run it, the types of people to consider as partners or not, the best location for the business, and the indication of the sources of resources necessary for the business.

On the other hand, it provides tangible resources such as financial support, and labor and skills. The financial supports take the form of loans from the genealogical kin in most cases. The term and condition of the loan and the repayment are arranged between the *havana* to ensure that social harmony is maintained. The agreement is based on consensus or the understanding of mutual help and the uncertainty of the future. Caution is taken during the agreement according to the rule of *tsiny* and *tody* because the person that lends money at this time might borrow in the future.

Fihavanana is a source of labor for family businesses, which employ family members in most cases. Giving a job to a *havana* is a noble action because of the customary obligations to put the *havana* as first in resource allocation, the principle of mutual help between family members, and the different benefits from hiring them (cheap labor, profits stays in the family, etc). All of these actions prevent the infliction of *tsiny* and *tody* to the entrepreneurs. The mutual help between family members is very important because it is usually women who own and run the family business. It is a principal source of income for single mothers or an additional activity and secondary source of income if they are married. Examples of family business include car shop, dairy, pork and cattle raising, hand crafts, and embroidery.

People also get personnel supports from their network based on the artificial *havana*. These networks are church, NGOs, and informal association or club. The help or support from the artificial *havana* is usually temporary because their help is expected

during the time of difficulty or emergency. Job training is another resource provided by

fihavanana. People receive training from their network, which can be from family or

non-family members. Those who have the know-how share with others their knowledge

and skills for different reasons: (1) to help those who lack skills and training, (2) and

improve their productivity, but (3) at the same time to alleviate the burden from their

dependence on those who are better-off in the community. The tangible and intangible

resources provided by *fihavanana*, *tsiny* and *tody* confirm the hypothesis that informal

institution is positively related with informal entrepreneurship. The benefactors and

receivers take these resources very seriously because of the rules established in *tsiny* and

tody which say that "the *tody* is none other than the retribution of your own deed."

    Fihavanana encourages the practice in the informal sector due to its effect on

bureaucracy. However, the best way to explain this second argument is through the

interaction of institutions because it illustrates the effects of the rules from *fihavanana*

and *tsiny* and *tody* on civil servants who handle business registrations and on

entrepreneurs who want to register their business.

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**3.6. Interactions of Formal Institutions (Business Entry Regulations)
and Informal Institutions (*Fihavanana* and *Tsiny* and *Tody*)
and Entrepreneurship**

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    The interaction of business entry regulations with *moramora*, *fihavanana*, *tsiny*

and *tody* determines entrepreneurship distribution in the formal and informal market.

Bureaucracy, which handles the business entry procedure, is the battleground where the

interaction occurs. The imbalance between the strength of each set of institutions drives

the interaction mechanism. The interaction is complex because it is a blend of weak

formal institutions and strong informal institutions. The lack of enforcement mechanism in the formal institutions allows the informal institutions to influence the outcomes of the interactions. It means that informal institutions of *fihavanana*, *tsiny*, and *tody* are in competition with formal institutions. The effect of *fihavanana, tsiny* and *tody* on bureaucracy determines the distributions of entrepreneurship in the formal and informal sector.

3.6.1. Effect of Informal Institutions—*Fihavanana*, *Tsiny* and *Tody* on Bureaucracy

In spite of their importance, the values of interpersonal relations, mutual trust, and mutual help found in *fihavanana* pose problems to bureaucratic efficiency. They may weaken bureaucracy because people's interests are not necessarily on the common good but on personal gains. The issue becomes complex when they face the decision to allocate scarce resources since they value interpersonal relations more than anything else. In this case, people prefer the genealogical *havana* over the artificial *havana*. Helping others, especially those who have ties with you, is a priority. Not doing so is a source of *tsiny*, which in turn becomes *tody*, and nobody wants to be afflicted by *tody*. Since the formal form of *tody* is distant or almost inexistent due to the lack of enforcement and punishment mechanism in the formal institutions, then civil servants have more fear of the immediate infliction of *tody* if they do not help their *havana*. Thus, it makes bureaucracy inefficient by promoting abuse of power and encouraging nepotism and favoritism due to its selective nature based on genealogical vs. artificial *havana*.

Abuse of Power

The abuse of power comes from the concept of power relations in Madagascar, which is based on the principle of the elder. *Fihavanana* gives "elder" a multifaceted meaning, which makes the meaning of power relation ambivalently complex in the Malagasy culture. "Elder" has two meanings according to *fihavanana*: *ray aman-dreny* (biological parents) and *raiamandreny* (elder in general or ex officio, usually anybody that has a leadership position). The Malagasy have a high regard and respect for elders without any distinction whether they are *ray aman-dreny* (biological parents) or *raimandreny* (elder in general)*.* Their position and the respect that comes with it give them power and authority.

The existence of *ray aman-dreny* (biological parents) and *raiamandreny* (elders in general) implies *zanaka* (children), which has two meanings: *zanaka* (biological children for biological parents—*ray aman-dreny*) and *vahoaka* (people for elders in general— *raiamandreny*). The cohabitation of elders and *zanaka* generates rights and duty for the two entities. On the one hand, elders have the rights to be consulted and respected, which give them an authoritative position and the duty to care, and provide leadership.[72] Also, they are expected to look after their *zanaka* (children). They are sources of life and light, graces and protections, and ensure social integration (Razafintsalama 1988). On the other hand, *zanaka* are expected to respect and follow the instruction of their elders.

The eldership position and the respect that the *vahoaka* (people as fictive children) should give to the *raiamandreny* (elder in general) become a source of abuse of

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[72] Bloch (1971) extensively addressed this concept when he explained the decision-making in the Merina tribe.

power. Elders' advice has the character of orders, and disobedience harms the virtuous

force of the soul (Jütersonke et al. 2010, 36). Some elders such as bureaucrats take

advantages of the rights of eldership and abuse the *vahoaka* or the public service users.

This is one of the reasons that make Malagasy bureaucracy too demanding. Bureaucrats

are not approachable to the extent that asking their service is interpreted as begging. It is

a parallel to the familiar situation where a child will come to his/her *ray aman-dreny*

(father and mother) with a concern or a complaint, and ask for help (Dahl 1999, 116).

The concept of "begging" is reflected in hardship that people confront when they deal

with Malagasy civil servants. This is due to the fact that Malagasy bureaucrats are known

by the art of making things difficult. It is their second nature to show their power because

they have the discretionary power to give the answer. Everybody that has power wants to

show it, and carelessly treats their fellow citizens under the pretext of bureaucratic policy.

The implication of the bureaucratic abuse culture is that, the *vahoaka* or the public

service users are afraid of bureaucracy, especially for the rural population and those who

did not receive education. The fear of bureaucracy and bureaucratic abuse becomes an

obstacle to business formalization and an incentive to stay in the informal market

(Pitchboule 2009). This scenario confirms the hypothesis that the interactions of formal

and informal institutions affect informal institutions.

Nepotism and Favoritism

Because of the affinity from *fihavanana* and the limited resources, elders

(bureaucrats in this case) prioritize the group of people that they want to serve. The

prioritization criterion is based on the four meanings of *fihavanana*: *tapaka* (kin) *sy*

namana (acquaintances)*, havana* (relatives) *aman-tsakaizana* (very close friends). Even though the characteristic of *fihavanana Malagasy* is inclusive, the application of the inclusiveness in real life depends on the symbolic distance of the four categories of *havana* from the actor. This concept is illustrated in the most popular proverb in Madagascar saying: "*Raha maty aho, matesa Rahàvana, raha maty Rahàvana, matesa ny omby ao am-bala*" or "If I am to die let one of my *hàvana* die first, but if one of the *havàna* has to die, may the oxen in the pen die first." *Tsiny* and *tody* reinforce the rules or principles of helping those who are closest to one in daily life. A person who undermines his immediate *havana* is looked down and ridiculed according to the proverb saying: "*Varimbarian'ny lavitra, ka tsy mahita ny ambany maso*" or "He is distracted by what is far away and does not see what is before his eyes" (Kœnig 1984, 36).

In the case of a civil servant, the decision to help or not to help (customer service) depends on the civil servant's assessment of the weight of the *tsiny* that he might receive from his/her supervisors and the public users and the relationship he/she has with them. And since we know that Malagasy civil service lacks formal enforcement mechanism, then it is more likely that the informal enforcement mechanism of *tsiny (*and *tody)* drives the civil servants' action. To avoid *tsiny* from *havana* and the community, the principle which consists in putting *havana* first is always applied based on the popular proverb: "*Ny havana aza mba hadinoina, toy ny kitapo hahafahana entana*" or "Do not leave your relatives as you would an emptied bag."

Civil servants also weigh the *tody* or the retribution or the reward of their action, which may come from God and ancestors (*razana*). The *razana*, which is *ray aman-dreny* (biological or artificial elders) can mean *Fanjakana* i.e. the state. So when, *razana* i.e.

Fanjakana is weak (by not having enforcement or punishment mechanism to reprimand illegal actions) in the formal transaction then people have to rely on God's punishment because God hands the verdict in the last resort (e.g., Navone 1977, 1987; Rogers 1985). However, God's punishment may take time; therefore they are less worried about complying with the formal rules of the game.

In the informal institutions realm, *tody* may come faster because anybody who does not help others in the community will receive immediate punishment such as alienation, disgrace, etc. People know each other in the community, and the news about the failure of one person to look after his/her *havana* spreads very fast. It is different when it comes to the transaction in the formal institution, which is more impersonal, since public users do not necessarily know public servants. Therefore, *tody* is more distant in dealings with government officers than in the community interactions.

Bureaucratic resource allocation then depends largely on the symbolic distance between the bureaucrats and the users. Thus, *fihavanana* and *tsiny* and *tody* opens the door to corruption, nepotism, favoritism, immunity, and preferential treatment given to *havana* (e.g., Jütersonke et al. 2010; Razafindrakoto and Roubaud 2001). Preferential treatment given to *havana* is normal in the administrative transactions. This explains the poor customer service in the Malagasy civil service.

A situation favorable to corruption has been created, when the loyalty to immediate *havana*, the ultimate power of bureaucrats as *ray aman-dreny*, the concept of public users as "beggars" meet together, and the reinforcement of *tsiny* and *tody* are gathered. Those who do not have any clouts, family tie, or connection with the bureaucrats are the "beggars," which are basically the majority of the Malagasy. People

expressed in the different forum discussions and newspapers that they have to beg before anything can happen.[73] The "begging" phenomena present a win-win situation of bribery for both bureaucrats and users (who are not a civil servant's *havana*) due to the delay and complexity of the registration process.

From the above perspectives, the interaction of *moramora*, *fihavanana*, *tody* and *tsiny* with business entry regulations, which are handled by a weak bureaucratic system, creates two distinct paths of entrepreneurship. In other words, the interaction plays two contradictory roles by filtering the entry to the formal sector and accommodating the practice in the informal sector.

3.6.2. Institutional Interactions and Formal Entrepreneurship

The interaction of formal institutions with *fihavanana* and *tsiny* and *tody* filters those who can enter the formal market because of the high transaction costs associated with the dysfunctional relations between the formal and informal institutions. The transaction costs come from the poor customer services, long delay in service delivery, and corruption and bribery or the "begging" event. The likelihood of an entrepreneur to have a close tie with a bureaucrat is very minimal because civil servants only represent a small percentage of the Malagasy people. Therefore, entry to the formal sector is limited to few privileged or selected entrepreneurs only.

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[73] Ny Orinasa Malagasy sy Frantsay. TopMada Forum. www.webcache.googleusercontent.com/search ?q=cache:UUjppVgi2_4J:www.topmada.com/forum/discussions-libres/ny-orinasa-malagasy-syny-frantsay/+biraom-panjakana&cd=27&hl=en&ct=clnk&gl=us&client=firefox-a&source=www.google.com. Accessed March 9, 2011. "Kolikoly eo amin'ny raharaham-panjakana" Seraseara.Org.: www.forum.serasera.org/forum/message/m4451bf9845f3e. Accessed March 9, 2011. Taratasy Misokatra. Madagascar Tribune. 2009. www.madagascar-tribune.com/Taratasy-misokatra,11616.html, April 6. Accessed March 9, 2011.

Favoritism and Formal Entrepreneurship

The interaction favors those who have *havana* or clouts in the administration. Let's take as an example the business formalization during the first epoch of the political development of Madagascar (1960-1972). During this period, the formal sector was almost reserved for the members of the Parti Social Démocrate (PSD), French, and other foreigner entrepreneurs (e.g., Chinese, Indian/Karana, and Greek). The system in place was designed to benefit them. It was easier for them to register their business because most of the civil servants were PSD members and senior administrative positions were held by French functionaries or Malagasy who were trained under the French system. The key to the access and advancement in business and other affairs in civic life was the passage through the PSD party (Allen 1995). They received economic and financial incentives to establish their business such as financing, the provision of enterprise preferential treatment, and tax and tariff concessions (World Bank 1974). These incentives were supported by the series of investment acts intended to promote private investment. One of them was the Investment Act 61-027 on October 09, 1961, which favored foreign investors over the nationals. Two other investment acts also were adopted in 1962 as an extension of the 1961 Act (Code des Investissements—JORM 1962/ Ordonnance N° 62-024 du 9 Septembre 1962 and Ordonnance N° 62-026 du 19 Septembre 1962). They were intended to "encourage a moderate amount of local capital investment by French residents and companies" (Heseltine 1971) and establish the National Society of Investment (Société Nationale d'Investissement) which had the roles of providing capital, action, and financing for the new Malagasy enterprises. The outcomes of these measures contributed to the growth of the formal sectors that were

dominated by the French, other foreigners, and few Malagasy enterprises (Douessin 1962).

French enterprises were present in all economic sectors such as agriculture, services, manufactures, etc.[74] This situation is reflected in the data on 415 of the largest formalized commercial establishments in Madagascar in 1968-69. Almost 75% of total businesses were French-owned. They were in wholesaling, importing, and manufacturing sector. Twenty five percent were owned by Asian descent and Malagasy people. Most of them were involved in the wholesaling than importing (INSRE 1967). The distribution of entrepreneurial activities based on the current entry regulation system was designed to maintain the colonial policy to use the colony as a source of cheap raw materials and unprocessed products and a market place for manufactured product from the colonial power.

"Karana" (Indo-Pakistani or of Indian descent) and Chinese were the other foreign entrepreneurs. They owned some smaller regional ventures (Jütersonke et al. 2010). The two Asian communities were middlemen in the Malagasy economy to support the French firms. They were actively involved in trade or commerce. They were trade retailers in the rural areas, wholesalers and retailers in the urban areas. Some of them specialized in import and export. As middlemen, their role was to buy, market, and sell crops from the farmers for the French businesses and enterprises, and sell the

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[74] Four French corporations monopolized all import and export sectors, which specialized in different activities French interests controlled major enterprises and production (Allen 1995). The Compagnie Lyonnaise invested in coffee, tobacco, and rice. The Companie Marseillaise specialized in coffee and sugar. The Compagnie Rochefortaise controlled the meat exportation with the Société Industrielle et Commerciale de l'Emyrne.

manufactured product from France back to the country.[75] Most of the Karana settled in the West coast of Madagascar. They were more involved in different sector of the economy such as lending or advancing loans, crops collection and marketing, trade, textile retailing, and jewelry (Brown 2000; Slawecki 1971; Thompson and Adloff 1965). The Chinese chose the East coast were almost exclusively middleman traders, with a heavy concentration in commerce, especially in the grocery business, transportation and services. Their role as intermediary was very important because not only did they provide goods from rural areas and services for the French firms but also they were used to maintain Malagasy peasants' interest in agriculture for export trade as they made monetary profits (which were very meager) from those activities.

The last group of entrepreneurs was a few privileged Malagasy people. Government's efforts to promote the involvement of Malagasy nationals in entrepreneurship and industrial development had limited results because it was driven by the policy to comfort the PSD party. Malagasy entrepreneurs were insufficient during this period even though the potential existed (World Bank 1974). The number of Malagasy businessmen was very insignificant at the eve of independence—perhaps 30 industrialists and 100 merchants who were involved in large scale sectors. They mostly came from prominent families from the highlander elite, and lived in Antananarivo province (Deschamps 1961; Thompson and Adloff 1965).

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[75] They did not see themselves as rivals because the Karana were involved in the big businesses whereas the Chinese in small businesses in their respective roles of economic agent intermediaries and channels of goods and products from and to the French companies.

The creation of enterprises by the non-elite Malagasy was small and almost unnoticeable because the market was still largely foreign-controlled, mostly by French firms. Hugon (1978) reports that the market share of indigenous Malagasy firms (both public and private) was only 5%. According to the compilation made by Pryor (1990, 2010), only 2.3% of wholesaling and 1.5% of importing firms were owned by Malagasy entrepreneurs. They only had some significant share in the manufacturing, in which they accounted for about 14% in 1967. Regardless of the growth and the important potential in the trade sector, Malagasy entrepreneurs involved in the wholesale trade were still insignificant. Only 39 out of 415 large wholesale firms, which is 9.6%, were owned and managed by Malagasy citizens (World Bank 1974). However, significant participation in the retail trade was noticed, in which Malagasy entrepreneurs represented 75% of retail trade businesses. Little growth of entrepreneurs was seen in 1970, where only 20% of modern industrial firms were Malagasy. Most of these firms were relatively small; their share in the value added was only 9%. As far as the small-scaled industry, Malagasy entrepreneurs owned and managed at least 15,000 small industrial firms in various fields.

Corruption, Bribery, and Formal Entrepreneurship

The interaction of *fihavanana*, *tsiny* and *tody* with business entry regulations presents an opportunity for corruption and bribery. Some civil servants intentionally delay the treatment of business registration in order to incite the applicants to engage in corruption according to the study conducted by the Center for Research, Studies, and Economic Analysis Support of Madagascar (CREAM) in 2006. Even though, not all entrepreneurs or bureaucrats are involved in corruption or bribery, a significant number

of them are still practicing it, especially when economic status is the most determinant of

corruption practice in Madagascar (Casals & Associates 2006). Entrepreneurs are

perceived as rich, which increases the likelihood of them being victims of bureaucratic

corruption. Big entrepreneurs are the prime targets for corruption and rent-seeking

behavior according to the firm interviews in representative industrial sectors conducted in

July 2001 by Cadot and Nasir (2001).[76] It implies that those who can afford the cost of

corruption are another category of entrepreneurs that enter the formal sector. Corruption

or bribery, which is the negative outcome of the interaction, is the way out if a person

wants to get his license faster. 49% of 300 formal entrepreneurs and 52% of 120 informal

entrepreneurs who participated in the Enterprise Surveys in 2009 identified corruption as

a major constraint to their activities.

Must Wait for a License Phenomenon

The interaction of *fihavanana*, tsiny and *tody* with business entry regulation forces

those who do not have any choice but have to wait for a license due to the nature of their

business. I call this situation as "Must Wait for a License Phenomenon." In reality, the

number of waiting days is much greater than what is reported in the official document.

For example, it actually took 41 days[77] to obtain an operating license instead of 7 days[78]

as reported in the Doing Business Index according to the survey of formal entrepreneurs

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[76] The report and findings from this study can be found in the World Bank report RPED Paper No. 117 entitled "Incentives and Obstacles to Growth: Lessons from Manufacturing Case Studies in Madagascar" by Cadot, Olivier and John Nasir. 2001.

[77] This is the actual figure collected from entrepreneurs' survey in 2009 by the World Bank (2009b). Madagascar Enterprise Surveys. www.enterprisesurveys.org/ExploreEconomies/?economyid=117&year=2009. Accessed February 15, 2011.

[78] This figure is the official number of days in 2009 published by the World Bank (2009a) Doing Business Index.

conducted in 2009.[79] The long waiting time is another outcome of *fihavanana* on

bureaucracy when its emphasis on interpersonal relation is associated with the Malagasy

conception of time as cyclical and event-related. Time in this conception posits that what

counts is the "accomplished task" but not the time necessary to get it done. Therefore, it

is impossible to provide a time precision to complete a task.

The long delay in getting business license creates a new category of entrepreneurs

that are channeled to the formal sector due to the interactions of formal and informal

institutions since not all entrepreneurs can afford the cost associated with it. They are

large scale enterprises, which are mostly foreign private investors (e.g., Mauritians, South

Africans, Taiwanese, South Koreans, etc). They "must wait for a license" because they

cannot practice in the informal sector due to their characteristics. A good example of this

category is the enterprises in the Export Processing Zones (EPZ) who must register to be

able to establish in Madagascar. The uncertainties engendered by the undefined time to

get the license cause frustrations and unnecessary additional cost to entrepreneurs. The

report from firm interviews in representative industrial sectors conducted by Cadot and

Nasir in July 2001 confirms that statement. It shows that obtaining work permits for

expatriates is extremely difficult. It also mentions that it took over six months for one

French investor to obtain a permit even though he has already invested over $300,000 in

his company (Cadot and Nasir 2001, 15). "It is a constant battle to obtain basic services

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[79] Business registration is not the only procedure that requires a long waiting-time. The official number of days necessary to meet the set of regulations affecting the 8 stages of a business's life in Madagascar is very long. The stages are: starting a business, dealing with construction permits, registering property, getting credit, protecting investors, paying taxes, trading across borders, and enforcing contracts. The 8 stages require a total of 99 procedures and have a waiting time of 1,183.38 days (equivalent to 3 years and 24 days) in 2011. In average, each procedure takes almost 12 days (11.95 days). The calculation was taken from 2011 Doing Business Index in Madagascar.

from government offices and that many officials do not seem interested in helping firms solve problems or overcome the difficult business environment" (Cadot and Nasir 2001, 15).

The profile of formal entrepreneurship being limited to few privileged and selected entrepreneurs only confirms the hypothesis that the interaction of formal institutions measured by entry regulations with informal institutions *fihavanana*, *tsiny* and *tody* determines the distribution of entrepreneurship in Madagascar. The interaction, which promotes favoritism, bribe and corruption, and delay in service delivery, filters those who can enter the formal sector due to the influence of *fihavanana*, *tsiny* and *tody* on bureaucracy. The formal sector is then reserved for three categories of entrepreneurs: those who are associated with the bureaucrats; those who can afford the cost of corruption and bribery, and those who must wait for a license because of the nature of their business.

3.6.3. Institutional Interactions and Informal Entrepreneurship

The interaction of entry regulations with *fihavanana,* and *tsiny* and *tody* accommodates informal entrepreneurship by default. Those who cannot enter the formal sector do not have the choice except entering or remaining (temporarily or permanently) in the informal sector. This situation creates a profile of informal sector in Madagascar. It consists of small-scale and indigenous private sectors. It provides employment for a vast majority of the population. These enterprises operate mostly in farm activities in rural areas; whereas non-farm activities function in urban areas in general.

Urban Informal Enterprises

The data from the survey of informal sector conducted in 2009 by Enterprise Surveys give a profile of enterprises in the informal sector in urban areas (Table 3.5). They are small firms employing less than three people including the owner. Ownership between men and women are almost equal in the case of joined ownership. The majority of entrepreneurs, who are less educated, have taken advantage of a business opportunity and started their businesses alone or with partners. Most of the businesses are located outside the household premises. They are in manufacturing (e.g., food, textiles, garments, electronics, etc.) and services (e.g., retail, trade, hotel and restaurant, construction, transport, etc.) industries.

The interaction of entry regulations with *fihavanana,* and *tsiny* and *tody* facilitates the creation of informal enterprise in the urban areas. First, they could not afford the transaction costs associated with business formalization due to the dysfunction of institution interaction. Therefore, they might stay in the informal sector temporarily or permanently. The majority of the participants in the informal sector survey (48.03%) claimed that entry procedures are the main obstacles to the registration of their business. The procedures are as follows: "time to complete registration procedure" (7.87%), "getting information on what you need to do to register" (13.39%), and "fees to complete registration procedure" (26.77%).[80] When each of the pre-registration procedure is analyzed (Table 3.6), we found that 73.23% of participants (as average responses) said that the pre-registration procedures are an obstacle to registration.

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[80] The other obstacles to business registration, which occur after the registration, are "taxes on registered businesses" (45.67%), "bribes that registered businesses need" (3.15%), "the inspections and meetings with government officials" (1.57%), and "ignorance—don't know" (1.57%).

Table 3.5

**Profile of Urban Informal Sector According to the Sample
from 2009 Informal Enterprise Surveys**

Profile	Percentage
Number of Owners	One individual (76.38%) Two individuals (21.26%)
Gender of Owners	Male (80%) Female (20%)
Joint Ownership	Male (50.39%) Female (48.82%)
Business ownership acquisition	Started on their own or with partners (96.06%) Joined an existing family business (3.94%)
Reason to start the business	To take advantage of a business opportunity (60.63%) Jobs or opportunities were absent or not satisfactory (39.37%)
Level of education of the main decision maker in the business	No education (3.94%) Primary school—complete or not (35.43%) Secondary school—complete or not (41.73%) Vocational training (11.02%) Some university training (7.87%)
Employees working in the business including owner and family members at start up	One—owner (56.69%) Two (25.20%) Three (11.02%) More than three (7.09%)
Industrial sector of the business	Retail (27.56%) Other manufacturing—e.g., plastics & rubber, basic metals, machinery, etc. (22.05%) Food manufacturing (14.17%) Textiles and garments manufacturing (12.60%) Other service—e.g., Hotel and restaurant, transport, IT, wholesale, etc.) (23.63%)

Table 3.6

Analysis of the Pre-Registration Procedure

Pre-Registration	No obstacle (%)	Obstacle (%)	Don't know (%)
Getting information on what you need to do to register	33.86	61.42	4.72
Time to complete registration procedures	18.90	76.38	4.72
Fees to complete registration procedures	12.60	81.89	5.51
Post Registration			
Taxes on registered businesses	9.45	85.83	4.72
The inspections and meetings with government officials registered businesses must have	36.22	57.48	6.30
Bribes that registered businesses need to pay	59.84	59.84	5.51

Second, people who enter the informal sector may not have any interests in the formal sector because practicing in the informal sector does not present high risk to their business venture. The absence of a license does not prevent them to run their business even though they are aware of the benefits of having it.[81] They are able to finance the day to day operations of their business through internal funds (81.89% of participants), credit from suppliers or advances from customers (10.24%), or other sources of funding such as money lenders, microfinance institutions, and friends/relatives, etc (6.30%). In addition, staying in the informal market benefits entrepreneurs because there is no fee associated with it. State weakness in enforcing registration law and providing public goods

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[81] The participants list the following as a benefit for their business activities if their business was registered: better access to financing (38.58% of participants), better access to market (17.32%), better opportunities of negotiation with formal firms (14.96%), better access to raw materials (10.24%), more access to government programs or services (8.66%), better legal foundations on the property rights of land and buildings (6.30%), and better access to services (3.94%).

facilitates the blossoming of the informal enterprise.[82] Operating in the informal sector is free; only 2.36% of the participants claimed that they had to make an informal payment in order to remain unregistered.

Rural Informal Enterprises

In rural areas, business formalization is not a major issue because the lack of business license is not an obstacle to business creation and operation in the predominantly rural and agricultural economy of Madagascar. Eighty percent of the Malagasy population lives in rural area. Agriculture represents 90 % of employment in rural areas, whereas it is 45% in urban centers (Hoftijzer and Paci 2008; World Bank 1995, 2005, 2006b). Economic activities are marked by small-scale indigenous private sector, in which household enterprise or family business employs 86% of the rural populations and approximately 75% of the secondary urban population (Hoftijzer and Paci 2008). Registered or not, entrepreneurs can still operate. In addition, *fihavanana*, backed by the informal reinforcement from *tsiny* and *tody*, provides enough resources to ensure entrepreneurial success in the informal sector.

The values of interpersonal relations that come from the *moramora* and *fihavanana* promotes reciprocity and social exchanges. They are reinforced by *tsiny* and *tody* because of the collectivistic nature of the Malagasy community in which mutual help ensures its functioning and survival. These values are very important to meet the

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[82] Saavedra-Chanduvi (2007, 215) addresses this concept extensively in his article: "Burdensome business and labor market regulations, poorly designed social protection systems, and weak enforcement capabilities bias the cost–benefit assessments of firms and workers in favor of informality. Furthermore, a collective perception of ineffectiveness, unfairness, and illegitimacy of the state's actions, in terms of who it represents and serves, can give rise to a social norm of noncompliance with taxes and regulations (a "culture of informality"), which further undermines the state's capacity to enforce the law and to provide effective public services."

small scale orientation of the rural economy (e.g., Fafchamps and Minten 1999; Winters, Corral, and Gordillo 2001). Hyden (1980) calls this type of economy an "economy of affection," which is defined "a network of support, communications and interactions among structurally defined groups connected by blood, kin, community or other affiliations" (Hyden 1983, 8).

The means provided by *fihavanana* are a perfect illustration of economy of affection because of the solidarity and mutual help from the genealogical *havana* and artificial *havana*. Mutual help and reciprocity ensure community harmony and successes in economic activities. The concept of mutual help is practiced through *valin-tanana* and *atero ka alao*. *Valin-tanana* means exchange of goods and services within the community to meet others' needs. It says that we are your hands today, and you will be ours tomorrow. The entire community is involved in *valin-tanana* by helping each other to achieve their own entrepreneurial endeavor. *Atero ka alao* is more individual because it implies individual accountability. I help you today because you will help me tomorrow. The type of help varies from financial, materials, moral support, *fandriaka*, *tamby-ro*, and *lampagno*.

The profile of the informal entrepreneurs in Madagascar confirms the hypothesis that the interaction of formal institutions (business entry regulations) with *fihavanana* and *tsiny* and *tody* promotes informal entrepreneurship. They operate in the informal sector because they cannot afford the cost of formalization, do not have any network in the bureaucracy, and are not interested in business formalization due to the nature of their activities. In addition, *fihavanana* provides them with the necessary resources they need to run their business.

3.7. Conclusion

This chapter explains the factor behind the distribution of entrepreneurship in Madagascar, which is marked by the prevalence of informal entrepreneurship, by testing the rival hypotheses about the roles of institutions on entrepreneurship. It shows that the interaction of formal and informal institutions provides better explanation about the distribution of entrepreneurship between the formal and informal sector in Madagascar. It is true that formal institutions through business entry regulations negatively affect business entry to the formal sector and informal institution (*fihavanana* and *tsiny* and *tody*) promotes informal entrepreneurship. However, this conclusion is not complete because it ignores the roles of informal institutions *fihavanana*, *tsiny* and *tody* on Malagasy people's behavior without any distinction whether they are civil servants or entrepreneurs.

The interaction conclusion posits that people's respect of *fihavanana* and *tsiny* and *tody* influence the Malagasy bureaucracy that handles business entry regulations, which in turn determines the distribution of entrepreneurship in the formal and informal sector. The interaction mechanism is complex because it is driven by the imbalance between the strength of the two institutions. The lack of enforcement mechanism in bureaucratic rule due to its structural and political legacies puts the formal institutions at disadvantage when it comes to controlling the interaction. As a consequence, the intertwined relationship between *fihavanana*, *tsiny*, and *tody* institutions controls the interaction mechanism. *Tsiny* and *tody* reinforce the value of interpersonal relations, which is central to the informal institutions. Mutual help, based on the categories of *havana* becomes the unwritten rules that dictate civil servants' action and the

prioritization of their service. The combinations of these different puzzles establish the sector that an entrepreneur should enter.

Institutional interaction creates conditions that complicate the business formalization. On the one hand, it filters those who can operate in the formal sector. Formal entrepreneurs, when filtered through their respective profile, then consist of (1) those who have *havana* and clouts in the administration, (2) those who can afford the cost of corruption and bribery, and (3) those who must wait for a license because of the nature of their business. On the other hand, it accommodates the practice in the informal sector. This situation creates a profile of informal entrepreneurs. The profile includes (1) small urban entrepreneurs who cannot afford the cost of formalization, (2) small urban entrepreneurs who have less interests in the formal sector because the absence of the license does not prevent them from starting and operating their business, and (3) rural entrepreneurs who have least concerns in business formalization because of the support system embedded in the informal institutions (*fihavanana*, *moramora*, and *tsiny* and *tody*). As a conclusion, the study of the distribution of entrepreneurship between the formal and informal sector in Madagascar shows that the institutional interactions matter for entrepreneurship.

CHAPTER IV

CONCLUSION

4.1. Research Questions

This research attempted to explain the factors behind the variation of enterprise creation across countries by looking at the roles of formal and informal institutions and their interactions in the distribution of enterprise in the formal and informal market. It is interested in clarifying the institutional factors behind the high level of total entrepreneurship in Sub Saharan Africa where formal institutions are weak and informal institutions are predominant compared with other regions.[83]

The research tests competing hypotheses about the individual versus mixed effects of formal institutions measured by entry regulations and informal institutions measured by social capital on the distribution of entrepreneurship in the formal and informal sector. It has two theses. The thesis for the individual effects of institutions claims that formal and informal institutions, independently, affect entrepreneurship when each institution can provide the best solution to allow entrepreneurs to reach their goals. The interaction thesis argues that institutional mix matters for the distribution of entrepreneurship in the formal and informal sector. The outcomes of institutional mix are influenced by the relative strength of each institution.

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[83] Total entrepreneurship here means the combination of entrepreneurship in the formal and formal sector (International Entrepreneurship Organization & Global Entrepreneurship Monitor Data).

I presented four hypotheses to conduct the research. They are related to the individual and cumulative effects of the formal and informal institutions on formal and informal entrepreneurship. I used two different methods to analyze the hypotheses. The first method (Chapter II) is quantitative. It draws a global picture of entrepreneurship by analyzing data from 48 countries. The second method (Chapter III) is qualitative. It the effect of business entry regulations and *fihavanana* (Malagasy social capital) on entrepreneurship in Madagascar. The following section summarizes the findings from each method.

4.2. Findings

I divided the four hypotheses used in this research into two categories. The first category includes Hypotheses 1 and 2, and tests the individual effects of institutions on each category of entrepreneurship (formal vs. informal). The second category consists of Hypotheses 3 and 4, and analyzes the effect of the interactions of institutions on formal and informal entrepreneurship. The findings from the test of each hypothesis are as follows.

4.2.1. Effects of Each Set of Institutions on Each Category of Entrepreneurship

Hypothesis 1 estimates that a formal institution measured by entry regulations is inversely related to the formal entrepreneurship. The findings from the quantitative and qualitative analysis confirm this hypothesis. The role of formal institutions in promoting formal entrepreneurship is unequivocal both in the cross-country study and the Madagascar case study. Cumbersome entry regulations discourage formal entrepreneurship.

Hypothesis 2 predicts that informal institution measured by social capital is positively related to the informal entrepreneurship. The findings from the quantitative and qualitative analysis confirm this prediction. Informal institutions such as social capital play very important roles in promoting informal entrepreneurship according to the cross-country data analysis. The finding is similar in the study of Madagascar, where informal institution such as *fihavanana* contributes to the growth of informal entrepreneurship.

4.2.2. Effects of Institutional Mix on Each Category of Entrepreneurship

Hypothesis 3 estimates that the relationship between informal institutions on formal entrepreneurship depends on the conditional effects of formal institutions on the institutional mix. I expect this relationship to be negative as the formal institution influences the interaction. The data analysis gives two different answers to this estimation. On the one hand, the results from the quantitative analysis failed to support this hypothesis. It means that institutional mix does not determine the entry to the formal sector. On the other hand, the study of the institutional mix in Madagascar confirms the hypothesis. The interaction of *fihavanana*, *tsiny* and *tody* with business entry regulations filters those who can operate in the formal sector.

Hypothesis 4 predicts that the relationship between formal institutions and informal entrepreneurship depends on the conditional effects of informal institutions on the institutional mix. I expect this relationship to be positive as it is driven by the strength of the informal institution. The quantitative and qualitative studies provide two different findings about this estimation as we found in Hypothesis 3. The quantitative analysis does not confirm the role of institutional mix in determining informal entrepreneurship.

The interaction of entry regulations with social capital does not have any relations with the operation in the informal sector. However, the qualitative case study of Madagascar shows that the interaction of *fihavanana*, *tsiny* and *tody* with business entry regulations promotes and encourages the practice in the informal sector.

4.2.3. Findings Summary

The findings from the hypothesis testing can be summarized as follows (Table 4.1). The findings from the quantitative and qualitative studies are unanimous about the role of each set of institutions in the distribution of entrepreneurship in the formal and informal sector by controlling the political and economic variables (levels of economic development, political stability, and control of corruption). They confirm the hypothesis that formal institution is inversely related to formal entrepreneurship and informal institution are positively related to the informal entrepreneurship. In other words, each set of institutions has independent effects on entrepreneurship.

Table 4.1

Individual vs. Mix Effect of Institutions on Entrepreneurship Distribution

	Quantitative Study (Cross-Countries)	Qualitative Study (Single Country, Madagascar)
Institutions	**Entrepreneurship Distribution**	
Individual Effect	Yes	Yes
Mix Effect	No	Yes

The findings from the two studies disagree on the role of institutional mix on entrepreneurship distribution in the formal and informal sector. The quantitative analysis

did not find any relationship between institutional mix and entrepreneurship. The interaction model is not statistically significant. On the contrary, the qualitative study finds that the interaction of formal and informal institutions determines the distribution of entrepreneurship in the formal and informal market. The interaction occurs in bureaucracy, which handles business entry procedures. The interaction mechanism is complex because it is driven by the imbalance between the strength of the two institutions.

4.3. Significance

The findings from this research have three main significant points in the study of the relation between institutions and the distribution of entrepreneurship as stipulated in the first chapter of this dissertation. The quantitative analysis confirms the effects of each set of institutions on the distribution of entrepreneurship, whereas the qualitative study contends that institutional interactions also matters in some context, especially when the informal institution competes with the formal one. These two findings (quantitative and qualitative) help us explain and understand the institutional mechanism behind the distribution of entrepreneurship in Africa.

4.3.1. Persistence of the Individual Effects of Institution Theory

This research confirms what has been found in the previous research that institutions have independent and individual effects on the distribution of entrepreneurship (e.g., Black and Strahan 2002; Hause and Du Rietz 1984; Klapper, Laeven, and Rajan 2006; Djankov et al. 2002). It then goes further to demonstrate that each set of institutions (formal vs. informal) is unique, and designs different paths for

entrepreneurship. In other words, the characteristic and strength of formal and informal institutions determine the business formation in the formal market and informal market.

Formal institutions measured by business entry registration channel entrepreneurship to the formal market; whereas informal institutions in terms of structural social capital direct entrepreneurship to the informal market. Less cumbersome business entry procedures encourage the entry to formal entrepreneurship, whereas more cumbersome business entry procedures promote the entry to the informal entrepreneurship. Social capital measured by voluntary organization does not have any effect on formal entrepreneurship, but it does on informal entrepreneurship. Higher level of social capital contributes to the growth of informal entrepreneurship. This makes sense because people's social network provides essential resources (e.g., advice, emotional, technical, and financial support, etc.) to start a business, which usually begins in the informal market before deciding to enter in the formal market or not.

4.3.2. Reconciling the Findings from the Quantitative and Qualitative Analysis

The quantitative and qualitative studies present conflicting findings about the role of institutional interactions on entrepreneurship distribution. The quantitative analysis did not find any relationship between institutional interactions and entrepreneurship distribution, whereas the qualitative did. The qualitative study shows that institutional interaction limits the entry to the formal sector and encourages the practice in the informal sector. The conflicting findings present a puzzle because Madagascar is not an outlier according to the output from the statistical analysis (in Chapter II). The conflicting findings revive the debate in the social science research methodology about the merits of

the use of different methods to analyze a phenomenon as a process of finding validation or a means of completing the picture of the investigated phenomena (e.g., George and Bennett 2005; Lieberman 2005; Mahoney and Goertz 2006).

To tackle the issue of the conflicting findings, I focus my explanation on the possibilities that might play roles in the differences of the findings between the quantitative and qualitative analysis and their implication for future research rather than questioning the results of either analysis. There is some reality out there that merits analysis despite the data limitations and methodological challenges in conducting the study and their outcomes (e.g., Levy 2007; Rueschemeyer 1991). The fact that differences might not be reconciled should not discredit the research[84] because the two methods used in this study can be viewed as investigative strategies that offer evidence to understand socio economic phenomena and inform judgments but not necessarily techniques that provide guaranteed truth or completeness (Hammersley 2005). The explanations consist of the conceptualization of institutions, the operationalization of the informal institutions, and the mechanism of institutional interactions. I present the direction of future research at the end of the explanation of each concept.

Conceptualization of Institution

The difference between the quantitative and qualitative analyses can be explained through the concept of institutional continuum. North (1990) argues that the difference between formal and informal institutions is a matter of degree, moving along a

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[84] Other works have addressed the issue of the conflicting results from two different methods: Ragin 1987; Rueschemeyer 1991; Stephens 1979.

continuum. Formal and informal institutions are extremes on the institution continuum, which taboos, customs, and traditions at one end, and written laws at the other (e.g., Etzold et al. 2009, 7; North 1990). The independent effects of each institution occur at these extremes. Their effects depend on their enforcement because institutions only affect people's behavior when they are enforced (e.g., North 1990, 2005; Sautet 2005, 4).

People comply with the formal institutions when they are effective. It means that "written rules and procedures are enforced or complied with in practice and there is a high probability that noncompliance will be sanctioned by official authorities" (e.g., Helmke and Levistky 2006, 13). This is the case in developed and more democratic countries (e.g., Acemoglu, Johnson, and Robinson 2001; Djankov 2009; Djankov et al. 2002). People adhere to the informal institutions when their actions are influenced by unwritten and unofficial rules, which generate acceptable and enforced shared expectations "outside of officially sanctioned channels" (Helmke and Levitsky 2004, 727). In this circumstance, informal institutions compete with, substitute for, dominate, and replace the formal institutions (e.g., Helmke and Levitsky 2006; Lauth 2002; Sen 2007). Informal institutions have special place in regulating economic activities in developing countries, particularly in poorer areas (Bratton 2007; World Bank 2002, 4).

From the above perspective, each set of institutions constrains people's behavior, depending on their level of enforcement. The findings from the quantitative and qualitative approaches confirm this statement. It is unequivocal that the distribution of entrepreneurship is influenced by the independent effect of each set of institutions. The Formal institutions determine the entry to the formal sector; whereas informal institution determines the entry to the informal sector. These findings suggest one important point:

the distribution of entrepreneurship depends on the type of institutions that is enforced. In other words, individual sets of institutions indeed determine the distribution of entrepreneurship when people comply with the rules that are enforced.

However, the conceptualization of institutions as a continuum and the emphasis on the enforcement mechanism within institutions raise a second point where the two approaches collide; that is, institutional interactions matter to entrepreneurship distribution as reported in the qualitative analysis. In other words, the concept of institutional continuum and enforcement mechanism can also imply that, if institutional interaction exists, then it might be during the different stages of institutional transformation when the two institutions overlap and the outcome depends on the institutions that have a higher level of enforcement. However, the precise location of the overlap in the continuum is not very clear.

The conceptualization of institutions as a continuum and the emphasis on the enforcement mechanism within institutions open an opportunity for future research where one can delineate the separate line between the individual and interaction effect of institutions. This is important because countries have different levels of institutional effectiveness and are at different stages of institutional transformation. Scholars have struggled with this issue as they are not conclusive about the appropriate ways to analyze institutions. One group promotes the classification of institutions based on continuum vs. dichotomous argument (e.g., Etzold et al. 2009; Leach et al. 1997; North 1991), others claim the relevance of formal institution effectiveness vs. institutional compatibility (e.g., Ake 1996; Bratton 2007; Helmke and Levitsky 2006). Comparative historical analysis of institutional transformation or evolution is one of the ways we can use to demarcate the

line that separates the individual versus interaction effect of institutions (e.g., Grzymala-Busse 2010; Rueschemeyer 1991). One should be able to identify the stage when individual institutions and/or institutional interactions affect the changes in the dependent variable by looking at the complex sequences (i.e., individual path vs. interaction path) of institutional transformation or evolution.

Operationalization of Informal Institutions

The observed differences may have to do with the operationalization of (proxy measure) of informal institutions. I used Helmke and Levitsky's (2004) definition of informal institutions in this dissertation. According to them, informal institutions are "socially shared rules, usually unwritten, that are created, communicated, and enforced outside of officially sanctioned channels" (Helmke and Levitsky 2004, 727). I chose social capital as a proxy measure of informal institutions based on the above definition (e.g., Svendsen and Svendsen 2004; Fukuyama 1995, 2001). Social capital is defined as a set of social structures (network) and attitudes (values), which has a self-enforcement mechanism that promotes cooperation because of the existence of mutual trust within the social network (e.g., Hooghe 2008; Krishna and Uphoff 1999; Putnam 1995; UN Human Settlements Programme 2003).

The quantitative analysis used voluntary organization membership to represent social capital based on the argument that "voluntary associations form part of the social infrastructure of society that makes the generation of trust possible, and that at least makes it easier for trust relations and trusting attitudes to develop and to re-enforce themselves within the population" (Anheier and Kendall 2002, 344). The qualitative

study uses *fihavanana* to represent social capital. It determines the scope of social network that a person belongs, and defines and solidifies the boundary of trust between people in Madagascar. *Fihavanana* is reinforced by the reward and sanction mechanism found in *tsiny* (reproach) and *tody* (retribution). Even though the two types of social capital measure are similar in their nature as a source of informal norms that constrain people's behavior, they differ from each other in their origin and scope.

On the one hand, the voluntary organization membership has its origin from the individual's choice and decision to join (or not) an organization. Active membership in voluntary organization is expected to spread social capital in the community (e.g., Glaeser et al. 2002; Knack and Keefer 1997). Regardless of its merits, voluntary organization membership has a smaller scope or less effect to the community life because it only concerns those who are members of an organization and who are interested in the cost and benefits of the membership (e.g., Hall 1999, 2002; Grenier and Wright 2003). This might be the case of this study because the mean of the organization membership is only 6% of the survey participants. Also, the concept of a voluntary organizational membership may have some constraints because it depends on the level of freedom of association in the country, the freewill of the citizens, and the culture of the community being collectivistic or individualistic (e.g., Gellner 1994; Fukuyama 1999, 2002; Norris 2001). In other words, as a proxy to measure social capital, voluntary organizational membership is an action (people's decision to join or not). It can be selective because of the concept of joining and is exclusive because not everybody wants to and can join a group due to their choice and their sociological context.

On the other hand, *fihavanana* is a direct measure of social capital. It has a built-in component of social capital as network and trust. Also, it has its origin from the conceptual system and social structure of the Malagasy society.[85] It implies that *fihavanana* is a way of life, thus conviction, but not an outcome of choice like joining or not joining an organization. The conviction influences people's actions to uphold the values found in the genealogical and artificial *havana*. These values (solidarity, mutual help, cooperation, trust, etc.) are intrinsic or embedded in the Malagasy mind because of the effect of socialization and transmission of *fihavanana* from generations to generations. Therefore, it has a larger scope; it conditions everybody's actions and behavior consciously or unconsciously. *Fihavanana* shapes the Malagasy people's action because of rights to corporate equality and the obligations of solidarity and cooperation associated with it.

I believe the differences in the origin and scope of the two types of social capital have implications in the findings from this research. The voluntary organizations membership is a constructed representation of the level of social capital (informal institution) in one country, whereas *fihavanana* is an intrinsic representation of social capital (informal institution). The difference between the "constructed" and "intrinsic" concepts is important in understanding the levels of enforceability of the informal institutions, which is one of the concepts that define informal institutions according to Helmke and Levitsky (2004). Even though the socially shared rules from the membership in voluntary organization would spread in the society and generate more social capital

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[85] "The conceptual system looks at the social action (or communication) with respect to its meaning for those who carry it out; the social aspects refer to concepts in terms of their contribution to the functioning of some social system" (Dahl 1999, 88).

according to Putnam (1999, 2000) and Putnam et al. (1993), I argue that these unwritten

shared rules are more likely to be enforced within the circle of the organizations only.

Their influence outside the organizations is minimal. As a consequence, the quantitative

model did not capture the concept of enforceability of the informal rules outside the

formal channel and affect the outcomes of the statistical analysis, whereas the intrinsic

form of informal institutions like *fihavanana*, however, have higher levels of

enforceability, because it is shared by the entire community, thus applicable to

everybody. People are more likely to adhere to such institutions and comply to its rules

because they are aware of the reward and sanction mechanism that ensures its

enforceability.

The level of scope and enforceability of institutions are crucial in the

understanding the finding discrepancies between the quantitative and qualitative studies

because they can influence the effect of institutions on people's behavior. The lower level

of the scope and enforceability of the informal rules emanating from the voluntary

membership organizations weakens its effect on people's behavior outside the

organizations. This might be one of the alternatives to explain the insignificance of

voluntary organizations in the distribution of entrepreneurship in the formal sector. The

quantitative analysis shows that the informal shared rules of trust, mutual help, and

solidarity originated from the voluntary organization membership did not matter to the

creation of enterprise in the formal sector. Business formalization is about bureaucratic

and formal procedures and the above rules did not necessary constrain the behavior of

entrepreneurs in general as well as the bureaucrats who handle the registration process.

The interaction of voluntary organization membership with entry regulations also did not

have any effect on entrepreneurship distribution because the informal rules for voluntary associations more likely concern those who are members of the organizations. However, the voluntary organization membership has a positive relationship with the informal sector because it may provide resources that are necessary in entrepreneurial activities especially for those who belong to the organization.[86] The effect also might have been facilitated by the nature of the informal sector as a starting point and a temporary stage to enter the formal sector.

In the qualitative study, *fihavanana* has crucial impact in the distribution of entrepreneurship because of the higher level of its scope and the enforceability of its rules. Not only does it govern the social and economic interaction of Malagasy people but it has a mechanism to enforce its rules. The reward and punishment mechanism found in *tsiny* and *tody* enforces the rules in *fihavanana* and renders them as a moral obligation to the Malagasy people. In other words, as an institution, *fihavanana* has a larger impact to the society than the voluntary organization membership. From this perspective, its effect on the society is palpable. It shapes bureaucratic and entrepreneurial actions and constrains their behavior and decisions. As a consequence it captures the effect of institutional interactions on the distribution of enterprise. The unwritten rules of *fihavanana* are detrimental to the formal institutions as their influence on bureaucracy complicates business formalization procedures. They also provide resources which makes the practice in the formal sector less attractive. These rules prioritize kinship ties and are enforced by the reward and punishment mechanism in *tsiny* (reproach) and *tody* (retribution).

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[86] This is in relation to the concept of the level of the scope of the institution and the enforceability of its rule that are higher within organization.

The importance of appropriate operationalization of informal institutions presents an opportunity for future research. Concerning the interactions of institutions and their effects, the analysis thereof can be improved by using a similar measure of informal institutions both in the quantitative and qualitative analysis. For example, conducting a case study of voluntary membership organizations and their interactions with entry regulations will be useful to test the interaction hypothesis whether it affects the distribution of entrepreneurship or not. This approach can be conducted on a within country or cross-country basis by collecting yearly data about the trends of voluntary membership organization and entrepreneurship creation.

Another approach could consist in creating a quantitative measure of *fihavanana*, *tsiny*, and *tody*, and in quantitatively test their relationship with the distribution of entrepreneurship using the competing hypotheses. This approach requires a survey interview that reflects the concepts of informal rules found in these institutions, their effects on people's behavior, their relations with formal institutions (e.g., entry regulations), and, especially, their impact on the distribution of entrepreneurship. The same approach should be replicable so that it can be used in different countries.

Mechanism of the Institutional Interaction

The differences in the findings about the effect of institutional interactions on the distribution of entrepreneurship should not be used to refute the roles of institutional interactions since we know that institutions matter to economic activities (North 1990; Williamson 1996) and institutions interact in different ways (Ahlstrom and Cook 2005; Helmke and Levistky 2004; Peng 2003). The discrepancy then might suggest that it is

necessary to demonstrate the causal mechanism between the institutions involved, their

purposes, and their compatibility, before establishing the causal inference between the

institutional interactions and their outcomes (Oberthur and Gehring 2006). In other

words, it is crucial to explain the incident of institutional interactions because institutions

do not self-interact by their own, but there are other actors such as states, culture, agents,

political entrepreneurs that drive the interaction mechanism (Oberthur and Gehring

2006). Knowing and considering these actors allow us to understand the mechanism that

drives the interactions and the process that leads to their outcomes. This argument is

illustrated in the case of Madagascar. The interaction of formal institutions (entry

regulations) with informal institutions (*fihavanana, tsiny*, and *tody*) is not accidental but it

is the outcome of the bureaucratic agents' preference to prioritize those who are their

havana.

The above argument suggests that determining the effect of institutional

interactions might involve the search and consideration of additional variables that are

involved in the interaction. I believe that was the issue with the quantitative analysis

because the regression analysis did not capture the roles of the outside factors that

mediate the interactions. This explanation presents an opportunity for future research by

looking at the roles of actors in engineering institutional interactions and the effects of

their preferences on the dependent variable.

This theory can be applied to this dissertation by looking at the mechanism behind

the interactions of formal institutions (business entry regulations) and informal

institutions (voluntary membership organization). More specifically, one needs to

conceptually identify the precise causal mechanism that drives the interaction of the two

institutions (Elster 1989; Hedstrom and Swedberg 1998). It means that there is a logical

connection between the two institutions, and their interactions can create an observed

effect, which is the distribution of entrepreneurship in this case (Schelling 1998).

Additionally, it is important to identify the actors that engineered the interaction because

it can affect its outcomes. These actors could be the entrepreneurs themselves, the

bureaucratic agents that handle the registration process, or the state. The mechanism of

the interactions and the roles of the actors involved in the process should be

quantitatively or qualitatively operationalized so that the interactions can be empirically

tested. As an illustration, it might be possible (if the data exist) to introduce another

variable such as the "professionalization of bureaucracy" to control the institutional

interaction before one test the interaction hypotheses to see whether institutional

interaction matters to business distribution or not.

4.4. Conclusion

This research attempted to explain the factors behind the variation of enterprise

creation across countries by testing competing hypotheses about the individual versus

interaction effect of formal institutions (measured by entry regulations) and informal

institutions (measured by social capital) on the distribution of entrepreneurship in the

formal and informal sectors. The findings from the qualitative and quantitative analysis

confirmed the hypotheses that each set of institutions has independent effects on

entrepreneurship distribution. Formal institutions are inversely related to formal

entrepreneurship, whereas informal institutions are positively related to informal

entrepreneurship. The findings settle the discussion about the roles of individual institutions on entrepreneurship distribution.

The differences of findings about the effects of institutional interactions on entrepreneurship show the continuing debate about the process and mechanism of institutional interactions and their effects on people's behavior. The quantitative analysis did not confirm the role of institutional interactions in determining entrepreneurship distribution; whereas the qualitative analysis did. The situation provides opportunity for future research by refining the research question and research methodology. The emphasis should be put on the determination of the different stages where each set of institutions and/or their interactions matter to entrepreneurs' decision to enter the formal or informal sector.

The findings from this research have some policy implications. They support the importance of streamlined and cost-effective business registration as a facilitator of business formalization. The relevance of each set of institutions in the distribution of entrepreneurship also provides practical perspectives about institutional reforms. It is important to design the institutional reform that creates institutional synergy based on the positive aspects of the informal institutions whenever possible. The goal is to create a good environment that is conducive to successful economic activity.

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Appendix A

Model Specification

I ran three different model specifications to conduct the quantitative analysis. The three specifications are the "Original Model," "Comprehensive Model," and "Simplified Model." This approach was motivated by the fact that the outputs from the Original Model show some problems due to the data limitation and multicollinearity between some variables. Appendix B summarizes the outputs from the three models. This section explains the differences between the three models and presents the rationale that motivates the choice of the Simplified Model as the best model for the study.

A.1. Original Model (OM)

The original model is the original estimation proposed in this research. It comprises the following variables: two dependent variables (formal entrepreneurship and informal entrepreneurship); one independent variable—composite index of social capital; and the three control variables: economic development (GDP per PPP), political stability, and control of corruption.

The findings from the original model (Appendix B) show some inconsistencies between the hypotheses and the outcomes. The inconsistencies are found in the effect of informal institutions/social capital index and the control variables (level of economic development and political stability). I believe they are caused by two factors: the use of the composite index to measure social capital and the presence of multicollinearity between the control variables. For this reason, I decided to create two additional models—Comprehensive Model (CM) and Simplified Model (SM)—to address these two problems.

I unpack the two variables that constitute the social capital index and run them individually with the formal and informal entrepreneurship in the Comprehensive Model. I decided to try this approach because the problem might originate in the interaction of the variables that constitute the composite index of social capital. However, I maintain the three control variables to determine whether the use of the individual variable of social capital provides different outcomes from the OM. In the Simplified Model, I address the problem of multicollinearity in the control variables, and use the best variable that measures social capital based on the findings from the Comprehensive Model.

A.2. Comprehensive Model (CM)

The Comprehensive Model (CM) uses the individual measures, general trust and organization membership, to represent the informal institutions instead of the composite index of social capital. It also uses the three individual control variables: economic development (GDP), political stability, and control of corruption in the estimation.

A.2.1. Issues with the Social Capital Index of Entrepreneurship Growth

The statistical outputs (Appendix B) from the Original Model showed that the index of social capital is not statistically significant. The results are surprising since social capital is one of the two important variables in the study and is estimated to have a positive relation with formal and informal entrepreneurship (e.g., Fountain 1998; Portes and Haller 2002; Wetzel 1993). The variable social capital used in this study is a composite index constructed from the two forms of social capital suggested in the literature to have influence on economic activities, development, and economic growth (e.g., Social Capital Initiatives 2001; Zak and Knack 2001). The two forms of social

capital consist of structural (associational or organization membership) and cognitive (level of generalized trust) forms of social capital. It is borrowed from the measure of social capital developed by Grootaert and van Bastelaer (2001).[87] The use of index to measure social capital by merging the two forms of social capital into one index is common in social capital studies as explained in the main strand of literature (e.g. Coffé and Geys 2005, Grootaert and van Bastelaer 2001, Krishna and Uphoff 1999).[88]

I suspect that the incoherence between the hypotheses and the outcomes might have originated from the characteristics of the two forms of social capital as being distinct but interdependent. They are distinct because each concept has its own meaning and characteristics: trust represents the cognitive aspect of social capital, whereas voluntary organization membership embodies the structural aspect of social capital. They are interdependent because they complement each other, and the two concepts constitute the two forms of social capital. For that reason, I believe one of the ways to address this problem is to unpack the index and use the individual measure of social capital to better understand the impact of each indicator on entrepreneurship. Some scholars suggest that this is the best way to analyze the effect of social capital because of the distinctness of its forms, which might have a different impact on the subject to study (e.g., Knack 2002; Knack & Keefer 1997; Newton 1999).

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[87] The social capital measure and framework are extensively explained in the "Understanding and Measuring Social Capital—A Synthesis of Findings and Recommendations from the Social Capital Initiative" by Christian Grootaert and Thierry van Bastelaer (2001). It can be accessed at www.siteresources.worldbank.org/INTSOCIALCAPITAL/Resources/Social-Capital-Initiative-Working-Paper-Series/SCI-WPS-24.pdf

[88] Despite the many advantages of index use, index numbers sometimes have limitations. For examples, the inconsistency of the index due to the incompleteness of some of the data used to calculate the index might question its accuracy, which affect the outcomes of the regression analysis. As a consequence, some scholar suggests that index number is better for description because "the change displayed in an index value is a descriptive measure rather than an inferential statistical process; it describes only a specific change that has occurred over a specific time period" (McNabb 2004, 303).

Even though the literature presents the use of composite index and individual indicators as viable approaches to measure social capital, I decided to try the individual indicators instead, because the social capital composite index used in the original model did not provide significant findings about the relationships between entrepreneurship and institutions. The social capital index did not matter for formal or informal entrepreneurship. The use of the individual indicators, "trust" and "voluntary organization membership," in the Comprehensive Model should show the distinctness of each measure and its impact on the formal and informal entrepreneurship.

The summary of the findings from the Comprehensive Model shows some inconsistencies between the hypotheses and the outcomes. For illustrations, H_2 predicts that formal institution is positively related to informal entrepreneurship; however, the statistical outputs showed that formal institution is not significant for the creation of informal entrepreneurship. H_3 predicts that the level of economic development and political stability are positively related to formal entrepreneurship; however, the outputs showed that the relation is not statistically significant; etc.

I believe these inconsistencies are caused by two factors. First, even though the Comprehensive Model gave us some ideas about the role of social capital—generalized trust and organization membership on entrepreneurship, the effects of the individual measure of social capital are not conclusive. The statistical analysis provided unexpected outcomes about the roles of trust and voluntary organization membership: insignificance of the relationship when it should be significant and the inconsistency of the actual coefficient sign with the hypothesized sign. Second, I believe that the Comprehensive Model has a multicollinearity problem like in the Original Model because the use of the

three control variables with the individual measures of social capital did not solve the incoherence of the relationship of the control variables with the two dependent variables. I will add a third model called "Simplified Model" to address this problem by taking the most appropriate variable to measure social capital that suits this study and by solving the multicollinearity problem.

A.3. Simplified Model

Neither the Original Model nor the Comprehensive Model gave a satisfactory explanation about the effect of formal institutions and informal institutions (Social Capital—composite index of social capital, generalized trust, and voluntary organization membership as individual measures) on the formal and informal entrepreneurship. In the Simplified Measure, I will use the variable voluntary organization membership as a measure of informal institutions and combines the control variables—economic development (GDP), political stability, and control of corruption to become a composite index. The rationale about the use of the above approach is explained as follows.

A.3.1. Voluntary Organization Membership vs. Generalized Trust to Measure Social Capital for this Study

The use of a composite index constructed by the combination of the cognitive and structural social capital or the use of individual variables to measure social capital in the statistical model is common in the study of social capital. For this study, neither approach provided clear picture about the role of social capital in entrepreneurship. The composite index of social capital used in the Original Model did not provide significant findings about the relationships between entrepreneurship and informal institutions. The statistical

output shows that it does not matter to the formal or informal entrepreneurship. The use of the two individual measures of social capital [generalized trust and voluntary organizational membership in the Comprehensive Model gave mixed and unexpected findings about the effects of generalized trust and voluntary organizational membership on formal and informal entrepreneurship. For example, voluntary organizational membership did not matter for formal and informal entrepreneurship; trust was significant for formal entrepreneurship in the interaction estimation only.

For that reason, I will use one variable only to measure social capital in the Simplified Model. I will retain the variable voluntary organizational membership (percentage of population who belongs to at least one voluntary organization) as the best measure of social capital because it represents informal institutions more accurately for this study both at the conceptual level as well as at the operationalization level. It will be used to represent the informal institution as one of the main explanatory variables (formal institution is the other one) in the model to test the four hypotheses.

A.3.2. Conceptual Level

From a conceptual level, the variable voluntary organization membership is sufficient to measure social capital for this study because of its association with trust. Voluntary organization membership is often ascribed a fundamental role in the formation of social capital (Wollebaek and Selle 2002, 32). It is a source of trust and can generate and spread trust throughout the society (Putnam 1993, 1995, 2000). It has socialization effects on democratic and cooperative values and norms (Coffé and Geys 2005). It generates trust and norms of reciprocity, which spread over the whole community,

affecting even those who are not equally active in associational life (Stolle 2000). For that reason, some scholars believe that a voluntary organization membership and trust are conceptually related (e.g., Fukuyama 1995; Dasgupta and Serageldin 1999; Halpern 1999; Putnam 2000; Putnam et al. 1993). This train of thought argues that "voluntary associations form part of the social infrastructure of society that makes the generation of trust possible, and that at least makes it easier for trust relations and trusting attitudes to develop and to re-enforce themselves within the population" (Anheier and Kendall 2002, 344).

In other words, social capital has a dual nature due to the distinctness and interdependence of the concept of "voluntary organization" and "trust." From a conceptual perspective then, I believe that using "voluntary organization membership" as a measure of social capital should be sufficient and appropriate to analyze the relationship between entrepreneurship and social capital as a measure of informal institutions for this study. It is a source of social capital due to the trust and norms of network generated by it. In addition, the output from the analysis of the correlation of the two variables confirms the association of trust and voluntary organization membership.

A.3.3. Operationalization Level

The generalized trust index used in this research was constructed by computing the percentage of people who responded "most people can be trusted" to the question "generally speaking, would you say that most people can be trusted or that you can be too

careful in dealing with people?"[89] Even though this measure is probably the most widely and internationally used and the best proxy for the cognitive form of social capital making international comparison possible (Sabatini 2006), the use of generalized trust to represent social capital (as a measure of informal institution) for this study might cause a problem because it can be an indirect reflection of formal institutions quality. It is crucial to use a measure of formal and informal institutions that are not linked or related.

The generalized trust question is not specific enough to warrant that people did not include government employees, whom they interact in their daily dealings and policy makers were excluded from the word "people" when they responded to the above question. Here, "people" might mean social beings (people that "they know or they do not know, or a combination of the two), a moral being (association to institutions such as government employers, political leaders, etc.) or the combination of the two. It might be difficult to disentangle the relation between the respondents' perception of "other people" as social beings, their perceptions of the overall institutions performance, and what they mean by trust because the concepts of people as social and moral beings seem to go hand to hand at least to some extent. In other words, "trust" as a cognitive concept of social capital might represent "the individuals' perception of people's social environment, related to the particular position the interviewed people occupy in the social structure" (Sabatini 2006, 11). Therefore, I dropped "trust" from the model since it can be an indirect reflection of the formal institutions, which is already measured by formal institution—number of procedures to start a business (Mishler and Rose 2001; Newton and Norris 2000).

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[89] This question was developed by Rosenberg (1956) and used in the World Value Survey (WVS) and Afrobarometer.

Finding the best measure of informal institutions is very important for this research since I am studying the effect of institutions interaction. If one of the variables already has some connection with the other, then that will distort the analysis and might not reflect the accuracy of the findings. The use of the variable—generalized trust as a proxy measure for social capital might be problematic for this study because of its implied relationship with formal institutions. It is difficult to separate its sources, forms, and consequences (Adam and Roncevic 2003; Onyx and Bullen 2001; Sobels et al. 2001) from the formal institutions. Therefore, it is of the interest of this study to use a measure that does not have any close connection with the formal institutions as an independent variable.

The choice of the variable—organizational membership to represent social capital meets the recommendation about the necessity of determining the best proxy indicator that represents social capital depending on the purpose of the research (Collier 2002). The choice of the indicator depends on the concept to be analyzed and the construct associated with it (Narayan and Cassidy 2001; Collier 2002; Grootaert and Van Bastelaer 2002). Since, the purpose of the research is to determine the effect of individual institutions (formal and informal) and their interactions on entrepreneurship, it is important to use measures that are specific such as formal institutions (number of procedures to start a business) and voluntary organization membership but not measures that might have implicit relations such as formal institution and trust.

A.3.4. Issues with Multicollinearty in the Control Variables About Their Relation with Formal and Informal Institutions

The statistical outputs from the two previous models (Original Model and

Comprehensive Model) show some inconsistencies in the significance of p-values and the

direction of the relationship between the dependent variables (formal entrepreneurship

and informal entrepreneurship) and the three control variables used in the estimation

(level of economic development [GDP],[90] political stability, and control of corruption).

These control variables are addressed in the literature to have relationship with

entrepreneurship (e.g., Amoros 2009; Ciccone and Papaioannou 2007; Kaufman and

Kraay 2003). The use of the three variables provides a relative measure that enables

comparison across the variations of countries covered in this study. These control

variables are expected to correlate with one another because of the presence of

approximate relationship between them.

The presence of multicollinearity violates the assumption of the linear

independence of the explanatory variables. It implies that the degree of multicollinearity

leads to estimation problems such as the presence of large variances of the OLS estimates

and specification errors, which are caused by the particularity of the sample available

(Kennedy 2008). Multicollinearity is at work whenever the regression coefficients do not

correspond to the hypothesized signs; changes in regression coefficients for given

variables occur when an independent variable is dropped or added; the correlation

coefficients indicate the presence of high correlations between the explanatory variables;

or variables that are known to be important in the analysis have insignificant p-value

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[90] GDP PPP per capita.

(Kennedy 2008; Manheim and Rich 1981). These multicollinearity symptoms occurred in the Original and Comprehensive Model.

For that reason, a test of pairwise correlation was conducted to determine the level of correlation between the three control variables. The results indicate a significant, strong, and positive correlation among them. The level of economic development (GDP) was significantly and positively related to political stability ($r = 0.72$, $p < 0.00$), and control of corruption ($r = 0.85$, $p < 0.00$). Political stability exhibited positive significant relationships with control of corruption ($r = 0.85$, $p < 0.00$). In other words, the relationship among the control variables is approximately linear. The estimation is suffered by the multicollinearity problem due to the high correlation among the control variables.

To address this problem, I will form a composite index of control variable, which is one of the techniques that Kennedy (2008) suggested when dealing with multicollinearity since the three variables (level of economic development [GDP], political stability, and control of corruption) are crucial in business creation at the macro/country level (e.g., Anokhin & Schulze 2009; Fosu 1992, Kuznets 1966; Reynolds et al. 2003). He suggests that "the variables that are collinear could be grouped together to form a composite index capable of representing this group of variables by itself. Such a composite variable should be created only if the variables included in the composite have some useful combined economic interpretation; otherwise, the empirical results will have little meaning" (Kennedy 2008, 197).

I believe the formation of composite index of control variables (economic development, political stability, and control of corruption) is the best approach for this

study because it allows us to control the economic and political variables that affect entrepreneurship and institutions more effectively. It will transform the three variables in one score using factor analysis procedure. Even though the use of the unitary measures makes it difficult to interpret the individual contribution of the three control variables, it will eliminate the multicollinearity problem. The difficulty in interpreting the relative contribution of the individual variables should not matter for this study because the three variables are used as control variables but not explanatory variables. Instead, the use of the composite index facilitate the understanding of the effect of institutions on entrepreneurship because the three variables become one unit that will be held constant in order to assess or clarify the relationships between entrepreneurship and institutions.

To summarize, the Simplified Model will have the following variables. The dependent variables comprise formal entrepreneurship and informal entrepreneurship. The independent variables consist of the number of procedures to start business as a measure of formal institutions and voluntary organization membership as a measure of informal institutions. The control variables will be an index of economic and political factors that affect entrepreneurship (factor analysis score). It is a combination of the level of economic development (GDP PPP per capital), political stability, and control of corruption. The findings from the Simplified Model are robust because they are consistent in the boostrapping and multiple regression approaches. The analysis of the findings from the Simplified Model is found the Chapter II of this dissertation.

Appendix B

Summary of the Statistical Outputs from the Three Models

Summary of the Statistical Outputs from the Three Models

Variables	Model					
	Original		Comprehensive		Simplified	
	Statistical Significance	Coefficient Sign	Statistical Significance	Coefficient Sign	Statistical Significance	Coefficient Sign
H₁: Determinant of Formal Entrepreneurship (Individual Estimation)						
Formal Institution	Yes*	–	Yes*	–	Yes*	–
Social Capital Index	Yes**	–				
Economic Development	No	–	No	–		
Political Stability	No	–	No	–		
Control of Corruption	Yes*	+	Yes*	+		
Trust			No	–		
Voluntary Organization membership			Yes**	–	No	–
Political and Economic Development Index (Control Variables)					Yes**	+
H₂: Determinant of Informal Entrepreneurship (Individual Estimation)						
Formal Institution	No	+	No	+	Yes	–
Social Capital Index	Yes**	–				
Economic Development	Yes*	–	Yes*	–		
Political Stability	No	+	No	+		
Control of Corruption	Yes*	–	Yes*	–		
Trust			No	–		
Voluntary Organization membership			Yes**	+	Yes*	+
Political and Economic Development Index (Control Variables)					Yes*	–

Variables	Model					
	Original		Comprehensive		Simplified	
	Statistical Significance	Coefficient Sign	Statistical Significance	Coefficient Sign	Statistical Significance	Coefficient Sign
H_3: Determinant of Formal Entrepreneurship (Interaction Estimation)						
Formal Institution	Yes*	–	Yes*	–	Yes*	–
Social Capital Index	No	–				
Economic Development	No	–	No	–		
Political Stability	No	–	No	–		
Control of Corruption	Yes**	+	Yes*	+		
Trust			Yes*	–		
Voluntary Organization membership			Yes*	–	No	–
Political and Economic Development Index (Control Variables)					Yes*	+
Institutional Mix	No	–				
Trust and Formal Institution			Yes*	+		
Voluntary Organization and Formal Institution			Yes*	+	No	+
H_4: Determinant of Informal Entrepreneurship (Interaction Estimation)						
Formal Institution	No	+	Yes*	+	No	+
Social Capital Index	No	–				
Economic Development	Yes**	–	Yes*	–		
Political Stability	No	+	Yes**	+		
Control of Corruption	Yes*	–	Yes*	–		
Trust			No	+		
Voluntary Organization membership			No	+	No	+

Variables	Model					
	Original		Comprehensive		Simplified	
	Statistical Significance	Coefficient Sign	Statistical Significance	Coefficient Sign	Statistical Significance	Coefficient Sign
Political and Economic Development Index (Control Variables)					Yes*	−
Institutional Mix	Yes*	+				
Trust and Formal Institution			Yes**	−		
Voluntary Organization and Formal Institution			No	−	No	−

* $p < 0.05$.
** $p < 0.10$.