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# THE EFFECT OF THE GOVERNANCE ENVIRONMENT ON INTERNATIONAL BUSINESS: THREE ESSAYS

A Dissertation

By

JUN WU

Submitted to the faculty of the College of Business and Public Administration of
Old Dominion University
In Partial Fulfillment of the Requirement for the Degree of

DOCTOR OF PHILOSOPHY

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#### ABSTRACT

# THE EFFECT OF THE GOVERNANCE ENVIRONMENT ON INTERNATIONAL BUSINESS: THREE ESSAYS

JUN WU, Doctor of Philosophy, 2010

Dissertation Directed by:

Professors Shaomin Li, David D. Selover and George O. White III

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We examine how governance environment affects business activities across countries.

Using an updated framework of governance environments, we classify countries into three groups based on their dominant modes of governance: (1) rule-based (strong rule of law), (2) relation-based (weak rule of law and strong informal network based on private relations), and (3) neither-based (absence of both public rules and private network). We then examine how different governance types affect trade patterns and foreign investment flows. Chapter 2 theoretically proposes that the governance environment of a society plays a significant role in influencing international trade and foreign investment across countries. Chapter 3 examines how different governance types affect trade patterns among 44 countries. Overall, we find that rule-based countries trade more than relation-based or neither-based countries. A large positive effect on trade flows exists between two highly rule-based countries and between two relation-based countries. Any trade relationship involving a neither-based country negatively affects trade flows, even between two neither-based countries. In Chapter 4, we examine how different governance types affect foreign investment flows among 44 countries. We find that rule-based

countries attract the lowest amount of FDI relative to total amount of foreign investment, and they have the largest stock market size relative to their economies.

This thesis is among the first to introduce the third category of governance—
neither-based governance. This advancement will contribute to both the institution and
political economy literature. Using the updated framework of governance to explore trade
and foreign investment patterns of many countries, especially of those relatively
undeveloped countries, will contribute the international business literature. In addition to
academic contributions, this study provides important policy implications to those
neither-based countries. We suggest that in considering trade and foreign investment
policies, governments should pay close attention to the governance environments to
evaluate their own and their partners' situations when conducting international business
such as trade and foreign investment.

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#### Chapter 1: Introduction

Since the 1990s, more and more scholars have come to realize that institutions matter (North, 1990; DiMaggio and Powell, 1991; Scott, 1995). Institutions are "the rules of game in a society" (North, 1990: 3). Institutional environments include cognitive, normative, and regulatory structures and activities which provide stability and meaning to social behavior in a particular society (Delios, Xu and Beamish, 2005; Scott, 1995; Wan and Hoskisson, 2003; White, 2006; Xu and Shenkar, 2002). Institution is a broad and complicated concept. Shuhe Li and his colleagues (Shuhe Li, 1999; Shaomin Li, Park, and Shuhe Li, 2004) proposed a relatively concise and powerful typology of institutional governance environment—the two-category framework of governance environments (rule-based versus relation-based). However, it is too simple to categorize all governance into these two categories. This two-category framework is far enough to cover all countries (Shaomin Li, 2009).

Some countries have neither effective public ordering nor extensive social network. They cannot be categorized into neither rule-based nor relation-based governance.

Therefore, it is called neither-based<sup>1</sup> governance (Li, 2009). This dissertation builds on Li (2009) to expand the three-category framework of governance environments. We take use of institutional theory and transaction cost perspectives to interpret the theoretical logic of different governance and the role of extended particularized trust, which is the differentiator of relation-based and neither-based governance.

Since the 1990s, scholars have come to realize that institutions play an important role in many perspectives, including international business (Ederington, Levinson and

<sup>&</sup>lt;sup>1</sup> We will explain it in more detail in a later chapter and we use it with "family-based" interchangeably.

Minier, 2005), industry structure (Li et al, 2004), organizational changes (Greenwood and Hinings, 1996), strategies (Peng, 2003), and organization structures (Judge and Li, 2008). We are very interested in the influence of institutions on international business. On one side, this new third-category governance (neither-based) includes the largest number of countries and many relatively undeveloped countries belong to this group (Li, 2009). These relatively undeveloped countries will benefit a lot from international business. On the other side, there are many countries, mostly, neither-based countries, which do not conduct international business as much as rule-based and relation-based countries do. For example, on average, neither-based countries trade less than one quarter of what rule-based countries trade<sup>2</sup>. Why does this happen? Therefore, this dissertation is to explore how institutional governance environments, especially, rule-based, relation-based and neither-based governance, affect international business such as international trade and foreign investment patterns.

The rest of the dissertation is organized as follows. Chapter 2 theoretically introduces this three-category governance framework and proposes its influence on international trade and foreign investment. Chapter 3 empirically examines why some countries trade more, some trade less, and some trade almost nothing, and empirically examines how the three-category governance framework affects international trade. Similarly, we empirically examine how three-category framework explains differences in foreign investment across countries in Chapter 4.

<sup>&</sup>lt;sup>2</sup> Please see Table 3 for more detail.

# Chapter 2: Effects of Governance Environments on International Trade and Foreign Investment: A Contingency Perspective Based on Particularized Trust

#### 2.1 Introduction

Institutions are "the rules of game in a society or, more formally, are humanly devised constraints that shape human interaction", according to North (1990:3).

Institutional theory has demonstrated its power to predict organizational changes (Greenwood and Hinings, 1996), organizational strategies (Peng, 2003), the co-evolution of organizations and organizational fields (Hoffman, 1999) and also international business activities, such as international trade flows (Anderson and Marcouiller, 2002; Koukhartchouk and Maurel, 2003; De Groot, Linders, Rietveld and Subramanian, 2004; Ederington, Levinson and Minier, 2005) and foreign investment patterns (Fatchi and Safizadeh, 1989; Gastanaga, Nugent, and Pashamova, 1998; Hejazi and Safarian, 2002; Henisz, 2000; Kaufmann, Kraay, and Zoido-Lobaton, 1999; Loree and Guisinger, 1995; Wei, 2000). However, there is relatively more literature focusing on the effects of "formal institutions" namely, governmental institutions (laws and regulations), compared with literature on informal and social institutions, such as the information infrastructure, public trust and business professional institutions (e.g., accounting standards) (Shaomin Li and Filer, 2007).

The governance environment is conceptualized as the "macro social, political, legal and economic institutions that shape and constrain micro governance behavior in social, political, and economic exchanges" (Li and Filer, 2007; 82-83). It is a concept implied in North's (1990) institutional theory and includes both formal and informal social rules. A relatively concise but powerful typology of institutional governance

systems is the two-category framework of governance environments (rule-based versus relation-based), first proposed by Shuhe Li and later on expanded upon by others (Shuhe Li, 1999; Shaomin Li, Park, and Shuhe Li, 2004). When public ordering is effective and efficient, people reply on public ordering to protect their interests in social exchanges, this mechanism is called rule-based governance. By contrast, when public ordering is lacking and the enforcement of laws and regulations is not very efficient, people reply on extended social networks to protect their interests, which is called relation-based governance. However, this framework receives criticism from scholars. As Shaomin Li (2009) later acknowledges, the two categories are far from sufficient to cover all the countries in the world. What this framework left unexamined is that there are many countries that have neither effective public ordering nor extensive informal social networks. Li (2009) interacted non-rule-based governance (societies without public ordering) with particularized trust (described in detail in a later section) and advanced a third category—neither-based governance (described in detail in a later section). For instance, according to Li's (2009) new classification, Argentina, Brazil and Russia are neither highly rule-based nor highly relation-based. They belong to "neither-based" societies.

Li's (2009) interaction is very novel and creative. It gives rise to a new category of governance environment—neither-based. However, he did not explain the theoretical background of this interaction. This paper builds on his classification and tries to interpret the theoretical logic of his interaction, using institutional theory and transaction cost economies. In societies without effective public ordering, extended particularized trust, which knits people into intensive social networks, in fact, plays the role of institution and

fills the "institutional voids". Extended particularized trust, on the other hand, reduces the transaction costs among economic transactions.

Since this three-category governance framework is new, it gives rise to another gap in literature—how does the interaction of governance environment and particularized trust affect international trade and foreign investment? Or, in other words, how do rule-based, relation-based and neither-based governance affect international trade and foreign investment?

This paper will take use of institutional theory and transaction cost economies to explain the interaction of non-rule-based governance with particularized trust. By doing this, this study will contribute to the governance literature with a new category of governance. In addition, it will apply this new category of governance environment to explain international trade patterns and foreign investment flows. Therefore, this paper will add itself into literature focusing on the quality of both formal and informal institutions and also literature in explaining the different patterns of foreign trade and investment.

#### 2.2 A Framework of Governance Environments

### 2.2.1 Three-category Framework of Governance Environments

Governance is defined as a mechanism people use to protect their interests in social and economic exchanges (Li and Filer, 2007). The foundation for this definition is North's (1990) institutional theory. For example, in a society with a fair, open, and effective legal system, people will resort to the court or public arbitrations for a ruling if disputes arise. On the other hand, when the law is biased and judges are corrupt, then it

becomes more likely that people will not choose the public rules as their means of settling disputes, but will look for a private method. This institutional environment is referred to as governance environment. It is the set of political, economic, and social institutions that together facilitates or constrain the choice of governance mechanisms in a society (Li and Filer, 2007). Institutions include both formal rules and informal rules or norms. The institutional or governance environment includes institutions, organizations, and the resulting enforcement characteristics. Li, Park and Li (2004) introduced a framework that classifies the governance environment across countries into two categories—rule-based and relation-based—in terms of how people protect their property rights and contracts.

Rule-based governance environment. In most developed societies, firms and individuals primarily rely on public rules—laws and government regulations—to resolve disputes and enforce rights and contracts. This reliance on public ordering is called a rule-based environment. A rule-based governance environment must satisfy the following conditions: the public rules governing economic exchanges (such as laws, state policies, and regulations) are fairly made; the rule-making, rule-adjudication, and rule-enforcement are separate; rule-enforcement is fair and efficient; and public information infrastructure (such as accounting, auditing, and financial rating) is highly reliable and accurate. Thus, a well-functioning rule-based system requires a large investment in the legal infrastructures, including a law making body, a court system, and a credible and powerful enforcement branch, which is costly and takes a long time to build. This environment is expected to be more conducive to trade and prosperity by reducing marginal transaction costs per exchange and to promote impersonal exchange (North

1990, 2005). According to Li (2009), countries such as Finland, Sweden and the United States are examples of rule-based societies (shown in Table 1).

#### [Please insert Table 1 about here]

Relation-based governance environment. In contrast, a relation-based society has the following characteristics: public rules (laws, government policies, and government regulations) are less fair; there are no checks and balances between the legislative, judiciary, and executive branches of the government; courts and judges are controlled by the ruler(s); and public information is controlled by the state and is untrustworthy.

Another feature that is vital to relation-based society is that there exist closely knit informal networks. People tend to use these personal connections to protect themselves and to settle disputes. Because business could be conducted and governed by well-functioning social networks maintained by private players, the relation-based governance system incurs few fixed costs compared to the high fixed-cost structure of the rule-based system. This environment is expected to be more restrictive for trade, to lessen potential prosperity by increasing marginal transactions costs per exchange, and to restrict impersonal exchange (North 1990, 2005). According to Li (2009), some good examples of relation-based societies are China, Indonesia and Vietnam (shown in Table 1).

Neither-based governance environment. Li (2009) expanded the traditional framework by introducing a third category of governance environment—neither-based, also called family-based (in this study, we use them interchangeably). He argued that a country that is not rule-based may not necessarily be relation-based. In fact, there are some countries that have neither strong public rules, nor extensive informal social

networks to conduct and protect business. According to Li (2009), some examples of neither-based countries are India, Argentina and Russia (see Table 1).

#### 2.2.2 Generalized Trust and Particularized Trust

Li (2009) identifies an important factor that distinguishes relation-based from neither-based societies—the dominant type of particularized trust. Broadly speaking, there are two types of trust in terms of who people trust: generalized trust and particularized trust (Uslaner, 2002, 2004). People who hold generalized trust believe that most people, including strangers, can be trusted. When people have very little confidence or faith in strangers, they rely on people whom they know well, such as family members or close friends. Such a trust is called particularized trust. The level of particularized trust people place on different relationships varies. The closest is among the direct members of the family—spouse, parents, and children. Relatives such as in-laws, cousins, and other close kinship may be the next circle. The third circle usually includes friends, neighbors and co-workers.

Some particularized trust goes beyond family members and extends to neighbors, friends, and friends' friends. In China, for example, the *guanxi* culture knits friends and friends' friends into extended social networks. People rely on these extended informal social networks to conduct business and to protect property rights. Such countries having a relatively high level of extended particularized trust are relation-based. In contrast, societies with extremely low levels of trust, where people predominantly rely on family members to conduct business and to protect property rights, are referred to as neither-based (family-based) societies. This environment is expected to lessen potential prosperity the most by increasing marginal transactions costs per exchange and to be the

most restrictive for impersonal exchange (North 1990, 2005). The typology of governance environment is shown in Figure 1.

#### [Please insert Figure 1 about here]

#### 2.2.3 The Institutional and Transaction Cost Perspective of Governance System

Institutions include both formal and informal constraints (North, 1990). Formal constraints include political rules, judicial decisions, and economic contracts. By contrast, informal constraints include socially sanctioned norms of behavior, which are embedded in culture and ideology (Scott, 1995). In situations where formal constraints fail, informal constraints will come into play the role to reduce uncertainty and provide constancy to organizations (North, 1990).

Rule-based societies are in situation when formal constraints work. The public ordering is effective and the enforcement is efficient. In contrast with "rule-based", we can call societies when formal constraints fail "non-rule-based". In some non-rule-based societies, personal relations come into play the role of institutions, for example, *guanxi* in China (Xin and Pearce, 1996). *Guanxi* works as a substitute for formal institutional support (Xin and Pearce, 1996) and is useful in "the regulation of transactions in the absence of state institutions for that purpose" (Redding, 1990, p. 56). This idea is hardly new and has been tested a lot (Boisot, 1986; Coleman, 1993; Fallers, 1965; Putname, 1993; Riggs, 1964; Walder, 1986; Xin and Pearce, 1996).

As Li (2009) stated, the strong *guanxi* culture comes from the extended particularized trust. Take China as an example, everyone must have his or her circle of close friends to survive. The members of circles help each other in social interactions and

exchanges. In each circle, people know each other very well. The Chinese society can be viewed as consisting of numerous circles. Resource people are the ones who belong to multiple circles. Because of highly particularized trust, members in one group will trust people from another group if they are introduced by these resource people. Through this powerful introduction, one member begins to know people from another circle, and then more circles are linked together and become a broader network. This network plays the role of institution in non-rule-based societies.

The cost structures of rule-based and relation-based governance systems are different (Shuhe Li, 1999; Li et al., 2004; Shaomin Li, 2009), which is shown in Figure 2. Basically, these scholars agreed that a well functioning rule-based system requires a large investment (high fixed cost) in the legal infrastructures. Once the infrastructure is built and functioning, the incremental cost to make another transaction is minimal (low marginal cost). By contrast, in a relation-based society, business can thrive with minimal social order (low fixed cost). However, with business expands, the extra cost to make another transaction increases (high marginal cost).

From a transaction cost perspective, the rule-based system works well when the scale of economy is large, while relation-based governance works best when the economic scale is small. In neither-based societies, formal institutional is missing and there is no extended particularized trust playing the role of institution. People reply on only their nuclear family members to do business, which leads to difficulty in expanding business. The business scale is very limited and the transaction cost is high (as shown in Figure 3).

#### [Please insert Figure 2 and 3 about here]

#### 2.3 Literature Review

Recently, as the use of the institutional perspective (North, 1990) to examine social, economic, and business behavior increases, scholars in international business begin to examine how institutional quality affects international business, such as international trade and foreign investment.

On the side of international trade, Anderson and Marcouiller (2002) have been among the main contributors to extend governance environment to international trade. They examine how enforcement of the legal system affects import demands. They present evidence that corruption and poor contract enforcement in a country increases the insecurity of selling to that country, thereby reducing international trade. Koukhartchouk and Maurel (2003) introduce variables reflecting institutional quality into the analysis of potential trade effects for Central and Eastern European countries. De Groot, Linders, Rietveld and Subramanian (2004) adopt a comprehensive dataset developed by Kaufman, Kraay and Zoido-Lobaton (2002), which includes the data sources used by Anderson and Marcouiller (2002) and Koukhartchouk and Maurel (2003). De Groot et al. (2004) capture the country-specific effect of governance on trade and also examine the bilateral influence of governance similarity on patterns of trade. Li and Samsell (2009) adopt a framework of governance environment and characterize these environments (institutional matrixes) into rule-based and relation-based. They examine the effect of rule-based and relation-based governance environments on international trade flows.

Scholars have also begun to pay increasing attention to the macro environment in a society and to its effect on investment. One of the main focuses is on how different governance environments, such as the legal system, affect the willingness of investors to invest and how investments are protected. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) found that countries with better legal systems tend to have a small number and diversified investors. English and Moore (2002) found that when a firm announced its investment in a country with ambiguous property rights, its stock value actually was affected negatively. Globerman and Shapiro (2003) found that governance infrastructure--including the nature of the legal system -- is an important determinant of FDI. Specifically, countries with a more impartial and transparent legal system and better protection of property rights tend to attract more FDI; countries lacking a good legal system and adequate protection of property rights attract less FDI. Li and Filer (2007) are among the first to examine the effect of governance environments on the variation of FDI and FPI (Foreign Portfolio Investment). They used a relatively new framework of governance environment, rule-based and relation-based and found that in countries with a weak rule-based governance environment, investors prefer direct investment to indirect investment, because the former can be better protected by private means.

These studies provide valuable insights into the powerful influence of the quality of a country's institutions on international trade or foreign investment. However, they focus on formal institutions and ignore the influence of "informal rules". Furthermore, these studies do not distinguish between institutional environments that promote trade and foreign investment and those that do not. Based on this argument, this paper will use

the latest three-category framework of governance environments to analyze difference in trade and foreign investment across countries.

Besides, this three-category framework is advanced by interacting particularized trust with non-rule-based governance. Since extended or nuclear particularized trust is the differentiator of relation-based and neither-based societies, trust will come to play roles in international trade and foreign investment. In fact, there is a very few studies exploring the role of trust in international business. Bhardwaj, Dietz and Beamish (2007) are among the first. They argued that higher levels of trust facilitates relationships and reduces perceptions of transaction costs and thereby attracts FDI. Thus, countries with higher levels of trust should attract more inward FDI. However, their empirical results did not support this statement. The main reason of their failure is that they did not distinguish between generalized trust and particularized trust, or in the other words, trust most people or trust only those one know well. "Interpersonal trust" they argued, in fact, is particularized trust. However, they used generalized trust level of a country to make their empirical analysis. Our paper distinguishes generalized trust and particularized trust. We believe that it is generalized trust differentiating relation-based and neither-based societies and we also argue that extended particularized trust will reduce transaction costs of a society, and therefore plays a role in international trade and foreign investment.

#### 2.4 Theory and Propositions

#### 2.4.1 Entry barriers for outsiders

Firms selling goods to a foreign country face many barriers, including tariffs, quotas, restrictive laws and regulations, and other informal constraints (Hill, 2005). As

we stated in the former section, in rule-based societies, the trade laws and regulations are relatively clear, effective, and universally applied. Both outsiders and insiders are subject to the same requirements and procedures to apply for trading rights or permits. Both them can acquire this information from public channels and sources.

By contrast, the situation in non-rule-based societies will be greatly different. In non-rule-based societies, the public ordering is less clear and less fair and the enforcement tends to be corrupt and inefficient. Given institutions as "the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction" (North, 1990: 3), and institutional framework as "the set of fundamental political, social, and legal ground rules that established the basis of production, exchange, and distribution", lacking of public ordering is called "the institutional voids" by Khanna and Palepu (1997).

In relation-based societies, or societies with extended particularized trust, people trust not only their family members, but also their neighbors, friends and friends' friends. For instance, Tang (2005) found that the most important trust sources of Chinese are neighbors and friends, rather than only one's own family. In China, the *guanxi* culture is very strong. Everyone must have his or her circle of close friends. Extend particularized trust knit different circles into an informal social network (Li and Wu, 2010). People reply on this extended informal social network to conduct social interactions and exchanges. This informal social network plays the role to fill the institutional voids.

Insiders have extended particularized trust with each other and tightly knit with each other through informal networks. These networks are very powerful. If one person

cheats another one in his/her circle, he/she will be kicked out from this circle and furthermore from the entire network. This strong deterrence will ensure that he/she will not cheat. Because the "behavioral repertoires (in high trust societies) are based towards cooperation, rather than opportunism" (Hill 1990: 511), trust play the ex-ante role to reduce the opportunism (Bradach and Eccles, 1989). In addition, trust also enhances expost efficiency (Arrow, 1974; Ouchi, 1981; La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1997) by lowering costs, such as monitoring cost and costs due to opportunistic behavior by agencies.

On the other side, outsiders are totally different from both institutional and transaction cost perspectives. For outsiders, they still face the situation institutional voids. They have nothing to rely on to conduct their business and protect their property rights. Because they are out of contact from any circle or network, they cannot get trust from insiders. As a result, they face higher transaction cost such as monitoring costs and costs due to opportunist behavior.

Neither-based societies, according to Li (2009), are those societies lacking of both effective public orderings and extended particularized trust. Because of lacking effective public ordering, neither-based societies are also in the situation of institutional voids.

People tend to trust their family members only to conduct business transactions and protect their interests. Insiders will be limited to a small group of family members.

If foreign countries who want to trade with focal countries, is just like outsiders want to do business with the insiders. In rule-based societies, the trade laws and regulations are relatively clear, effective, and universally applied. Both outsiders and

insiders are subject to the same requirements and procedures to apply for trading rights or permits. In relation-based countries, laws and regulations regarding trade are opaque and applied differently depending on the relationship of the prospective trader within the authorities. Outsiders find it is difficult to break in because developing relationships are costly. Even worse, neither-based societies are more restrictive than relation-based because the economic cooperation is limited to family members only.

From a transaction cost perspective, rule-based governance works best when the economic scale is large while relation-based governance works best when the economic scale is small (shown in Figure 3). Thus, it will be easier to sell to rule-based than to relation-based governance societies. With extended particularized trust, relations are based towards cooperation, rather than opportunism. Trust is associated with expectations of reduced opportunism by others (Bradach and Eccles, 1989). Perceptions of monitoring costs are likely lower in societies with extended particularized trust than societies with nuclear particularized trust (Bhardwaj, Dietz and Beamish, 2007).

Based on these arguments, we argue that:

P1: It is the least difficult (least costly) to trade with rule-based countries. .

P2: It is the most difficult (most costly) to trade with non-rule-based countries without extended particularized trust (neither-based countries).

#### 2.4.2 Protection types outsiders may resort to: FDI vs. FPI

As we stated in a former section, direct investment allows an investor to govern his/her own assets and thus direct investment is easier for investors to protect than portfolio investment. Rule-based societies have well-established information

infrastructure, fair and efficient public ordering and effective enforcement systems. If only from the perspective of protection, there is no difference between direct investment and portfolio investment to foreign investors.

Non-rule-based societies (both relation-based and neither-based societies) are in the situation of institutional voids. Foreign investors do not have fair public ordering, transparent information infrastructure and effective enforcement systems to rely on and protect their investment. From institutional theory, investors make investment into non-rule-based countries will be more likely to choose direct investment.

In fact, Bhardwa, Dietz and Beamish (2007) argued that there is positive relationship between FDI and trust level in a country. They argued that trust leads to "spontaneous sociability" (Fukuyama, 1995: 29) and enables individuals and firms to form cooperative relationships. Spontaneous sociality also enhances the speed of relationship formation and reduces the opportunism. Furthermore, because of high trust, the perception of monitoring costs is likely lower. In addition to providing ex-ante attractions to foreign investors, trust also enhances the ex-post efficiency by lowering monitoring cost and costs due to opportunist behavior. The trust they proposed, in fact, is particularized trust. Follow them, we believe that highly particularized trust can enable spontaneous sociability, enhance relationship formation and reduce opportunism, and thus trust can low monitoring cost. Therefore, we argue that when foreign investors make investment to societies with extend particularized trust (relation-based societies) they are more likely to choose FDI.

<sup>&</sup>lt;sup>3</sup> They did not distinguish particularized trust and generalized trust. The trust they proposed, in fact, is particularized trust. But they use generalized trust to measure it, which is one of the reasons that their statement is supported only partially.

One of the reasons that the argument of Bhardwa et al. (2007) is only partially supported is because they did not distinguish different types of countries. As we argued in the former paragraph, countries with extended particularized trust will attract FDI. However, in neither-based governance, the particularized trust level is very low, but because of institutional voids, foreign investors are more likely to choose foreign direct investment to protect their investment. In other words, in neither-based countries, the particularized trust is low, but the FDI ratio is high. Therefore, there is a negative relationship between trust level and relatively FDI ratio in some countries (neither-based countries), which is opposite to their argument. In fact, different from relation-based countries, where particularized trust comes to play the role of institution, neither-based countries are in absolutely institution voids. When investors make investment into neither-based countries, they are more likely to choose FDI to take their investment under control and furthermore providing protection, compared to when they make investment into relation-based countries. Based on these arguments, we would like to propose that:

P3: It is the most likely for foreign investors to choose foreign direct investment when they invest into non-rule-based countries without extended particularized trust (neither-based countries).

P4: It is the least likely for foreign investors to choose foreign direct investment when they invest into rule-based countries.

A summary of our theoretical propositions is located in Table 2 and the theoretical framework can be seen from Figure 4.

[Please insert Table 2 and Figure 4 about here]

#### 2.5 Concluding Remarks

This study applies a framework of governance environments to explain differences in international trade and foreign investment across countries. Institutional theory plays an important role in predicting industrial and corporate practices (e.g. Greenwood and Hinings, 1996; Hoffman, 1999; Peng, 2003). A relatively concise but powerful typology of institutional governance systems in institutional and political economy literature is a dichotomy between rule-based and relation-based governance. However, this dichotomy leaves some countries unexamined (Li, 2009). Li (2009) interacted non-rule-based governance with extended particularized trust and advanced a third category of governance—neither-based. This paper interprets this governance from transaction cost and institutional perspectives and introduces its difference from rule-based and relation-based societies. In relation-based societies, extended particularized trust knit people into thick social network which plays the role of institution. Because of extended particularized trust, relations are based on cooperation, rather than opportunism which also reduce transaction costs. Neither-based societies lack of extended particularized trust, therefore transaction costs will be higher.

Besides, this paper applies this three-category governance environment framework to explain differences in international trade and foreign investment and puts forward four propositions. Basically, we argue that rule-based societies are the easiest to enter for outsiders (making international trade), relation-based societies are the next easiest, and neither-based societies are the most difficult to enter. Similarly, foreign investors are most likely to choose foreign direct investment when they invest in neither-

based societies and are least likely to choose foreign direct investment when they invest into rule-based societies, compared to when they invest into relation-based societies.

This paper is among the first to introduce this third category of governance—
neither-based governance. This advancement will contribute to the institution and
political economy literature. Present literatures ignore neither-based societies or mix
neither-based societies with relation-based societies. In fact, there are a large number of
countries which have neither efficient public ordering nor a thick social network. To a
large extent, most of these countries are relatively less developed and are in greatest need
to promote their international trade and attract foreign investment.

This study provides important policy implications for those neither-based countries, in addition to the contributions to the literature. We suggest that when making international trade, in considering trade policies, governments should pay close attention to the governance environments to evaluate their own and their trading partners' situations. When making foreign investment, investors should consider governance environments carefully to choose their investment mode and protect their investment. The implication is that countries with low levels of international trade that are trying to promote trade must not only evaluate their trade policies, but also evaluate their governance environment. Similarly, countries with low levels of foreign investment must evaluate their governance environment. A policy can be changed relatively quickly, but it will take much longer to change the governance environment, especially its cultural components such as trust. This is a fact that both the government and the multinational companies must realize and be prepared to deal with.

Chapter 3: Why Some Countries Trade More, Some Trade Less, Some Trade Almost Nothing: The Effect of the Governance Environments on Trade Flows

#### 3.1 Introduction

There are extensive studies about the importance of international trade in economic development by both scholars and policy makers who have convincingly shown that freer trade leads to higher welfare for a country. However, an unsolved yet important issue ever lingering in this area is why some countries trade more than others even after taking economic development and trade policy into consideration. Indeed this question has motivated many scholars of trade to search for answers. Recently, Li and Samsell (2009) used a relatively new framework of governance environment which classifies countries into rule-based and relation-based environment to examine its effect on trade flows and found that rule-based countries have larger trade flows than relation-based countries.

While Li and Samsell (2009) made a contribution in bringing the governance environment into the model predicting trade flows, a major drawback of their governance framework is that it is limited to two types of countries in the world: rule-based and relation-based. As Li (2009) later acknowledges, the two categories are far from exhaustive to cover all the countries in the world. Countries that have strong public ordering (i.e. rule-based) usually are the ones with mature market systems and advanced democracy, such as the United States and Western European countries. Countries that lack public ordering and yet have extensive informal (privately ordered) social networks (relation-based) include many Asian countries such as China, Taiwan, and Indonesia. Left unexamined in the Li-Samsell framework is many countries that have neither public

ordering nor extensive informal social networks. For instance, according to Li's (2009) new classification, Argentina, Brazil, and Russia are neither highly rule-based nor relation-based. Many of the least developed countries, such as some of the low-income African countries, may also belong to this "neither" category. As a matter of fact, this group includes the largest number of countries, but gets relatively little attention from both policy makers and academic scholars. More importantly, these countries can benefit significantly from increased trade, as shown in the following statistics.

If we group trade volume according to the more updated governance classification by Li (2009) (namely, rule-based, relation-based, and neither-based), we can clearly see that some significant differences exist among the three types of countries (see Table 3). The most striking fact is that the average trade volume per capita of neither-based countries is the lowest, and the gap between them and their rule-based and relation-based counterparts is substantial. Rule-based countries trade three and 10 times more than relation-based and neither-based countries, respectively.

#### [Please insert Table 3 about here]

Why do the neither-based countries trade so little? Is it because of their low economic development level, their geography, and culture, as the previous literature suggests, or does the governance environment play a role? If the governance environment plays a role, why is it so?

To attempt to fill these gaps in the literature, we adopt the new classification of governance environments developed by Li (2009) to explain why some countries trade more, some trade less, and some other countries trade almost nothing with other countries.

### 3.2 Theory Development and Hypotheses

#### 3.2.1 The literature on trade flow

Scholars and policy makers have long recognized the importance of international trade. Smith's (1776) absolute advantage theory, Ricardo's (1817) comparative advantage theory - later refined by Heckscher (1919) and Ohlin (1933) - establish the theoretical foundation for productivity and prosperity increases resulting from specialization and free trade. In the 1980s, these free trade theories were challenged by the so-called new trade theorists, who argued that in highly concentrated industries where increasing returns to scale exist at a global level, the benefit of government intervention may outweigh the cost for a country. However, even the new trade theorists recognized the difficulty of applying such a theory and concluded that free trade still seems to be the best policy choice (e.g. Krugman, 1987).

Empirically, numerous studies have provided evidence to support various trade theories. The explanatory factors from these studies are summarized in Markusen, Melvin, Kaempfer and Maskus (1995) and include differences in production functions, differences in factor endowments, returns to scale, differences in consumer tastes and preferences, and market distortions. Studies somewhat related to the governance environment effect on trade tend to examine the distortive effects of taxes, quotas, and subsidies. Examples of these studies include Melvin (1970, 1979, 1982), Magee (1971), and Parry (2001).

What is conspicuously missing from the earlier empirical study on the trade flows is how the institutional environment of a country affects the trade flows to and from the country.

More recently, as the use of the institutional perspective (North, 1990) to examine social, economic, and business behavior increases and offers insights in studies of international business behavior and outcome, trade scholars begin to examine how institutional quality affects trade. Anderson and Marcouiller (2002) have been among the main contributors to extend governance environment to international trade. They examine how enforcement of the legal system affects import demands. They present evidence that corruption and poor contract enforcement in a country increases the insecurity of selling to that country, thereby reducing international trade. Koukhartchouk and Maurel (2003) introduce variables reflecting institutional quality into the analysis of potential trade effects for Central and Eastern European countries. De Groot, Linders, Rietveld and Subramanian (2004) adopt a comprehensive dataset developed by Kaufman, Kraay and Zoido-Lobaton (2002), which includes the data sources used by Anderson and Marcouiller (2002) and Koukhartchouk and Maurel (2003). De Groot et al. (2004) capture the country-specific effect of governance on trade and also examine the bilateral influence of governance similarity on patterns of trade.

Li and Samsell (2009) acknowledge that these studies provide valuable insights into the powerful influence of the quality of a country's institutions on trade. But they also argue that these studies focus on formal institutions and ignore the influence of "informal rules". Furthermore, these studies do not distinguish between institutional environments that promote trade and those that do not. Based on these arguments, Li and

Samsell (2009) adopt a framework of governance environment and characterize these environments (institutional matrixes) into rule-based and relation-based. They examine the effect of rule-based and relation-based governance environments on international trade flows.

This paper builds on Li and Samsell's (2009) study and uses a more recently developed framework of governance environment, distinguishing not only rule-based and relation-based environments, but also characterizing those environments that are neither rule-based nor relation-based. We use this new framework to examine the effect of these newly characterized environments on international trade flows.

#### 3.2.2 Governance environments

Governance is defined as a mechanism people use to protect their interests in social and economic exchanges (Li and Filer, 2007). The foundation for this definition is North's (1990) institutional theory. For example, in a society with a fair, open, and effective legal system, people will resort to the court or public arbitrations for a ruling if disputes arise. On the other hand, when the law is biased and judges are corrupt, then it becomes more likely that people will not choose the public rules as their means of settling disputes. It becomes more likely they will look for a private way to solve exchange disputes. This institutional environment is referred to as governance environment. It is the set of political, economic, and social institutions that facilitate or constrain the choice of governance mechanisms in a society (Li and Filer, 2007). Institutions include both formal rules and informal rules or norms. The institutional or governance environment includes institutions, organizations, and the resulting

enforcement characteristics. Scholars have begun to pay attention to how institutional environments affect economic growth (Keefer and Knack, 1997).

Li, Park and Li (2004) introduced a framework that classifies the governance environment across countries into two categories—rule-based and relation-based—in terms of how people protect their property rights and contracts.

Rule-based governance environment. In most developed societies, firms and individuals primarily rely on public rules—laws and government regulations—to resolve disputes and enforce rights and contracts. This reliance on public ordering is called a rule-based environment. A rule-based governance environment must satisfy the following conditions: the public rules governing economic exchanges (such as laws, state policies, and regulations) are fairly made; the rule-making, rule-adjudication, and rule-enforcement are separate; rule-enforcement is fair and efficient; and public information infrastructure (such as accounting, auditing, and financial rating) is highly reliable and accurate. Thus, a well-functioning rule-based system requires a large investment in the legal infrastructures, including a law making body, a court system, and a credible and powerful enforcement branch, which is costly and takes a long time to build. This environment is expected to be more conducive to trade and prosperity by reducing marginal transaction costs per exchange and to promote impersonal exchange (North 1990, 2005).

Relation-based governance environment. In contrast, a relation-based society has the following characteristics: public rules (laws, government policies, and government regulations) are less fair; there are no checks and balances between the

legislative, judiciary, and executive branches of the government; courts and judges are controlled by the ruler(s); and public information is controlled by the state and is untrustworthy. Another feature that is vital to relation-based society is that there exist closely knit informal networks. People tend to use these personal connections to protect themselves and to settle disputes. Because business could be conducted and governed by well-functioning social networks maintained by private players, the relation-based governance system incurs few fixed costs compared to the cost structure of the rule-based system. This environment is expected to be more restrictive for trade, to lessen potential prosperity by increasing marginal transactions costs per exchange, and to restrict impersonal exchange (North 1990, 2005).

Neither-based governance environment. Li (2009) expanded the traditional framework by introducing a third category of governance environment—neither-based, also called family-based (in this study, we use them interchangeably). He argued that a country that is not rule-based may not necessarily be relation-based. In fact, there are some countries that have neither strong public rules, nor extensive informal social networks to conduct and protect business. Li (2009) identifies an important factor that distinguishes relation-based with neither-based societies—which is the dominant type of particularized trust.

Broadly speaking, there are two types of trust in terms of who people trust:

generalized trust and particularized trust. People who hold generalized trust believe that
most people, including strangers, can be trusted. When people have very little confidence
or faith in strangers, they rely on people whom they know well, such as family members
or close friends. Such a trust is called particularized trust. The level of particularized

trust people place on different relationships varies. The closest is among the direct members of the family--spouse, parents, and children. Relatives such as in-laws, cousins, and other close kinship may be the next circle. The third circle usually includes friends, neighbors and co-workers.

Some particularized trust goes beyond family members and extends to neighbors, friends, and friends' friends. In China, for example, the guanxi culture knits friends and friends' friends into extended social networks. People rely on these extended informal social networks to conduct business and to protect property rights. Countries having a relatively high level of extended particularized trust are relation-based. In contrast, societies with extremely low levels of trust, where people predominantly rely on family members to conduct business and to protect property rights, are referred to as neither-based (family-based) societies. This environment is expected to lessen potential prosperity the most by increasing marginal transactions costs per exchange and to be the most restrictive for impersonal exchange (North 1990, 2005), and thus to be the most restrictive for trade.

## 3.2.3 Trade flow and governance environment

Firms selling goods to a foreign country face many barriers, including tariffs, quotas, restrictive laws and regulations, and other informal constraints (Hill, 2005). In rule-based societies, the trade laws and regulations are relatively clear, effective, and universally applied. Different from relation-based environments, both outsiders and insiders are subject to the same requirements and procedures to apply for trading rights or permits. Besides, the cost structure of rule-based societies—high fixed costs and low marginal costs—encourages more participants in trade. Dixit (2003) shows that private

enforcement (relation-based) "prevails only in a sufficiently small world". External enforcement (rule-based) "is useful only if the world is sufficiently large".

By comparison, laws and regulations regarding trade in relation-based societies are opaque and applied differently depending on the relationship of the prospective trader within the authorities. According to Li et al. (2004), relation-based economies are characterized by closed market sectors dominated by insiders, and outsiders find it is difficult to break in because developing relationships are costly.

Similarly, in neither-based countries, people do not have too much confidence or faith in anyone. But in order to conduct business, they have to rely on someone, usually family members. Thus, neither-based governance is more restrictive than relation-based because the economic cooperation is limited to family members only (tending to limit trade to personal trade), which is not usually the most efficient choice (Li, 2009).

Comparing the three types of governance environment and their effects on trade flows, we hypothesize as follows:

H1: Rule-based countries have more international trade than relation-based and family-based countries.

The above differences between rule-based and relation-based countries lead to different levels of difficulty (marginal cost) in trade. The opaque laws and regulations that favor insiders in relation-based society make relation-based markets difficult for outsiders to enter, whereas the transparency and universal application of laws and regulations in rule-based markets ensure a more level playing field for both inside and outside traders. Li and Samsell (2009) find that it is less costly for a trader from a

relation-based country to enter a rule-based market than vice versa. In this study, we will retest this argument.

**H2**: It is easier (less costly) for a relation-based country to export to a rule-based country than vice versa, so relation-based countries export more to rule-based countries than to other relation-based countries.

De Groot et al. (2004) argue that countries tend to trade with countries with similar institutional framework, because the time and costs of learning new rules and regulations (marginal costs) are minimal for those partner countries that have similar institutions. Li and Samsell (2009) find empirical evidence that countries with a larger gap in the scores of governance environment index (GEI, see the detailed explanation in the method section) or that have less similar governance environments tend to trade less. But they argue that it does not mean that countries with more similar institutions trade more. To resolve this issue, we retest this argument in this study.

H3: Countries with more similar governance environments trade more with one another than countries with more dissimilar governance environments, ceteris paribus.

As Li and Samsell (2009) point out, De Groot et al.'s (2004) findings are only partially true. The marginal transaction costs (learning, information, enforcement) between rule-based countries tend to be low, but not between relation-based, or neither-based trading partners. Once again, trading laws and regulations in rule-based societies are clear, effective, and universally applied. While the forms of checks and balance may vary, they all share some key commonalities, which help to reduce marginal transaction costs between their partners. However, different relation-based societies may resort to

totally different types of relation-based governance mechanisms. It is difficult for outsiders to break in. Thus, even though two countries both have relation-based environments, the marginal transaction cost may be still high. It takes a long time and great effort to build relationships. Meanwhile, a trader's good relationship with some powerful players in one country can not be transferred to another relation-based country, although a trader's experience in cultivating private relationships with powerful players in a relation-based country may help him or her to do the same in new relation-based economies. Similarly, people in neither-based societies resort to family members in order to protect their interest or to conduct business. This governance mechanism is even more difficult for outsiders to enter than the relation-based governance mechanism. Therefore, we argue that:

H4: Trade flows between two highly rule-based countries are greater than trade flows between two highly relation-based countries (as well as between two highly neither-based countries), ceteris paribus.

**H5:** Trade flows between two highly relation-based countries are greater than trade flows between highly neither-based countries, ceteris paribus.

Informal rules such as social norms are an important part of the institutional environment of a society. Social norms promoting honesty and trust reduce transaction costs and promote exchange (North 2005). Trust is an important determinant of cooperation between strangers in a society and therefore of performance of social institutions. Trust is also particularly important for the performance of large organizations (La Porta, Lopez-de-Silances, Shleifer and Vishny, 1996). Lack of trust could bring some

negative effects. From the perspective of political system, a higher level of generalized trust means that people have confidence that others will abide the rule of law and cooperate in maintaining it. This will make a pluralistic political system such as democracy work more efficiently. However, the lack of generalized trust creates more friction in the political and economic activities in a country, which, in turn, makes economic activities less efficient (Li, 2009). Li and Wu (2010) found that high levels of trust in a society could help to mitigate the negative effect of corruption on economic development. In a society with a high trust level, corrupt officials feel comfortable to accept bribes from almost everyone. If officials deliver goods to people with the highest bribe, it is likely to be "efficiency improving" corruption, because this briber usually is the most efficient one so that he/she can offer the highest bribe. When the society lacks trust, corrupt officials limit bribery to their families and close friends, who usually are not the most efficient economic players. Similarly, neither-based societies are characterized by a lack of extended particularized trust. Because of the lack of trust, economic cooperation is limited to a much smaller number of people (maybe family members only), which usually are not the most efficient choices. Thus, we argue that

**H6**: All other things being equal, it is most difficult (most costly) to trade with a family-based country.

#### 3.3 Methods

In this section, we will introduce how data is collected, how variables are measured, and how data is analyzed.

#### 3.3.1 Measuring governance environment

The Governance Environment Index (GEI) developed by Li and Filer (2007) consists of five indicators: political rights; rule of law; quality of accounting standards; free flow of information; and public trust. Each of the five components of the GEI is standardized to a mean of zero and a standard deviation (SD) of one by subtracting the mean from the value and then dividing by the SD of the values. The standardized components are then summed to calculate the GEI for each country. A high GEI indicates a country is more rule-based, while a low GEI indicates a country is more relation-based. Li and Filer calculated the GEI for 44 countries for which all the five indicators are available.

Li (2009) updated Li and Filer's (2007) GEI index and further improved their classification into three categories (rule-based, relation-based, and neither-based societics) with the addition of particularized trust. Li used the same five indicators but with data for 2005 and 2006. Similar to Li and Filer (2007), he calculated the GEI for 45 countries for which all of the five indicators are available (See Table 4). On Table 4 there are 22 countries which have positive GEI index scores and 23 countries which have negative GEI index scores. Since the average GEI is 0, a positive GEI country can be roughly thought as rule-based, and a negative GEI score means the country is less rule-based. However, it does not mean that it must be relation-based (Li, 2009). Some countries may be governed by extensive informal social networks. Some may have neither public rules, nor extensive informal social networks. Li (2009) recognizes a key indicator that can distinguish more-relation-based with non-relation-based countries—the trust level in a country.

By examining the dominant type of particularized trust, Li (2009) distinguishes relation-based countries from non-relation-based countries. He performs a cluster analysis of countries with negative GEI scores by using criteria including generalized trust, indicators trust of family, friends, and people one meets for the first time. The result of the cluster analysis is shown in Table 5.

## [Please insert Table 4 and Table 5 about here]

On average, as compared to those in Cluster 2, Cluster 1 countries have (1) a higher level of generalized trust; (2) a slightly lower level of trust on family, and (3) a higher level of trust on neighborhood and people one meets for the first time. They fit our description of a relation-based country. In comparison, Cluster 2 countries have slightly higher trust on family and lower trust on other trust measures. These are countries in which most people do not rely on public rules or extended private relations.

Li (2009) also confirmed this clustering pattern by simply ranking these countries by one of the most discriminating trust questions from World Value Survey 2005, Question V47, "Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?" Relation-based countries have a higher percentage of respondents who believe that people try to be fair (see Table 6).

# [Please insert Table 6 about here]

## 3.3.2 Data on Trade flows

Following Li and Samsell (2009), we include all the countries for which the GEI is available in our empirical analysis (45 countries; see Table 2). As can be seen from Table 2, these countries represent a mix of countries with different development levels from all

major continents without systematic biases toward countries of a certain development level or geographic concentration. We collected the trade data from the United Nations Comtrade Statistics Database (United Nations, 2009). Import is the total volume of imports in US dollars to the importing country (I) from the exporting country (E). Imports are averaged by country for only the available data for the years 2005, 2006, 2007, and 2008. The averaging is to minimize the effect of any reporting deficiencies and fluctuations in the data. The UN Comtrade database does not include data for Taiwan, leaving 44 countries. The bilateral trade flows among 44 countries would generate 1892 (44×43) possible trade relationships. There are seven cases of no trade relationships, leaving 1885 observations of imports flows between two countries.

#### 3.2.3 Estimation Model

Following Li and Samsell (2009), we use an OLS gravity model with commonly used country-specific variables to estimate the country-specific GEI effect and the effect of trading partners' GEIs. This method allows us to use the country-specific GEIs for both the importing and exporting countries, which is the main interest of our study, while controlling for the effects of the factors that were found to influence trade flows in the literature. We use the gravity model from Rose, Lockwood and Quah (2000) specified generally as follows:

$$\ln(X_{ii}) = \beta_0 + \beta_1 \ln(Y_i Y_i) + \beta_2 \ln(Y_i Y_i / P_i P_i) + \beta_3 \ln D_{ii} + \beta_n Gov_n + \beta_m Factor_m + \varepsilon_{ii}$$

where i and j denote the reporting and partner countries. The variables are defined as:  $X_{ij}$  is the bilateral trade between the reporting and partner countries, Y is real GDP, P is population,  $D_{ij}$  is the distance between the reporting and partner countries, Gov<sub>n</sub> are

governance environment measures, and Factor<sub>m</sub> are the other control variables listed in the earlier section and more fully described in Table 7.

[Please insert Table 7 about here]

## 3.4 Findings

We first calculate simple statistics and run a correlation matrix (see Table 8) for all independent variables in order to identify any high correlations that may cause multicollinearity. The highest correlation is between GEI and the log of GDP per capita, which is about .74. The Variance Inflation Factor (VIF) is calculated for each independent variable to test for multicollinearity. All VIF values are well below the cutoff of 10 which suggests possible harmful multicollinearity (Kennedy, 2003), and so we rule out any multicollinearity concerns.

# [Please insert Table 8 and 9 about here]

Table 9 summarizes our data analysis using six model specifications with different GEI variables (Model 1 to Model 3d, which will be explained in more detail below). The R-squared for these models ranges from 0.673 to 0.704, and the F-statistics range from 182.7 to 268.3 and are statistically significant (p<.001), indicating that the models fit the data quite well. To facilitate our discussion of the results, below we will present our data analysis model by model.

Model 1 uses the importer's (receiver) GEI labeled RGEI and the exporter's (partner) GEI labeled PGEI to estimate the OLS model. The coefficients for RGEI and PGEI are both positive and highly significant (at the p<0.001 levels), strongly supporting H1 that rule-based countries trade more.

Model 2 uses the absolute gap (ABSGAP) between the GEIs of the trading countries' (the importer's and the exporter's). The coefficient estimate for ABSGAP is positive but not significant. Thus H3 is not supported. This is an important finding because it shows that the original classification of governance environment into two dichotomous groups may not capture all the major effects of governance environment on trade patterns. While GEI can distinguish countries with strong public ordering with high GEI scores (i.e. rule-based) from the countries with absence of strong public rules (low GEI scores), it cannot separate the countries with low GEI scores further into relation-based and neither-based countries, which may have different trade flow patterns. A new dimension may be needed to distinguish the two so that we can examine how the difference affects trade flows, which is the main purpose of our study, namely, to overcome the drawback of previous studies that argued that countries with similar institutional environments tend to trade more (De Groot et al., 2004), or countries with different institutional environments tend to trade less (Li and Samsell, 2009). Our findings show that their arguments are only partially true.

Model 3 uses nine combinations of GEI relationships between the three types of trade partner countries. The first three letters denote the exporting country's type and the later three letters designate the governance type of the importing country. Among them, "Rul" means rule-based countries, "Rel" means relation-based countries, and "Fam" means family-based countries. For example, "RulRel" means trade flows from rule-based countries to relation-based countries. "FamRul" indicates trade flows from family-based countries to rule-based countries. We use the unlabelled middle countries as the default category.

We further test the sensitivity of Model 3 using various GEI cutoff points defined as the number of standard deviations (SD) (with one SD=3.40) centered on the mean (which is -0.01). For example, Model 3 use 0.75 SD as the cutoff point (i.e., excluding the middle segment between the 0.75 SD cutoff points and retaining the observations in the two tails, with the top tail (0.375 SD above the mean) labeled as rule-based countries and the bottom tail (0.375 SD below the mean) as relation-based). This yields 56 percent of the observations in the middle with 44 percent of the observations in the two tails. As can be seen from Table 7, the cutoffs include 0.50 (SD), 0.75 (SD), 1.00 (SD) and 1.50 (SD), showing in the Model 3a, Model 3, Model 3c and Model 3d. Model 3a has the largest number of rule-based countries along with the largest number of relation-based countries, and the fewest neither-based countries. Model 3d has the fewest number (but the strongest) of rule-based countries, and the most neither-based countries.

Throughout the four models, the coefficient estimates for RulRul, RulRel, RelRul, and RelRel are all positive and significant. The effects of other combinations of governance types that involve a family-based (or neither-based) (i.e., whether importing from family-based countries or exporting to family-based countries, including RulFam, RelFam, FamRul, FamRel and FamRel) on trade flows are all negative and highly significant. These results provide strong support for **H6** that trade is difficult (more costly) with family-based countries.

The coefficient estimates for RulRel and RelRul in all four models are positive and significant, and there is no significant difference between the coefficient estimates for RelRul and RulRel in Models 3a and 3, implying that that the governance-related

marginal trading costs are similar for relation-based countries selling (exporting) to rule-based countries and the other way around. However there is a larger difference in Models 3c and 3d which include the strongest rule-based countries and the strongest relation-based countries. Therefore, H2 is only supported in Models 3b and 3c.

Interestingly, this finding is not consistent with Li and Samsell (2009). Li and Samsell (2009) found that the governance-related costs are different between RulRel and RelRul; the coefficient was positive for RulRel and negative for RelRul. But their finding was based on a misclassified relation-based group for they inappropriately included neither-based countries in the former. The difference they captured was actually caused by the neither-based countries. Now once we distinguish these three groups, the cost difference between rule-based to relation-based and relation-based to rule-based is only different for the strongest rule-based countries versus the strongest relation-based countries.

H4 and H5 argue that trade flows between two highly rule-based countries will be greater than trade flows between two relation-based countries or two neither-based countries. Again, the coefficient estimate for RulRul is positive and highly significant (p<0.001). In all four models (Model 3a, 3, 3c and 3d), RelRel are positive and significant. However, contrary to the findings by Li and Samsell (2009), there is no substantial difference between the coefficient estimates of RulRul and RelRel in Models 3a and 3, but the difference is substantial in Models 3c and 3d. In other words, the effects of the governance environment on trade flows are both positive and strong between two rule-based countries or between two relation-based countries; but the effects are most positive and significant for trade between the strongest rule-based countries. Thus H4 is only supported in Models 3c and 3d which include only the strongest rule-based countries

and the strongest relation-based countries. Once again, when we separate neither-based countries from the relation-based group, the difference between rule-based and relation-based countries becomes trivial in Models 3a and 3. In all four models (Model 3a, 3, 3c and 3d), FamFam are all negative and significant, lending strong support for H5.

#### 3.5 Discussion and Conclusions

Recently scholars have begun to use the characteristics of the institutional or governance environment to examine trade flows. Li and Samsell (2009) bring a new aspect of governance environment into the literature. They examine the effect of institutional environment quality on trade patterns and explore the different influences of rule-based and relation-based governance environments on trade. However, Li and Samsell left out a large number of countries which have neither strong public ordering or extended social networks. This group of countries is relatively poor but large in number. Accelerating their economic development is not only in the best interest of these countries, but also contributes positively to the world economic order and world peace. Unfortunately, the reasons why they trade so little has received little attention from trade scholars.

Our study fills this gap in the literature by paying special attention to this category of countries. Drawing on Li's (2009) updated framework of governance environment, we add neither-based governance environment to the analysis of trade flows across countries. Combined with rule-based and relation-based governance environment, this paper examines how the governance environment affects international trade flows among the three types of countries.

We find that that being classified as a neither-based country has a negative effect on trade flows, which means that both import and export of neither-based countries tend to be relatively low. The major reason for this pattern is the lack of trust in these societies, which prevents the establishment of informal, relation-based social networks which may function as an effective governance mechanism when formal public rules and enforcement are lacking. An effective governance mechanism is necessary for conducting trade and the governance vacuum in the neither-based countries makes trade difficult.

This important discovery helps explain the puzzle as to why some countries trade almost nothing, which the previous literature has failed to explain even after taking into account low GDP level and other barriers such as culture, geography, and legal systems. We show that the institutional environment explains why there are still many countries that trade little thereby limiting their productivity and prosperity even though it is widely known that trade improves welfare.

Our findings imply that increasing the level of rule-based governance from relation-based or neither-based in a country can increase trade flows. We also find that countries with dissimilar governance environments do not necessarily trade less, which is different from former studies (De Groot et al., 2004; Li and Samsell, 2009). We find that countries with similar higher levels of rule-based governance environments (the RulRul trade relations) tend to trade more with one another, and is the highest between the strongest rule-based countries. Trade flows will also be high if it is between two relation-based countries (the RelRel trade relations), but trade between the strongest relation-based countries will not be as high as between the strongest rule-based countries. If the trade is between two neither-based countries (the FamFam trade relations), the effect of

governance environment on trade flows is the most negative. In other words, countries with similar neither-based governance environments tend to trade the least with one another.

In addition to the contributions to the literature, our study provides important policy implications. Our findings suggest that in considering trade policies, governments should pay close attention to the governance environments to evaluate their own and their trading partners' trading situations. The finding that rule-based and relation-based countries tend to trade more and neither-based countries tend to trade less is important for policy makers. All countries, regardless of their governance environment, trade less with neither-based countries. The implication is that countries with low levels of international trade that are trying to promote trade must not only evaluate their trade policies, but also evaluate their governance environment. A trade policy can be changed relatively quickly, but it will take much longer to change the governance environment, especially its cultural components such as trust. This is a fact that both the government and the trading companies must realize and be prepared to deal with.

# Chapter 4: Foreign Direct Investment vs. Foreign Portfolio Investment: the Effect of the Governance Environment

## 4.1 Introduction

Foreign investment has been increasing rapidly in both volume and the number of participating countries. It has been an engine of economic growth worldwide and thus has been a major subject of research for scholars of international business.

However, there are some deficiencies in the literature. First, most studies of foreign investment have been focused on foreign direct investment (FDI), whereas foreign indirect investment, or foreign portfolio investment (FPI), has been largely ignored (Li and Filer, 2007). This leads to the second gap in the literature. The relationship between foreign direct investment and indirect investment has not been sufficiently examined. When the proportion of FDI over total foreign investment into a country and the level of rule of law of the receiving countries are plotted, it is clear that countries with a low level of the rule of law have a higher proportion of FDI (Li and Filer, 2007). Third, the effect of governance environments that lack the rule of law has not been sufficiently examined. Recently, Li and Filer (2007) used a relatively new framework of governance environments which classified countries into rule-based and relation-based environments to examine its effect on the proportion of FDI and found that rule-based countries have a smaller FDI proportion than relation-based countries.

While Li and Filer (2007) made a contribution in bringing the governance environments into the model to predict the relative size of FDI and FPI, a major drawback of their governance framework is that it is limited to two types of countries: rule-based and relation-based. As Li (2009) later acknowledged, the two categories are

far from exhaustive. Countries that have a strong public ordering (i.e. rule-based) usually are the ones with mature market systems and advanced democracy, such as the United States and Western European countries. Countries that lack public ordering and yet have extensive informal relation-based social networks include many Asian countries such as China, Taiwan, and Indonesia. Left unexamined in the Li-Filer framework are the countries that have neither public ordering nor extensive informal social networks. For instance, according to Li's (2009) new classification, Argentina, Brazil, and Russia are neither highly rule-based nor relation-based, which he terms "family-based" (we will explain it in more detail later). Many of the least developed countries, such as some of the low-income African countries, may also belong to this third category. In fact, this group includes the largest number of countries, but receives relatively little attention from both policy makers and scholars. More importantly, these countries are large in number and can benefit significantly from increased foreign indirect investment, as we will show later.

If we group foreign investment according to the more updated governance classification by Li (2009) (namely, rule-based, relation-based, and family-based), we can clearly see that some interesting differences exist among the three categories of countries (see Table 10). There is almost no difference among these three types of countries in the FDI volume they attract. However, when we compare the FDI as a proportion of total foreign investment, the average FDI proportion of family-based countries is the highest, and the FDI ratio of relation-based and family-based countries is almost twice of that in rule-based countries.

[Please insert Table 10 about here]

Why do the family-based countries attract so little indirect (portfolio) investment? Is it because of their low economic development level, their geography, and culture, as the previous literature suggests, or does the governance environment play a role? If the governance environment plays a role, why is it so?

To attempt to fill these gaps in the literature, we adopt the new classification of governance environments developed by Li (2009) to explain why some countries attract more and some attract less FDI.

# 4.2 Theory Development and Hypotheses

## 4.2.1 Mode of investment: direct versus indirect

Foreign investments include two categories: direct investment and portfolio investment. In portfolio investment, investors invest capital only for a return through purchasing securities, such as stocks and bonds. By contrast, in direct investment, investors invest capital into a firm for not only a return but also participation the management of the firm. Thus, the major difference between direct and portfolio investment is control (Ball, McCulloch, Frantz, Geringer, and Minor, 2002, p. 69).

Generally, if an investor controls 10% or more shares of a firm, it is direct investment (Bell et al., 2002, p.69; Hill, 2003, p.204). However, the line between direct and portfolio investment is increasingly blurred. In literature, "portfolio investment" is used more commonly. But in this paper, we may use "indirect investment" and "portfolio investment" interchangeably to contrast the directness and indirectness of the two modes of investments.

In direct investment, the investor directly oversees his/her investment; he/she has firsthand information on the operations and does not need to rely on financial reports issued by someone else, such as an accounting firm or a board in which he/she has no control or access. Thus in direct investment, the risk of being misinformed or being expropriated by others is substantially reduced, even in a governance environment that lacks fair and efficient public ordering (e.g., low quality public financial information and weak financial regulation), an investor can still effectively protect his/her investment. Furthermore, if one has a good relationship with the ruler(s), the protection can be extremely effective and favorable.

On the contrary, for portfolio investments, such as buying stocks and bonds in the secondary market, the investor has no direct control over his/her investment; nor does he/she have firsthand information about the operation. The lack of a good public governance environment is especially hazardous for such investment. First, in societies lacking in public ordering, there tends to be a dearth of reliable public information and a low level of general trust. Accounting and auditing standards are lower, the operations of publicly listed companies are less transparent, and financial information is easily altered by insiders. Second, due to the lack of checks and balances and the lack of freedom of the press, the political system in a society lacking of public ordering tends to be dominated by a powerful dictator (who tends to view the country as his private property [Olson, 1993]). The state policies under such a dictator tend to favor industry leaders and big businesses that have strong relations with the dictator. This puts the minority shareholders, such as the portfolio investors, in a disadvantageous position.

#### 4.2.2 The literature on foreign investment

Foreign direct investment has been extensively studied by international business scholars. The early literature had provided a theoretical rationale for FDI mainly through the industrial organization economics research stream, e.g., costs of doing business abroad and internalization (Hymer, 1960; Kindleberger, 1969), firm specific competitive advantage (Buckley and Casson, 1976; Caves, 1971), risk diversification (Rugman, 1979), product-life-cycle theory (Vernon, 1966), and the eclective paradigm (Dunning, 1980). The "Uppsala Model", which posited an incremental international process (Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975), and the liability of foreignness that highlights the MNE subsidiary's disadvantages in the host country (Kostova and Zahcer, 1999; Zaheer, 1995) supplemented those approaches. These theories suggest various determinants of potential FDI patterns such as country-level determinants (e.g., economic and political stability, host government policies, market size, gross domestic product, cultural distance, tax rates, wages, corruption, and production and transportation costs [Hofstede, 1980; Nigh, 1985; Root and Ahmed, 1979]), industry-level determinants (e.g., sales growth, asset intensity, growth in the number of firms [Luo, 2001]), and firmlevel determinants (e.g., knowledge protection, global integration, host country experience [Luo, 2001]).

In this paper, we focus on the effect of socioeconomic and political factors on patterns of FDI. In this research stream, some scholars draw on Dunning's eclectic theory to identify policy and non-policy factors that affect the FDI location choice (e.g., Gastanaga, Nugent and Pashamova 1998; Loree and Guisinger, 1995); some study FDI and trade patterns simultaneously by using the gravity model developed by international

trade economists (e.g., Hejazi and Safarian, 2002); and another sub-stream focuses on how political risks affect the FDI flow (e.g., Butler and Joaquin, 1998; Henisz, 2000).

In recent years, scholars have begun to pay increasing attention to the macro environments in a society and to its effect on investments. One of the main foci is on how different governance environments, such as the legal system, affect the willingness of investors to invest and how investments are protected. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) found that countries with better legal systems tend to have a small number of diversified investors. English and Moore (2002) found that when a firm announced its investment in a country with ambiguous property rights, its stock value actually was affected negatively. Globerman and Shapiro (2003) found that governance infrastructure—including the nature of the legal system—is an important determinant of FDI. Specifically, countries with a more impartial and transparent legal system and better protection of property rights tend to attract more FDI; countries lacking a good legal system and less adequate protection of property rights attract less FDI.

Although these studies examined how different governance environments affect the FDI patterns, they still did not directly address the relationship between direct and indirect investment. Three studies provided some insight into these issues. Itay and Razin (2005) found that there is a higher ratio of FDI to FPI in developing countries relative to developed countries. They argue that the hands-on nature of FDI investors enables them to obtain special information about the operations of the firm. However, the cost of this superior information possessed only by FDI investors is that FDI assets have a lower resale price. They use this argument to explain the variation of FDI and FPI in developed and developing countries. Albuquerque (2003) found that FDI is less volatile than other

financial flows such as FPI. He explained that is because FDI is harder to expropriate under financing constraints. Li and Filer (2007) are among the first to examine the effect of governance environments on the variation of FDI and FPI. They used a relatively new framework of governance environments, rule-based and relation-based and found that in countries with a weak rule-based governance environment, investors prefer direct to indirect investment, because the former can be better protected by private means.

This study builds on Li and Filer's (2007) study and uses the latest framework of governance environments developed by Li (2009), distinguishing not only rule-based and relation-based environments, but also characterizing those environments that are neither rule-based nor relation-based. We use this new framework to examine the effect of these newly characterized environments on variation of foreign investment flows.

## 4.2.3 Governance environments

Governance is defined as a mechanism people use to protect their interests in social and economic exchanges (Li and Filer, 2007). The foundation for this definition is North's (1990) institutional theory. For example, in a society with a fair, open, and effective legal system, people will resort to the court or public arbitrations for a ruling if disputes arise. On the other hand, when the law is biased and judges are corrupt, then it becomes more likely that people will not choose the public rules as their means of settling disputes, but will look for a private method. This institutional environment is referred to as governance environment. It is the set of political, economic, and social institutions that facilitate or constrain the choice of governance mechanisms in a society (Li and Filer, 2007). Institutions include both formal rules and informal rules or norms. The institutional or governance environment includes institutions, organizations, and the

resulting enforcement characteristics. Scholars have begun to pay attention to how institutional environments affect economic growth (Keefer and Knack, 1997).

Li, Park and Li (2004) introduced a framework that classifies the governance environment across countries into two categories—rule-based and relation-based—in terms of how people protect their property rights and contracts.

Rule-based governance environment. In most developed societies, firms and individuals primarily rely on public rules—laws and government regulations—to resolve disputes and enforce rights and contracts. This reliance on public ordering is called a rule-based environment. A rule-based governance environment must satisfy the following conditions: the public rules governing economic exchanges (such as laws, state policies, and regulations) are fairly made; the rule-making, rule-adjudication, and rule-enforcement are separate; rule-enforcement is fair and efficient; and public information infrastructure (such as accounting, auditing, and financial rating) is highly reliable and accurate. Thus, a well-functioning rule-based system requires a large investment in the legal infrastructure, including a law making body, a court system, and a credible and powerful enforcement branch, all of which are costly and take a long time to build. This environment is expected to be more conducive to trade and prosperity by reducing marginal transaction costs per exchange and to promote impersonal exchange (North 1990, 2005).

Relation-based governance environment. In contrast, a relation-based society has the following characteristics: public rules (laws, government policies, and government regulations) are less fair; there are no checks and balances between the

legislative, judiciary, and executive branches of the government; courts and judges are controlled by the ruler(s); and public information is controlled or manipulated by the state and thus is untrustworthy. Another feature that is vital to relation-based society is that there exist closely knit informal networks. People tend to use these personal connections to protect themselves and to settle disputes. Because business could be conducted and governed by well-functioning social networks maintained by private players, the relation-based governance system incurs few fixed costs compared to the high fixed-cost structure of the rule-based system. This environment is expected to be more restrictive for trade, to lessen potential prosperity by increasing the marginal transactions costs per exchange and to restrict impersonal exchange (North 1990, 2005).

Family-based governance environment. Li (2009) expanded the Li-Filer framework (2007) by introducing a third category of governance environment. He argued that a country that is not rule-based may not necessarily be relation-based. In fact, there are some countries that have neither strong public rules nor extensive informal social networks to conduct and protect business. In such societies, people have little trust in others and rely primarily on their immediate family members for protection in business. Li (2009) called this type of governance environment family-based and identified an important factor that distinguishes the relation-based societies from the family-based societies—the dominant type of particularized trust.

Broadly speaking, there are two types of trust: generalized trust and particularized trust. People who hold generalized trust believe that most people, including strangers, can be trusted. When people have very little confidence or faith in strangers, they rely on people whom they know well, such as family members or close friends. Such a trust is

called particularized trust. The level of particularized trust people place on different relationships varies. The closest is among the direct members of the family--spouse, parents, and children. Relatives such as in-laws, cousins, and other close kin may be the next circle. The third circle usually includes friends, neighbors, classmates, and coworkers.

Some particularized trust goes beyond family members and extends to neighbors, friends, and friends' friends. In China, for example, the *guanxi* culture knits friends and friends' friends into extended social networks. People rely on these extended informal social networks to conduct business and to protect property rights. In our framework, we use the term "relation-based" to describe countries with a relatively high level of extended particularized trust. In contrast to these countries, there are societies with extremely low levels of trust (including particularized trust), where people predominantly rely on family members to conduct business and to protect property rights. Behind their immediate family members, they essentially trust no one, and thus the term "family-based" is coined. This type of governance environment is viewed as having the biggest hurdle in achieving prosperity due to the even higher marginal transactions costs and being the most restrictive for impersonal (rule-based) exchange, such as investment that relies on public ordering (North 1990, 2005).

## 4.2.4 Foreign investment and governance environments

As stated above, direct investment allows an investor to govern his/her assets, and thus direct investment is easier to protect than indirect investment. As a result, when investing in an economy that is non-rule-based, people tend to choose more direct investment as opposed to portfolio investment for better protection of their investment

through private means. In contrast, rule-based societies, which have a well-developed public information infrastructure, a high level of public trust, and fair and efficient public protection, offer better protection for indirect (portfolio) investments than do non-rule-based societies. As a result, rule-based societies tend to have a large portfolio investment market (such as publicly traded stock markets and bond markets). Thus, we hypothesize as follows:

H1: Foreign investors are less likely to choose direct investment when they invest in rule-based societies and more likely to choose direct investment when they invest in relation-based in relation-based societies and family-based societies, ceteris paribus.

**H2:** The size of the stock market relative to the size of the economy tends to be larger in rule-based societies than in relation-based societies and family-based societies, ceteris paribus.

In relation-based societies, public rules are less fair because it is usually biased in favor of certain privileged groups; government operations are secretive; and public information and the media tend to be controlled and manipulated by the government. However, there is usually a thick and strong relational network. Neighbors, friends, and friends' friends are closely knit by extended particularized trust. If the investors have connections with the insiders (such as powerful politicians in the country), they can have access to insider information and enjoy informal and effective protection for their investment.

Similar to relation-based societies, family-based countries lack trustworthy public information and effective public ordering. The legal system is not transparent or fair, and

the state is unable to enforce laws impartially. Different from relation-based countries, however, in family-based societies people do not have much confidence or faith in anyone. But in order to conduct business, they have to rely on some people, who are usually their family members. For example, in Russia, "The system is not based on law, it is based on personal connections, likes and dislikes, in many cases, on marriages" (BBC World Service Podcast, 2009). Obviously, it is virtually impossible or at least very difficult for outsiders to enter into a nuclear family circle. Logically, it is very difficult for investors to protect their investments, especially portfolio investment which relies primarily on public information (company financial report and public auditing) and the enforcement of the public rules for protection. Again, direct investment is less risky since the investor is also the manager who oversees his/her own assets. Thus the favored mode of investment in family-based societies tends to be the direct investment, and the portfolio investment market tends to be small relative to that in the rule-based and relation-based societies. Thus, we argue that:

H3: Foreign investors are more likely to choose direct investment when they invest in family-based societies than in relation-based societies, ceteris paribus.

**H4:** The size of the stock market relative to the size of the economy will be larger in relation-based societies than in family-based societies, ceteris paribus.

## 4.3 Methods

In this section, we will introduce how data is collected, how variables are measured, and how data is analyzed.

## 4.3.1 Measuring governance environments

We have mentioned how to measure governance environments in Section 3.3.1 and the results and process are shown in Table 4, 5 and 6.

## 4.3.2 Dependent variables

We use various dependent variables in our models to test above hypotheses. To test the foreign investment hypotheses (H1 and H3), we specify the dependent variable as the share of foreign direct investment in relation to the economy's total foreign investment position (FDI\_FI). Since we have constructed the total foreign investment measure as the sum of foreign direct investment and foreign portfolio investment, a smaller measure of FDI\_FI suggests that foreign investment focuses on portfolio investment.

To test the stock market hypotheses (II2 and H4), we specify a measure of market depth and size by using market capitalization. The first specification uses this capitalization measure relative to the economy's GDP (CAP\_GDP). In an alternative specification, we also consider the market capitalization measure alone and we control for the size of the economy on the right-hand side. The full description of these variables and their sources are listed in Table 11.

# 4.3.3 Control variables

Our choices of control variables are based on previous studies. There is a rich literature on the determinants of foreign direct investment. Globerman and Shapiro (2003) found that the foreign exchange rate affects direct investment flows and they also found that the existence of English common law in a country exerts a positive effect on attracting direct investment from the United States. La Porta et al. (1998) found that the

different legal traditions (English common law and different families of Continental law) have different effects on investor protection. Based on these two studies, which are most relevant to our studies, we include foreign exchange rate (FXRATE) and legal tradition index in our models. Following La Porta et al. (1998), we specify four legal traditions: (1) English common law tradition, (2) French civil law tradition, (3) German civil law tradition, and (4) Scandinavian civil law tradition. We use dummy variables to present the four legal families: ENG\_LAW, FRE\_LAW, GER\_LAW, and SCA\_LAW (the default, or the omitted category is other countries with an unspecified legal tradition). To test the stock market hypotheses, we include GDP and the age of the stock market (AGE) as additional controls.

Another control variable based on the previous literature is the openness variable in examining FDI hypotheses. In certain countries the investors may have no access to portfolio markets and thus any investment they make must be in the form of direct investment (Li and Filer, 2007). We add a dummy variable OPEN. OPEN is equal to 0 if any of the following controls on foreign investment exists: (1) ceiling on the percentage of foreign ownership in a particular stock, (2) restrictions on the repatriation of income and earned interest, or (3) direct control preventing entry of foreign investors into the market. OPEN equal to 1 if the market is accessible to foreign investors.

When we test the stock market hypotheses (H2 and H4), we also create a dummy variable for Hong Kong. Hong Kong is a special case because it is strongly based on the English tradition with mature public rules and at the same time is heavily influenced by the Chinese relation-based culture. Furthermore, Hong Kong is a city-state whose economy highly dependent on international trade and finance. During the past decade, as

Hong Kong's manufacturing industry moved to the mainland, its service industry—mainly finance and trade—has grown rapidly and accounted for about 90% of the territory's GDP. Based on these reasons, we create a dummy variable for Hong Kong only.<sup>4</sup> Detailed descriptions of all variables and their sources are shown in Table 11.

[Please insert Table 11 about here]

# 4.4 Findings

We first calculate descriptive statistics and a correlation matrix (see Table 12) for all independent variables in order to identify any high correlations that may cause multicollinearity problem. The highest correlations in absolute value are between Rul and FDI\_FI and between Rul and GEI, which are -0.86 and 0.86, respectively. But neither of these combinations is used in the same regression. The second highest correlation is 0.76 between GEI and FDI\_FI. The Variance Inflation Factor (VIF) is calculated for each independent variable. All VIF values are well below the cutoff of 10 which rules out any multicollinearity concerns.

## [Please insert Table 12 about here]

Tables 13 and 14 summarize our data analysis. Table 13 gives the data analysis results of the FDI hypotheses (H1 and H3). Four specifications are used to examine these hypotheses and illustrate the robustness of the results. Model 1 examines the Li-Filer model (2007) of the influence of GEI, legal structure, exchange rate changes, the log of GDP and the openness of the financial market to possible portfolio flows on the log of

<sup>&</sup>lt;sup>4</sup> We run the models with and without the Hong Kong dummy variable. There are no significant differences between the two specifications in terms of the overall results of the models and the estimates of the variables of interests.

foreign direct investment (FDI). In Model 2, we use the same control variables as above and replace the influence of GEI with two dummy variables, Rel and Fam. Model 3 and Model 4 regress the dependent variable, the FDI to total foreign investment ratio, on the same set of independent variables used in Models 1 and 2.

## [Please insert Table 13 about here]

The results for Model 1 and 2 illustrate the incomplete picture based on models with only FDI in absolute value as the dependent variable. The estimates of all governance environments measures, GEI, Rel and Fam, are insignificant. The governance environment cannot explain the flows of the total value of FDI. When the dependent variable is changed to relative size of FDI over total foreign investments (Models 3 and 4), the two governance variables become highly significant and the adjusted R-squares increase dramatically (from around 0.2 in Model 1 and 2 to 0.7 in Model 3 and 0.8 in Model 4). In Model 3, the coefficient estimate of GEI, which is negative and highly statistically significant, shows that the more rule-based a country, the smaller FDI investment will be as a share of the total foreign investment. When GEI is replaced with two dummies (Rel and Fam) in Model 4, the coefficient estimates of both dummies are positive and highly statistically significant. In this model, the default is rule-based governance. It seems that in rule-based countries the FDI-total foreign investment ratio will be the smallest, compared to relation-based and family-based countries. So H1 is strongly supported.

Since both the estimates of the relation-based dummy and the family-based dummy are positive and significant and the estimate of the family-based is larger than that of the

relation-based, it is apparent that the family-based countries attract more FDI relative to total foreign investment than do relation-based countries, exactly as hypothesized in H3. To further compare the estimates of relation-based dummy and family-based dummy statistically, we rerun Model 4 and use the relation-based category as the default (shown in Model 4a). Compared with relation-based countries, rule-based countries attract significantly less FDI (relative to total foreign investment), which is consistent with H1. However, the estimate of family-based countries is positive but insignificant. This means that there is no significant difference between estimate of family-based and relation-based countries. Thus, we cannot conclude that family-based countries. Thus we cannot conclude that H3 is supported.

Table 14 is the data analysis results of the stock market size hypotheses H2 and H4. To test these hypotheses, we use two alternative specifications of the size of the stock market: market capitalization of listed companies in U.S. dollars (CAP) and market capitalization of listed companies as a percentage of GDP (CAP\_GDP). In the models that use CAP (Model 5 and 6), we also control for the effect of GDP, since the capitalization of the market is likely to depend on the size of the economy. In all these models, we control for the length of time the market has existed as of 2006 (AGE).

## [Please insert Table 14 about here]

Models 5 and 6 use absolute market capitalization as the dependent variable.

Estimates of all governance environments measures, GEI, Rel and Fam, are insignificant once again, showing that governance environments cannot explain the absolute value of

market capitalization. However, when the dependent variable is changed to market capitalization as percentage of GDP (as in Model 7 and 8), the regressions are more significant and the adjusted R-squares increase markedly (from around 0.17 to around 0.82). In Model 7, the estimate of GEI is positive and statistically significant, showing that the more a country relies on public ordering (more rule-based), market capitalization will constitute a larger share of its economy size.

When GEI is replaced with two dummies (Rel and Fam) to measure governance environments in Model 8, estimates of both these two dummies are negative and statistically significant. In these regressions, the default effect is that of rule-based governance. It means that in rule-based countries, the relative market capitalization will be the highest, compared to relation-based and family-based countries. Consequently H2 is supported. Estimates of the both dummies (Rel and Fam) are positive and significant, but the estimate of the relation-based dummy is relatively smaller than that of the family-based dummy, implying that the market capitalization is greater in the family-based economy than it is in the relation-based economy. This is opposite to the direction we proposed in H4. Thus H4 is not supported.

[Please insert Table 15 about here]

### 4.5 Discussion and Conclusions

Foreign investment has been extensively studied in the literature. However, most studies focus on foreign direct investment. Foreign portfolio investment has largely been ignored and the relationship between direct and portfolio investment is unexamined. In addition, the effect of governance environment, especially a governance environment that

lacks the rule of law, has not been sufficiently examined. Recently, Li and Filer (2007) bring a new aspect of governance environment into the literature. They examined the effects of institutional environment quality on foreign investment and explored the different influence of rule-based and relation-based governance environment on foreign investment. Li and Filer left out countries which have neither strong public ordering nor extended informal social networks. This non-rule-based and non-relation-based group of countries is relatively poor but large in number. Identifying factors that may hinder investment flows and effectively dealing with these factors is not only an academic exercise, but beneficial to the economic development in these countries and to foreign investors who are investing or plan to invest in these countries. Our study sheds light on this issue which has been largely unexamined by scholars.

Our study fills this gap in the literature by focusing on this third group of countries.

Drawing on Li's (2009) updated framework of governance environment, we add family-based governance environment, along with rule-based and relation-based governance environment, to the analysis of the patterns of foreign investment across countries.

We find that family-based countries tend to have a lower portfolio to total foreign investment ratio, much like relation-based countries. Our explanation for this pattern is that due to the lack of effective rule of laws, foreign investors prefer to participate in the management of their investment to reduce information noise and expropriation risks faced by portfolio investments. We also find that rule-based countries have the largest stock markets relative to their economies because of their better public ordering, the flip side of the very same reason that makes investors to choose direct investment in non-rule-based countries.

Our finding helps explain the puzzle why some countries attract relatively more FDI and others attract relatively more portfolio investment, a puzzle which the previous literature has failed to explain even after taking into account low GDP level and other barriers such as culture, geography, and legal systems. We show that the governance environment explains why there are still many countries that attract little foreign investment thereby limiting their productivity and prosperity even though it is widely known that foreign investment is the engine of economic growth worldwide.

In addition to the contributions to the literature, our study provides useful policy implications. Our findings suggest that in formulating foreign investment policies, governments and investors should pay close attention to the governance environment. The finding that rule-based countries tend to have smaller FDI to total foreign investment ratios than that of family-based and relation-based countries is important for policy makers. The implication is that countries with low levels of foreign investment trying to attract investment should not only evaluate their investment policies, but also evaluate their governance environment. Foreign investment policies can be changed relatively quickly, but it will take much longer to improve the governance environment, especially its cultural components such as trust. This is a fact that both the government and multinational corporations must realize and be prepared to deal with.

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Table 1. Governance Environment Index (GEI) and Governance Environment Type

Country	GEI	Type	Country	GEI	Trust <sup>5</sup>	Туре
Finland	6.41	1	Victnam	-5.19	6.16	2
Sweden	6.18	1	China	-5.92	5.92	2
Netherlands	5.7	Į.	Indonesia	-1.1	5.09	2
Germany	4.53	1	Taiwan	-0.13	5.08	2
United Kingdom	4.35	1	Thailand	-0.84	4.53	2
Switzerland	4.34	1	Mexico	-3.71	4.46	2
New Zealand	4.04	1	Mali	-1.81	4.33	2
Hong Kong	4.02	1	Malaysia	-2.91	4.12	2
Australia	3.73	1	Zambia	-2.64	4.01	2
South Africa	3.11	1	Moldova	-3.43	3.88	3
United States	2.3	1	Russia	-4.34	3.65	3
Cyprus	2.28	1	Peru	-1.92	3.63	3
Slovenia	2.23	1	Ukraine	-0.86	3.6	3
France	1.97	1	Egypt	-3.04	3.36	3
Japan	1.79	1	Colombia	-3.69	3.26	3
Poland	1.32	1	Argentina	-2.75	3.12	3
Spain	1.18	1	Brazil	-2.06	3.1	3
Ghana	0.95	1	Romania	-0.63	3.07	3
Italy	0.94	1	Bulgaria	-1.75	2.82	3
South Korea	0.24	1	Iran	-8.13	2.8	3
Trinidad & Tobago	0.12	1	Turkey	-2.75	2.75	3
Chile	0.12	1	India	-0.85	2.35	3
			Morocco	-3.7	2.02	3

(Source: Li, 2009)

Type: 1—rule-based, 2—relation-based, 3—neither-based.

<sup>&</sup>lt;sup>5</sup> This score is from one of the most discriminating trust questions in the 2005 World Value Survey, Question V47, "Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?" 1="try to take advantage of you", 2...6, 7="try to be fair."

Table 2. Summary of Theoretical Propositions

	Summary of theo	retical propositions	
Partner	Rule-based	Relation-based	Neither-based
Trade	Easiest	Moderate	Most Difficult
FDÍ	Least	Moderate	Largest

Table 3. Classification and Comparison of Trade Volume of Different Countries

		Trade	volume	(\$billions)	Trac	de volume	per capita
Category	N	Mean	S.D.	F-value	Mean	S.D.	F-value
Rule-based	946	4.79	13.70	1.73	202.6	1,356.6	4.18 **
Relation-based	338	5.16	23.90	40.36 †	76.4	586.2	18.18 †
Neither-based	601	1.32	3.51		19.0	41.8	
Total	1,885	3.75	14.20		121.4	996.0	

<sup>&</sup>lt;sup>†</sup>P<0.001, \*\*\*P<0.01, \*\*P<0.05, \*P<0.1

Table 4. Governance Environment Index (GEI) by Country

Country	GEI	Country	GEI
Finland	6.41	Taiwan	-0.13
Sweden	6.18	Romania	-0.63
Netherlands	5.70	Thailand	-0.84
Germany	4.53	India	-0.85
United Kingdom	4.35	Ukraine	-0.86
Switzerland	4.34	Indonesia	-1.10
New Zealand	4.04	Bulgaria	-1.75
Hong Kong	4.02	Mali	-1.81
Australia	3.73	Peru	-1.92
South Africa	3.11	Brazil	-2.06
United States	2.30	Zambia	-2.64
Cyprus	2.28	Turkey	-2.75
Slovenia	2.23	Argentina	-2.75
France	1.97	Malaysia	-2.91
Japan	1.79	Egypt	-3.04
Poland	1.32	Moldova	-3.43
Spain	1.18	Colombia	-3.69
Ghana	0.95	Morocco	-3.70
Italy	0.94	Mexico	-3.71
South Korea	0.24	Russia	-4.34
Trinidad & Tobago	0.12	Vietnam	-5.19
Chile	0.12	China	-5.92
		Iran	-8.13

(Source: Li, 2009)

Table 5. Clustering of More Relation-Based Versus More Family-Based Countries on Trust

Country	Cluster	Country	Cluster
China	1	Argentina	2
Indonesia	1	Brazil	2
Malaysia	1	Bulgaria	2
Mali	1	Colombia	2
Mexico	1	Egypt	2
Taiwan	1	India	2
Thailand	1	Iran	2
Vietnam	1	Moldova	2
Zambia	1	Morocco	2
		Peru	2
		Romania	2
		Russia	2
		Turkey	2
		Ukraine	2

(1 = more relation-based; 2 = more family-based)

(Source: Li, 2009)

Table 6. Ranking of Relation-based Countries

Country	Trust Score
Vietnam	6.16
China	5.92
Indonesia	5.09
Taiwan	5.08
Thailand	4.53
Mexico	4.46
Mali	4.33
Malaysia	4.12
Zambia	4.01
Moldova	3.88
Russia	3.65
Peru	3.63
Ukraine	3.60
Egypt	3.36
Colombia	3.26
Argentina	3.12
Brazil	3.10
Romania	3.07
Bulgaria	2.82
Iran	2.80
Turkey	2.75
India	2.35
Morocco	2.02

(Scores are average answer by each country. High score means people in a country incline to agree that "people try to be fair", indicating the country is more relation-based; low score means people in a country incline to agree that "people try to take advantage of me," indicating it is less relation-based.)

(Source: Li, 2009)

Table 7. Data Sources and Variable Definitions

Data Source	Variable Description
United	Imports. Import is the total volume of imports in U.S.
Nations	dollars to the importing country (I) from the exporting
Comtrade	country (E). The trade data is from the United Nations
Statistics	Comtrade Statistics Database (United Nations, 2009).
Database,	Imports are averaged by country for only the available data
•	for the years 2005, 2006, 2007, and 2008. The averaging is
,	to minimize the effect of any reporting deficiencies and
•	fluctuations in the data.
	GDP, Population, and GDP per capita. GDP is the average
Development	of the reported GDP in U.S. dollars for the three years
	2004, 2005, and 2006. The GDP and population data come
	from World Development Indicators (WDI) (World Bank,
•	2008) and is averaged for the same three years. Population
•	is the average of the reported population for the same three
, ,	years.
GEI scores	The GEI consists of five indicators: political rights; rule of
are from Li	law; quality of accounting standards; free flow of
	information; and public trust. Each of the five components
which	of the GEI is standardized to a mean of zero and a standard
reflect the	deviation of one by subtracting the mean from the value
governance	and then dividing by the standard deviation of the values.
environment	The standardized components are then summed to
around 2004	calculate the GEI for each country. A high GEI indicates a
and 2005.	country is more rule-based while a low GEI indicates a
	country is more relation-based.
2008 CIA	Distance. Previous studies have used the gravity model to
World Fact	capture the exponential effect of distance on the level of
Book	trade between two countries and the effect of the other
Web Site	independent variables. Deardorff (1995) examines the use
(Central	of the gravity model for trade flow estimations involving a
Intelligence	distance variable. We calculate distance using the "great
Agency,	circle equation" and the mid-country coordinates obtained
2008).	from the CIA World Fact Book (Central Intelligence
•	Agency, 2008). The above studies consistently find
	distance, as a proxy for transportation costs, to be
	significantly inversely related to trade flows. Shared
	Borders, Island, Landlocked. In addition to distance, other
	geographical related variables have been used in past
	studies to represent effects on trading costs. The data for
	these variables come from the CIA World Fact Book
	(Central Intelligence Agency, 2008). Countries sharing a
	common border, counties that are islands, and countries
	that are landlocked are represented with dummy variables.
	Language and Religion. Past studies find culture, as
	United Nations Comtrade Statistics Database, (United Nations, 2009). World Development Indicators (WDI) (World Bank, 2008)  GEI scores are from Li (2009), which reflect the governance environment around 2004 and 2005.  2008 CIA World Fact Book Web Site (Central Intelligence

Former	Grier (1999).	represented by language and religion, to be significant in explaining the overall level of bilateral trade flows.  Language and religion are dummy variables set to 1 if countries match and zero if not. These variables, obtained from the CIA World Fact Book (Central Intelligence Agency, 2008).  Former Colonial Relationship. As in prior papers, we
Colonial		control for possible trade effects between countries with a
Relationship		former colonial relationship using dummy variables. The
		designation of these relationships follows the listings in Grier (1999).
Trade	EU27	Trade Agreements. Consistent with some of the earlier
agreement		studies, we include control variables for membership in the
membership		agreements of EU 27 (the economic and political union of
		27 European countries).6

<sup>&</sup>lt;sup>6</sup> We did not control some other trade agreements such as WTO, NAFTA and EFTA because either most of our countries (only 1 or 2 left) belong to an agreement or only 1 or 2 countries belong to an agreement. In fact, Li and Samsell (2009) included all of these agreements and found that the average is either close to 1 or close to 0. So we did not include these agreements.

Table 8. Means, Standard Deviations, and Correlations for Model Variables

		Mean	S.D		2	6	4	5	9	7	<b>∞</b>	6	2	=	12	13
-	Import(log)	19.13	3.21	1.00					;							
7	RGEI	-0.01	3.39	0.15	1.00											
m	PGEI	-0.02	3.40	0.18	-0.03	1.00										
4	ABSGAP	3.98	2.82	90.0	0.01	0.01	1.00									
S	RulRul	0.13	0.33	0.22	0.4]	0.41	-0.29	1.00								
9	RulRel	0.05	0.22	0.00	-0.25	0.25	0.28	-0.09	1.00							
7	RulFam	0.09	0.29	0.00	-0.32	0.35	0.35	-0.12	-0.07	1.00						
ø	RelRul	0.05	0.22	-0.03	0.25	-0.25	0.28	-0.09	-0.05	-0.07	1.00					
6	RelRel	0.02	0.12	-0.05	-0.14	-0.14	-0.09	-0.05	-0.03	-0.04	-0.03	1.00				
10	RelFam	0.03	0.18	-0.10	-0.18	-0.20	-0.15	-0.07	-0.04	<b>-</b> 0.06	-0.04	-0.02	1.00			
Ξ	FamRul	0.09	0.29	-0.02	0.35	-0.32	0.35	-0.12	-0.07	-0.10	-0.07	-0.04	-0.06	1.00		
12	FamRel	0.04	0.18	-0.13	-0.21	-0.19	-0.15	-0.07	-0.04	-0.06	-0.04	-0.02	-0.04	-0.06	1.00	
13	FamFam	90.0	0.23	-0.09	-0.25	-0.25	-0.19	-0.10	-0.06	-0.08	-0.06	-0.03	-0.05	-0.08	-0.05	1.00
14	Distance(log)	8.52	7.99	-0.18	-0.06	-0.05	-0.05	-0.05	0.02	0.00	0.02	0.04	0.05	-0.02	90.0	-0.02
15	GDP(log)	53.40	2.20	0.74	-0.01	-0.01	0.09	0.08	-0.05	0.05	-0.04	90.0-	-0.04	0.05	-0.05	0.02
16	GDP capita (log)	18.72	1.41	0.4]	0.43	0.43	0.12	0.48	-0.05	0.13	-0.05	-0.21	-0.20	0.13	-0.21	-0.11
17	Language	0.13	0.34	90.0	0.05	0.01	-0.07	0.03	90.0	-0.08	0.05	0.03	-0.05	-0.07	-0.01	-0.01
18	Religion	0.18	0.38	0.13	0.01	-0.04	-0.11	0.00	-0.06	-0.02	-0.03	-0.01	0.03	0.00	0.02	0.05
19	EU27	80.0	0.27	0.20	0.24	0.24	-0.10	0.30	-0.07	-0.04	-0.07	-0.04	-0.06	-0.04	-0.06	-0.07
20	Border	0.04	0.19	0.20	-0.02	-0.02	-0.09	0.04	-0.02	-0.03	-0.02	0.02	-0.02	-0.04	-0.02	0.10
21	R British Colony	0.20	0.40	-0.04	0.10	0.00	-0.04	0.04	0.07	-0.09	0.03	0.04	90.0-	0.04	90.0	-0.08
22	R Spanish Colony	0.11	0.32	-0.10	-0.25	0.00	-0.05	-0.14	0.04	0.16	-0.08	0.02	0.10	-0.11	0.03	0.12
23	P British Colony	0.20	0.40	-0.06	0.00	0.10	-0.04	0.04	0.03	0.03	80.0	0.03	90.0	-0.09	-0.05	-0.06
24	P Spanish Colony	0.11	0.32	-0.06	0.01	-0.23	-0.04	-0.14	-0.08	-0.10	0.05	0.02	0.03	0.16	0.09	0.12
25	Reporterisland	0.16	0.37	-0.03	0.28	-0.01	-0.03	0.16	-0.10	-0.14	0.10	-0.05	-0.08	0.13	-0.08	-0.11
26	PartnerIsland	0.16	0.37	-0.04	-0.01	0.27	-0.04	0.16	0.10	0.12	-0.10	-0.05	-0.07	-0.14	-0.08	-0.09
27	ReporterLandlock	0.09	0.29	-0.22	-0.04	0.01	-0.02	-0.04	0.20	-0.04	-0.02	0.10	-0.06	-0.03	91.0	-0.03
28	PartnerLandlock	0.09	0.28	-0.32	0.01	-0.07	-0.01	-0.03	-0.02	-0.03	0.19	0.10	0.13	0.00	0.00	-0.01

Table 8. Means, Standard Deviations, and Correlations for Model Variables (Continued)

		14	15	16	17	18	19	50	21	22	23	54	25	56	27
14	Distance	1.00													
15	LuYY	0.02	1.00												
16	LnYPYP	-0.05	0.38	1.00											
17	Language	0.01	-0.05	-0.04	1.00										
18	Religion	-0.09	0.07	0.07	0.17	1.00									
19	EU27	-0.40	-0.01	0.30	-0.09	-0.01	1.00								
20	Border	-0.26	60.0	0.04	0.13	0.17	0.11	1.00							
21	R British Colony	0.15	-0.05	-0.10	0.22	0.00	-0.15	-0.06	1.00						
22	R Spanish (	0.23	-0.02	-0.06	0.07	0.15	-0.11	0.02	-0.18	1.00					
23	P British Colony	0.15	-0.05	-0.10	0.14	-0.01	-0.15	-0.06	-0.02	0.00	1.00				
24	P Spanish (	0.24	-0.02	-0.05	0.07	0.14	-0.11	0.02	0.00	-0.02	-0.18	1.00			
25	Reporter	0.15	-0.05	0.17	0.07	0.00	0.00	-0.08	0.09	-0.16	0.00	10.0	1.00		
26	PartnerIsland	0.15	-0.06	0.15	0.11	-0.04	-0.01	-0.08	0.00	0.00	0.09	-0.16	-0.02	1.00	
27	ReporterLandlock	-0.08	-0.22	-0.15	0.01	-0.02	-0.09	0.00	0.04	-0.11	-0.01	0.00	-0.14	0.00	1.00
28	PartnerLandlock	-0.08	-0.19	-0.14	-0.01	-0.01	-0.09	-0.01	0.00	0.01	0.03	-0.11	0.00	-0.13	-0.03

Table 9. Data and Sensitivity Analysis

						D	V: Log	(Import)				<u> </u>	
	Hypothesis	Model	1	Mode	12	Model (0.508		Mode (0.758		Model (1.008		Model (1,508	
R-squared		0.707		0.673		0.701		0.702		0.702		0.704	
F-statistics		268.3	ţ	243.1	t	184.7	†	182.7	Ť	186.0	†	187.9	†
GDP(Log)		1,036	t	0.942	†	0.948	t	0.954	†	0.972	t	0.966	1
GDP per capita(log)		-0.197	†	0.212	f	0.140	***	0.106	**	0.070	*	0.102	**
RGEI	HI	0.162	t										
PGEI	Нl	0.203	†										
ABSGAP	Н3			0.012									
RulRul	H4, H5					0.710	†	0.857	†	1,112	†	1.672	1
RulRel	H2					0.637	***	0.777	÷	0.997	†	1.536	1
RulFam	H6					-0.347	**	-0.202		-0.137		0.151	
RelRula	H2					0.645	***	0.551	**	0.630	**	1,160	+
RelRel	114					0.906	<b>+ +</b>	0.803	**	0.799	**	0.848	*
RelFam	Н6					-0.379		-0.530	**	-0.528	**	-0.145	
FamRul	H6					-0.541	***	-0.607	†	-0.541	***	-0.565	*
FamRel	116					-1.085	†	-1.140	†	-1.134	†	-1.636	1
FamFam	H5, H6					-1,380	ŧ	-1.350	t	-1.588	ţ	-1.532	i
Language		0.850	Ť	0.962	Ť	0.783	ţ	0.789	†	0.763	ţ	0.726	
Religion		0.519	Ť	0.475	†	0.512	ţ	0.528	ţ	0.567	Ť	0.543	
R_British_Colony		-0.133		0.111		-0.018		0.004		-0.004		0.046	
C_Spanish_Colony		-0.488	***	-0.712	†	-0.455	**	-0.513	***	-0.484	<b>**</b> *	-0.580	
P_British_Colony		-0.212	**	0.048		-0.129		-0,102		-0,101		-0.087	
_Spanish_Colony		-0.215		-0.517	***	-0.191		-0.203		-0.173		-0.308	
EU27		0,652	***	1,211	t	0.706	***	0.851	ţ	0.926	†	1.106	1
Border		1.292	†	1.214	†	1.124	ŧ	1.170	†	1,157	ŧ	1.029	f
ReporterIsland		-0.232		-0.165		-0.311	* *	-0.268	**	-0.256	**	-0.171	
PartnerTsland		-0.491	†	0.354	**	-0.540	t	-0.527	†	-0.518	ţ	-0.413	*
ReporterLandlock		-0.996	t	-0.865	†	-1.023	†	-1.024	t	-1.016	ŧ	-0.942	4
PartnerLandlock		-2.199	†	-2.163	†	-2.325	ţ	-2.290	t	-2,271	ŧ	-2.247	4
Distance		-0.0001	†	-0.0001	t	-0.0001	Ť	-0.0001	ŧ	-0.0001	t	-0.0001	÷

a Code: Exporter-Importer, for example, RelRul means trade flows from relation-based to rulebased countries

Table 10. Classification and Comparison of Foreign Investment of Different Countries

	_	FDI (\$b	illions)	FDI/F	H (%)
Category	N	Mean	S.D.	Mean	S.D.
Rule-based	20	1.42	1.72	47.19	27.14
Relation-based	6	1.51	2.21	81.79	15.29
Neither-based	13	1.43	2.18	86.92	19.97
Total	39	1.44	1.90	65.76	30.00

Table 11. Data Sources and Variable Definitions

Variable	Data Source	Variable Description
FDI	Cumulative foreign direct	International Financial Statistics
	investment (FDI) (billions of US\$)	(IFS) (IMF, 2009).
	(2005–2007 average).	
FDI_FI	FDI as % of total foreign	IFS.
	investment.	
CAP_GDP	Market capitalization of listed	World Development Indicators
	companies as % of GDP (2005–	(WDI) World Bank (2008).
CAR	2007 average).	WIN
CAP	Market capitalization of listed	WDI.
	companies (billions of US\$) (2005–	
CEL	2007 average). Governance Environment Index.	T : (2000)
GEI Rul	Dummy variable. It equals to 1 if a	Li (2009). Li (2009).
Kui	country is rule-based.	LI (2009).
Rel	Dummy variable. It equals to 1 if a	Li (2009).
1101	country is relation-based.	11 (2007).
Fam	Dummy variable. It equals to 1 if a	Li (2009).
	country is neither-based.	
ENG_LAW	Dummy variable. It equals to 1 if a	La Porta et al. (1998).
	country's legal system originated in	
	the English common law tradition	
	(1998).	
FRE_LAW	Dummy variable. It equals to 1 if a	La Porta et al. (1998).
	country's legal system originated in	
0000 C 1377	the French civil law tradition (1998).	r . b 1 (1000)
GER_LAW	Dummy variable. It equals to 1 if a	La Porta et al. (1998).
	country's legal system originated in	
	the German civil law tradition (1998).	
SCA LAW	Dummy variable. It equals to 1 if a	La Porta et al. (1998).
SCH_LITW	country's legal system originated in	La t orta et al. (1990).
	the Scandinavian civil law tradition	
	(1998).	
GDP	Gross domestic product (billions of	IFS.
	US\$) (2005-2007 average).	
FXRT	Change in foreign exchange rate	WDI.
	(local currency per US\$), 2004-	
	2007. A positive FXRT means that	
	the local currency is rising against	
	the U.S. dollar.	
AGE	The number of years the stock	International Encyclopedia of the

Stock Market market had been in existence as of (Sheimo, Loizou, and Avcs, 1999). **OPEN** Dummy variable. It equals to 1 if OECD's FDI regulatory none of the following foreign restrictiveness index: revision and investment restrictions are in place: extension to more economies (1) ceiling on the percentage of (OECD, 2006), Implementing the eforeign ownership in a particular APEC Strategy: progress and stock, (2) restrictions on the recommendations for further action repatriation of income and earned (Lee, 2004) and country reports interest, or (3)direct controls (UNCTAD for multiple years) preventing entry of foreign investors into the market. Dummy variable. It equals to 1 if the Dhk country is Hong Kong, otherwise 0.

Table 12. Means, Standard Deviations, and Correlations for Model Variables

17	16	15	14	13	12	Ξ	3	9	ø	7	Q	S.	4	بہا	<i>t.</i> 3	٦	
Dhk	Open	CDP	FXRT1	AGE	SCA_LAW	GER_LAW	FRE_LAW	ENG_LAW	Fam	Rel	Rul	GEI	CAP	CAP_GDP	FDI_F1	FDI	
0.026	0.342	188.68	-2.64	107.23	0.04	0.11	0.29	0.20	0.31	0.20	0.49	-0.05	227.22	87.09	65.76	143.54	Mean
0.162	0.481	217.32	3.31	95.62	0.21	0.32	0.46	0.41	0.47	0.41	0.51	3.41	320.14	107.19	30.00	190.22	S.D.
0.58	0.07	0.08	-0.01	0.17	0.00	-0.09	0.10	0.04	-0.26	0.12	0.16	0.10	0.28	0.57	-0.13	1.00	1
-0.04	-0.55	0.23	-0.19	-0.35	-0.27	-0.43	0.11	-0.06	0.69	0.30	-0.86	-0.76	-0.10	-0.29	1.00		2
0.86	0.37	0.09	0.24	0.16	0.05	0.09	-0.21	0.45	-0.33	-0.10	0.37	0.40	0.11	1.00			သ
-0.13	11.0	0.12	-0.16	0.08	0.06	0.20	-0.01	0.11	-0.05	-0.11	0.12	0.14	00.1				4
0.18	0.49	0.09	0.11	0.54	0.43	0.25	-0.27	0.26	-0.63	-0.39	0.86	1.00					ψ
0.16	0.35	-0.09	0.20	0.39	0.22	0.33	-0.20	0.16	-0.76	-0.41	1.00						6
-0.06	-0.28	0.18	-0.05	-0.22	-0.09	-0.13	0.05	0.15	-0.28	1.00							7
-0.12	-0.17	-0.03	-0.17	-0.25	-0.17	-0.25	0.18	-0.27	1.00								œ
0.30	-0.01	0.13	0.03	0.11	-0.13	-0.19	-0.40	1.00									9
-0.12	0.06	0.18	-0.03	0.07	-0.17	-0.25	1.00										10
-0.06	0.29	-0.21	0.37	0.25	-0.08	1.00											Ħ
-0.04	0.33	0.03	-0.04	0.10	1.00												12
0.04 0.03 0.22 0.04	0.52	0.23	0.05	1.00													ដ
0.22	0.21	0.16	1.00														14
	0.02	1.00															15
0.23	1.00																16

Table 13. Data Analysis Results of FD1 Hypotheses

	Model	le[ ]	Model 2	el 2	Model 3	el 3	Model 4	el 4	Model 4a	el 4a
DV	Log(FD)	FDI)	Log(FDI)	(IOI)	FDJ_FI	FI	FDIFI	FI	FDI_FI	FI
SAI					:					
(Constant)	9.092	(0.976)	9.261‡	(1.040)	54.208**	(17.000)	36.634**	(13.798)	76.166‡	(14.092)
GEI	0.020	(0.131)			-6.826	(1.157)				
FXRATE	-0.130	(0.119)	-0.137	(0.121)	-0.609	(1.072)	0.541	(0.846)	0.541	(0.846)
ENG_LAW	1.009	(0.967)	0.886	(0.954)	0.424	(8.694)	-3.756	(6.644)	-3.756	(6.644)
FRE LAW	1.828**	(0.815)	1.801**	(0.826)	-9.197	(7.775)	-8.809	(6.120)	-8.809	(6.120)
GER_LAW	0.979	(1.415)	0.837	(1.413)	-15.197	(12.591)	-15.713	(9.758)	-15.713	(9.758)
SCALLAW	2.994	(1.812)	2.847	(1.722)	-1.565	(16.708)	-16.064	(12.365)	-16.064	(12.365)
Log(GDP)	0.233*	(0.136)	0.246*	(0.138)	3.369**	(1.254)	1.391	(0.997)	1.391	(0.997)
Open	-2.111**	(0.774)	-2.103***	(0.756)	-5.519	(7.634)	-10.955**	(5.840)	-10.955**	(5.840)
Log(FDI)					0.609	(1.612)	1.362	(1.275)	1.362	(1.275)
Rel			-0.163	(0.957)			39.532‡	(6.573)		
Fam			-0.448	(0.812)			45.371	(909:5)	5.840	(6.752)
Rul									-39.532†	(6.573)
R-Square (%)	0.208		0.189		0.684		0.805		0.805	
F-Value	2.25*		1.984*		10.159†		16.640†		16.640†	
N of countries	39		39		39		39		39	

\*P<0.001, \*\*\*P<0.01, \*\*P<0.05, \*P<0.1; Std. Errors are in the parenthesis.

Table 14. Data Analysis Results of Stock Market Hypotheses

	Mc	Model 5	Model6	e16	Model 7	11	Model 8	8
DV	Log	Log(CAP)	Log(CAP)	AP)	CAP_GDP	;DP	CAP_GDP	DP
IVs			:					
(Constant)	1.440*	(0.844)	1.372	(0.905)	50.174**	(14.485)	62.908***	(16.741)
GEI	-0.076	(0.140)			5.060*	(2.950)		
AGE	-0.002	(0.005)	-0.003	(0.004)	-0.054	(0.096)	-0.033	(680.0)
ENG_LAW	2.519**	(1.059)	2.668**	(1.041)	71.585***	(22.472)	78.386***	(21.836)
FRE_LAW	2.063**	(0.885)	2.075**	(0.884)	22.453	(18.701)	24.316	(18.459)
GER_LAW	2.267	(1.430)	2,394	(1.423)	70.459**	(29.500)	67.523**	(29.202)
SCA_LAW	3.497*	(1.928)	3.356*	(1.738)	43.544	(40.557)	57.279	(36.107)
Log(GDP)	0.287*	(0.145)	0.275*	(0.147)				
Dły	-5.014**	(2.304)	-5.158**	(2.296)	537.536	(48.612)	535.417†	(47.832)
Rel			-0.323	(1.031)			-40.384*	(21.426)
Fam			0.819	(0.849)			-33.383*	(17.504)
R-Square (%)	0.172		0.178		0.821		0.826	
F-Value	2.088*		2.012*		28.525‡		25.977	
N of countries	43		43		43		43	

<sup>†</sup>P<0.001, \*\*\*P<0.01, \*\*P<0.05, \*P<0.1; Std. Errors are in the parenthesis.

Table 15. Data Analysis Results of Stock market Hypotheses (Without Hong Kong)

	Mod	Model 5	Model6	Jel6	Model 7	el 7	Model 8	8 le
DV	Log(CAP)	CAP)	Log(CAP)	CAP)	CAP_GDP	GDP	CAP_GDP	GDP
IVs								
(Constant)	1.440*	(0.844)	1.372	(0.905)	50.174**	(14.485)	62.908***	(16.741)
GEI	-0.076	(0.140)			\$.060*	(2.950)		
AGE	-0.002	(0.005)	-0.003	(0.004)	-0.054	(0.096)	-0.033	(680.0)
Eng_law	2.519**	(1.059)	2.668**	(1.041)	71.585**	(22.472)	78.386***	(21.836)
Fre_law	2.063**	(0.885)	2.075**	(0.884)	22.453	(18.701)	24.316	(18.459)
Ger_law	2.266	(1.430)	2.394	(1.423)	70.459**	(29.500)	67.523**	(29.202)
Sca_law	3.497*	(1.928)	3.355*	(1.738)	43.544	(40.557)	59.279	(36.107)
Log(GDP)	0.287*	(0.145)	0.275*	(0.147)				
Rel			-0.323	(1.031)			-40.384*	(21.426)
Fam			0.819	(0.849)			-33.383*	(17.504)
R-Square (%)	0.138		0.145		0.362		0.381	
F-Value	1.936*		1.867*		4.885**		4.610***	
N of countries	42		42		42		42	

†P<0.001, \*\*\*P<0.01, \*\*P<0.05, \*P<0.1; Std. Errors are in the parenthesis.

		Generalized Trust	Particular	rized trust
		High	Extended	Nuclear
		Rule-based		
	High	governance		
Public		environment		
Ordering			Relation-Based	Neither-Based
	Low		governance	governance
			environment	environment

Figure 1: Typology of Governance Environments

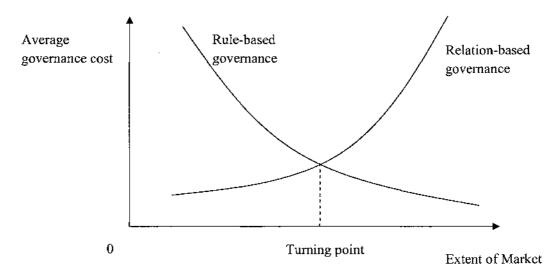


Figure 2: The governance cost of rule-based and relation-based systems (Source: Li (1999))

## Transaction cost

		<del>-,-</del> ·	High	Low
	Rule	Rule-based	Small scale	Large scale
Institution	Lack of rule	Relation- based	Large Scale	Small scale
		Neither-based	Limited scale	

Figure 3: The Combination of Institutional Theory and Transaction Costs Economics

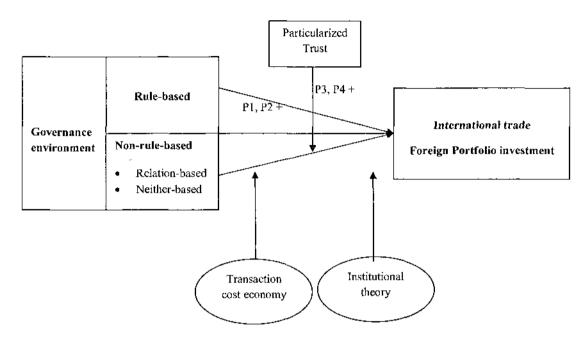


Figure 4: Theoretical framework

## VITA

## Jun Wu

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