

# Collectivism and Connected Lending

Siwamong Dheera-aumpon

Department of Economics, Kasetsart University

Email: fecospd@ku.ac.th, siwamongt@gmail.com

July 2017

## Abstract

National culture may affect the prevalence of connected lending. This study aimed to assess the effects of national culture, especially collectivism, on the need for special connections with banks, which is a measure of connected lending. I obtained national culture data from both Hofstede's work and the GLOBE project. Using data covering more than 5000 firms in 51 countries, this study found that GLOBE Institutional Collectivism decreases the need for special connections, while Hofstede Collectivism and GLOBE In-Group Collectivism do not. This suggests that the first cultural dimension is linked to lending cronyism while the last two dimensions are not.

**Keywords:** national culture; financial institution; institutional environment; collectivism; firm financing

**JEL Classification:** G21

## 1. Introduction

There is an expectation for banks and financial institutions to play roles in improving resource allocation. The prevalence of corruption in bank lending and the prevalence of connected lending, however, mitigate this important role. Corruption in bank lending has been examined by a number of studies such as Barth et al. (2009), Beck et al. (2006), Dheera-aumpon (2015), Houston et al. (2011), and Zheng et al. (2013). These researchers use a firm's perception of the corruption of bank officials as a measure of corruption in bank lending. Such research, therefore, considers a situation in which a loan officer abuses authority for personal pecuniary/non-pecuniary benefits. The corruption of bank officials not only undermines the integrity of bank lending, but also the prevalence of connected lending. It has been investigated by a number of studies such as Charumilind et al. (2006), Cull et al. (2011), Dheera-aumpon (2013, 2016), Hamada and Konishi (2010), Jou et al. (2017), La Porta et al. (2003), Laeven (2001), and Maurer and Haber (2007). All of these except Dheera-aumpon (2013, 2016) are country-focused studies. Conversely, Dheera-aumpon (2013, 2016) uses cross-country data on firms' perceptions of the need for special connections with banks to measure the prevalence of connected lending. Similar to the corruption of bank officials, Beck et al. (2005) found the need for special connections with banks to lower firm growth rates.

Different from other studies that focus on the effects of banking factors, Zheng et al. (2013) proposed that national culture also affects the corruption of bank officials. They argued that culture places informal constraints on human interactions so that it affects a loan officer's decision to engage in lending corruption. They found that the level of collectivism is positively associated with the corruption of bank officials. They explained that loan officers in a collectivist society weigh personal relationships over tasks and impersonal relationships, so that such officers have more incentives to engage in lending corruption. Additionally, colleagues in a collectivist society are less likely to detect and report such corruption. Because of the same reasons, it is possible that the level of collectivism also relates to the need to have special connections with banks. National culture also affects other aspects of the banking industry such as

bank risk taking (Kanagaretnam et al., 2011), bank earning's quality (Kanagaretnam et al., 2014), and bank performance (Boubakri et al., 2017).

Hofstede (1980, 2001) has been regarded as the pioneer of national culture research. His cultural dimensions have been used in a large number of studies such as Zheng et al. (2013). He constructed cultural dimensions from survey data conducted on IBM employees between 1967 and 1973. His original cultural dimensions included Individualism/Collectivism, Power Distance, Masculinity/Femininity, and Uncertainty Avoidance. In 1991, there was an introduction of another dimension named Long-term Orientation/Short-term Orientation. The Global Leadership and Organizational Behavior Effectiveness (GLOBE) project has updated and expanded Hofstede's model. In this project, the researchers conducted a survey in 1990s, reporting nine cultural dimensions including In-Group Collectivism, Institutional Collectivism, Power Distance, Assertiveness, Gender Egalitarianism, Uncertainty Avoidance, Future Orientation, Performance Orientation, and Humane Orientation. Some of them are similar to those of Hofstede while some of them are new. Since the national culture data from the GLOBE project are newer and have more cultural dimensions than those from Hofstede (2001), they might provide insights to use the cultural dimensions from the GLOBE project as well.

This study aimed to assess the effects of national culture, specifically collectivism, on the need for special connections with banks using national culture data from both Hofstede (2001) and the GLOBE project. Different from some prior studies on national culture such as Chang and Lin (2015) that focused on all cultural dimensions, this study focused on collectivism because researchers have found it to be the most influential one compared to other cultural dimensions. Triandis (2001) argued that collectivism is the most significant source of cultural differences. Zheng et al. (2013) also found that collectivism had the largest influence on the corruption of bank officials compared to other cultural dimensions.

There are three cultural dimensions concerning collectivism—Hofstede Collectivism, GLOBE In-Group Collectivism, and GLOBE Institutional Collectivism. Hofstede Collectivism represents a preference for a tightly knit framework in society in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty. This

dimension measures the degree of interdependence a society maintains among its members (Hofstede, 2001). Rules may be applied differently when it comes to connected parties (Husted, 2002). Preferential treatment is commonly extended to in-group members through the discretionary application of rules (Davis and Ruhe, 2003). Decision makers in collectivist societies are also more likely to use relationship-based reasoning (Husted and Allen, 2008). Loan officers in collectivist countries, therefore, are more likely to approve connected loans to connected parties. In addition, bank employees from collectivist societies tend to have more informal contact with fellow workers and know them better (Bochner and Hesketh, 1994). Peer reporting is less likely in collectivist societies that stress group loyalty (Trevino and Vector, 1992). Connected loans in collectivist countries, therefore, are less likely to be reported by fellow bank employees. Similar to what Zheng et al. (2013) explained for the corruption of bank officials, in a country with a high level of Hofstede Collectivism, a loan officer thus has more incentives to approve a connected loan to a related party, and such a loan is also less likely to be noticed and reported by colleagues. I, therefore, expect that connected loans are more prevalent in a high level of Hofstede Collectivism. As a result, I proposed the following hypothesis.

**Hypothesis 1.** There is a positive relation between a country's level of Hofstede Collectivism and the need to have special connections with banks.

GLOBE In-Group Collectivism measures the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families (House et al., 2004). According to its definition, this dimension is concerning the relationship between self and group similar to Hofstede Collectivism. Given that the definition of GLOBE In-Group Collectivism is similar to that of Hofstede Collectivism, connected loans are expected to be more prevalent in a country with a high level of GLOBE In-Group Collectivism. This led to the following hypothesis.

**Hypothesis 2.** There is a positive relation between a country's level of GLOBE In-Group Collectivism and the need to have special connections with banks.

Different from the previous two dimensions, GLOBE Institutional Collectivism measures the degree to which organizational and societal institutional practices encourage and reward collective

distribution of resources and collective action (House et al., 2004). A country with a high level of institutional collectivism tends to maximize the interests of collectives and encourages group loyalty even if this undermines the pursuit of individual goals (Grove, 2005). When there is a conflict of interest between self and an in-group, a collectivist tends to have less opportunistic behavior (Chen et al., 2002). In a country with a high level of institutional collectivism, a loan officer is thus less likely to approve a connected loan to a related party. I, therefore, expect that connected loans are less prevalent in a country with a high level of institutional collectivism. Accordingly, I proposed the following hypothesis.

**Hypothesis 3.** There is an inverse relation between a country's level of GLOBE Institutional Collectivism and the need to have special connections with banks.

To test the above hypotheses, this study used data on the need for special connections with banks from the World Business Environment Survey (WBES) and national culture data from Hofstede (2001) and the GLOBE project (House et al., 2004). The whole sample covers more than 5000 firms in 51 countries covering both developed and developing countries.

The results indicated that a country's level of institutional collectivism is negatively associated with the need to have special connections with banks. This means a firm in a country with a higher level of institutional collectivism tends to face more need for special connections with banks, and thus connected lending. The results were robust when introducing a variety of country-level factors as control variables. Perception or endogeneity biases did not drive the results. The results indicated that neither a country's level of Hofstede Collectivism nor a country's level of GLOBE In-Group Collectivism is associated with the need for special connections with banks.

This paper mainly contributes to the existing literature on the integrity of bank lending. It shows that the need to have special connections with banks is affected not only by banking factors but also by national culture. It also emphasizes that the need for special connections with banks is different from the corruption of bank officials, as they relate differently to national culture. Additionally, it suggests that institutional collectivism has a significant negative effect on the need for special connections with banks while other types of collectivism do not. This paper also contributes to the literature on national culture. It

gives additional evidence that Hofstede Collectivism and GLOBE In-Group Collectivism may be mislabeled and should be renamed.

The following explains the organization of the remainder of the paper. The next section describes the data and the method. The third section presents the main results and the robustness checks. The last section is the conclusion.

## **2. Data and method**

### *2.1. Data and Variables*

To assess the effects of national culture on the need to have special connections with banks, this study assembled a dataset considerably similar to Zheng et al. (2013), with an exception regarding the source of national culture data. The sources of data and the descriptions of variables were as follows.

#### *2.1.1. Need for special connections with banks*

The World Business Environment Survey (WBES) is the source of data on the need for special connections with banks that is a proxy for connected lending. The World Bank conducted the WBES between late 1999 and early 2000. It provides firm-level data covering firms of all sizes—small, medium, and large—from both developed and developing countries. The dependent variable—Special Connections—is constructed from responses of firm managers to the survey question "Is the need for special connections with banks and financial institutions an obstacle for the operation and growth of your business?" The response to this question is assigned a value of 1 for no obstacle, 2 for minor obstacle, 3 for moderate obstacle, and 4 for major obstacle. A higher value of this variable means a higher perception of connected lending.

#### *2.1.2. National culture*

I obtained the national culture data from Hofstede (2001) and House et al. (2004). They have some similarities and differences. House et al. (2004) reported nine cultural dimensions including In-Group Collectivism, Institutional Collectivism, Power Distance, Assertiveness, Gender Egalitarianism, Uncertainty Avoidance, Future Orientation, Performance Orientation, and Humane Orientation from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project. In-Group Collectivism,

Power Distance, Assertiveness, Uncertainty Avoidance, and Future Orientation are somewhat similar to Hofstede's Collectivism, Power Distance, Masculinity, Uncertainty Avoidance, and Long-term Orientation, respectively. As such, Institutional Collectivism, Gender Egalitarianism, Performance Orientation, and Humane Orientation are relatively unique to the GLOBE project. Different from Hofstede (2001) which reported one score for each cultural dimension, the GLOBE project report two scores—practices and values—for each dimension. Because connected lending and the need for special connections with banks are more likely determined by how people in the society behave, the practice scores are relatively more relevant and thus were used in this study.

### *2.1.3. Other country-level and firm-level control variables*

Other country-level control variables were included to control for bank supervision, bank competition, and information sharing that might affect the need for special connections as well. Following Beck et al. (2006), bank supervision variables include Supervisory Power and Private Monitoring, obtained from Barth et al. (2004). Supervisory Power measures the degree to which official bank supervisory agencies have the power to take specific actions to prevent and correct problems. Private Monitoring measures the extent to which supervisory agencies require banks to disclose information to the public and induce private sector monitoring of banks. Both variables were the first principal components of associated dummy variables, with higher values indicating higher authority of supervisory agencies, and better tools and incentives for private sector monitoring, respectively. Following Barth et al. (2009), bank competition and information sharing variables include Bank Concentration and Private Bureau Age, which I obtained from Beck et al. (2004) and Djankov et al. (2007), respectively. Bank Concentration is the share of the total banking sector assets held by the three largest banks. Private Bureau Age is the year of establishment of the oldest private credit bureau.

Firm-level control variables were included to control for firm characteristics. Sales is the natural logarithm of firm sales. Government and Foreign dummy variables take a value of 1 if the government and foreign entities own any fraction of the firm, respectively and 0 otherwise. The Export dummy variable takes a value of 1 if the firm exports and 0 otherwise. The Manufacturing and Services dummy

variables take a value of 1 if the firm is in the manufacturing industry and the service industry, respectively, and 0 otherwise. The Number of Competitors represents the number of competitors the firm faces in its market.

To perform robustness checks, additional control variables will be included later on. Growth is the growth rate of GDP. Inflation is the rate of inflation. Private Credit is the ratio of private credit by deposit money banks to GDP. Press State Ownership is the market share of state-owned newspapers out of the five largest daily newspapers. Political Connections is the percentage of firms connected with a minister or a member of parliament. Anti-Self-Dealing is an index measuring the protection of minority shareholders against expropriation by corporate insiders. Rule of Law is an index measuring the extent to which agents have confidence in and abide by the rules of society. Government Effectiveness is an index capturing perceptions of the quality of public services, the quality of the civil service, and the degree of its independence from political pressures. General Financing Obstacle is constructed from responses of firm managers to the survey question "Is financing an obstacle for the operation and growth of your business?" General Corruption Obstacle is constructed from responses of firm managers to the survey question "Is the level of general corruption an obstacle for the operation and growth of your business?"

Table 1 reports summary statistics. I reported the descriptions and sources of all variables as well as the list of countries included in the dataset in the Appendix.

"Table 1 about here"

## 2.2. Model and Method

The following equation describes a firm's latent response to the survey question whether the need for special connections with banks and financial institutions is an obstacle for the operation and growth of its business:

$$\text{Special Connections}_{i,j} = \alpha + \beta' \text{Cultural Dimensions}_{i,j} + \delta' \text{Country-Level Controls}_{i,j} + \gamma' \text{Firm Characteristics}_{i,j} + \varepsilon_{i,j},$$

In this equation, the  $i$  and  $j$  subscripts indicate firm and country, respectively. Different from the latent response, the observed response is a polychotomous variable with a natural order. Because a firm rates the

degree to which the need for special connections is an obstacle into four categories, there were three threshold parameters estimated together with the regression coefficients. Country-Level Controls include Supervisory Power, Private Monitoring, Bank Concentration, and Private Bureau Age. Firm Characteristics include Sales, Government, Foreign, Export, Manufacturing, Services, and Number of Competitors. To estimate the above equation, I used the ordered probit model with standard maximum likelihood estimation and heteroskedasticity robust standard errors. Following Beck et al. (2006), I also allowed for clustered error terms at the country level. Specifically, I allowed error terms to be correlated for firms within countries, but I required them to be independent across countries.

### **3. Results**

#### *3.1. Effects of Collectivism on the Need for Special Connections with Banks*

The results from ordered probit regressions of Special Connections on Hofstede Collectivism, GLOBE In-Group Collectivism, and GLOBE Institutional Collectivism are reported in Table 2 and Table 3, respectively. In the first specification in Table 2, all firm-level control variables were included besides Hofstede Collectivism. The second specification includes Hofstede's other cultural dimensions. The third specification includes bank supervision variables. The fourth specification included bank competition and information sharing variables. The fifth specification includes all country-level control variables.

"Table 2 about here"

The results in Table 2 do not support the first hypothesis that the need for special connections with banks increases with the level of Hofstede Collectivism. The coefficient of Hofstede Collectivism is always positive but is not always statistically significant. This suggests that the need for special connections with banks is different from the corruption of bank officials as suggested by Dheera-aumpon (2013, 2016). Specifically, Hofstede Collectivism was significantly positively related to the corruption of bank official, as shown by Zheng et al. (2013), but it was not significantly related to the need for special connections with banks, as shown in this paper.

Hofstede Collectivism was not significantly associated with the need for special connections with banks probably because Hofstede Collectivism was not related to ties between individuals but rather

related to how individuals focus on work-related goals. In other words, Hofstede Collectivism was in fact not linked to lending cronyism. Brewer and Venaik (2011) suggested that Hofstede Collectivism should be renamed as Work-Orientation in order to better represent what this cultural dimension reflects.

"Table 3 about here"

In the first specification in Table 3, all firm-level control variables were included besides In-Group Collectivism and Institutional Collectivism from the GLOBE project. The second through the fifth specifications includes similar sets of country-level control variables as those in Table 2. The results in Table 3 do not support the second hypothesis that the need for special connections with banks increases with the level of in-group collectivism. The coefficient of In-Group Collectivism was neither always positive nor always statistically significant.

GLOBE In-Group Collectivism was not significantly associated with the need for special connections with banks possibly because GLOBE In-Group Collectivism was not related to ties within groups but rather related to ties within families. In other words, In-Group Collectivism was essentially not linked to lending cronyism. Because the survey questions are rather family oriented, Brewer and Venaik (2011) suggest that GLOBE In-Group Collectivism should be renamed as Family Collectivism.

The results in Table 3 do support the third hypothesis that the need for special connections with banks decreases with the level of institutional collectivism. The coefficient of Institutional Collectivism was always negative and statistically significant at the 1% level. This confirms that GLOBE Institutional Collectivism is different from GLOBE In-Group Collectivism and Hofstede Collectivism, as they related differently to the need for special connections with banks. It is probably because Hofstede Collectivism and GLOBE In-Group Collectivism were related to how individuals focus on work-related work goals and to ties within families, respectively. None of them might had any effect on the need for special connections with banks. Conversely, GLOBE Institutional Collectivism that is related to collective action and collective distribution of resources might have an effect on the need for special connections with banks. GLOBE Institutional Collectivism is significantly inversely associated with the need for special connections with banks probably because a country with a high level of institutional collectivism tends to

have strong group loyalty and group cohesion so that bank insiders do not approve connected loans at the expense of other stakeholders.

The results in Table 2 and Table 3 also indicated that other cultural dimensions have no significant effect on the need for special connections with banks, as their coefficients were not always statistically significant. Consistent with Triandis (2001), these results suggest that collectivism, particularly institutional collectivism, is the most important one compared to other cultural dimensions.

"Table 4 about here"

Besides being statistically significant, the effect of institutional collectivism on the need for special connections with banks was also economically significant. To evaluate the magnitude of the effect, I calculated the estimated probabilities that an average firm will rate the need for special connections as no obstacle, a minor obstacle, a moderate obstacle, and a major obstacle at different levels of Institutional Collectivism, while holding other variables constant at their sample means. Then I computed changes in the estimated probabilities when Institutional Collectivism changed.

Table 4 presents the estimated probabilities and changes in them based on the third specification of Table 3. I conservatively chose the third specification because it had the smallest coefficient of Institutional Collectivism. The estimates indicate that if Institutional Collectivism moved from the 25th percentile (3.93) to the 75th percentile (4.36), the probability that an average firm would rate the need for special connections with banks as a major obstacle decreased from 13.5% to 10.6%. This 2.9-percentage-point decrease is relatively large as only 14% of firms in the sample rated the need for special connections with banks as a major obstacle. This confirms that the effect of institutional collectivism on the need for special connections with banks was significant.

In sum, the results indicated that there was a significant and inverse relation between GLOBE Institutional Collectivism and the need for special connections with banks. In contrast, there was no significant relation between Hofstede Collectivism and GLOBE In-Group Collectivism and the need for special connections with banks. The results thus also suggest that only GLOBE Institutional Collectivism was linked to lending cronyism while the other two dimensions were not.

### 3.2. Robustness Checks

The results from the previous section indicate that there was an inverse relation between Institutional Collectivism and the need for special connections with banks. To test whether an omitted variable bias and/or a perception bias drove the results, I introduced additional control variables into the regressions of Special Connections on GLOBE Institutional Collectivism. According to Beck et al. (2006), there may be a perception bias because respondents facing exactly the same obstacle may give different responses to the survey question due to differences in some country-level factors. To take care of these possible biases, additional country-level and firm-level control variables were included in the regressions.

In Table 5, the growth rate of GDP (Growth) is included as a proxy for firms' growth opportunities; the rate of inflation (Inflation) is included as a proxy for monetary instability; the private credit to GDP ratio (Private Credit) from Beck et al. (2000) is included as a measure of financial development; the share of state-owned newspapers (Press State Ownership) from Djankov et al. (2003) is included as a measure of state media ownership following Houston et al. (2011); and the percentage of politically connected firms (Political Connections) from Faccio (2006) is included as a measure of the prevalence of political connections. In Table 6, Anti-Self-Dealing index from Djankov et al. (2008) is included as a measure of minority shareholders protection against expropriation by corporate insiders; Rule of Law and Government Effectiveness indices from Kaufmann et al. (2010) are included as proxies for institutional environment. Because they may share the same perception bias and the same set of factors as Special Connections, General Financing Obstacle and General Corruption Obstacle are also included to reduce the likelihood that a perception bias and an omitted variable bias drive the results.

"Table 5 about here"

"Table 6 about here"

The results in Table 5 and Table 6 confirm that the need for special connections with banks decreases with the level of institutional collectivism. The coefficient of Institutional Collectivism was always negative and statistically significant even when various additional country-level and firm-level

control variables were introduced. These results suggest that there is neither a perception bias nor an omitted variable bias driving the aforementioned relationship.

Because of the distribution of the survey responses was not quite even across four categories, there might be a concern regarding the robustness of the results. To be specific, 35, 27, 23, and 14% of firms in the sample rated the need for special connections with banks as no obstacle, minor obstacle, moderate obstacle, and major obstacle, respectively. In the first specification of Table 7, I grouped the last two categories—moderate and major obstacles—together so that there were three categories left. In the second specification of Table 7, I also grouped the first two categories—no and minor obstacles—together so that there were two categories left. The coefficient of Institutional Collectivism remained negative and statistically significant at the 1% level. Hence, the uneven distribution of the survey responses did not affect the relationship between the need for special connections with banks and the level of institutional collectivism.

Even though national culture is believed to change so very slowly that the level of institutional collectivism is unlikely to be affected by the need for special connections with banks, there still may be a concern regarding an endogeneity bias. To alleviate such concern, I used the instrumental variable (IV) probit model. Along the lines of Gorodnichenko and Roland (2016) and Zheng et al. (2013), I used an overall index of the historical prevalence of seven diseases from Murray and Schaller (2010) as an instrumental variable for institutional collectivism. I chose this because it correlated with institutional collectivism, and yet it was unlikely to affect the need for special connections with banks so that the instrument relevance and exogeneity conditions were satisfied. Because the instrumental variable method is only available for the probit model but not the ordered probit, I also grouped the need for special connections with banks into two categories in the third specification of Table 7. The historical disease prevalence index entered significantly at the 1% level in the first stage regression. In the third specification of Table 7, the coefficient of Institutional Collectivism remained negative and statistically significant at the 1% level. An endogeneity bias did not drive the association between the need for special connections with banks and the level of institutional collectivism.

"Table 7 about here"

Because firms that receive bank financing may respond to the survey question in a different way from firms that do not receive bank financing, I included only firms with bank finance and only firms without bank finance in the fourth and the fifth specifications of Table 7, respectively. The coefficient of Institutional Collectivism remained negative and statistically significant at the 1% level. The relationship between the need for special connections with banks and the level of institutional collectivism thus was robust to subsampling and not affected by disgruntled borrowers. The results from the above robustness checks support the finding that the country's level of institutional collectivism was inversely related to the need for special connections with banks.

#### **4. Conclusion**

In the existing literature, banking factors such as bank supervision have shown to determine the need for special connections with banks. This study shows that the national culture, particularly institutional collectivism, determines the need for special connections with banks. This study used national culture data from two major sources, Hofstede's work and the GLOBE project. As a result, there were three measures of collectivism used in this study—Hofstede collectivism, GLOBE In-Group Collectivism, and GLOBE Institutional Collectivism.

Using data covering more than 5000 firms in 51 countries, this study found that a country's level of institutional collectivism was significantly and inversely related to the need to have special connections with banks. It can be explained that a loan officer in a country with a high level of institutional collectivism tends to have strong group loyalty and group cohesion so that he/she does not approve a connected loan at the expense of other stakeholders. Conversely, this study found that neither a country's level of Hofstede Collectivism nor a country's level of GLOBE In-Group Collectivism was significantly related to the need for special connections with banks. It can be explained that Hofstede Collectivism and GLOBE In-Group Collectivism were not related to cronyism. This is consistent with suggestions from other studies that the names of these cultural dimensions are misleading and should be renamed.

The findings suggest that the integrity of bank lending was not only adversely affected by the corruption of bank officials but also the need to have special connections with banks. A prior study has shown that the former is positively associated with Hofstede Collectivism. This paper shows that the latter is negatively associated with GLOBE Institutional Collectivism. To improve the integrity of bank lending, policymakers hence should pay special attention to countries with high level of Hofstede Collectivism and low level of GLOBE Institutional Collectivism as they tend to have more bank corruption and connected lending. To enhance institutional collectivism, policymakers may promote the building and the strengthening of teamwork culture among bank officials.

## **Appendix**

The dataset covers 51 countries including Albania, Argentina, Bolivia, Brazil, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Czech Rep, Ecuador, Egypt, El Salvador, Estonia, France, Georgia, Germany, Guatemala, Hungary, India, Indonesia, Italy, Kazakhstan, Malaysia, Mexico, Namibia, Nigeria, Pakistan, Panama, Peru, Philippines, Poland, Portugal, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Thailand, Trinidad and Tobago, Turkey, United Kingdom, United States, Uruguay, Venezuela, Zambia, and Zimbabwe.

"Table A1 about here"

## **References**

- Barth, J. R., Caprio, G. Jr., & Levine, R. (2004). Bank regulation and supervision: what works best? *Journal of Financial Intermediation*, 13(2), 205–248.
- Barth, J.R., Lin, C., Lin, P., & Song, F.M. (2009). Corruption in bank lending to firms: Cross-country micro evidence on the beneficial role of competition and information sharing. *Journal of Financial Economics*, 91(3), 361–388.
- Beck T., Demirguc-Kunt, A., & Levine, R. (2000). A new database on financial development and structure. *World Bank Economic Review*, 14(3), 597–605.
- Beck, T., Demirguc-Kunt, A., & Levine, R. (2006). Bank supervision and corruption in lending. *Journal of Monetary Economics*, 53(8), 2131–2163.

- Beck, T., Demirguc-Kunt, A., & Maksimovic, V. (2004). Bank competition and access to finance: International evidence. *Journal of Money, Credit and Banking*, 36(3), 627–648.
- Beck, T., Demirguc-Kunt, A., & Maksimovic, V. (2005). Financial and legal constraints to growth: Does firm size matter? *Journal of Finance*, 60(1), 137–177.
- Bochner, S., & Hesketh, B. (1994). Power distance, individualism/collectivism, and job-related attitudes in a culturally diverse work group. *Journal of Cross-Cultural Psychology*, 25(2), 233–257.
- Boubakria, N., Mirzaeib, A., & Samet, A. (2017). National culture and bank performance: Evidence from the recent financial crisis. *Journal of Financial Stability*, 29, 36–56.
- Brewer, P., & Venaik, S. (2011). Individualism-Collectivism in Hofstede and GLOBE. *Journal of International Business Studies*, 42(3), 436–445.
- Charumilind, C., Kali, R., & Wiwattanakantang, Y. (2006). Connected lending: Thailand before the financial crisis. *Journal of Business*, 79(1), 181–218.
- Chang, C.-H., & Lin, S.-J. (2015). The effects of national culture and behavioral pitfalls on investors' decision-making: Herding behavior in international stock markets. *International Review of Economics and Finance*, 37, 380–392.
- Chen, C. C., Peng, M. W., & Saporito, P. A. (2002). Individualism, collectivism, and opportunism: A cultural perspective on transaction cost economics. *Journal of Management*, 28(4), 567–583.
- Cull, R., Haber, S., & Imai, M. (2011). Related lending and banking development. *Journal of International Business Studies*, 42(3), 406–426.
- Davis, J. H., & Ruhe, J. A. (2003). Perceptions of country corruption: Antecedents and outcomes. *Journal of Business Ethics*, 43(4), 275–288.
- Dheera-aumpon, S. (2013). Connected lending and concentrated control. *Journal of Financial Stability*, 9(4), 475–486.
- Dheera-aumpon, S. (2015). Can shareholder rights protection reduce corruption in lending? *International Journal of Monetary Economics and Finance*, 8(2), 178–190.

- Dheera-aumpon, S. (2016). Bank ownership and connected lending. *International Review of Economics and Finance*, 41, 274–286.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The law and economics of self-dealing. *Journal of Financial Economics*, 88(3), 430–465.
- Djankov, S., McLiesh, C., Nenova, T., & Shleifer, A. (2003). Who owns the media? *Journal of Law and Economics*, 16(2), 341–382.
- Djankov, S., McLiesh, C., & Shleifer, A. (2007). Private credit in 129 countries. *Journal of Financial Economics*, 84(2), 299–329.
- Faccio, M. (2006). Politically connected firms. *American Economic Review*, 96(1), 369–386.
- Gorodnichenko, Y., & Roland, G. (2016). Culture, institutions and the wealth of nations. *Review of Economics and Statistics*, advance online publication March 23. doi:10.1162/REST\_a\_00599.
- Grove, C. N. (2005). Worldwide Differences in Business Values and Practices: Overview of GLOBE Research Findings. <http://www.grovewell.com/pub-GLOBE-dimensions.html>.
- Hamada, M., & Konishi, M. (2010). *Related lending and bank performance: Evidence from Indonesia*. IDE Discussion Paper No. 229, Institute of Developing Economies.
- Hofstede, G. H. (1980). *Culture's consequences: International differences in work-related values*. Thousand Oaks, CA: Sage.
- Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- Houston, J. F., Lin, C., & Ma, Y. (2011). Media ownership, concentration and corruption in bank lending. *Journal of Financial Economics*, 100(2), 326–350.
- Husted, B. W. (2002). Culture and international anti-corruption agreements in Latin America. *Journal of Business Ethics*, 37(4), 413–422.

- Husted, B. W., & Allen, D. B. (2008). Toward a model of cross-cultural business ethics: The impact of individualism and collectivism on the ethical decision-making process. *Journal of Business Ethics*, 82(2): 293–305.
- Jou, R., Chen, S., & Tsai, J.-Y. (2017). Politically connected lending, government capital injection, and bank performance. *International Review of Economics and Finance*, 47, 220–232.
- Kanagaretnam K., Lim, C. Y., & Lobo, G. J. (2011). Effects of national culture on earnings quality of banks. *Journal of International Business Studies*, 42(6), 853–874.
- Kanagaretnam K., Lim, C. Y., & Lobo, G. J. (2014). Effects of international institutional factors on earnings quality of banks. *Journal of Banking & Finance*, 39(C), 87–106.
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). *The worldwide governance indicators : methodology and analytical issues*. Policy Research Working Paper Series 5430, The World Bank.
- La Porta, R., Lopez-de-Silanes, F., & Zamarripa, G. (2003). Related lending. *Quarterly Journal of Economics*, 118(1), 231–268.
- Laeven, L. (2001). Insider lending and bank ownership: The case of Russia. *Journal of Comparative Economics*, 29(2), 207–229.
- Maurer, N., & Haber, S. (2007). Related lending and economic performance: Evidence from Mexico. *Journal of Economic History*, 67(3), 551–581.
- Murray, D. R., & Schaller, M. (2010). Historical prevalence of infectious diseases within 230 geopolitical regions: A tool for investigating origins of culture. *Journal of Cross-Cultural Psychology*, 41(1), 99–108.
- Triandis, H. C. (2001). Individualism-collectivism and personality. *Journal of Personality*, 69(6), 907–924.
- Trevino, L. K., & Victor, B. (1992). Peer reporting of unethical behavior: A social context perspective. *Academy of Management Journal*, 35(1), 38–64.
- Zheng, X., El Ghouli, S., Guedhami, O., & Kwok, C. C. Y. (2013). Collectivism and corruption in bank lending. *Journal of International Business Studies*, 44(4), 363–390.

**Table 1**  
Summary statistics

Variable	Mean	Standard deviation	Minimum	Median	Maximum	Number of observations
Special Connections	2.16	1.06	1	2	4	5068
Hofstede Collectivism	60.05	24.90	9	66	94	40
Hofstede Power Distance	65.30	20.20	31	65	104	40
Hofstede Masculinity	51.70	18.64	5	50	110	40
Hofstede Uncertainty Avoidance	68.65	23.26	8	75.50	104	40
Hofstede Long-Term Orientation	38.15	24.80	0	32.50	118	20
In-Group Collectivism	5.30	0.59	3.46	5.50	6.18	40
Institutional Collectivism	4.15	0.34	3.63	4.06	5.26	40
Power Distance	5.21	0.32	4.44	5.28	5.68	40
Assertiveness	4.11	0.32	3.41	4.10	4.72	40
Gender Egalitarianism	3.42	0.32	2.88	3.45	4.07	40
Uncertainty Avoidance	4.02	0.53	3.09	3.92	5.36	40
Future Orientation	3.74	0.41	3.06	3.71	4.88	40
Performance Orientation	3.98	0.33	3.41	3.99	4.81	40
Humane Orientation	4.07	0.45	3.29	3.98	5.12	40
Supervisory Power	-0.09	1.07	-3.05	0.09	1.14	40
Private Monitoring	0.26	0.66	-1.25	0.29	1.46	40
Bank Concentration	61.02	19.24	21.84	59.04	98.68	49
Private Bureau Age	21.86	25.28	0	11	99	29
Sales	10.47	8.05	-2.12	13.30	25.33	5068
Government	0.11	0.31	0	0	1	5068
Foreign	0.20	0.40	0	0	1	5068
Export	0.38	0.49	0	0	1	5068
Manufacturing	0.38	0.49	0	0	1	5068
Services	0.46	0.50	0	0	1	5068
Number of Competitors	2.30	0.74	0	2	9	5068
Growth	3.42	2.01	-1.05	3.56	9.14	51
Inflation	21.19	39.80	0.77	8.25	252.66	46
Private Credit	42.80	35.14	3.35	29.11	145.29	48
Press State Ownership	0.12	0.29	0	0	1	41
Political Connections	4.68	6.62	0	1.55	22.08	29
Anti-Self-Dealing	0.45	0.24	0.08	0.43	1	42
Rule of Law	0.14	0.90	-1.46	0.01	1.77	51
Government Effectiveness	0.31	0.88	-1.21	0.21	2.12	51
General Financing	2.75	1.13	1	3	4	4831
Obstacle						
General Corruption	2.42	1.16	1	2	4	4610
Obstacle						

**Table 2**  
Hofstede's collectivism and the need for special connections

	(1)	(2)	(3)	(4)	(5)
Hofstede Collectivism	0.0065*** (0.0018)	0.0074 (0.0049)	0.0030 (0.0018)	0.0069*** (0.0017)	0.018*** (0.0040)
Hofstede Power Distance		-0.0024 (0.0050)			0.00017 (0.0027)
Hofstede Masculinity		0.0065* (0.0032)			0.014*** (0.0020)
Hofstede Uncertainty Avoidance		0.0024 (0.0040)			-0.013*** (0.0021)
Hofstede Long-Term Orientation		0.000054 (0.0038)			0.012*** (0.0019)
Supervisory Power			0.096* (0.047)		-0.0086 (0.021)
Private Monitoring			-0.070 (0.072)		0.16*** (0.046)
Bank Concentration				-0.0050 (0.0028)	-0.0016 (0.0014)
Private Bureau Age				-0.0024 (0.0025)	0.0049** (0.0019)
Sales	0.0039 (0.0045)	0.015 (0.0079)	0.010 (0.0055)	0.0043 (0.0087)	-0.0070 (0.0093)
Government	-0.32*** (0.060)	-0.28*** (0.087)	-0.35*** (0.069)	-0.33*** (0.098)	-0.16 (0.11)
Foreign	-0.18*** (0.049)	-0.20*** (0.053)	-0.17*** (0.051)	-0.22*** (0.067)	-0.23** (0.085)
Export	-0.10** (0.045)	-0.0090 (0.050)	-0.11** (0.041)	-0.081 (0.054)	0.020 (0.064)
Manufacturing	-0.16 (0.100)	-0.069 (0.085)	-0.18 (0.11)	-0.10 (0.060)	-0.18* (0.082)
Services	-0.12 (0.095)	-0.035 (0.065)	-0.16 (0.096)	-0.026 (0.063)	-0.062 (0.080)
Number of Competitors	0.064 (0.048)	0.042 (0.073)	0.070 (0.051)	0.023 (0.059)	0.034 (0.045)
Observations	4230	2196	3632	2539	1496
Pseudo $R^2$	0.015	0.014	0.017	0.023	0.046
Countries	40	20	33	26	13

The dependent variable is Special Connections. The errors are clustered at the country level. Robust clustered standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1 % level, respectively.

**Table 3**  
In-Group collectivism, institutional collectivism, and the need for special connections

	(1)	(2)	(3)	(4)	(5)
In-Group Collectivism	0.17** (0.064)	-0.022 (0.11)	0.042 (0.068)	0.12 (0.097)	-0.074 (0.17)
Institutional Collectivism	-0.42*** (0.12)	-0.58*** (0.18)	-0.34*** (0.100)	-0.42*** (0.15)	-1.10*** (0.25)
Power Distance		-0.048 (0.15)			-0.44 (0.30)
Assertiveness		-0.24 (0.16)			-0.80 (0.50)
Gender Egalitarianism		-0.051 (0.16)			-0.43 (0.23)
Uncertainty Avoidance		-0.21 (0.17)			0.083 (0.30)
Future Orientation		-0.0033 (0.16)			0.31 (0.33)
Performance Orientation		0.30 (0.22)			0.19 (0.29)
Humane Orientation		0.16 (0.092)			-0.21 (0.24)
Supervisory Power			0.074 (0.044)		0.14** (0.049)
Private Monitoring			-0.16** (0.065)		-0.24** (0.091)
Bank Concentration				-0.0035 (0.0029)	-0.0022 (0.0024)
Private Bureau Age				-0.0019 (0.0026)	0.0026 (0.0036)
Sales	0.0013 (0.0062)	-0.0077 (0.0068)	0.010 (0.0059)	0.0077 (0.0086)	-0.017 (0.013)
Government	-0.35*** (0.064)	-0.33*** (0.064)	-0.38*** (0.068)	-0.43*** (0.099)	-0.34*** (0.098)
Foreign	-0.23*** (0.051)	-0.22*** (0.052)	-0.23*** (0.057)	-0.24*** (0.072)	-0.22*** (0.075)
Export	-0.11* (0.052)	-0.11* (0.049)	-0.076 (0.051)	-0.040 (0.063)	-0.013 (0.064)
Manufacturing	-0.13 (0.10)	-0.15 (0.098)	-0.16 (0.11)	-0.087 (0.068)	-0.12 (0.064)
Services	-0.10 (0.094)	-0.10 (0.090)	-0.12 (0.099)	-0.017 (0.065)	-0.034 (0.056)
Number of Competitors	-0.038 (0.050)	-0.064 (0.042)	-0.039 (0.051)	-0.054 (0.078)	0.0059 (0.070)
Observations	4068	4068	3446	2310	2149
Pseudo $R^2$	0.018	0.023	0.022	0.025	0.040
Countries	40	40	33	23	21

The dependent variable is Special Connections. The errors are clustered at the country level. Robust clustered standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1 % level, respectively.

**Table 4**

Institutional collectivism and the need for special connections—magnitude of the effect

		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle
Institutional Collectivism at	25th percentile (3.93)	0.334	0.283	0.248	0.135
	50th percentile (4.06)	0.350	0.283	0.241	0.126
	75th percentile (4.36)	0.389	0.282	0.223	0.106
Change between	25th and 50th percentiles	0.016	0.001	-0.007	-0.009
	50th and 75th percentiles	0.039	-0.001	-0.018	-0.020
	25th and 75th percentiles	0.055	0.000	-0.025	-0.029

Based on Specification 3 in Table 3, estimated probabilities which an average firm will rate the need for special connections as no obstacles, a minor obstacle, a moderate obstacle, and a major obstacle are presented for the 25th, 50th, and 75th percentiles of Institutional Collectivism. Estimated probabilities are calculated setting all variables at their mean values, except for Institutional Collectivism, which is set at either the 25th, 50th, or 75th percentile of the sample.

**Table 5**  
Institutional collectivism and the need for special connections—controlling for other factors

	(1)	(2)	(3)	(4)	(5)
In-Group Collectivism	0.084 (0.077)	-0.036 (0.063)	-0.0022 (0.067)	-0.029 (0.082)	-0.031 (0.092)
Institutional Collectivism	-0.29** (0.11)	-0.37*** (0.088)	-0.37*** (0.10)	-0.41** (0.15)	-0.40** (0.16)
Supervisory Power	0.081 (0.044)	0.097** (0.041)	0.081 (0.044)	0.061 (0.050)	0.086 (0.049)
Private Monitoring	-0.097 (0.092)	-0.19*** (0.057)	-0.20*** (0.062)	-0.17** (0.075)	-0.098 (0.091)
Sales	0.0096 (0.0055)	0.019*** (0.0067)	0.013 (0.0073)	0.011 (0.0062)	0.0071 (0.0069)
Government	-0.38*** (0.066)	-0.38*** (0.067)	-0.38*** (0.068)	-0.36*** (0.064)	-0.33*** (0.071)
Foreign	-0.23*** (0.057)	-0.19*** (0.053)	-0.22*** (0.058)	-0.23*** (0.061)	-0.22*** (0.063)
Export	-0.055 (0.050)	-0.048 (0.052)	-0.068 (0.055)	-0.089 (0.053)	-0.072 (0.056)
Manufacturing	-0.14 (0.11)	-0.16 (0.12)	-0.18 (0.11)	-0.18 (0.11)	-0.19 (0.12)
Services	-0.12 (0.099)	-0.14 (0.10)	-0.14 (0.098)	-0.15 (0.100)	-0.16 (0.11)
Number of Competitors	-0.041 (0.050)	-0.039 (0.049)	-0.037 (0.049)	0.0072 (0.045)	0.0043 (0.049)
Growth	-0.030 (0.020)				
Inflation		0.0036* (0.0018)			
Private Credit			-0.00014 (0.00085)		
Press State Ownership				0.21 (0.18)	
Political Connections					0.011* (0.0049)
Observations	3446	3256	3339	3197	2851
Pseudo $R^2$	0.023	0.025	0.024	0.021	0.023
Countries	33	30	31	29	24

The dependent variable is Special Connections. The errors are clustered at the country level. Robust clustered standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1 % level, respectively.

**Table 6**  
Institutional collectivism and the need for special connections—controlling for other factors

	(1)	(2)	(3)	(4)	(5)
In-Group Collectivism	0.0086 (0.078)	-0.058 (0.082)	-0.048 (0.085)	-0.036 (0.059)	-0.079 (0.062)
Institutional Collectivism	-0.33 <sup>*</sup> (0.13)	-0.34 <sup>***</sup> (0.088)	-0.34 <sup>***</sup> (0.086)	-0.30 <sup>***</sup> (0.089)	-0.24 <sup>***</sup> (0.080)
Supervisory Power	0.082 (0.042)	0.070 (0.039)	0.053 (0.041)	0.074 (0.038)	0.053 (0.046)
Private Monitoring	-0.17 <sup>*</sup> (0.078)	-0.093 (0.060)	-0.10 (0.061)	-0.15 <sup>**</sup> (0.055)	-0.11 (0.059)
Sales	0.011 (0.0074)	0.0085 (0.0053)	0.0093 (0.0049)	0.014 <sup>***</sup> (0.0046)	0.0040 (0.0061)
Government	-0.35 <sup>***</sup> (0.068)	-0.37 <sup>***</sup> (0.064)	-0.38 <sup>***</sup> (0.066)	-0.37 <sup>***</sup> (0.064)	-0.30 <sup>***</sup> (0.068)
Foreign	-0.20 <sup>***</sup> (0.056)	-0.22 <sup>***</sup> (0.057)	-0.23 <sup>***</sup> (0.057)	-0.15 <sup>**</sup> (0.058)	-0.22 <sup>***</sup> (0.062)
Export	-0.058 (0.052)	-0.053 (0.052)	-0.065 (0.052)	-0.064 (0.050)	-0.078 (0.052)
Manufacturing	-0.22 <sup>*</sup> (0.11)	-0.14 (0.12)	-0.14 (0.11)	-0.087 (0.12)	-0.10 (0.12)
Services	-0.16 (0.099)	-0.100 (0.10)	-0.10 (0.10)	-0.0086 (0.091)	-0.024 (0.098)
Number of Competitors	-0.018 (0.050)	-0.030 (0.053)	-0.049 (0.052)	-0.051 (0.045)	-0.073 (0.055)
Anti-Self-Dealing	-0.11 (0.17)				
Rule of Law		-0.15 <sup>**</sup> (0.062)			
Government Effectiveness			-0.14 <sup>*</sup> (0.068)		
General Financing Obstacle				0.33 <sup>***</sup> (0.029)	
General Corruption Obstacle					0.25 <sup>***</sup> (0.029)
Observations	3191	3446	3446	3235	3082
Pseudo $R^2$	0.022	0.025	0.024	0.059	0.043
Countries	29	33	33	33	33

The dependent variable is Special Connections. The errors are clustered at the country level. Robust clustered standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1 % level, respectively.

**Table 7**

Institutional collectivism and the need for special connections—robustness tests

	(1) Ordered probit 3 categories	(2) Probit 2 categories	(3) IV probit	(4) Only firms with bank finance	(5) Only firms without bank finance
Institutional Collectivism	-0.37*** (0.098)	-0.42*** (0.11)	-2.70*** (0.56)	-0.55*** (0.12)	-0.33*** (0.098)
Supervisory Power	0.081 (0.044)	0.057 (0.057)	-0.27*** (0.084)	0.062 (0.053)	0.021 (0.052)
Private Monitoring	-0.16*** (0.056)	-0.18** (0.068)	-0.29*** (0.046)	-0.17** (0.067)	-0.15** (0.055)
Sales	0.0093 (0.0063)	0.0024 (0.0069)	-0.022*** (0.0072)	0.0089 (0.0062)	0.016** (0.0063)
Government	-0.37*** (0.066)	-0.43*** (0.080)	-0.35*** (0.094)	-0.35*** (0.092)	-0.32*** (0.075)
Foreign	-0.24*** (0.064)	-0.23*** (0.070)	-0.28*** (0.069)	-0.33*** (0.092)	-0.14 (0.074)
Export	-0.044 (0.060)	-0.074 (0.059)	-0.087 (0.058)	0.023 (0.061)	-0.10* (0.047)
Manufacturing	-0.14 (0.11)	-0.15 (0.092)	-0.21** (0.079)	-0.070 (0.087)	-0.29 (0.16)
Services	-0.12 (0.092)	-0.11 (0.084)	-0.15* (0.074)	-0.029 (0.077)	-0.24 (0.15)
Number of Competitors	-0.012 (0.053)	-0.040 (0.054)	-0.079 (0.040)	-0.024 (0.057)	0.0090 (0.066)
Observations	3446	3446	3446	1326	1545
Pseudo $R^2$	0.025	0.034	n/a	0.029	0.019
Countries	33	33	33	28	28

The dependent variable is Special Connections. The errors are clustered at the country level. Robust clustered standard errors are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10, 5, and 1 % level, respectively.

**Table A1**  
Descriptions and sources of variables

Variable	Description	Source
Special Connections	Is the need for special connections with banks and financial institutions an obstacle for the operation and growth of your business? 1 for no obstacle, 2 for minor obstacle, 3 for moderate obstacle, and 4 for major obstacle.	WBES
Hofstede Collectivism	Hofstede's national cultural index measuring the degree of interdependence a society maintains among its members.	Hofstede (2001)
Hofstede Power Distance	Hofstede's national cultural index measuring the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally.	Hofstede (2001)
Hofstede Masculinity	Hofstede's national cultural index measuring the extent to which the society is driven by competition, achievement and success, with success being defined by the winner / best in field – a value system that starts in school and continues throughout organizational life.	Hofstede (2001)
Hofstede Uncertainty Avoidance	Hofstede's national cultural index measuring the extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these.	Hofstede (2001)
Hofstede Long-Term Orientation	Hofstede's national cultural index measuring how every society has to maintain some links with its own past while dealing with the challenges of the present and future.	Hofstede (2001)
In-Group Collectivism	GLOBE's national cultural index measuring the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families. (practices)	House et al. (2004)
Institutional Collectivism	GLOBE's national cultural index measuring the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action. (practices)	House et al. (2004)
Power Distance	GLOBE's national cultural index measuring the degree to which members of an organization or society expect and agree that power should be unequally shared. (practices)	House et al. (2004)
Assertiveness	GLOBE's national cultural index measuring the degree to which individuals are assertive, confrontational, and aggressive in their relationships with others. (practices)	House et al. (2004)
Gender Egalitarianism	GLOBE's national cultural index measuring the degree to which a collective minimizes gender inequality. (practices)	House et al. (2004)
Uncertainty Avoidance	GLOBE's national cultural index measuring the extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate the unpredictability of future events. (practices)	House et al. (2004)
Future Orientation	GLOBE's national cultural index measuring the degree to which a collectivity encourages and rewards future-oriented behaviors such as planning and delaying gratification. (practices)	House et al. (2004)
Performance Orientation	GLOBE's national cultural index measuring the extent to which a community encourages and rewards innovation, high standards, excellence, and performance improvement. (practices)	House et al. (2004)

Variable	Description	Source
Humane Orientation	GLOBE's national cultural index measuring the degree to which an organization or society encourages and rewards individuals for being fair, altruistic, friendly, generous, caring, and kind to others. (practices)	House et al. (2004)
Supervisory Power	First principal component of 14 dummy variables: (1) Does the supervisory agency have the right to meet with external auditors to discuss their report without the approval of the bank? (2) Are auditors required by law to communicate directly to the supervisory agency any presumed involvement of bank directors or senior managers in illicit activities, fraud, or insider abuse? (3) Can supervisors take legal action against external auditors for negligence? (4) Can the supervisory authority force a bank to change its internal organizational structure? (5) Are off-balance sheet items disclosed to supervisors? (6) Can the supervisory agency order the bank's directors or management to constitute provisions to cover actual or potential losses? (7) Can the supervisory agency suspend the directors' decision to distribute: (a) Dividends? (b) Bonuses? (c) Management fees? (8) Can the supervisory agency legally declare—such that this declaration supersedes the rights of bank shareholders—that a bank is insolvent? (9) Does the Banking Law give authority to the supervisory agency to intervene—that is, suspend some or all ownership rights—a problem bank? (10) Regarding bank restructuring and reorganization, can the supervisory agency or any other government agency do the following: (a) Supersede shareholder rights? (b) Remove and replace management? (c) Remove and replace directors?	Barth et al. (2004)
Private Monitoring	First principal component of 9 dummy variables: (1) Are bank directors legally liable if information disclosed is erroneous or misleading? (2) Are financial institutions required to produce consolidated accounts covering all bank and any non-bank financial subsidiaries? (3) Is an external audit a compulsory obligation for banks? (4) Are the top ten banks rated by international credit rating agencies? (5) Are off-balance sheet items disclosed to the public? (6) Must banks disclose their risk management procedures to the public? (7) Does accrued, though unpaid, interest/principal enter the income statement while the loan is still non-performing? (8) Is subordinated debt allowable as part of capital? (9) Is there no explicit deposit insurance protection system or compensation paid the last time a bank failed?	Barth et al. (2004)
Bank Concentration	Share of the assets of the largest three banks in total banking sector assets, averaged from 1995-1999.	Beck et al. (2004)
Private Bureau Age	Years since the establishment of the oldest private credit bureau in 1999.	Djankov et al. (2007)
Sales	Natural logarithm of firm sales.	WBES
Government	Dummy variable equals one if the government owns any fraction of the firm, zero otherwise.	WBES
Foreign	Dummy variable equals one if foreign entities own any fraction of the firm, zero otherwise.	WBES
Export	Dummy variable equals one if the firm exports, zero otherwise.	WBES

Variable	Description	Source
Manufacturing	Dummy variable equals one if the firm is in the manufacturing industry, zero otherwise.	WBES
Services	Dummy variable equals one if the firm is in the service industry, zero otherwise.	WBES
Number of Competitors	Regarding your firm's major product line, how many competitors do the firm faces in its markets?	WBES
Growth	Growth rate of GDP, averaged from 1995-1999.	World Development Indicators
Inflation	Growth rate of consumer price index, averaged from 1995-1999.	World Development Indicators
Private Credit	Ratio of private credit by deposit money banks to GDP, averaged from 1995-1999.	Beck et al. (2000)
Press State Ownership	Market share of state-owned newspapers out of the five largest daily newspapers.	Djankov et al. (2003)
Political Connections	Percentage of firms connected with a minister or a member of parliament.	Faccio (2006)
Anti-Self-Dealing	First principal component of 9 dummy variables: (1) approval by disinterested shareholders; (2) disclosures by buyer; (3) disclosures by a corporate insider; (4) independent review; (5) each of the elements in the index of disclosure in periodic filings; (6) standing to sue; (7) rescission; ease of holding a corporate insider liable; (8) ease of holding the approving body liable; and (9) access to evidence.	Djankov et al. (2006)
Rule of Law	An index capturing the perceptions of the extent to which agents have confidence in and abide by the rules of society in 1998.	Kaufmann et al. (2010)
Government Effectiveness	An index capturing the perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies in 1998.	Kaufmann et al. (2010)
General Financing Obstacle	Is the general financing an obstacle for the operation and growth of your business? 1 for no obstacle, 2 for minor obstacle, 3 for moderate obstacle, and 4 for major obstacle.	WBES
General Corruption Obstacle	Is the general corruption an obstacle for the operation and growth of your business? 1 for no obstacle, 2 for minor obstacle, 3 for moderate obstacle, and 4 for major obstacle.	WBES