Where Is Credit Due? Legal Institutions, Connections, and the Efficiency of Bank Lending in Vietnam

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Rapid development of the domestic private sector in communist China and Vietnam has been offered as evidence against a large literature that claims a solid legal infrastructure is required for the financial sector to contribute to economic development. One component of the counterargument holds that relationship-based lending has served as an effective substitute for legal institutions. In this article, we challenge this assertion with empirical findings that show bank credit allocation that relies heavily on "connections" undermines the impact of finance on investment growth. Our data come from Vietnam, where—like China—the private sector and financial sector are expanding dramatically but rule of law has not kept pace. Although Vietnam's banking sector is in transition toward a healthier system, it still allocates a disproportionate share of credit to "connected" enterprises in less competitive regions. We find that political connections, in particular, are an ineffective tool for channeling bank credit to the most profitable investors. Using a two-stage empirical approach, we find evidence that banks place greater value on connections than performance and that the firms with greater access to bank loans are no more profitable than firms without them. By some measures, connected firms are even significantly less profitable. We conclude by demonstrating that the most profitable investors in Vietnam have forgone the formal banking system, preferring to finance their activities out of reinvested earnings or informal loans (*JEL* G21, G28, G30, O12, K11).

1. Introduction

Financial intermediation is a critical facilitator of investment and economic growth (Schumpeter 1912; Patrick 1966; McKinnon 1973). Authors writing

in the law and finance literature frame finance as a set of contracts and predict that savers, and subsequently financial intermediaries, will not agree to invest in enterprises without clear legal claim to firms' winnings. In the absence of strong legal institutions, financial flows to potentially profitable companies are curtailed (Lerner and Schoar 2005), and as a result, overall economic growth is hampered (King and Levine 1993a; Jayaratne and Strahan 1996; La Porta et al. 1997, 1998; Beck and Levine 2003). For short-hand, we follow Allen et al. (2005) in terming this extensive literature the Law-Finance-Growth Nexus (henceforth LFGN).[1]

Other work has shown that when faced with unreliable legal institutions, enterprises tend to fall back on personal relationships for contract enforcement (Grief 1989, 1993; Uzzi 1997; McMillan and Woodruff 1999a; Guiso et al. 2000; Johnson et al. 2002; Beck and Levine 2003; Franks et al. 2003). Citing the important role of relationship-based lending, Allen et al. (2005) point to the rapid parallel growth of credit availability and private enterprise in the context of China's troubled institutional environment as a challenge to LFGN and suggest the possibility that it represents a credible alternative to the law and finance model of economic growth. Similar arguments have been made in discussing connections and access to credit in Vietnam (Hansen et al. 2004; Le et al. 2006).

The answer to the question of whether banks can use connections to overcome the negative impact of weak legal institutions has significant implications. Surveys of entrepreneurs in the developing world by the World Bank and others repeatedly claim access to finance as the leading obstacle to growth (e.g., World Bank 2006c). Governments in many countries have responded to such findings by intervening to increase volumes of available financing—especially in regions beset by economic stagnation, which frequently are characterized by their more rural and remote status. The World Bank, Asian Development Bank, and other international development agencies have provided substantial support to such policies, including large-scale direct credit lines.

Of course, lending based on relationships is not unique to developing economies. An extensive literature proves that even in countries with developed legal institutions, relationship lending is the norm, rather than the exception for small and young firms. Banks in developed countries use "soft information" to ameliorate asymmetric information problems through careful screening of borrowers (Gerschenkron 1961; Stiglitz and Weiss 1981). As a result, firms with longer banking relationships receive better terms in the form of lower interest rates and less collateral requirements (Diamond 1991a; Berger and Udell 1995, 2002). Relationship lending, as opposed to arms-length lending like buying bonds, also grants banks greater bargaining power over firm profits, once projects have begun (Rajan 1992) and allows them veto power over high-risk ventures (Jafee and Russell 1976). Firms prefer close relationships with banks as well because they are able to receive larger loans and

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1. In many ways, the LFGN is analogous to the credible comments theory pioneered by Barry Weingast in the political science literature. See Weingast (1992, 1993, 1998).

cheaper interest rates than they would if they widened their circle to multiple lenders (Diamond 1991b; Petersen and Rajan 1994). In some countries, recent consolidation of the financial industry has damaged these tight relationships, leading to more systematic risk in the banking sector and less capital reaching small firms (Berger et al. 1999; Berger et al. 2001; Giannetti and Ongena 2005).

Because of the positive role assigned to relationship lending on the part of banks in developed countries, it is tempting to extend the same logic to developing countries as Tsai (2002), Hansen et al. (2004), Allen et al. (2005), and Le et al. (2006) do. But there are two problems with this logic.

First, it is not clear that relationship lending has the same meaning in the two contexts. For authors writing about banking in the United States, the concept is defined as the acquisition of soft information over time through contact with a firm, its owner, and its community and the use of this information in assessing terms of credit (Berger and Udell 2002). Soft information is thought to be acquired as part of the banking relationship and has been operationalized by scholars in statistical models as the length of time a bank lends to a particular firm (Berger and Udell 1995). By contrast, writers extending the relationship argument to the developing country context often define relationships as bonds that originate outside of banking relationships. These bonds, which include family, friends, ethnic cohorts, and political acquaintances, are commonly referred to as "connections." To emphasize this difference, we use the term "connections lending" to refer specifically to personal relations outside of banking interactions.

Whereas accumulated soft information may often address lenders' asymmetric information problem, connections can lead to severe incentive problems and inefficiencies. La Porta et al. (2003) find that borrowers with direct links to Mexican banks (as officers and directors) receive better terms and are more likely to default. Laeven (2001) found that banks in Russia grant larger loans to firms which own equity in them. Due to their weaker profit motive and more complicated mandates, state-owned banks are particularly prone to connections lending. Sapienza (2004) demonstrates that state-owned banks in Italy are a vehicle for supplying patronage to distressed regions and powerful political parties, whereas Giannetti and Onega (2005) describe the pervasiveness of connections lending among state-owned banks in Eastern Europe. Finally, and of most direct relevance, Fan et al. (2005) show that politically connected Chief Executive Officers in China significantly under-perform their unconnected counterparts.

A second problem with the argument that connections lending can serve as an effective substitute for rule of law in countries with weak legal infrastructures is its reliance on the macroeconomic correlation as evidence. Although the cases of China and Vietnam make it clear that expansion of connections lending and private sector investment growth can indeed occur in parallel, it is another matter to attribute a causal relationship to such developments without sufficient firm-level evidence (Huang 2006). All else equal, connections-lending practices may still lead to less growth than would arm-length lending practices, especially if conducted in an environment characterized by strong property rights and legal protections. Lending based on ethnic relations, for

example, has been shown to be relatively ineffective in market terms (Banerjee and Munshi 2002; Fisman 2003).

Furthermore, it is helpful to parse out two distinct concepts that fall under the general rubric of the connections-lending literature. Allen et al. (2005, 2007) argue not only for the benefits of connections lending from formal banks to enterprises but also alternative, informal financial channels, including: "back-alley banks" (Tsai 2002), trade credits, and money from family and friends. Conflating these two options under a single term can be misleading because they are conceptually distinct and appear to interact in important ways. As the evidence in this articles shows, connections lending from formal institutions to enterprises in Vietnam has been inefficient and wasteful. Indeed, it appears Vietnam's most successful firms actually opt out of the formal financial system, preferring to invest with retained earnings and informal sources of capital. In this sense, our results are consistent with a portion of the Allen et al. (2005, 2007) argument: as in China and India, much of the financing of the most dynamic and fastest growing business activity in the Vietnamese economy takes place outside the traditional banking sector.

Our immediate target in this article, however, is the hypothesis that connections can serve as an effective substitute for legal institutions within the formal banking sector, that is, the direct challenge to LFGN. To test this component of the connections-lending literature, we investigate the specific case of private companies in rapidly growing and nominally communist Vietnam. Like China, Vietnam is a transition economy with weak legal institutions, a large and growing state-dominated bank sector, and rapidly expanding entrepreneurship and economic growth. Vietnam's ideological similarities place it very close to China on the spectrum of legal development. In fact, given the lasting influence of French colonialism on its legal system, Vietnam actually may have a legal system even less conducive to investment than China (La Porta et al. 1998; Acemoglu and Johnson 2005). Table 1 ranks the legal and financial development of Vietnam along with 13 other major developing and transition countries based on the World Bank (2006a) *Doing Business Indicators* and Transparency International's *Corruption Perception Index* (2006). Vietnam ranks last in terms of its overall legal and financial development, scoring particularly low on legal protections for investors and corruption.

Vietnam's Gross Domestic Product (GDP) growth from 2001 to 2005, however, was an impressive 7.3%—below only China's among developing countries. This fact combined with the rapid growth of credit in the Vietnamese banking system would seem to indicate that Vietnam is another potential anomaly to LFGN. Combining a unique data set covering 6400 firms and all 64 of Vietnam's provinces with an equally unique set of province-level control variables, we directly test bank financing of the private companies across a range of differing environments and find the connections-lending explanation misleading. Although connected entrepreneurs are significantly more likely to receive bank financing, they are not more profitable and do not invest more than their peers.

Our article is organized as follows. We begin with recent developments in Vietnam's economy, analyzing both growth trends in the banking sector and

Table 1. Ranking of Developing/Transition Countries on Indicators of Legal and Financial Development

Legal indicators		Getting credit			Protecting investors		3. Enforcing contracts				Transparency international		Average legal and financial development rank[j]	Average GDP growth 2000–2005 (%)[k]
Country	Legal origin[a]	Legal rights index[b]	Credit information index[c]	International rank[d]	Investor protection index[e]	International rank[d]	Procedures (number)[f]	Time (days)[g]	Cost (% of debt)[h]	International rank[d]	Corruptio perceptions index[i]	International rank[d]		
Malaysia	English	8	6	3	8.7	4	31	450	21.3	81	5	44	33.0	5.00
South Africa	English	5	5	33	8	9	26	600	11.5	43	4.6	51	34.0	3.83
Thailand	English	5	5	33	6	33	26	425	17.5	44	3.6	63	43.3	4.83
Hungary	?	6	5	21	4.3	118	21	335	9.6	12	5.2	41	48.0	4.33
Mexico	French	2	6	65	6	33	37	415	20	87	3.3	70	63.8	2.67
Poland	?	4	4	65	6	33	41	980	10	112	3.7	61	67.8	3.00
Argentina	French	3	6	48	4.7	99	33	520	15	68	2.9	93	77.0	1.83
China	?	2	4	101	5	83	31	292	26.8	63	3.3	70	79.3	9.17
Brazil	French	2	5	83	5.3	60	42	616	15.5	120	3.3	70	83.3	2.50
India	English	5	3	65	6	33	56	1420	35.7	173	3.3	70	85.3	6.50
Russia	?	3	0	159	5.3	60	31	178	13.5	25	2.5	121	91.3	6.67
Pakistan	English	4	4	65	6.3	19	55	880	22.6	163	2.2	142	97.3	4.67
Indonesia	French	5	2	83	5.3	60	34	570	126.5	145	2.4	130	104.5	4.83
Vietnam	French	4	3	83	2	170	37	295	31	94	2.6	111	114.5	7.33

[a]Legal origin of legal system (La Porta et al. 1998).

[b]Measures the degree to which collateral and bankruptcy laws facilitate lending. Source: World Bank (2006a).

[c]Measures rules affecting the scope, access, and quality of credit information (DB).

[d]International Rank of all countries included in the data set (DB 175, Transparency International).

[e]Composite measure of transparency of transactions, liability for self-dealing, and shareholders' ability to sue officers and directors for misconduct (DB).

[f]Number of procedures from the moment the plaintiff files a lawsuit in court until the moment of payment (DB).

[g]Time in calendar days to resolve the dispute (DB).

[h]Cost in court fees and attorney fees, where the use of attorneys is mandatory or common, expressed as a percentage of the debt value (DB).

[i]Composite measure of global corruption surveys. Source: Transparency International (2006).

[j]Average of four shaded international ranking boxes.

[k]Source: World Bank (2006b).

among domestic private companies. Building on this background, we engage in a two-stage empirical test. First, we study the determinants of banks' selection of borrowers. We find that personal connections and policy goals of increasing credit availability in rural provinces are indeed of primary importance in accessing bank credit. In the second empirical test, however, we find no evidence that access to loans is related to firm performance on range of different measures. This finding survives a series of robustness tests and specifications. In short, there is no evidence that connections lending is an effective substitute for a sound legal foundation in the efficient allocation of bank credit. In fact, when we substitute our direct measure of connections in favor of a self-reported measure, we find that connected firms actually have significantly worse profitability. In the final section, we probe deeper into the lack of any relationship between bank loans and firm performance. We find that banks do not even have access to the most worthy potential borrowers because the latter actually opt completely out of the formal lending system, preferring to finance expansion out of non-bank sources.

2. Finance and Firm Growth in Vietnam

Two fundamental issues confuse discussion of China and Vietnam as anomalies to LFGN. The first is the definition of financial development. Cull and Xu (2005: 120) argue specifically that, in terms of financial development, China is "well ahead" of the Eastern European countries covered by Johnson et al. (2002), illustrating this point with three indicators of the volume of credit relative to GDP. Allen et al. (2005), in turn, establish China as financially underdeveloped, based primarily on numbers describing its equity and bond markets. Like China, Vietnam provides an intriguing case because volume of available bank credit has grown at a very high rate, despite the absence of meaningful legal institutions. Were financial development understood literally as rapid growth of available financing, Vietnam would also contradict the theory that financial development requires a well-developed legal system.

Financial development, however, is better defined as an overall "level" of sophistication on the part of the financial system, rather than as a "process" of rapidly increasing availability of finance. Vietnam and China both rank very low on such a metric. Descriptive statistics on Vietnam's stock market in 2003 included market capitalization/GDP of 0.4% and market liquidity of 0.08%,[2]

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2. Stock market data are provided by PXP Vietnam Asset Management Ltd. It is worth noting that market liquidity in 2003 dipped from 0.18% in 2002 and subsequently rebounded to a still relatively insignificant 0.28% in 2004. Although still ranking as relatively underdeveloped, Vietnam's stock market has actually achieved shocking growth in the past 2 years. Capitalization of the Vietnamese stock market is now expected to reach 50% of GDP by the end of 2008 (*Tin Nhanh Chung Khoan*, January 18, 2008). This is clearly a case of capitalization driven by investor optimism about the country's future. The full implications for the current level of sophistication of local capital markets, however, are quite difficult to confidently assess at this dynamic point in the country's economic development.

far below even China, which recorded numbers of 48.1% and 33.6%, respectively (Allen et al. 2005; World Bank 2005: 282).

A second issue is the premise of the counterarguments to LFGN: that, despite weak legal infrastructure, rapidly expanding access to credit is causally related to parallel rapid growth private sector activity in China (Allen et al. 2005: 90; Tsai 2002: 59) and Vietnam (Hansen et al. 2004: 17). But these trends may be correlated simply because they are both direct outputs of government reform efforts and because they both began at such low levels.

The International Monetary Fund (IMF), Standard & Poor's, and others have actually expressed serious concern that credit expansion is occurring too rapidly and that interest rates are too low (O'Connor 2000; IMF 2005; Mai 2005). Over the most recent 4-year period, for which statistics are accessible, credit available to the Vietnamese economy more than doubled, from VND 155.7 trillion in 2000 to VND 366 trillion in 2004. Observers of the Vietnamese economy have frequently focused on the dangers of increasing capital flows to the country's state-owned enterprises (SOEs) because of slow progress on state sector reform and the related dangers of asset stripping and nonperforming loans. Freed of earlier regulatory obstacles, however, banks are also increasingly allowing the domestic private sector a greater share of access to the lending largess: SOEs' share of outstanding credit fell from 44% in 2000 to 35% in 2004 (IMF, 2005: 30). Figure 1 shows that, when viewed as a percentage of GDP, credit to SOEs has basically remained level, whereas credit to the private sector has jumped dramatically from 19.4% in 2000 to 31.6% in 2003. There is also reason to believe that formal companies, in particular, are getting an increasing share of the growing pie of credit available to the domestic private sector.[3] The share of liabilities held by the formal private sector has similarly increased from 11% of total enterprise liabilities in 2001 to 20% in 2005 (GSO 2005).

Despite these numbers, most surveys of private company owners in Vietnam consistently cite difficulty of accessing credit as a—or sometimes *the*—leading obstacle to private sector development (Hemlin et al. 1998; Tenev et al. 2003; Kokko and Sjoholm 2004; Carlier and Son 2005; Rand 2005; World Bank 2006c). Indeed, Vietnam's banking system does appear biased against the fledgling private sector. At least three quarters of all bank credit is provided by four state-owned commercial banks (SOCBs), where incentives generally have less to do with the profitability than with industrial policy and concern over risk of nonpayment by a borrower not backed by the state (i.e., a private borrower) (World Bank 2004a: 73; Freeman 2005). State banks are almost by definition less focused on profit and tend to offer loans at relatively low interest rates (La Porta et al. 2000; Sherif et al. 2003). As in Italy (Sapienza 2002) and Eastern Europe (Giannetti and Onega 2005), Vietnam's SOCBs are encouraged to funnel credit to favored, state-dominated industries and are party to the government's effort to use the financial system to ameliorate geographic (urban-rural) inequalities (Dufhues 2003). Despite its benign goals, there is no

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3. This assertion is based on both the rapidly increasing number of private companies and various data sources on regional and bank-specific lending since the year 2000.
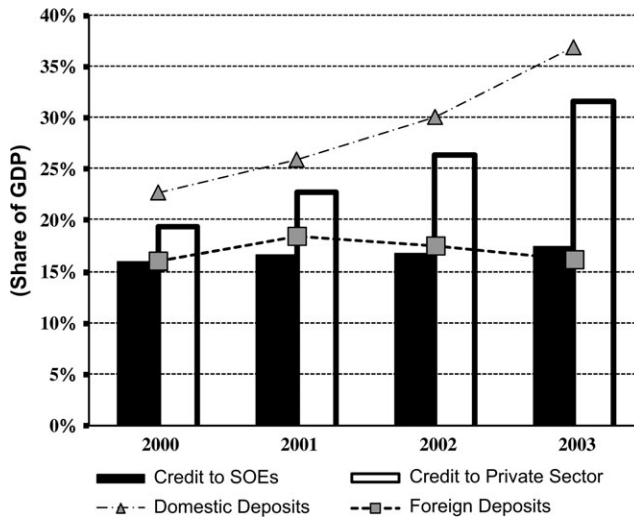
Figure 1. Bank Lending and Deposits as Share of GDP (2000-2003) (IMF 2004).

evidence that this redistributive process has resulted in clear benefits with regard to increased economic growth or job creation. More clear is that the availability of high volumes of low-cost credit has distorted credit markets in rural areas. Internationally funded microfinance programs complain that they have trouble operating in Vietnam because rates that they consider to be commercially viable are higher than those offered by the state (World Bank 2004b: 4).

At the level of the individual lending officer working for an SOCB, there are very strict punishments for nonperforming loans to private companies, including the possibility of jail time. Although ostensibly aimed at combating corruption, such measures primarily have the affect of further cementing risk-averse lending behavior. Even Vietnam's emerging group of privately held banks seems to favor borrowers with political connections, as a way of ameliorating risk and avoiding punishments (Nguyen et al. 2004: 9). The net result is a relative overabundance of credit flowing to "connected" enterprises in uncompetitive rural regions, and a constraining of credit markets, thereby crowding-out entrepreneurs most in need of capital to expand business activities in Vietnam's most competitive regions (O'Connor 2000).

Surveys of entrepreneurs themselves must, of course, be taken with a certain grain of salt. Entrepreneurs worldwide are never satisfied with the amount and terms of credit available to them. This is particularly true of small and medium-sized enterprises, which, in Vietnam's case, account for 98.8% of domestic private companies.[4] Generally, only banking systems in industrialized

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4. We use the commonly used cutoff of 300 employees for differentiating between SMEs and larger firms. The statistics used are from 2002 (GSO 2005).

countries with more sophisticated credit history information systems show much predilection for lending to smaller firms. Even in famously explosive historical periods of business growth, such as the late 19th century in Europe, banks have tended to remain focused on more familiar large firms (Cull et al. 2004). Empirical research, in fact, finds that targeted efforts to change this equation by apportioning larger shares of credit for smaller enterprises have been ineffective (Beck et al. 2004a, 2004b, 2005) and even damaging (Adams et al. 1984).

Despite the complaints of their owners, Vietnam's private companies have in fact substantially surpassed even the surprising growth of the country's banking sector (Taussig 2005, VNCI 2007). In the first 5 years following the January 2000 introduction of a new Enterprise Law that significantly decreased the costs of entry, the number of domestic private companies nearly tripled in number, as did the share of Vietnamese workers that it employs (GSO 2005).[5] Moreover, capital utilization models indicate that official numbers may underestimate output from the domestic private sector by 50% or even higher (Tenev et al. 2003).

On all measures, however, growth of private companies has disproportionately been centered on urban commercial centers and in the southern third of the country. Eleven of Vietnam's 64 provinces account for over 60% of growth in the active private sector and over 70% of both private sector investment and revenue (VNCI 2005). This growth is in sharp contrast to the increasing flow of bank lending, which by design has been much more balanced across the country as part of the earlier-mentioned strategy for greater income equality (Dufhues 2003). This spatial divergence between lending and private sector growth is a strong clue that further empirical testing at the firm level is needed.

3. Determinants of Access to Credit: a Multivariate Selection Model

To test whether relationships are important in receiving favored access to credit, we use data obtained from the 2006 Vietnam Provincial Competitiveness Index (PCI) Survey, a comprehensive governance survey of 6400 firms distributed across all of Vietnam's 64 provinces.[6] The survey team randomly sampled from a list of registered private enterprises with tax codes at each provincial tax authority. Stratification was based on firm size, age, and sector; so samples accurately reflect the population in each province. It is the most

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5. The Enterprise Law implemented in 2000 is widely credited for boosting the strong growth of the formal private sector through its streamlining of registration procedures, specifically eliminating hundreds of ministerial licenses and the requirement that provincial Departments of Planning and Investment finalize a firm's registration procedures within 15 days. Part of the impact of the Enterprise Law was also philosophical. It leveled the playing field between the formal private sector and SOEs and also significantly altered the manner in which government officials addressed new private businesses by transitioning from a system where officials granted permission/licenses to new business ventures to one where they simply facilitated entrepreneurs in registering those activities.

6. The survey instrument, data, and reports can be obtained from http://www.pcivietnam.org/.

comprehensive and methodologically rigorous assessment of the business environment for the Vietnamese private sector to date. The subnational design of the study allows us sufficient variance on provincial endowments, while holding constant tricky cross-national differences in culture and history that create problems for cross-national studies of the same issues.

The data analysis proceeds in two stages. First, we assess the key factors underlying provision of bank credit in Vietnam. Secondly, we test whether firms fortunate enough to receive a loan perform better than their peers.

3.1. Dependent Variable

The dependent variable for the first test is derived from the question, "Do you presently have a bank loan from a State-Owned or Joint-Stock Commercial Bank (Yes/No)?" We code the answer as a simple dichotomous variable. This variable offers the cleanest test of access to credit in the present Vietnamese environment. A variable capturing the total credit history would be misleading, as it may be biased by access to credit prior to implementation of the earlier-mentioned Enterprise Law and the recent upsurge in credit volumes. The PCI data set offers an alternative question asking respondents to rate their, "access to loans from branches of State-Owned Banks," on a five-point Likert scale. Although this measure was significantly correlated (at the 0.05 level) with whether a firm has a loan or not, we deemed it too subjective to use as our dependent variable due to the possibility that respondents, who had never applied for loans, may have underestimated the difficulties.

The PCI data set does not have more detailed information on terms of the loan, such as the, size, length, or interest rate. Other research on Vietnam, however, has pointed out that there is little variance on terms of loans charged by banks on private firms in Vietnam, though bank interest rates actually tend to be higher than those reportedly charged by informal lenders or other enterprises (Rand 2005). The average private firm pays interest rates of 11.1% per annum on bank loans lasting about 19 months (World Bank 2006c). The most important lending term cited in the literature on Vietnamese banking is actually whether or not firms use a Land Use Rights Certificate (LURC) or other business assets such as equipment as collateral (Do and Iyer 2003; World Bank 2006c). Unfortunately, due to the highly risk-averse nature of bankers in Vietnam, 90% of the PCI firms that received bank loans had used their LURC as collateral. This offered too little variance for a formal test. Thus, the key factor in our analysis is simply whether or not firms presently have a bank loan, not the specific conditions of the agreement.

3.2. Key Causal Variable: Political Connections

Our key causal variable is the strength of a firm's connections to the provincial government. The most sophisticated treatment of political connections in the relevant literature is Raymond Fisman's (2001) work on Indonesia, in which he uses a five-point Suharto dependency index to assess whether a personal

relationship with the dictator led to a decline in share prices when Suharto fell ill. The Vietnamese Communist Party's approach, including its embrace of collective leadership and relatively high turnover of Politburo members, has precluded similar accumulation of individual power in Vietnam. The far more influential connection is an association with the Party, government, or state-owned sector. Although Vietnam is a rapidly growing transition economy, political reform has been minimal. The Party continues to use promotion of cadres to maintain control of the governing apparatus. For a state banker attempting to ameliorate his personal risk, lending to someone with a connection to the ruling party is the safest option, much like in China (Fan et al. 2005). These connections are most important at the provincial level, where local elites interact regularly at government and social functions, as well as the few high-end restaurants and cafes in many provinces. Le et al. (2006: 214) also make this point, when they argue that networking significantly improves the probability of access to bank lending.

We use a three-point additive index to capture the degree of political connections to the ruling party. Respondents were asked whether the owner of the firm was any of the below:

- Former Party, government official, or military officer;
- Former SOE manager;
- Former SOE employee

Firms received a point for each characteristic that applied to the owner, with the most connected respondent receiving a score of three. Some readers might object to the inclusion of SOE employees as a connection, but it is important to note that historically SOE employment has been a springboard to local leadership positions. Many directors of provincial agencies and provincial People's Committee Chairmen graduated from employment at provincially managed SOEs (Gainsborough 2004). In more general terms, SOE employment of any kind is an elite privilege in Vietnam, offering a relatively small share of the work force (approximately 5%) guaranteed life-long wage employment, whereas the vast majority (approximately 80%) work in agriculture or other forms of informal sector employment.[7]

Table 2 presents summary statistics by the degree of political connections of the owner. Approximately 2019 firms (32% of the sample) have at least one political connection with the local government. Of these, 58% are former SOE employees, 23% were SOE managers, and 18% were government officials. Only 1% of firms had more than one connection. Connected firms are actually not very different from the rest of the private sector. They have very similar investment and profit levels and on average have seen similar levels of expansion over the past year. Connected firms have slightly larger employment but not much. The vast majority of both connected and unconnected firms are

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7. For exact figures on employment, see either the Statistical Yearbook 2005 (GSO 2006) or Statistical Data of Labor-Employment in Vietnam 2005 (MOLISA 2006). Figures from different branches of Vietnamese government differ marginally.

Table 2. Summary Statistics by Degree of Connections to Provincial Government

Variables/connections	No	Yes	If yes, degree of connection		
			1	2	3
Observations	4297	2022	1996	23	3
Equity size 2005 (mean of eight-point scale)[a]	2.77	2.82	2.82	2.81	2.67
Employment size 2005 mean of eight-point scale)[c]	2.86	2.99[b]	2.99	2.95	3.33
Profit size 2005 (mean of eight-point scale)[d]	4.33	4.40	4.40	4.52	4.33
Equity growth (change in eight-point scale between 2004 and 2005)	0.28	0.30	0.30	0.30	0.67
Profit Growth (change in eight-point scale between 2004 and 2005)	0.32	0.36	0.36	0.62	0.67
% Equitized Local SOE	5.56%	5.55%	5.47%	8.70%	33.33%
% Equitized Central SOE	0.86%	1.58%[b]	1.51%	4.35%	33.33%
% With bank loan from Joint-Stock or Commercial Bank	47.70%	51.24%[b]	51.15%	60.87%	33.33%

[b]Difference statistically significant at 0.05 level (t-test for means and chi-squared test for cross-tabulations)

[a]A8. What was the total equity capital of your firm?	[c]A10. What was the employment size of your firm?	[d]A12. Which statement best characterizes your firm's overall performance (net profit or losses after taxes and operating expenditures/total investment)?.
1. Under 0.5 billion VND	1. Less than five people	1. Large losses
2. Between 0.5 and 1 billion VND	2. Between five and nine people	2. Small losses
3. Between 1 and 5 billion VND	3. Between 10 and 49 people	3. Broke even
4. Between 5 and 10 billion VND	4. Between 50 and 199 people	4. Profits up to 2.5% of total investment
5. Between 10 and 50 billion VND	5. Between 200 and 299 people	5. Profits between 2.6% and 5% of total investment
6. Between 50 and 200 billion VND	6. Between 300 and 499 people	6. Profits between 5.1% and 10% of total investment
7. Between 200 and 500 billion VND	7. Between 500 and 1000 people	7. Profits between 10.1% and 20% of total investment
8. Above 500 billion VND	8. Above 1000 people	8. Above 20% of total investment

greenfield start-ups, but about 6% of both samples are privatized local SOEs.[8] As is to be expected, firms with two and three connections are more likely to have resulted from privatization, with former centrally managed SOEs slightly more common among connected firms. Most importantly, despite the similarities in size, historical background, and profits, connected firms are significantly more likely to have a bank loan in a bivariate analysis.

As a robustness test, we also use firms' self-assessment of their connection to government, based on their answer to the following question, "How important are your family and friends in bargaining with government officials?" (1 Not Important—4 Very Important).

3.3. Control Variables

Our analysis controls for several firm and provincial-level factors that impact access to credit. The descriptive statistics, hypothesized impact on credit access, and the source for the data are reported in Table 3.

Firm-level controls include the size of the firm (measured by both capital and labor), dummies capturing whether the firm resulted from provincial- or central-level privatization, and a battery of variables measuring sector (manufacturing, construction, service/commerce, and agriculture). These variables are listed as percentages because 63% of firms operate in more than one sector, rendering sector dummy variables meaningless.

"Years since establishment" is used as an imperfect proxy for the standard relationship lending hypothesis. Our data does not include the length of time that firms have been borrowing from particularly banks, but it is reasonable to assume bankers would have increased soft information about quality of management, historical record of success, and level of risk. Older firms should therefore be more likely to receive loans under the conventional usage of relationship lending. The measure is admittedly imperfect because bankers will have more information about both poor and well-performing firms, but given the relatively low survival rate of firms in Vietnam (Hansen et al. 2004), there are likely to be very few poor-performing firms among older entrepreneurs.

A final, but crucially important control for access to capital is whether or not a firm possesses an LURC (De Soto 2000). Although technically all Vietnamese land belongs to the state, the rights to its use have been assigned to individuals and firms through LURCs starting in 1993 (Do and Iyer 2004;

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8. Vietnam's government steadfastly avoids use of the word privatization (*tu nhan hoa*). Instead, authorities have promoted a national "equitization" (*co phan hoa*) program. According to Vu Thanh Tu Anh (2005), equitization is roughly analogous to privatization and can take one of four forms: (1) keeping state shares intact and issuing new shares; (2) selling part of the existing state shares; (3) detaching and then selling parts of an SOE; and (4) selling off all state shares to workers and private shareholders (a method mostly applied to loss-making SOEs). An important characteristic of this program is that national or local government frequently maintain a significant ownership share—especially for larger and more profitable equitized firms. To facilitate accessibility, throughout this article, we will use "privatization," when referring to the above four activities.

Table 3. Summary Information on Dependent and Independent Variables Used in Models

Dependent variables	Mean	Standard deviation	Min.	Max.	Source[a]	Question number	Coding
Firm presently has bank loan from a state-owned or joint-stock commercial bank	0.53	0.50	0	1	PCI	a9	Dichotomous
Net profit or losses after taxes and operating expenditures/total investment	4.51	1.37	1	8	PCI	a12_3	Eight-point scale
Profit Growth (change between 2004 and 2005 on eight-point scale)	0.33	0.85	−6	6	PCI	a12_3–a12-2	
Investment Growth (change between 2004 and 2005 on eight-point scale)	0.29	0.51	−3	3	PCI	a8_3–a8-2	

Independent variables	Hypothesis loan	Hypothesis profit	Mean	Standard deviation	Min.	Max.	Source	Question number	Coding
Bank loan		?	0.53	0.50	0	1	PCI	a9	Dichotomous
Degree of personal connection with local government	Positive	?	0.33	0.48	0	3	PCI	h5_3+h5_4+h5_5	Four-point scale
Connection dummy	Positive	?	0.33	0.47	0	1	PCI	Connections>1	Dichotomous
Privatized Local SOE	Positive	Positive	0.06	0.24	0	1	PCI	h5_1	Dichotomous
Privatized Central SEO	Positive	Positive	0.01	0.10	0	1	PCI	h5_2	Dichotomous
Local government owns share of firm	Positive	Positive	0.03	0.16	0	1	PCI	h5_7	Dichotomous
Total firm equity in 2005	Positive	Positive	2.87	1.15	1	8	PCI	a8_3	Eight-point scale
Total firm equity in 2004	Positive	Positive	2.58	1.11	1	8	PCI	a8_2	Eight-point scale
Total employment size in 2005	Positive	Positive	2.98	1.26	1	8	PCI	a10_3	Eight-point scale
Total employment size in 2004	Positive	Positive	2.78	1.22	1	8	PCI	a10_2	Eight-point scale

Firm profit in 2004	Positive	Positive	4.17	1.36	1	8	PCI	a12_2	Eight-point scale
% of firm business from manufacturing	Positive	Positive	22.44	39.35	0	100	PCI	a6_1	Continuous
% of firm business from construction	Positive	Positive	24.60	39.26	0	100	PCI	a6_2	Continuous
% of firm business from service/commerce	Positive	Positive	46.59	45.30	0	100	PCI	a6_3	Continuous
% of firm business from agriculture/forestry/ aquaculture	Negative	Negative	5.18	19.58	0	100	PCI	a6_4	Continuous
Land Use Rights Certificate	Positive	Positive	0.54	0.50	0	1	PCI	b4_1a	Dichotomous
Years since establishment	Positive		4.91	4.66	0	60	PCI	2006-a1	Continuous
Years since registration		Negative	4.18	3.73	0	106	PCI	2006-a2	Continuous
Firm exports directly		Positive	3.85	17.18	0	100	PCI	a14d	Dichotomous
Firm exports through distributor		Positive	2.23	12.41	0	100	PCI	a14e	Dichotomous
Self-reported reliance on family and friends in government	Positive		2.72	0.91	1	4	PCI	5-f6	Four-point scale
Total PCI score—unweighted		Positive	6.34	0.68	5.05	8.35	VNCI	Provincial aggregate	Continuous
PCI subindex 5: informal charges		Positive	55.91	5.86	42.51	74.87	VNCI	Provincial aggregate	Continuous
Employed who finished high school (%)	Positive	Positive	18.44	8.59	4.93	55.14	MOLISA		Continuous
Telephones per capita in 2004	Positive	Positive	90.91	66.43	31.04	339.50	GSO A		Continuous
Population in 2004 (thousands)	Positive	Positive	1456.39	1085.55	296.20	5730.70	GSO A		Continuous

Distance from Hanoi or HCMC (km)	Negative	Negative	232.31	216.46	0	835	GSO A	Continuous
Number of Registered Private Enterprises per 1000 citizens 2004 (ln)	Negative	Negative	0.52	0.32	0.18	1.68	GSO B	Continuous (Natural Log)
Interaction (loans to SOEs × number of enterprises)	Negative	Negative	0.19	0.36	0.01	2.37	Authors	Continuous
Loans of four state commercial banks to SOEs/total lending	Negative	Negative	0.19	0.14	0.02	0.71	SCB	Continuous
Ratio of economic cases filed by Private Firms in Provincial People's Courts		Positive	48.71	39.53	0	100	PSC	Continuous

Data sources: PCI: PCI Survey of 6400 firms in all of Vietnam's 64 provinces. Survey instrument and methodology can be obtained at http://www.pcivietnam.org/; VNCI (2006); MOLISA (2005); GSO A (2006); GSO B (2005). (Provincial-Level Data Supplied Directly to Authors); SCB: State Commercial Banks of Vietnam (Provincial Data Supplied Directly to Authors); PSC: People's Supreme Court of Vietnam (Provincial-Level Data Supplied Directly to Authors—Author's Calculations).

Robertson 2006). These certificates legalize their owners' rights to the long-

term use of the allocated land (for as little as 20 years, but up to 70 years) and to transfer, exchange, lease, inherit, and mortgage the land use right. Particularly important is the ability to use a formal LURC as collateral in accessing bank loans, which was enshrined in the 1998 iteration of the Land Law.[9] Many firms possess only informal land rights inherited from previous generations or purchased through informal exchange. We use a dummy variable measuring whether a firm has an official LURC.

3.3.2. *Provincial-Level Controls.*   We provide a number of structural controls that may impact bank lending in Vietnamese provinces. These include the infrastructure of the province (proxied by the number of telephones per capita), proximity to markets (measured by the distance of the provincial capital from Hanoi and HCMC), human capital (measured by the percentage of secondary school graduates in the workforce), and finally market size (measured by the provincial population size).

In addition to these structural controls, it is important to analyze the demand and supply of credit at the provincial level, as they frame the opportunities available to firms. First, access to loans will be limited by the proportion of bank lending available. As the IMF has noted, in many provinces, lending to the state sector crowds out the volume of credit left for entrepreneurs. To measure the extent of this problem, we use annual lending data from all four state-owned commercial banks in 2006.[10] Loans to firms in industrial zones within the province were considered along with the loans to firms outside the zones (Mai Anh 2005). The percentage of total bank loans going to SOEs in the province in 2006 was taken as the indicator.[11]

Access is also limited by competition for loans from other enterprises in the same bank jurisdiction. To measure this, we use the number of active companies in the province per thousand citizens as measured by the General Statistical Office's Enterprise Census in 2005.[12]

Finally, we interact the SOE lending bias and competition variables in each model to test how the two variables respond in combination. These supply and demand conditions are displayed in Figure 2. Lending to SOEs as a percentage of total SOCB loans appears on the horizontal axis and the number of private

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9. Other forms of collateral are possible according to the Land Law of 2003, such as Property, Plant, and Equipment, as well as fruit-bearing trees on firm property, but as an anonymous reviewer correctly pointed out, banks rarely use them due to the poor quality of firm accounts.

10. SOCBs include: Vietcombank, The Industrial and Commercial Bank (INCOMBANK), and The Bank for Investment and Development (BIDV), and Bank for Agriculture and Rural Development (BARD).

11. The absolute amount of lending to private companies may have been a better measure of overall access to capital, as a province like Hanoi may have proportionately more SOE lending but in absolute terms gives far more capital to the private sector than a province like Ninh Thuan. Such data, however, were considered proprietary by the four commercial banks that provided the data.

12. The natural log of this variable is taken due to wide variance across provinces.

Competition for Capital Access by Provinces
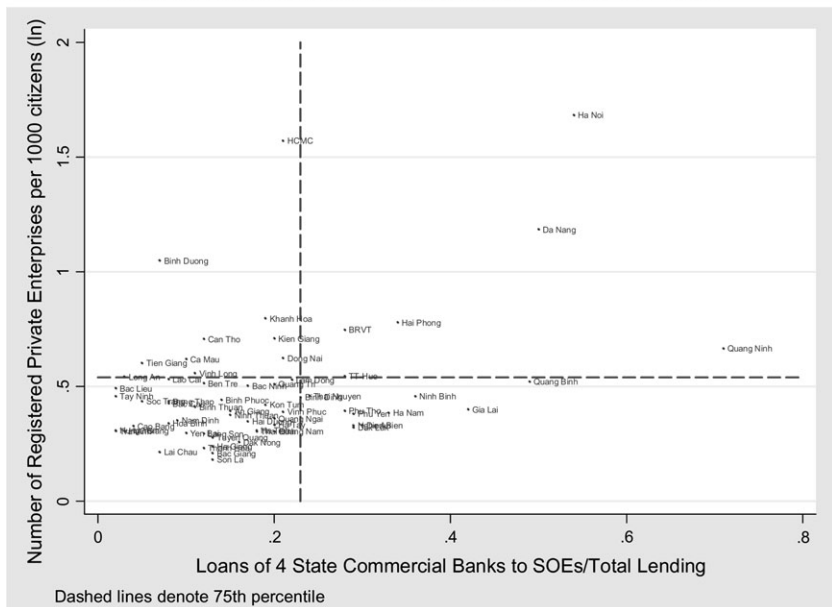(Scatter plot of Number of Enterprises and Percentage of Loans to SOE Sector)

Figure 2.   Competition for Capital Access by Provinces (Scatter Plot of Number of Enterprises and Percentage of Loans to SOE Sector).

companies per thousand citizens on the vertical axis. Dashed lines denote the 75th percentile of each variable.

Four quadrants are recognizable immediately in Figure 2. The Southwest quadrant should be the easiest environment for loan access, due to the high percentage of loans to the private sector and relatively low number of private companies competing for the same pot. The Northeast quadrant with Hanoi and a number of Vietnam's prereform era industrial centers should be the most difficult place to receive a loan, due to a low percentage of loans dedicated to the private sector and very high competition. The Northwest quadrant, which includes the Mekong Delta and the rapidly growing provinces around Ho Chi Minh City, and the Southeast quadrant, including primarily mountainous rural areas, are both mixed environments for loan access. Which quadrant has a more problematic environment depends on the relative saliency of the two dimensions.

3.3. Results of Access to Bank Loans

The initial results of access to bank loans are shown in Table 4. Model 1 is a baseline model including a core set of firm-level controls. Model 2 adds our key causal variable of personal connections, as well as controls for whether the

firm resulted from privatization. Model 3 adds the first set of provincial variables, which are the supply of available credit for private firms and the number of enterprises competing for these loans. These two terms are interacted in Model 4. In Model 5, we add province-level structural controls. Model 6 controls for lagged firm performance (profitability). We do not use prior profitability in all specifications, however, as this would drop newly registered firms from the analysis, thereby reducing the sample size by 1200 firms. Model 9 substitutes firms' self-assessment of connections for the more direct measures. In all models, robust standard errors are clustered at the provincial level.

Firm size measured by labor and equity, percentage of activity in manufacturing and the service sector, and the quality of human capital all have the predicted signs.[13] Interestingly, distance from Hanoi or HCMC is positively correlated with bank loans. This indicates that more remote rural environments are more likely to receive bank loans and confirms speculation that the Vietnamese government has tried to use SOCBs to alleviate emerging income inequalities and stimulate rural growth. Possession of LURCs has a large positive impact on access to bank loans. These findings confirm De Soto's hypothesis as well as the Johnson et al. (2002) discovery that property rights are critical for credit access in transition countries because of the high reliance on collateral among banks in these states. "Years since establishment" proves insignificant in every model offering some evidence that conventional relationship lending is not a major feature of Vietnam's still quite young banking sector. Previous profitability is not only insignificant but actually has a negative impact on access to bank loans. Banks apparently did not take previous performance into account in their original valuation of firm worthiness.

Competitiveness of loan access (as measured by the number of companies per 1000 citizens) at the provincial level was significant in Model 3. Moving from the minimum score of 0.18 (about 0.2 enterprises per 1000 citizens) to the maximum of 1.7 (about 4.3 enterprises) would yield a 10% decrease in the probability of receiving a loan, demonstrating the difficulty of accessing loans in highly competitive markets. The percentage of SOE lending is not individually significant in any models.[14]

More interestingly, the interaction between the competition for loans and the percentage of bank credit for SOEs is highly significant as well as robust to provincial-level controls in Models 4, 5, and 6. This interaction is explored more concretely in Figure 3. Provinces above the 75th percentile (about 23%) are listed as "High Loans to SOE," and provinces below the 75th percentile are listed as "Low loans to SOE." Along the horizontal axis, we list the number of enterprises per 1000 citizens. The vertical axis illustrates the

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13. Please see Robustness Test 2 in our Online Appendices file at http://irps.ucsd.edu/faculty/faculty-directory/edmund-malesky.htm. It demonstrates that using lagged value of equity and labor size does not change the results dramatically.

14. The statistical insignificance of percentage of SOE loans indicates that reverse causality is not a major consider with this variable.

Table 4. Determinants of Bank Lending in Vietnam (Marginal Probabilities with Robust Standard Errors in Parentheses)

Model	1	2	3	4	5	6	7	8	9
Dependent variable: firm presently has bank loan from a state-owned or joint-stock commercial bank	Baseline	Relations	Competition	Interaction	Provincial controls	Lagged profitability	SOE loans interaction	Triple interaction	Family connections
Degree of personal connection with local government		0.0363** (0.016)	0.0353** (0.015)	0.0373** (0.015)	0.0346** (0.015)	0.0195* (0.016)			
Connection dummy							0.0344** (0.016)	−0.00748 (0.031)	
Self-reported reliance on family and friends in government[a]									0.0117* (0.0061)
Total firm equity in 2005	0.0829*** (0.0096)	0.0831*** (0.0097)	0.0831*** (0.0097)	0.0828*** (0.0097)	0.0832*** (0.0099)	0.0828*** (0.011)	0.0831*** (0.0098)	0.0831*** (0.0099)	0.0831*** (0.0097)
Total employment size in 2005	0.0385*** (0.011)	0.0378*** (0.011)	0.0392*** (0.010)	0.0399*** (0.010)	0.0390*** (0.010)	0.0328*** (0.011)	0.0386*** (0.010)	0.0387*** (0.010)	0.0385*** (0.011)
Profitability in 2004						−0.00536 (0.0058)			
Years since establishment	0.00223 (0.0016)	0.00176 (0.0016)	0.00219 (0.0017)	0.00192 (0.0017)	0.00223 (0.0016)	0.000620 (0.0018)	0.00229 (0.0016)	0.00231 (0.0016)	0.00173 (0.0016)
% of firm business from manufacturing	0.000922*** (0.00035)	0.000894** (0.00036)	0.000919** (0.00036)	0.000924** (0.00036)	0.000967** (0.00038)	0.00124*** (0.00047)	0.000953** (0.00038)	0.000952** (0.00038)	0.000882** (0.00036)
% of firm business from construction	0.000322 (0.00033)	0.000262 (0.00034)	0.000243 (0.00034)	0.000255 (0.00034)	0.000270 (0.00036)	0.000901* (0.00047)	0.000243 (0.00036)	0.000252 (0.00036)	0.000276 (0.00034)
% of firm business from service/commerce	0.00105*** (0.00035)	0.00102*** (0.00035)	0.00106*** (0.00035)	0.00106*** (0.00035)	0.00112*** (0.00037)	0.00140*** (0.00047)	0.00109*** (0.00037)	0.00109*** (0.00037)	0.00101*** (0.00035)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
% of firm business from agriculture/forestry/aquaculture	0.000187 (0.00055)	0.000157 (0.00054)	0.000127 (0.00054)	0.000112 (0.00054)	0.000183 (0.00056)	0.000746 (0.00068)	0.000179 (0.00056)	0.000189 (0.00056)	0.000165 (0.00054)
Land Use Rights Certificate	0.0420** (0.019)	0.0423** (0.019)	0.0351* (0.018)	0.0349* (0.018)	0.0383** (0.019)	0.0381* (0.020)	0.0380** (0.019)	0.0376** (0.019)	0.0420** (0.019)
Privatized Local SOE		0.0394 (0.029)	0.0311 (0.029)	0.0340 (0.029)	0.0342 (0.030)	0.0397 (0.033)	0.0359 (0.030)	0.0360 (0.030)	0.0416 (0.029)
Privatized Central SOE		0.0641 (0.077)	0.0654 (0.077)	0.0645 (0.077)	0.0572 (0.076)	0.112 (0.093)	0.0607 (0.076)	0.0650 (0.075)	0.0681 (0.077)
Number of Registered Private Enterprises per 1000 citizens (ln)			−0.0753* (0.044)	0.0281 (0.045)	0.00537 (0.067)	0.0261 (0.076)	−0.0695 (0.062)	−0.0975 (0.063)	
Loans of four State Commercial Banks to SOEs/total lending			−0.0248 (0.11)	0.108 (0.13)	−0.0302 (0.099)	−0.00913 (0.097)			
Interaction (loans to SOEs × number of enterprises)				−0.141** (0.067)	−0.199*** (0.062)	−0.239*** (0.066)			
Distance from Hanoi or HCMC (km)					0.000130** (0.000057)	0.000195*** (0.000066)	0.000115* (0.000061)	0.000114* (0.000061)	
Telephones per capita in 2004					0.0000913 (0.00035)	−0.0000323 (0.00036)	0.000153 (0.00037)	0.000155 (0.00038)	
Employed who finished high school (%)					0.00538*** (0.0021)	0.00724*** (0.0024)	0.00422** (0.0019)	0.00426** (0.0019)	
Population in 2004 (thousands)					−0.00000550 (0.0000100)	−0.00000311 (0.000012)	−0.0000139 (0.000011)	−0.0000139 (0.000011)	
Loans to SOEs above 75th Percentile (SOE loans dummy)							0.0797 (0.056)	0.0871 (0.053)	

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Interaction (SOE loans dummy × number of enterprises)							−0.221** (0.091)	−0.228*** (0.087)	
Interaction (SOE loans dummy × connections dummy)								−0.00924 (0.053)	
Interaction (number of enterprises (ln) × connections dummy)								0.0929** (0.047)	
Interaction (SOE loans dummy × number of enterprises × connections dummy)								−0.0117 (0.061)	
Observations	5383	5369	5369	5369	5264	4042	5264	5264	5369
Provincial clusters	64	64	64	64	61	61	61	61	64
Pseudo R-squared	0.0479	0.0493	0.0510	0.0523	0.0543	0.0528	0.0536	0.054	0.0488
Log likelihood	−3552	−3538	−3532	−3527	−3450	−2648	−3453.0277	−3451.3758	−3540
Degrees of freedom	8	11	13	14	18	19	18	21	11
Chi squared	317.4***	388.6***	399.2***	430.3***	488.1***	322.2***	470.0***	503.1***	394.6

Probit analysis with Robust standard errors (clustered at province level) in parentheses; ***$P < 0.01$, **$P < 0.05$, *$P < 0.1$; (ln) Natural Log. Vietnam created three new provinces in 2004 (Dien Bien, Dak Nong, and Hau Giang). Some control data are not available for these provinces, leading to reduction in the number of provincial clusters.

[a]6. How important are your family and friends in bargaining with government officials? (1 Not Important—4 Very Important).
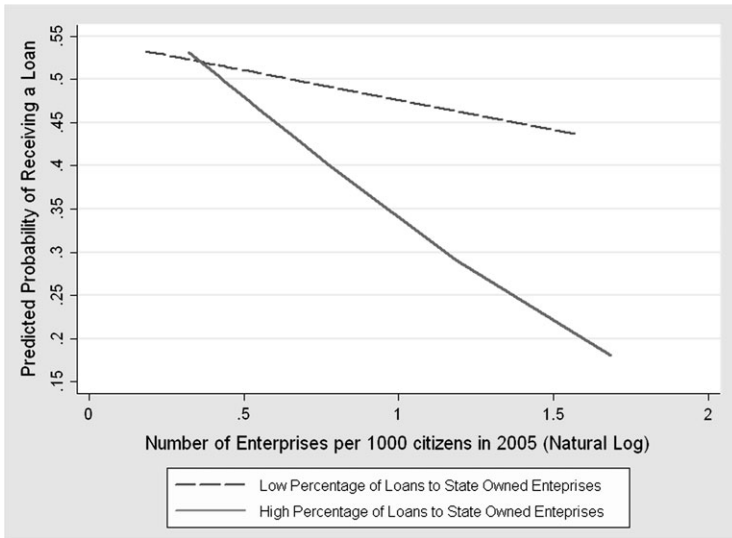
Figure 3.   Predicted Probability of Receiving a Bank Loan (By Number of Enterprises and Percentage of Loans to SOEs from State Commercial Banks).

predicated probability of a firm having a loan. Figure 3 shows that in provinces with a high percentage of loans to the state-owned sector, access to bank loans declines precipitously as more firms are competing for the limited amount of capital. By contrast, in provinces with a low percentage of loans to the state sector, the decrease in the probability of loan reception is much less steep.

The most robust finding from the model is that personal connections to the government matter a great deal.[15] In the fully specified Model 5, with all other variables held to their mean, having one connection to the provincial government increases the probability of a loan by about 4%. This result remains whether the full-relationship scale is used or we employ only a dummy variable, as we do in Model 7. But the relationship scale allows for greater nuance. Whereas a firm with no connections has a 48% probability of receiving a loan, a firm with one connection to the provincial government has a 52% probability, and those with two or three connections have 55% and 59% probabilities of receiving loans, respectively.

In short, political connections are important in all types of investment environments. This can be seen strikingly in Model 8, where we once again show the interaction between competition and availability of loans, but this time triple interact the term with the dummy of whether a firm has a personal connection. The operation allows us to separate the impact of competition for scarce loans for connected and unconnected firms. Table 5 displays the

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15. Robustness Test 3 (Online Appendices) tests the value of political connections using an alternative measure self-declared relationships derived from the survey and finds very similar results.

Table 5. Predicted Probability of Receiving a Loan (Based on Supply, Competition, and Political Connections)

	Firm Has No Political Connections			Firm Has Political Connections		
% Loans to SOEs/No. of Enterprises	Low	High	Loans to SOEs/ No. of Enterprises	Low	High
High competition	0.458	0.298	High	0.490	0.344
	(0.034)	(0.062)	Competition	(0.038)	(0.063)
Low competition	0.511	0.506	Low	0.542	0.547
	(0.017)	(0.028)	Competition	(0.018)	(0.032)

Results simulated from Regression Model 8 in Table 4 using *Clarify* (Tomz et al. 2003). Robust standard errors of prediction (clustered at province level) in parentheses. Dependent Variable: Firm presently has bank loan from a state-owned or joint-stock commercial bank. % of Loans to SOEs: 1 if greater than or equal 23%, 0 if less than or 23%. No. of enterprises: Natural Log of Enterprises/1000 citizens simulated at the values (high competition = 1.112, low competition = 0.362).

predicted probabilities of loan access based on Model 8. The table is designed to replicate the four quadrants explored in Figure 1 with different probabilities calculated depending on whether the firm has a political connections (shaded) or does not (unshaded).

The relationships in the unshaded portion of the table are much like Figure 3. The probability of receiving a loan declines with both a higher percentage of SOCB loans going to the state sector and with a large number of enterprises competing. Thus, firms located in the Northeast quadrant have the lowest probability of receiving a loan (29.8%). Because number of enterprises has a stronger effect than percentage of loans to SOEs, the second worst quadrant for loan is access is the Northwest (45.8%). Notably, there is a very small but statistically significant difference between the two quadrants with few enterprises, with the Southwest (51.1%) possessing a slight advantage on loan reception over the Southeast (50.6%), due to decreased bias toward SOEs.

Having political connections, however, alters the dynamic dramatically. The probability of receiving a loan increases in all quadrants, but the probability increases more in the provinces with capital constraints characterized by bias toward SOEs (about 4%) than those with more loans available to the private sector (about 3%). This indicates that political connections ameliorate the deleterious effects of capital constraints but particularly help firms overcome the problems faced by biases in provincial lending toward SOEs.

4. The Impact of Credit Access on Firm Performance

The above result that bank selection of borrowers depends heavily on "connectedness" raises an important question regarding how credit access impacts firm performance. Although it makes sense that allocating capital based on personal relationships lowers the asymmetric information disadvantage that banks have with potential borrowers, as they can rely on their social network

to enforce repayment, lending based on nonbusiness principles always has the potential for abuse (Akerlof 1970; McMillan and Woodruff 1999b). Moreover, there is an important national welfare principle at stake: scarce capital may not be going to the firms with the best ideas and business prospects.

Lending to politically connected firms, however, is not by definition inefficient lending, especially because some connections in still nominally communist Vietnam may imply relevant business experience. Perhaps, banks lend to connected entrepreneurs because they have greater technical expertise than their competitors.[16] Another possibility is that banks lend to connected entrepreneurs because these firms' connections lower their respective costs of doing business through improved relations with government regulators. If either were true, we would expect a higher level of performance among connected firms, all else equal. To tackle this question in Table 6, we study the impact of bank lending and political connections on firm profitability, defined as "Net Profit or Losses after Taxes" and "Operating Expenditure/Investment in 2005" (measured by an eight-point scale to encourage firm responses)."[17]

We use very much the same control variables as above with a few minor changes. In Model 2, we add dummy variables for whether the firms exports directly or indirectly to capture the impact of expanding trade on firm profits. Propensity to export is not correlated with connections. Models 5, 6, and 7 add provincial measures of the business environment. In Model 5, we exploit a unique data set on the percentage of economic cases filed in Provincial People's courts by private companies to capture private sector confidence in the fairness of local judicial proceedings. Model 6 adds aggregate measure of total economic governance, as measured by the PCI. Finally, Model 7 controls for the level of corruption experienced by firms in each province, measured by the PCI subindex euphemistically titled Informal Charges. With both the governance index (1–100 point scale) and the informal charges subindex (1–10 point scale), a higher score represents improvement. In addition, lagged values of Firm Size are used rather than values in the same year as the dependent variable. Once again clustered standard errors are employed.

In Models 1–8, whether the firm has a bank loan is the key causal variable, whereas Model 9 replaces this with our measure of political connections. In properly specified models, it is quite clear that neither access to bank lending nor political connections are correlated with profitability. Indeed, though not significant, the sign on bank lending is actually negative. Although firms with political connections are more likely to have received loans, there appears to be no indication that banks are justified in using connections as a shortcut for judging industry capabilities. The more important determinants of firm profitability are sector (especially construction and services), size (especially labor size), and whether or not a firm possesses an LURC. Interestingly, distance from major markets has a very strong positive impact on firm profits. This

16. We would like to thank an anonymous reviewer for pointing this out.
17. Dependent variables are described in detail in Table 2.

Table 6. Determinants of Firm Profit (Ordinary Least Squares Analysis)

Model	1	2	3	4	5	6	7	8	9
Dependent variable: net profit or losses after taxes and operating expenditures/total investment (eight-point scale)	Baseline	Firm controls	Provincial controls	Competition	Legal	Governance	Corruption	Relations	Relations/ corruption
Firm presently has bank loan	−0.0416 (0.046)	−0.0476 (0.047)	−0.0480 (0.047)	−0.0478 (0.047)	−0.0481 (0.047)	−0.0495 (0.046)	−0.0505 (0.047)		
Degree of personal connection with local government								0.0431 (0.044)	0.0438 (0.044)
Total firm equity in 2004	0.0633** (0.029)	0.0515* (0.030)	0.0496 (0.030)	0.0497 (0.030)	0.0501 (0.030)	0.0506* (0.030)	0.0503 (0.030)	0.0448 (0.031)	0.0451 (0.031)
Total employment size in 2004	0.236*** (0.026)	0.261*** (0.029)	0.266*** (0.031)	0.266*** (0.031)	0.266*** (0.031)	0.267*** (0.031)	0.267*** (0.031)	0.260*** (0.030)	0.261*** (0.030)
% of firm business from manufacturing		0.000949 (0.00093)	0.000723 (0.00095)	0.000709 (0.00095)	0.000697 (0.00095)	0.000736 (0.00095)	0.000712 (0.00095)	0.000881 (0.00092)	0.000879 (0.00092)
% of firm business from construction		0.00287*** (0.0010)	0.00231** (0.0011)	0.00231** (0.0011)	0.00222** (0.0010)	0.00233** (0.0011)	0.00228** (0.0011)	0.00252** (0.0010)	0.00250** (0.0010)
% of firm business from service/ commerce		0.00305*** (0.00096)	0.00271*** (0.00099)	0.00271*** (0.00099)	0.00270*** (0.00099)	0.00275*** (0.00099)	0.00271*** (0.00098)	0.00282*** (0.00096)	0.00282*** (0.00096)
% of firm business from agriculture/ forestry/aquaculture		−0.000323 (0.0013)	−0.000833 (0.0013)	−0.000845 (0.0013)	−0.000879 (0.0013)	−0.000825 (0.0013)	−0.000875 (0.0013)	−0.000685 (0.0013)	−0.000714 (0.0013)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Land Use Rights Certificate	0.0593*	0.0555	0.0555	0.0577*	0.0550	0.0544	0.0588*	0.0577*
	(0.033)	(0.035)	(0.035)	(0.034)	(0.035)	(0.035)	(0.034)	(0.034)
Years since registration	0.0128**	0.0121**	0.0119**	0.0121**	0.0119**	0.0117**	0.0100*	0.00980*
	(0.0053)	(0.0054)	(0.0055)	(0.0056)	(0.0055)	(0.0056)	(0.0052)	(0.0053)
Privatized Local SOE							0.272**	0.270**
							(0.12)	(0.12)
Privatized Central SOE							0.388	0.382
							(0.25)	(0.25)
Firm exports directly	0.00222	0.00201	0.00198	0.00192	0.00191	0.00196	0.00182	0.00181
	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)	(0.0014)
Firm exports through distributor	0.000763	0.000855	0.000854	0.000849	0.000827	0.000839	0.000590	0.000574
	(0.0018)	(0.0018)	(0.0018)	(0.0018)	(0.0018)	(0.0018)	(0.0018)	(0.0018)
Distance from Hanoi or HCMC (km)		0.000319***	0.000332***	0.000353***	0.000337***	0.000367***	0.000328***	0.000358***
		(0.00010)	(0.00011)	(0.00012)	(0.00011)	(0.00011)	(0.00011)	(0.00011)
Telephones per capita in 2004		−0.00550	−0.00560	−0.00559	−0.00452	−0.00360	−0.00722	−0.00547
		(0.0052)	(0.0049)	(0.0048)	(0.0051)	(0.0054)	(0.0048)	(0.0053)
Employed who finished high school (%)		0.000499	0.000455	0.000421	0.000478	0.000632	0.000510	0.000666
		(0.00072)	(0.00081)	(0.00076)	(0.00080)	(0.00082)	(0.00078)	(0.00080)
Population in 2004 (thousands)		0.000550	−0.0000465	−0.0000485	−0.000420	−0.000131	−0.000620	−0.000698
		(0.0013)	(0.0022)	(0.0022)	(0.0024)	(0.0022)	(0.0022)	(0.0022)
Number of registered private enterprises per 1000 citizens (ln)			−0.0263	−0.0691	−0.0208	−0.0561	0.0139	−0.0122
			(0.19)	(0.19)	(0.19)	(0.20)	(0.19)	(0.20)
Loans of four State Commercial Banks to SOEs/total lending			0.0549	0.0407	0.0211	0.00706	0.125	0.0832
			(0.19)	(0.18)	(0.19)	(0.19)	(0.19)	(0.19)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ratio of economic cases filed by private firms in provincial people's courts					0.000826 (0.00067)				
Total PCI score—unweighted						0.00464 (0.0043)			
PCI subindex 5: informal charges							0.0446 (0.036)		0.0392 (0.036)
Constant	3.692*** (0.073)	3.317*** (0.13)	3.319*** (0.14)	3.314*** (0.14)	3.288*** (0.15)	3.050*** (0.31)	3.002*** (0.30)	3.274*** (0.13)	3.000*** (0.29)
Observations	4441	4190	4095	4095	4095	4095	4095	4088	4088
R-squared	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07

Robust standard errors

(clustered at province level) in parentheses; ***$P < 0.01$, **$P < 0.05$, *$P < 0.1$;

(ln) Natural Log.

may indicate that local monopoly power in rural areas is more important to firm business prospects than market size.

We follow this test with similar tests on two different dependent variables to adjudicate the robustness of our finding:

• Profit Growth: The change in the above eight-point scale between 2004 and 2005.[18]

• Investment Growth: The change in firm equity between 2004 and 2005 (Table 7).

The results for Profit Growth closely resemble our findings for Firm Profits in 2005: neither access to bank loans nor political connections have any influence in a properly specified model.

Table 7 reveals, however, that bank loans are correlated with growth in firm equity over the past year. Political connections, though, still have no impact on firm expansion. Further exploration, through the interaction term in Model 10 drives this point home. Connected firms with bank loans are no more likely to have expanded their businesses than unconnected firms with bank loans. One positive note from the perspective of the LFGN is that in provinces where private firms have filed a high percentage of provincial court cases, investment growth is more likely.

Results for all three models were replicated in Heckman 2-Stage Selection Bias-Correction model.[19] Coefficients in the second stage (performance variables) were adjusted to account for their impact on helping firms to access loans. The Wald test of the independence of equations revealed that the factors explaining access to bank loans had no significant impact on firm profitability or profit growth but do impact firm-investment growth.

In sum, this analysis appears to reject the hypotheses that connections can substitute for legal institutions in helping banks locate the highest performing borrowers in transition states.

5. Disaggregation of Political Connections and Bank Ownership

Nevertheless, before concluding that political connections have no role in firm performance, it is important to drill down deeper into the data and explore more refined hypotheses. For instance, it is possible that all political connections are not equal; banks may view particular subcategories of connections as a better signal of future profitability. For instance, former SOE managers may be seen as having more business expertise and thus being better borrowers (*ceteris paribus*) than former SOE employees or government officials.[20] Table 8 disaggregates the political connections variable, finding that SOE employees are the most likely of the three to receive loans (Models 1 and 2).

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18. Robustness Test 5 in Online Appendices.
19. Robustness 4 in Online Appendices
20. Thanks to an anonymous reviewer for pointing this out.

Table 7. Determinants of Firm-Investment Growth (Ordinary Least Squares Analysis)

Model	1	2	3	4	5	6	7	8	9	10
Dependent variable: investment Growth (change between 2004 and 2005 on eight-point scale below)	Baseline	Firm controls	Provincial controls	Competition	Legal	Governance	Corruption	Connection	Connection/ corruption	Interaction
Firm presently has bank loan	0.0911*** (0.016)	0.0888*** (0.016)	0.0894*** (0.016)	0.0895*** (0.016)	0.0891*** (0.016)	0.0889*** (0.016)	0.0887*** (0.016)			0.0961*** (0.019)
Degree of personal connection with local government								0.0114 (0.015)	0.0118 (0.015)	0.0204 (0.023)
Interaction between bank loan and relationship dummy										−0.0187 (0.034)
Total firm equity in 2004	−0.104*** (0.0090)	−0.102*** (0.0093)	−0.105*** (0.0095)	−0.105*** (0.0096)	−0.104*** (0.0097)	−0.104*** (0.0096)	−0.105*** (0.0096)	−0.0981*** (0.0097)	−0.0979*** (0.0097)	−0.105*** (0.0095)
Total employment size in 2004	0.0522*** (0.0090)	0.0486*** (0.0098)	0.0501*** (0.0099)	0.0501*** (0.0099)	0.0499*** (0.0098)	0.0505*** (0.0098)	0.0505*** (0.0098)	0.0532*** (0.0100)	0.0537*** (0.0099)	0.0504*** (0.0097)
% of firm business from manufacturing		0.000266 (0.00034)	0.000323 (0.00035)	0.000327 (0.00035)	0.000320 (0.00035)	0.000335 (0.00035)	0.000325 (0.00035)	0.000424 (0.00038)	0.000420 (0.00038)	0.000327 (0.00036)
% of firm business from construction		−0.0000750 (0.00037)	0.00000549 (0.00038)	0.00000692 (0.00038)	−0.0000570 (0.00037)	0.0000157 (0.00038)	−0.00000298 (0.00038)	0.0000567 (0.00041)	0.0000419 (0.00041)	−0.0000103 (0.00039)
% of firm business from service/commerce		−0.0000270 (0.00036)	0.0000623 (0.00038)	0.0000635 (0.00038)	0.0000653 (0.00038)	0.0000782 (0.00038)	0.0000607 (0.00038)	0.000164 (0.00040)	0.000159 (0.00040)	0.0000600 (0.00038)
% of firm business from agriculture/ forestry/aquaculture		0.000256 (0.00034)	0.000278 (0.00035)	0.000282 (0.00035)	0.000260 (0.00035)	0.000289 (0.00035)	0.000275 (0.00035)	0.000305 (0.00037)	0.000295 (0.00037)	0.000266 (0.00035)
Land Use Rights Certificate		0.0282** (0.013)	0.0270** (0.013)	0.0269** (0.013)	0.0285** (0.014)	0.0268* (0.013)	0.0266* (0.013)	0.0285** (0.013)	0.0280** (0.013)	0.0256* (0.013)
Years since registration		−0.00137 (0.0029)	−0.00171 (0.0030)	−0.00170 (0.0030)	−0.00156 (0.0029)	−0.00173 (0.0029)	−0.00177 (0.0029)	−0.00137 (0.0030)	−0.00147 (0.0030)	−0.00138 (0.0030)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Privatized Local SOE								−0.0496*	−0.0504*	−0.0542*
								(0.028)	(0.028)	(0.028)
Privatized Central SOE								−0.0168	−0.0185	−0.0206
								(0.094)	(0.094)	(0.092)
Firm exports directly	0.000253	0.000237	0.000246	0.000202	0.000221	0.000239	0.000269	0.000260	0.000289	
	(0.00048)	(0.00049)	(0.00049)	(0.00048)	(0.00048)	(0.00049)	(0.00051)	(0.00051)	(0.00049)	
Firm exports through distributor	0.000782	0.000588	0.000588	0.000583	0.000578	0.000582	0.000704	0.000695	0.000613	
	(0.00055)	(0.00055)	(0.00055)	(0.00056)	(0.00055)	(0.00055)	(0.00056)	(0.00056)	(0.00056)	
Distance from Hanoi or HCMC (km)		−0.0000192	−0.0000250	−0.00000817	−0.0000233	−0.0000155	−0.0000146	−0.00000165	−0.0000168	
		(0.000051)	(0.000054)	(0.000050)	(0.000050)	(0.000052)	(0.000055)	(0.000052)	(0.000052)	
Telephones per capita in 2004		0.000183	0.0000410	0.0000549	0.000414	0.000583	0.000291	0.00103	0.000615	
		(0.0019)	(0.0025)	(0.0024)	(0.0025)	(0.0028)	(0.0025)	(0.0027)	(0.0028)	
Employed who finished high school (%)		−0.000317	−0.000311	−0.000338	−0.000304	−0.000264	−0.000355	−0.000290	−0.000262	
		(0.00028)	(0.00027)	(0.00026)	(0.00026)	(0.00026)	(0.00028)	(0.00027)	(0.00027)	
Population in 2004 (thousands)		0.000644	0.000784	0.000777	0.000662	0.000760	0.00101	0.000979	0.000769	
		(0.00090)	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0013)	(0.0012)	(0.0012)	
Number of registered private enterprises per 1000 citizens (ln)			0.0217	−0.0127	0.0237	0.0134	0.00200	−0.00942	0.00625	
			(0.075)	(0.070)	(0.075)	(0.077)	(0.077)	(0.078)	(0.079)	
Loans of four State Commercial Banks to SOEs/total lending			−0.0116	−0.0233	−0.0232	−0.0243	−0.0250	−0.0424	−0.0274	
			(0.069)	(0.059)	(0.068)	(0.071)	(0.070)	(0.073)	(0.072)	
Ratio of economic cases filed by private firms in Provincial People's Courts					0.000678***					
					(0.00023)					
Total PCI score—unweighted						0.00157				
						(0.0017)				
PCI subindex 5: informal charges							0.0120		0.0165	0.0129
							(0.018)		(0.017)	(0.018)
Constant	0.365***	0.352***	0.365***	0.367***	0.345***	0.277**	0.283**	0.379***	0.264**	0.275**
	(0.027)	(0.043)	(0.054)	(0.055)	(0.053)	(0.11)	(0.13)	(0.056)	(0.13)	(0.13)
Observations	4409	4161	4064	4064	4064	4064	4064	4057	4057	4057
R-squared	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.04

Robust standard errors (clustered at province level) in parentheses; ***$P < 0.01$, **$P < 0.05$, *$P < 0.1$; (ln) Natural Log.

Table 8. Disaggregation of Connections in Bank Loan and Profit Models (Robust Standard Errors in Parentheses)

Independent variables/Models	Dependent variable: firm presently has bank loan from a state-owned or joint-stock commercial bank				Dependent variable: net profit or losses after taxes and operating expenditures/total investment (eight-point scale)			
	1	2	3	4	5	6	7	8
Personal connections								
Former Military/ Government	0.0182 (0.031)	0.0171 (0.031)			0.136 (0.088)	0.128 (0.087)		
Former SOE Manager	0.0143 (0.027)	0.00745 (0.027)			−0.0202 (0.070)	−0.0304 (0.069)		
Former SOE Employee	0.0481*** (0.019)	0.0466** (0.018)			0.0364 (0.065)	0.0247 (0.066)		
Self-reported reliance on family and friends in government[a]			0.0127** (0.0060)	0.0130** (0.0061)			−0.0687*** (0.024)	−0.0664*** (0.024)
Firm Connections								
Privatized Local SOE	0.0387 (0.031)		0.0446 (0.029)		0.286** (0.12)		0.248** (0.12)	
Privatized Central SOE	0.0632 (0.076)		0.0648 (0.080)		0.401 (0.25)		0.323 (0.24)	
Local government owns shares of firm		0.116** (0.050)		0.114** (0.050)		0.525*** (0.15)		0.490*** (0.14)

Total firm equity in 2005 (in 2004 for profit equations)	0.0834*** (0.0100)	0.0828*** (0.010)	0.0818*** (0.010)	0.0811*** (0.010)	0.0449 (0.031)	0.0441 (0.031)	0.0371 (0.032)	0.0359 (0.032)
Total employment size in 2005 (in 2004 for profit equations)	0.0389*** (0.010)	0.0390*** (0.010)	0.0369*** (0.011)	0.0370*** (0.011)	0.260*** (0.031)	0.261*** (0.031)	0.274*** (0.032)	0.275*** (0.032)
Years since establishment	0.00224 (0.0016)	0.00228 (0.0016)	0.00199 (0.0017)	0.00209 (0.0018)	0.00965* (0.0052)	0.00919 (0.0056)	0.00960* (0.0053)	0.00900 (0.0056)
% of firm business from manufacturing	0.000971** (0.00038)	0.000975** (0.00039)	0.000972** (0.00038)	0.000979** (0.00039)	0.000876 (0.00092)	0.000874 (0.00092)	0.00114 (0.00092)	0.00116 (0.00091)
% of firm business from construction	0.000274 (0.00037)	0.000277 (0.00037)	0.000299 (0.00038)	0.000302 (0.00038)	0.00252** (0.010)	0.00248** (0.010)	0.00269** (0.0011)	0.00267** (0.0011)
% of firm business from service/commerce	0.00112*** (0.00037)	0.00112*** (0.00038)	0.00111*** (0.00038)	0.00112*** (0.00038)	0.00281*** (0.00096)	0.00279*** (0.00097)	0.00297*** (0.0010)	0.00297*** (0.0010)
% of firm business from agriculture/forestry/ aquaculture	0.000187 (0.00057)	0.000202 (0.00057)	0.0000897 (0.00055)	0.000109 (0.00056)	−0.000675 (0.0013)	−0.000636 (0.0013)	−0.000988 (0.0013)	−0.000947 (0.0013)
Land Use Rights Certificate	0.0384** (0.019)	0.0386** (0.018)	0.0370** (0.019)	0.0371** (0.018)	0.0596* (0.034)	0.0579 (0.035)	0.0731** (0.034)	0.0715** (0.035)
Firm exports directly					0.00187 (0.0014)	0.00200 (0.0014)	0.00117 (0.0014)	0.00129 (0.0014)
Firm exports through distributor					0.000571 (0.0018)	0.000624 (0.0018)	0.000178 (0.0019)	0.000179 (0.0020)
Number of registered private enterprises per 1000 citizens (ln)	0.00549 (0.067)	0.00193 (0.066)	0.00612 (0.069)	0.00187 (0.069)	0.122 (0.19)	0.0960 (0.18)	0.159 (0.20)	0.143 (0.19)
Loans of four State Commercial Banks to SOEs/total lending	−0.0335 (0.099)	−0.0338 (0.099)	−0.00545 (0.10)	−0.00614 (0.10)	0.0209 (0.19)	0.0107 (0.18)	0.0268 (0.20)	0.0232 (0.19)

Interaction (loans to SOEs × number of enterprises)	−0.197*** (0.062)	−0.198*** (0.063)	−0.216*** (0.064)	−0.216*** (0.065)				
Distance from Hanoi or HCMC (km)	0.000129** (0.000057)	0.000130** (0.000058)	0.000123** (0.000060)	0.000124** (0.000060)	0.000325*** (0.00011)	0.000327*** (0.00011)	0.000370*** (0.00012)	0.000372*** (0.00011)
Telephones per capita in 2004	0.0000855 (0.00034)	0.0000837 (0.00035)	0.0000970 (0.00034)	0.0000965 (0.00034)	0.000496 (0.00078)	0.000461 (0.00079)	0.000678 (0.00079)	0.000650 (0.00079)
Employed who finished high school (%)	0.00535*** (0.0021)	0.00550*** (0.0021)	0.00607*** (0.0022)	0.00620*** (0.0022)	−0.00728 (0.0048)	−0.00638 (0.0048)	−0.00760 (0.0051)	−0.00701 (0.0050)
Population in 2004 (thousands)	−0.00000548 (0.0000100)	−0.00000515 (0.000010)	−0.00000680 (0.000011)	−0.00000637 (0.000011)				
% of population urban in 2004					−0.000517 (0.0022)		−0.00210 (0.0025)	−0.00210 (0.0024)
Constant					3.274*** (0.13)	3.289*** (0.13)	3.447*** (0.14)	3.450*** (0.14)
Observations	5264	5264	5264	5264	4087	4087	4087	4087
Provincial clusters	61	61	61	61	61	61	61	61
Pseudo R-squared	0.0545	0.0551	0.0518	0.0523	0.07	0.07	0.08	0.08
Root mean squared error					1.330	1.329	1.332	1.331
Log likelihood	−3450	−3448	−3230	−3228	−6953	−6951	−6496	−6494
Degrees of freedom	20	19	18	17	21	20	19	18
Chi squared	496.3***	499.4***	433.3***	432.3***				

Models 1 and 2 are probit analysis. displayed numbers are marginal probabilities. Robust standard errors (clustered at province level) in parentheses. ***$P < 0.01$, **$P < 0.05$, *$P < 0.1$;

(ln) Natural Log. Models 3–6 are ordinary least squares. robust standard errors (clustered at province level) in parentheses; privatization variables dropped from Models 2, 4, 5 because of high correlation with government ownership.

[a]6. How important are your family and friends in bargaining with government officials? (1 Not Important—4 Very Important).

Vietnam created three new provinces in 2004 (Dien Bien, Dak Nong, and Hau Giang). Some control data are not available for these provinces, leading to reduction in the number of provincial clusters.

Importantly, however, they are *not* any more profitable than the other connections subcategories (Models 5 and 6). Indeed, none of the political connections variables are statistically more profitable than an unconnected enterprise. Thus, while it appears that banks do distinguish among particular types of connections, it also appears that they do so in a way that further undermines the effectiveness of connections as a tool for increasing the efficiency of lending. In short, banks are making poor use of available signals in their attempt to overcome asymmetric information. This is further confirmed by Models 3, 4, 7, and 8, which contain the self-reported importance of relationships with government officials. Firms, which cite such relationships as very important, are 5% more likely to get a loan than those who see such relationships as unimportant, but are significantly less profitable (about 2/10 of a level).[21]

The second group of variables in Table 8 takes this disaggregated analysis even further. We demonstrated above that recently privatized local firms were both more likely to receive loans and more profitable. As local governments have maintained shares in about 164 firms in the PCI sample (20% of privatized companies), it may be that firms with explicit government ownership are favored in local capital markets. Indeed, Models 2 and 4 show that firms where the local government maintains a business interest in the company are about 12% more likely to receive bank financing and are over 1/2 a level more profitable, on average.

Thus, we can conclude that bank reliance on connections has positive results on balance sheets when the loans are to a very small group of firms with explicit government ownership. These firms are likely to operate in industries with substantial entry barriers. For the much larger groups of firms with personal relationships (1202 SOE employees; 3300 firms citing government relations as important for their business), these connections are at best ineffective and at worst actually detrimental to overall bank performance.

Another refined hypothesis is that differences exist in the type of lender.[22] SOCBs may be more reliant on connections than private commercial banks. If private banks are more profitable than SOCBs, the two effects may countervail each other in the profitability. Unfortunately, at the time of the study, private lending was too limited in scale and too regionally concentrated to explore this analysis in depth. According to the World Bank's 2005 Investment Climate Analysis (ICA), only 4.6% of private firms had received any financing at all from private lenders, accounting for about 3% of their start-up and working capital. About 78% of these private commercial loans went to firms in HCMC, Hanoi, or provinces immediately bordering one of the two. As a result, given present data, it is not yet possible to differentiate lending by bank ownership.

Nevertheless, the banking sector is rapidly changing in Vietnam. Private commercial banks are expanding their operations at the same time SOCBs in Vietnam are being privatized. The country's best-known SOCB,

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21. See Online Appendices (Robustness Test 3) for the bivariate correlation of all relationship variables.

22. Thanks to an anonymous reviewer for pointing this out.

Vietcombank, was recently privatized, whereas the Mekong Housing Bank and Incombank both began the process in 2008. A full schedule of bank privatizations was put forth in Prime Minister's Decision 1729 (December 2006). This changing dynamic within the banking sector offers the potential for very interesting future research on the relationship between bank ownership structure and relationship banking that is not yet possible with existing data.

6. Self-selection Out of the Formal Banking Sector

There are two possible interpretations for the insignificance of bank lending and the direct measures of political connections on firm profitability. First, as we have argued above, banks that rely on political connections may simply do a poor job of valuation and not allocate credit to the companies most likely to be profitable. A second interpretation is that profitable private firms are opting out of the formal banking sector. This could be because they prefer to finance themselves through retained earnings (Johnson et al. 2002). As noted earlier, Allen et al. (2005) suggest that China's rapid private sector growth has been driven not only by relationship-based bank lending but also by self-financing and entrepreneurs' success in accessing capital from informal sources.

To sort out these alternative explanations, we return to the World Bank's ICA in Vietnam, a survey of 1500 firms (801 private) in 24 Vietnamese provinces. The ICA asks far more detailed questions about applications for bank lending and in particular the rejection of borrowers but unfortunately includes no questions about firm connections (World Bank 2006c).[23] The ICA data are comparable with the PCI data due to similar provincial-level sampling, though the average ICA private firm size is slightly bigger. Analysis of these data shows that private firms finance (on average) about 29% of their working capital and 31% of their new investment out of retained earnings, as opposed to 23% and 22% from bank lending. The difference between bank lending and retained earnings at the aggregate level is statistically significant but substantively less than one might imagine for a developing country. By way of comparison, trade credits from suppliers or customers are not nearly so important, accounting for 7% of working capital and 1% of new investments on average, contrasting with the finding of McMillan and Woodruff (1999) using data drawn from 1997.

More interesting, however, are the follow-up questions related to bank lending. About 62% of private firms presently have bank loans according to the ICA data.[24] When the 299 (37%) firms without loans were asked why they did not have them, 255 (85%) answered that they did not apply. A third question asked why firms did not apply, to which 141 (54%) responded they did not need bank capital. Smaller percentages cited various administrative problems in the application process.

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23. This study sampled from a different set of firms and cannot be pooled with the PCI data.
24. This is a far larger portion of the sample than the PCI data, which likely results from the fact that ICA firms tend to be larger than the PCI sample.

Table 9 compares these three sets of firms by their average of profit/total investment in 2004 and by the percentage of their working capital financed by retained earnings. The analysis is enlightening. Although there is no statistical difference in profitability between firms with bank loans and those without, there are striking differences between firms that applied and those that applied and were rejected. Rejected firms averaged a return on investment that was less than 1%, whereas firms that opted not to apply had profit/sales ratio of about 3.3%. Of the firms that chose not to apply, the firms that said they did not need the capital averaged a remarkable 5% return on their investments, compared to 1.3% for those firms that did not apply due to administrative issues and 3.3% for firms that borrowed from banks. One reason for the non-finding in the regression of profitability on loans is that the PCI data set conflates the highly profitable firms that did not apply with the far less profitable firms that applied and were rejected. As a result, those without loans do not appear to be any more profitable than those that received them.

The most profitable private firms in Vietnam are not attempting to access bank loans at all; they are content to operate primarily out of retained earnings. This can be seen in Table 9 where firms who did not receive bank loans financed 43% of their working capital using retained earnings, compared to 24% of firms that did receive loans and 25% that applied and were rejected.[25] As a result, banks are forced to choose between Box 1 and Box 3 in their allocation of capital. In this light, they are doing a pretty good job; firms that received bank loans are 6.5 times more profitable than firms that applied and were rejected.

The results from our analysis of bank lending above should be seen in the following light. There is clearly biased lending based on political connections taking place in Vietnam, but it appears that banks do not choose from among from Vietnam's finest enterprises. Connections may be useful in helping lenders sort through the second-best options, but we cannot be certain because of the limitations of both the PCI and ICA datasets. It may be that the best firms opt for self-financing specifically because of perceived bias in bank lending. Future research is needed to address this dilemma. In addition, as we discuss below, more research is needed to address why successful firms are opting away from bank lending, as this choice could be a direct result of perceived biases in the system.

7. Concluding Discussion

Although bank credit has expanded dramatically despite Vietnam's poor legal infrastructure, we demonstrate that SOCBs' reliance on political connections in determining loan access has not served to direct credit to more profitable enterprises. Our findings are consistent with LFGN, indicating that the efficiency of the formal banking sector has been significantly undermined by the poor legal infrastructure. As such, our findings raise serious questions regarding claims that connections lending by bankers has economic value in

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25. Differences between the use of trade credits were not statistically significant.

Table 9. Bank Loans, Applications, and Profitability

Firm presently has bank loan?	1. Yes	2. No
Observations	502	299
% of total private	63%	37%
Mean profit/total investment in 2004	3.30%	2.92%
Mean percentage of working capital/new investments financed through retained earnings	24%*/26%*	38%/40%
Mean percentage of working capital/new investments financed through trade credits	6%/1%	7%/2%

Firm applied for bank loan?	3. Yes	4. No
Observations	44	255
% of total private	5%	32%
Mean profit/total investment in 2004	0.54%*	3.30%
Mean percentage of working capital/new investments financed through retained earnings	25%* / 37%	40% / 41%
Mean percentage of working capital/new investments financed through trade credits	6% / 2%	10% / 3%

Reason firm did not apply?	5. Problems	6. No need
Observations	119	136
% of total private	15%	17%
Mean profit/total investment in 2004*	1.26%*	5.05%
Mean percentage of working capital/new investments financed through retained earnings*	38%*/41%	43%/40%
Mean percentage of working capital/new investments financed through trade credits	8%/2%	5%/1%

*Difference between Yes/No is statistically significant at 0.05 level (*t*-test).Source: World Bank's Investment Climate Analysis Dataset: http://info.worldbank.org/etools/docs/library/135821/Investment%20Climate%20Assessments-DECRG.pdf. Private Firm defined as one having over 50% of investment from domestic private investors.

Vietnam, neighboring China, or elsewhere. The findings also suggest the importance of distinguishing clearly between what we deem as the harmful use of personal connections within the formal financial system and the critically important use of personal connections as direct sources of informal capital.[26]

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26. We are grateful to an anonymous reviewer for pointing this out.

On the core issue of connections, a reassessment of commercial bank lending practices is necessary in order to understand what incentives are driving decisions by banks in countries like Vietnam and China to lend to connected parties rather than the most deserving, efficient firms. Such lending is likely the result of an insecure legal framework that does not adequately protect lenders or debtors, thereby forcing bankers to rely on social contracting as the preferred method for enforcing loan repayment. Our consistent finding regarding the importance of property rights on access to credit can also be seen in this light. Bankers' focus on collateral rather than business prospects is a similar response to an insecure legal environment.

One positive note from an LFGN perspective in Vietnam is that investment growth is more likely in provinces where private firms use the court systems to settle disputes. Moreover, there is a significant negative correlation between political connections and the use of the court, indicating that some provinces may be transitioning away from a strict connection-based system already.

The next level of transition is the development of a legal framework that encourages proper loan valuation based an assessment of business prospects and allows lenders greater recourse for nonpayments. In the absence of such institutional developments, popular efforts aimed at enhancing the capacity of bankers are likely to have minimal impact. Bankers in Vietnam's state and private banking sectors are an increasingly sophisticated lot with regard to technical skills.[27] The key for these bankers is not better training; rather they need the proper incentives to use existing skills appropriately.

Institutional improvements can be expected to improve not only the provision of credit resources but to also affect change in the population of firms demanding credit. Our findings demonstrate that the most profitable firms in Vietnam have selected out of the population of loan applicants, forcing bankers to choose among lesser-quality firms. In this light, relying on connections seems more reasonable. Banks may not be receiving the highest returns on their investment, but it could be that they are minimizing downside risk by being better able to enforce repayment. In the case of the small number of firms with some ownership in government shares, it appears this can be a particularly fruitful decision. In cases of personal relationships with government officials, it is riskier and can even lead to poorer performance than simply lending to an average private firm. On the other hand, bias in the formal banking sector may be the very reasons successful firms avoid using it.

In terms of Vietnam's future development, the finding that successful firms are not applying for bank lending raises a counter-factual question that is worth careful consideration but cannot be answered with present data. We find that profitable firms claim not to need bank capital given their present expansion plans, but need is relative. Firms' needs depend on the degree of their ambitions, and given the small size of Vietnamese private firms, it is conceivable that more optimal expansion plans were constrained from the outset, because

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27. For evidence of the capacity of bankers, see the Mekong Private Sector Development Facility's work at its Bank Training Center.

appropriate bank financing was not considered a legitimate possibility or because an insecure legal environment simply made big dreams too risky. Could profitable firms have been more ambitious? And if so, why were they not? Sorting out the endogeneity of firm expansion plans and bank-lending practices will be an area of focus for our future research efforts as appropriate PCI panel data becomes available.

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