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Are politically connected firms less constrained in credit markets?

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Abstract: Utilizing a panel of over 2,000 Vietnamese SMEs over a 10-year period, we analyse the importance of being politically connected on both access and cost-of-credit obtained from formal financial institutions. Controlling for unobserved time-invariant firm-level heterogeneity, productivity self-selection concerns, and access to alternative credit markets, we show that political connections decreases the likelihood of being credit-constrained by 4 percentage points. Moreover, politically connected firms accessing credit face lower cost-of-capital than non-connected SMEs not excluded from formal financial markets. However, the impact of political connections is most valuable during periods of financial distress, but less prevalent during business cycle upswings.

Keywords: Credit constraints, political connections, Vietnam

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1 Introduction

A wide range of outcomes related to political connections of firms has been researched. These include (i) the influence on choice of dispute settlement, (ii) quality of corporate governance, (iii) initial public offering (IPO) firm value, (iv) effective tax rates paid by the company, (v) firm performance, (vi) societal cost, etc. (among others: Ang and Jia, 2014; Fan et al., 2007; Adhikari et al., 2006; Faccio, 2006; Claessens et al., 2008). Within this literature, some focus especially on the impact of firm-level political connections on access to formal finance. The heterogeneity in results is striking, as some studies conclude that lenders, especially in developing countries, do favor politically connected firms (e.g., Mian and Khwaja, 2005; Claessens et al. 2008; Boubakri et al., 2012), while others have questioned such generalizations (Jackowicz, 2014; Siegel, 2007), emphasizing that there are significant costs of being politically connected as well. This paper addresses the question to what extent political connections influence firm-level access to formal finance of small and medium enterprises (SMEs) in Vietnam, taking into account that there may be heterogeneity in firm-level access to cheaper informal credit options.

The literature studying the benefits of political connectedness often takes point of departure in the resource dependency theory, which studies how external resources affect organizational behavior. Resources form the basis of power, which is relational and situational, and can be mutual between actors within a network (Pfeffer and Salancik, 1978). Using this perspective, political connections facilitate relatively easier access to relevant resources (such as access to finance) and increase the likelihood of receiving government contracts. Assuming that there is only a limited amount of political capital available for private firms to acquire, and that political ties lead to preferential access to resources (bank lending), inequality of political capital across locations is one key determinant of the benefit a firm can derive from acquiring such capital. The underlying rationale then becomes that the more political capital there is available, the smaller the returns to acquiring such capital will become.

Using the resource perspective Leuz and Oberholzer-Gee (2006) find, in the case of Indonesia, that political connections help to attain preferential local financing, but work at the expense of a dynamic integration into global financial markets. However, cross-country evidence by Richter (2010) shows that political connections help improve a company's access to finance *beyond* the domestic debt markets. It is further suggested that political connections hereby are a firm-level substitute for strong national property rights that can therefore reduce the perceived risk of connected firms in an environment with low rule of law. Studying the lending behavior of Pakistani firms between 1996 and 2002, Mian and Khwaja (2005) observe that politically connected firms borrow more than unconnected firms, and have a remarkable 50 per cent higher default rate on their liabilities. The analysis further reveals that the political status is the sole driver thereof, and that the benefits increase according to the political importance of the respective connection. Interestingly, their findings are not robust for private lenders, which indicates that political connections only facilitate access to credit from state-influenced financial institutions. Given that two-thirds of formal financing to the Vietnamese SMEs considered in our sample come from State Owned Commercial Banks (SOCBs), this result may be of particular importance in the context of Vietnam.

Another argument is that government ties can help overcome market/state imperfection such as red-tape, low enforcement of property rights, heavy government regulations or 'extra-legal fees' (Chen et al., 2011). This is in accordance with the argument that 'Chinese managers rely perhaps more heavily on the cultivation of personal relationships to cope with the exigencies of their

situation' (Child, 1994:150). Li et al. (2008) examine how membership of the communist party affects performance of Chinese private firms in an environment of continued ideological discrimination against private ownership. The authors observe a positive effect conditional on firm-specific variables, and attribute most of the effect to lower cost-of-capital facing political connected firms. Interestingly, the influence is stronger in regions with weaker institutions and legal protection (Li et al., 2008). Studying how the cost of equity capital correlates with being politically connected, Boubakri et al. (2012) confirm this observation in a cross-country study addressing possible endogeneity concerns, where the authors find that political connections lower the cost-of-capital, especially for older and larger firms and for firms operating in weaker institutional environments.

When examining the disadvantages of being politically connected, point of departure can be taken in the argument that government bureaucrats tend to be more interested in rent seeking and political objectives than longer-term corporate and industry efficiency (Shleifer and Vishny, 1998). Political connections can therefore be seen as unfavorable, because of the concomitant increased exposure to government actors. In a politically unstable environment (Poland) Jackowicz et al. (2014) show how the operational performance of non-listed firms is negatively affected by political connections, and that this negative influence on firm performance is intensified as the number of connections rises. Supportive evidence in Siegel (2007) analyses how South Korean firms shape cross-border alliances based on connections to socio-political networks. Network connections to political enemies of the respective current regime in power are found to substantially slow the rate at which cross-border strategic alliances are established. As such, overall industry dynamics are distorted, harming both politically connected and unconnected firms in the economy. Finally, in a study in France, Bertrand et al. (2004) find that political connections impose significant economic costs on firms, as firm managers and owners grant political favors to local government in the form of generating employment opportunities around election time. Moreover, politically connected firms have a lower operating profit due to relatively higher labor cost (per unit efficiency). Furthermore, Fan et al. (2007) show how political connections can negatively influence companies' performance, as the connections tend to harm the board of directors' corporate governance.

In an effort to reconcile such contrasting findings on the costs and benefits of political connectedness, several studies take a contingency perspective that identifies ownership, the enterprise's stage of development, and/or the quality of the political connections as underlying cause of the ambiguous outcomes (e.g., Du and Girma, 2010; Peng and Luo, 2000; Chen et al., 2011). As an example, Du and Girma (2010) use a panel of over 106,000 Chinese private start up enterprises between 1999 and 2004 and they find that political connections do enhance firm survival. However, conditional on firm survival, productivity growth is higher in firms that operate without political connections while politically connected firms are more focused on job creation. Furthermore, the benefits of political affiliation are stronger in capital-intensive industries and in cases where the firm is connected to local, rather than prefecture-level authorities. The authors also conclude that in terms of overall efficiency, political connections lead to a suboptimal allocation of resources, and especially credit, by interfering with traditional market forces. A similar argument has been brought forward by Chen et al. (2011) who observe that firms are more likely to establish political connections where market orientation of the local economy is low and where the government's discretion in allocation of economic resources is high. Thereby, incentives for officials to engage in rent-seeking motivate private firms to seek political connections in order to protect themselves from such behavior, which relates to Shleifer and Vishny's (1998) notion of the state as a 'grabbing hand'.

To summarize, the existing literature relies on the resource dependency of firms and the grabbing hand of a rent-seeking state to motivate arguments for positive or negative firm outcomes of political connections. While ambiguous outcomes are observed, contingency perspectives try to

understand how and why outcomes differ, and highlight that the impact of political connections is highly context-specific. To our knowledge there is only limited firm-level evidence regarding the impact of political connections in Vietnam, and the fact that most of existing research stems from countries with more volatile political environments, raises the question to which extent existing research applies to Vietnam. We know of one study for Vietnam at the firm level studying the impact of political connections on credit access (Malesky and Taussig, 2009). Using data from 6,400 firms across all provinces in 2006 it is observed that one additional political connection increases the probability of obtaining a loan by 4 per cent. During a subsequent test of the impact of credit access on firm performance, the authors however observe that political connections do not influence profit or investment growth. These results challenge the assertion that relationship-based lending is an effective substitute for legal institutions. Rather, they indicate that political connections are ineffective in channeling bank credit to the most profitable investors. However, this study (given its cross-sectional nature) is subject to concerns of individual heterogeneity being a simultaneous driver of both access to finance and political connectedness.

This paper instead utilizes a panel of small and medium enterprises (SMEs) observed biannually between 2005 and 2015. Controlling for unobserved time-invariant firm-level heterogeneity as well as differences in productivity between firms (to indirectly control for self-selection of the most productive firms into being politically connected) and having access to informal credit markets, we show that firm owner membership of the Communist Party of Vietnam (CPV) (all else equal) decreases the likelihood of being constrained in formal financial markets by 4 percentage points. In addition, when accessing formal credit, politically connected firms face 2 to 5 per cent lower cost-of-capital than non-connected SMEs. Finally, we document that political connections are especially valuable during periods of financial distress both in terms of credit access and cost-of-capital when obtaining loans from formal financial institutions, whereas these benefits are less prevalent during business cycle upswings.

2 Defining credit constraints and political connectedness

Data to analyse the relationship between politically connected firms and access to finance and credit constraints come from the Vietnam Small and Medium Enterprise (VSME) tracer panel survey carried out biannually between 2005 and 2015 in the following nine provinces in Vietnam: Ha Noi (including Ha Tay), Hai Phong, Ho Chi Minh City, Phu Tho, Nghe An, Quang Nam, Khanh Hoa, Lam Dong and Long An (CIEM, 2006, 2008, 2010, 2012, 2014 and 2016).[1] It should be noted that although the survey focuses on SMEs, the tracer dimension of the data allows to track and interview firms with more than 300 employees, if they have been previously interviewed. The data are based on face-to-face interviews with owners/managers of businesses and are collected in the months of June-August. The sampling frame of the tracer survey was established in 2005, where the population of listed non-state manufacturing enterprises in the selected provinces was established based on two data sources from the General Statistics Office of Vietnam (GSO); the Establishment Census from 2002 and the Industrial Survey of 2002-2004.[2] Additional details on the sampling can be found in CIEM (2006).

[1] Provinces were not chosen randomly. It was decided that the surveys should cover the main urban cities as well as selected rural areas. The choice of rural provinces was driven by funding related issues (each selected province was either a Danida or Sida focus province at the time).

[2] The population of individual business establishments that do not satisfy the conditions stated in the Law on Enterprises of Vietnam (also referred to as household enterprises) is obtained from the Establishment Census. This

One important aspect of the data needs attention. The majority of firms considered are smaller household businesses. Some of these are administratively listed firms (sampled appropriately using census data information), and others are non-listed household businesses (obtained through on-site 'block' identification) operating alongside the formal entities. Thus, while the group of listed firms well represents the 'formal' manufacturing sector in the 10 selected provinces, our sample of informal household businesses may not be representative of 'non-listed' manufacturing firms in Vietnam, as they may represent the more established and productive informal entities. The distinction between formal and informal enterprises may be important when analysing credit access. On the one hand, informal businesses will not be eligible for formal loans in the company name, but have to rely on formal financing obtained based on personal wealth records without reliance on firm assets as collateral. On the other hand, since the data at hand (for the majority part) are smaller household businesses, informality will not necessarily matter that much for the relative probability of obtaining formal financing. Results reveal that using a control for being a household business and/or being an informal business did not change the results. We therefore in the following only report results from distinguishing between household and non-household enterprises.

2.1 Defining political connectedness

Vietnam is by and large a one-party nation with four formal political structures making up the regime: (i) the Communist Party of Vietnam (CPV), (ii) the people's armed forces, (iii) the Vietnam Fatherland Front and (iv) the state bureaucracy. Through the National Party Congress, the CPV elects the Central Committee (CC), which again elects the Politburo. Most political power is entrusted in these two government entities. The CPV sets the policy direction, which is implemented through different sub-levels of government (national, provincial, district, commune). At the sub-national level, the People's Council (PC) is the highest legislative institution, and it selects the People's Committee (PCOM) to serve as the executive institution at each respective local governmental level. PC members, who in most cases are members of the Communist Party (Malesky et al, 2014), are selected through voter elections. Members of local PCOMs are also elected, but by PC members only, and their choice needs the consent of the PCOM at the next higher level (Kerkvliet and Marr, 2004).[3] As such, membership of the Communist Party seems to a necessary first step for closer ties to local legislative and executive government bodies. Before the 12th National Congress of the CPV it was estimated that over 4.5 million members were represented. This indicates that only around 5 per cent of the population are members of the CPV.

As alluded to in the introduction, being politically connected may bring both benefits and costs, which is also illustrated in Gainsborough (2010) in the case of Vietnam. In Vietnam, new private entrepreneurs continued to have relatively strong political ties after the initiation of the Vietnamese Doi Moi reform process. Some of these new entrepreneurs even stayed directly politically involved in local government matters, and a non-negligible batch of younger private sector entrepreneurs were children of the political elite. Gainsborough (2010) even states that to succeed in business, private companies are reliant on local governments; a statement clearly signaling the potential benefits of being politically connected. One mechanism highlighted in Gainsborough (2010) goes through easier access to formal finance, which is the focus of this paper.

information is combined with data on enterprises formally registered under the Law on Enterprises from the Industrial Survey. See CIEM (2006) for details.

[3] Further details on Vietnamese election processes can be found in Malesky and Schuler (2011).

However, there is also evidence signaling that the benefits of being politically connected at the local level in Vietnam may be limited. Local government have generally been more accountable toward higher levels of government than toward local populations and businesses (Markussen and Tarp, 2014), and public funding has generally prioritized infrastructure, health and education, and offered relatively little support to private businesses (Malesky, 2014).

In this paper, we use an indicator variable taking the value 1 if the firm owner is member of the Communist Party of Vietnam (CPV), and zero otherwise, as proxy for political connectedness. In Tables 1A and 1B we document summary statistics, by political connectedness and by year, for all variables subsequently used in the analysis of the impact of political connections on the probability of being financially constrained. Related to our definition, we see that 8.1 per cent of the sample are politically connected, ranging from 7.1 in 2007 to 9.4 in 2011. Note that variation exists even when only considering the balanced panel; a variation that we are utilizing below for identification. Moreover, Table 1A shows that differences exist between politically connected firms and non-connected firms along observable characteristics. Politically connected firms are larger, have higher debt-ratios, lower profit shares and are more formal (less likely to be a household firm).

Table 1A: Summary statistics, by connectedness

	All	Politically connected	Not Connected	
Politically connected	0.081	1.000	0.000	*
Credit constrained (Yes=1)	0.258	0.241	0.260	
Have informal loans (Yes=1)	0.578	0.597	0.577	
Number of employees (log)	1.736	1.965	1.716	*
Revenue (log)	13.465	13.637	13.450	*
Capital stock (log)	13.647	13.854	13.629	*
Intermediate Inputs (log)	13.003	13.169	12.988	*
Debt ratio	0.077	0.102	0.074	*
Have debt (Yes=1)	0.504	0.560	0.500	*
Profit share	0.652	0.621	0.654	*
Household business (Yes==1)	0.692	0.568	0.703	*
Number of observations	13,819	1,117	12,702	

Note: * indicates differences in means tested at the 5% significance level.

Table 1B: Summary statistics, by year

	2005	2007	2009	2011	2013	2015
Politically connected	0.085	0.071	0.073	0.094	0.091	0.071
Credit constrained (Yes=1)	0.253	0.241	0.266	0.280	0.308	0.207
Have informal loans (Yes=1)	..	0.596	0.695	0.640	0.624	0.340
Number of employees (log)	1.904	1.832	1.778	1.697	1.615	1.574
Revenue (log)	13.379	13.449	13.567	13.490	13.436	13.471
Capital stock (log)	13.499	13.699	13.738	13.886	13.628	13.450
Intermediate inputs (log)	12.917	12.978	13.136	13.018	12.987	12.982
Debt ratio	0.092	0.084	0.081	0.064	0.064	0.072
Have debt (Yes=1)	0.575	0.531	0.581	0.487	0.492	0.355
Profit share	0.634	0.670	0.659	0.662	0.648	0.639
Household business (Yes==1)	0.720	0.716	0.689	0.681	0.673	0.668
Number of observations	2,446	2,324	2,341	2,227	2,166	2,315

Source: Author's calculations.

2.2 Defining credit-constrained firms

Defining firm-level credit constraints has been discussed intensively in the small and medium size enterprise (SME) literature over the last couple of decades. Beck and Demirgüç-Kunt (2006) use the World Business Environment Survey (WBES) data and utilize a perception-based approach were firms are asked whether they perceive themselves as financially constrained and whether this is creating an obstacle to their firm growth. Hansen and Rand (2014) show that using Investment Climate Assessment (ICA) surveys almost 50 per cent of the firms perceive lack of access to credit to be a serious or very serious constraint to firm growth. Moreover, in the context of Vietnam, Rand (2007) shows that more than 50 per cent of SMEs perceive access to finance as the most severe obstacle to firm growth.

As also emphasized in Hansen and Rand (2014), perceptions about being financially constrained does not imply that the firms are in fact credit-constrained. Boulier and Goldfarb (1998) summarize the discussion about how (and if) surveys should be used for analysis of economic inference. They conclude that the reliability of these different types of survey data information can be ranked, and according to their analysis, the most reliable information is obtained through simple direct questions (i) related to an action taken in relation to a given activity and (ii) easily verifiable through a 'third party'. As such, perception-based questions are not seen as a reliable source of information.

Focusing on credit-related questions, the recommendations in Boulier and Goldfarb (1998) would rank a question such as 'has your firm during the past two years applied for a bank loan?' as more reliable than a subjective/perception-based question such as 'do you think that the access to credit presents any obstacle to the current operations of your establishment?'. In the following we therefore base our credit constraint definition only on questions that would rank highly in a Boulier and Goldfarb (1998) reliability classification.

In addition, our measure of credit constraints need to ensure that constrained firms are only classified for firms having credit demand. Here we address this form of selection bias following Bigsten *et al.* (2003), Rand (2007), Bentzen *et al.* (2010) and Hansen and Rand (2014a, 2014b) in (i) first identifying firms with demand for credit, and (ii) conditional on credit demand, identifying credit-constrained firms. Following the reliability criteria described above, we in this paper apply the following question to distinguish between firms with and without credit demand: 'no need for a loan – firm has sufficient capital'.

As in previous literature cited above, we classify a firm as credit-constrained if it (i) applied for and was denied credit or (ii) did not apply for credit due to reasons such as 'application procedures too complex', 'collateral requirements unattainable', or 'possible loan size and maturity insufficient'. Firms not applying for a loan and responding 'interest rates too high' or 'did not think it would be approved' as reasons for not applying are still labeled as being financially constrained as these answers may reflect that the investment project applied for is not competitive at going interest rates.

Tables 1A and 1B report that 25.8 per cent of the sample can be classified as financially constrained. This number reflects a steady increase from 2005 to 2013 (from 25.3 - 30.8 per cent), accompanied by a significant drop in 2015 to only 20.7 per cent being credit-constrained (in formal financial markets). Moreover, this significant drop in credit-constrained firms in 2015 is accompanied by a significant reduction in the number of firms having informal loans, but is also reflecting that only one-third of firms in 2015 have debt as compared to around half of the firms in the other survey years. As such, the 2015 decline in credit-constrained firms may be reflecting a general decline in debt demand. Note also from Table 1A, that no apparent difference in credit

access (formal or informal) is found between politically connected and non-connected firms. This apparent lack of relationship between being politically connected and being financially constrained is what we put under deeper scrutiny in the next sections.

3 Empirical approach and results

We operate with several different specifications for analysing the relationship between the probability of being credit-constrained and political connectedness. First, we rely on the following simple pooled non-linear (probit) model:

$$c_{it} = 1[\beta_0 + \beta_1 member_{it} + x'_{it}\sigma + \varepsilon_{it} > 0] \quad (1)$$

, where *c* is an indicator variable taking the value of one if the firm is defined as credit-constrained and zero otherwise, *member* = 1 if the firm owner is a member of the communist party and zero otherwise, *x* contains proxies for credit access, and ε is a firm-specific error term.

However, the above specification does not utilize the dynamics observed in political connectedness over time. We therefore also estimate the following pooled non-linear (logit) model:

$$P(c_{it} = 1) = \frac{\exp[\gamma_0 + \gamma_1 entry_{it} + \gamma_2 always_{it} + x'_{it}\sigma + \varepsilon_{it}]}{1 + \exp[\gamma_0 + \gamma_1 entry_{it} + \gamma_2 always_{it} + x'_{it}\sigma + \varepsilon_{it}]} \quad (2)$$

, where *entry* = 1 if the firm owner goes from not being politically connected in period t-1 to becoming connected in period t (and zero otherwise), and *always* = 1 if the firm owner is politically connected throughout the 2005-2015 period. The coefficient on γ_1 measures the difference in credit constraints for political 'switchers' as compared to firms staying politically unconnected throughout the period under study. The coefficient γ_2 measures a similar difference in the probability of being credit-constrained between politically unconnected firms to firms who are connected throughout the period under study.

As the above specification does not fully control for the individual fixed effects affecting the probability of being credit-constrained we as a robustness check also run the following conditional fixed-effects logit model:

$$P(c_{it} = 1) = \frac{\exp[\gamma_0 + \gamma_1 member_{it} + \alpha_i + x'_{it}\sigma + \varepsilon_{it}]}{1 + \exp[\gamma_0 + \gamma_1 member_{it} + \alpha_i + x'_{it}\sigma + \varepsilon_{it}]} \quad (3)$$

, where α_i represents the firm-specific fixed effect.

Finally, we have to acknowledge that the relatively vibrant informal sector credit market may influence credit constraint determinants in formal credit markets, especially for smaller household businesses. In order to take into account the interaction of formal and informal financial markets, we will model the determination of credit access in the two sectors jointly using a non-linear biprobit model, which utilizes the fact that the propensity to have a loan in formal and informal financial markets may not be independent:

$$c_{it} = 1[\beta_{10} + \beta_{11} member_{it} + x'_{1it}\sigma + \varepsilon_{1it} > 0] \quad (4)$$

$$i_{it} = 1[\beta_{20} + \beta_{21} member_{it} + x'_{2it}\sigma + \varepsilon_{2it} > 0]$$

, where ε_{1it} and ε_{2it} have mean zero and unit variance, such that $(\varepsilon_{1it}, \varepsilon_{2it}) \sim binorm(0,0,1,1,\rho)$ and ρ is the coefficient of correlation.

Table 2: Credit constraint determinants

	1		2		3		4		5	
	All		All		All		Household firms		Non-HH firms	
Politically connected	**-0.030***	**(1.96)**	**-0.040*****	**(2.71)**	**-0.042*****	**(2.83)**	**-0.046****	**(2.49)**	**-0.041***	**(1.66)**
Number of employees (log)	0.025***	(4.14)	0.019***	(2.94)	0.000	(0.01)	0.013	(1.26)	-0.009	(0.73)
Capital stock (log)	-0.016***	(4.55)	-0.021***	(5.84)	-0.019***	(5.12)	-0.017***	(4.06)	-0.023***	(2.93)
Intermediate Inputs (log)	0.024***	(5.78)	0.023***	(5.46)	0.023***	(5.23)	0.019***	(3.76)	0.021**	(2.34)
Time-fixed effects	Yes		Yes		Yes		Yes		Yes	
Province-fixed effects	No		Yes		Yes		Yes		Yes	
Sector-fixed effects	No		Yes		Yes		Yes		Yes	
Additional controls	No		No		Yes		Yes		Yes	
Observations	13,819		13,819		13,819		9,561		4,258	
Pseudo R-sq	0.014		0.033		0.036		0.036		0.033	

Note: t-stats (in parentheses) clustered at the firm level. *** indicates significance at the 1 per cent level, ** at the 5 per cent level, and * at the 10 per cent level.

Source: Author's calculations.

Table 2 reports the results from specification (1). Column 1 only includes time-fixed effects in addition to the reported variables, whereas column 2 also include both location- and sector-fixed effects. Column 3 adds additional variables (described in Tables 1 and 2) likely to influence credit market access. Finally, in columns 4 and 5 we do the analysis separately for household business and non-HH firm entities. We consistently find that politically connected firm owners are less likely to be constrained in formal credit markets. Controlling for location- and sector-fixed effects we consistently find that membership of the communist party lowers the probability of being financially constrained by 4 percentage points.

Table 3 reports results from specification (2) for the full sample (column 1), household firms only (column 2) and non-HH enterprises (column 3), respectively. It should be noted that this specification excludes firms that lost or did not state precisely the nature of their political connections, which reduces the sample by approximately 1,100 observations (8 per cent). We find that firms that are politically connected throughout the survey and firms switching into connectedness are significantly less likely to be constrained in formal credit markets, confirming the overall results in Table 2. Coefficient estimates for the full sample in panel A, column 1 are equivalent to marginal effect estimates of -0.055 (always) and -0.062 (entry), respectively. This means that excluding firm owners who lose their membership (mostly due to change of owner) or who did not precisely state the nature of their political connection (party membership or local cadre member) increases the marginal effects as compared to results in Table 2. Moreover, it should be noted that the effect is larger in non-HH enterprises. Panel B of Table 3 reports results from estimating specification (3). Allowing for individual fixed effects strengthens the conclusion, leading to the result that political connections reduce the probability of being credit-constrained, especially for non-HH enterprises.

Table 3: Always connected versus getting connected

PANEL A: Pooled Logit

	1		2		3	
	All		Household firms		Non-HH firms	
Always connected	**-0.318****	**(2.17)**	**-0.308**	**(1.56)**	**-0.388***	**(1.81)**
Entry (getting connected)	**-0.362****	**(2.12)**	**-0.257**	**(1.21)**	**-0.577****	**(2.22)**
Production function controls	Yes		Yes		Yes	
Time-fixed effects	Yes		Yes		Yes	
Province-fixed effects	Yes		Yes		Yes	
Sector-fixed effects	Yes		Yes		Yes	
Additional controls	Yes		Yes		Yes	
Observations	12,696		8,920		3,776	
Pseudo R-sq	0.036		0.035		0.037	

PANEL B: Conditional Fixed Effects Logit

	1		2		3	
	All		Household firms		Non-HH firms	
Entry (getting connected)	**-0.592*****	**(2.61)**	**-0.308**	**(1.06)**	**-0.989****	**(2.40)**
Time-fixed effects	Yes		Yes		Yes	
Production function controls	Yes		Yes		Yes	
Additional controls	Yes		Yes		Yes	
Observations	7,241		4,939		1,967	
Firms	1,726		1,153		551	

Note: t-stats (in parentheses) clustered at the firm level. *** indicates significance at the 1 per cent level, ** at the 5 per cent level, and * at the 10 per cent level.

Source: Author's calculations.

Finally, in Panel A of Table 4 we report results from the bivariate probit model (specification (4)). The reported test for independence between the equations shows that the null hypothesis of independence is rejected and in Panel B of Table 4 we also confirm that the likelihood of being constrained in formal credit markets is significantly related to having obtained an informal loan (if a firm has an informal loan the probability of being financially constrained in formal credit markets is 15 percent higher than if the firm does not have informal loans). The results of the bivariate probit model therefore suggests that the informal credit market is a (good) substitute for the formal credit market, especially for smaller household enterprises (not reported). In addition, we see from column 2, that conditioning on having access to informal credit, the well-determined effect of politically connections on reducing the probability of being constrained in formal financial markets is only maintained by newly connected firms.

Overall, we therefore conclude that we find a well-determined relationship between becoming politically connected and having easier access to formal financial markets. And this reduced probability of being credit-constrained in formal markets does not reduce the firm's probability of obtaining informal financing.

Table 4: Formal versus informal lending

PANEL A: Biprobit - Constrained and informal lender

	Constrained	Informal	Constrained	Informal
Politically connected	**-0.096***	**-0.120****		
	(1.83)	**(2.39)**		
Always connected			**-0.135**	**-0.278*****
			(1.47)	**(3.25)**
Entry (getting connected)			**-0.203****	**-0.009**
			(2.06)	**(0.11)**
Time-fixed effects	Yes		Yes	
Province-fixed effects	Yes		Yes	
Sector-fixed effects	Yes		Yes	
Additional controls	Yes		Yes	
Observations	11,373		10,452	
Rho	0.307	17.00	0.311	16.53
Wald test (p-value)	0.000		0.000	

PANEL B: Pooled logit - Constrained with informal lender control

	1		2	
	All		All	
Politically connected	**-0.114**	**(1.29)**		
Always connected			**-0.119**	**(0.77)**
Entry (getting connected)			**-0.345****	**(2.00)**
Informal	**0.871*****	**(16.86)**	**0.882*****	**(16.36)**
Time-fixed effects	Yes		Yes	
Province-fixed effects	Yes		Yes	
Sector-fixed effects	Yes		Yes	
Additional controls	Yes		Yes	
Observations	11,373		10,452	
Pseudo R-sq	0.059		0.060	

Note: t-stats (in parentheses) clustered at the firm level. *** indicates significance at the 1 per cent level, ** at the 5 per cent level, and * at the 10 per cent level.

Source: Author's calculations.

Table 5 documents simple loan characteristics for formal and informal loans respectively. Looking at formal loans in Panel A, we see that two-thirds of formal loans are obtained from State Owned Commercial Banks (SOCBs), most loans require collateral, and both of these seem independent of whether the firm owner is politically connected or not. Moreover, interest rates do not seem to differ along the connectedness dimension, and formal loan characteristics do not seem to differ conditioning on having access to informal loans (columns 3 and 4).

In Panel B of Table 5, we document the characteristics of the informal loans obtained by firms. Almost two-thirds of these loans are from friends and family and many of these loans are obtained without having to pay interest. In addition, few informal loans require collateral. In our sample of almost 14,000 SME observations we on average find that informal loans are smaller, easier to obtain and cheaper. As such, informal lending markets seem to be a competitive alternative to formal financing among smaller SMEs. Interestingly, it also looks as if politically connected firms face higher cost of informal capital than their non-connected counterparts do.

Table 5: Formal versus informal loan characteristics

Panel A: Formal Loans	1A All	2A Connected	3A All with informal	4A Connected with informal
State bank	0.667	0.672	0.675	0.627
Interest rate (%/month)	1.120	1.112	1.144	1.123
Collateral needed	0.922	0.892	0.931	0.881

Panel B: Informal Loans	1B All	2B Connected	3B All with formal	4B Connected with formal
Friends and family	0.615	0.554	0.584	0.559
Interest rate (%/month)	0.678	0.821	0.827	0.844
Loans with no interest (share of total)	0.559	0.432	0.479	0.407
Collateral needed	0.082	0.071	0.099	0.102

Source: Author's calculations.

Given the differences in attributes between politically connected SMEs and non-connected firms, in Table 6 we run simple cost-of-capital regressions for formal loans, controlling for the observable heterogeneity between the two groups. Column (1) only includes production function and credit access controls in addition to year-fixed effects. Column (2) adds a control for access to SOCBs. Being politically connected may facilitate easier (and maybe cheaper) access to SOCB finance, but it may also create a negative lock-in effect (negative network externalities may force politically connected firms to obtain finance from a specific SOCB, maybe even at a higher cost than the alternative financial opportunities available - weakness of strong ties argument). Column (3) adds location- and sector-fixed effects, whereas column (4) tests whether there has been cost-of-capital changes over time for politically connected firms.

First, we see that the cost of formal capital is lower for politically connected firms. Being politically connected lowers interest rates on formal loans with between 0.025 and 0.057 percentage points, equivalent to a 2.2 – 5.1 per cent lower cost-of-capital than non-connected SMEs. We also see that obtaining a loan from a SOCB is relatively more expensive than receiving external finance from a formal private bank (about 0.016 percentage points difference in interest rates). However, this is not explaining the difference in interest payments between connected and non-connected firms (column 2), and controlling for location and sector only reduces the coefficient on party membership but the estimate remains well-determined at the 10 per cent level. Finally, column 4 shows that the favourable cost-of-capital conditions for politically connected firms has diminished in recent years, and in fact in 2013 and 2015, we find no differential cost-of-capital effect along the connectedness dimension.

Having documented that politically connected firms over the period 2005-2015 are less credit constrained and had more favorable loan conditions (at least in the earlier years) when obtaining external finance, makes it interesting to do a back-of-the-envelope estimate of the differences in the desired level of debt for politically connected and unconnected firms, respectively. Following the approach by Rand (2007), we use a two-step sample selection model, recording whether enterprises with positive debt holdings are credit-constrained and conditional on being a credit-constrained firm, holding positive debt, and estimate the desired level of debt of the individual firm.

Table 6: Cost of capital and political connectedness

	1	2	3	4
	Formal loan	Formal loan	Formal loan	Formal loan
Politically connected	-0.034**	-0.037**	-0.025*	-0.057***
	(1.99)	(2.36)	(1.68)	(2.67)
Loan from SOCB		0.164***	0.160***	0.160***
		(14.23)	(13.70)	(13.67)
Connected#2007				-0.004
				(0.14)
Connected#2009				0.066
				(1.49)
Connected#2011				-0.002
				(0.03)
Connected#2013				0.097**
				(2.00)
Connected#2015				0.078**
				(2.33)
Production function controls	Yes	Yes	Yes	Yes
Time-fixed effects	Yes	Yes	Yes	Yes
Additional controls	Yes	Yes	Yes	Yes
Location-fixed effects	No	No	Yes	Yes
Sector-fixed effects	No	No	Yes	Yes
Observations	3,522	3,522	3,522	3,522
R-sq	0.314	0.367	0.418	0.419

Note: t-stats (in parentheses) clustered at the firm level. *** indicates significance at the 1 per cent level, ** at the 5 per cent level, and * at the 10 per cent level.

Source: Author's calculations.

The estimation problem is that the desired debt level of a firm is only observed if the firm has positive debt and the firm cannot be labelled as being financially constrained. Direct estimation of the demand for formal external financing using all firms will be therefore biased if the same variables determining whether a firm has debt or is credit-constrained, also affect the level of observed debt. Therefore, inverse Mills ratios from estimating a (i) debt probability model and (ii) credit constraint probability model, have to be obtained, and thereafter the demand for debt can be modelled as:

$$d_i = \beta_1 x_i + \beta_2 \frac{\varphi(c_i)}{F(c_i)} + \beta_3 \frac{\varphi(b_i)}{F(b_i)} \quad (5)$$

where $\frac{\varphi(c_i)}{F(c_i)}$ and $\frac{\varphi(b_i)}{F(b_i)}$ are the inverse Mill's ratios for being credit-constrained and having debt, respectively, and $\varphi(*)$ and $F(*)$ are the probability and cumulative distribution functions, respectively. Having estimated determinants for demand of external finance using (5) (not reported) we inquire how much SMEs would increase their debt burden if all credit constraints were removed and their desire for external finance was fully met. This we do for the (i) full sample, (ii) political connected firms and (iii) non-connected firms. Based on these estimates the so-called credit gap can be calculated using the approach in Rand (2007) as:

$$GAP = d_c \frac{f_c}{f} + d_{uc} \frac{f_{uc}}{f} - d_a = \beta_1 x_c \frac{f_c}{f} + d_{uc} \frac{f_{uc}}{f} - d_a \quad (6)$$

where d_c and d_{uc} are desired debt for constrained and unconstrained firms, respectively; f_c and f_{uc} are the number of constrained and unconstrained firms respectively, and d_a is the average actual debt. Means of observables for the constrained firms are represented by x_c and β_1 are the estimates obtained from (5).

Table 7: Credit gap by year and connectedness

		2007	2009	2011	2013	2015
All	Loanable funds need	1.7	3.2	2.7	4.7	3.2
	Constrained firms demand	20.4	38.6	42.3	72.2	43.6
Politically connected	Loanable funds need	0.1	3.4	-1,3	5.9	2.7
	Constrained firms demand	0.4	32.1	-14,7	70.5	26.4
Unconnected	Loanable funds need	1.9	3.2	2.8	4.7	3.2
	Constrained firms demand	22.9	40.7	46.2	75.5	46.4

Source: Author's calculations.

Table 7 shows that the average debt burden lies between 1.7 (in 2007) and 4.7 (in 2013) percent. Given that the number of credit-constrained firms is between 20.7 (in 2015) and 30.8 (in 2013) percent of the sample, this signals (using equation (6)) that Vietnamese SMEs would increase their debt burden by 20.4 (2007) to 72.2 (2013) percent if all credit constraints were removed. Looking at the trend, unfulfilled credit demand is as expected increasing from 2007-2013 during the period of financial distress, but sharply declining in 2015. Moreover, we note that especially during the crisis period (2007-2011) politically connected firms have much less unfulfilled credit demand than non-connected SMEs. These back-off-the-envelope calculations therefore suggest that political connections are especially valuable in terms of access to formal external finance during periods of financial distress (both in terms of credit access, non-rationing and cost-of-capital), whereas these benefits are less prevalent during more financially favorable periods.

4 Conclusion

In the context of SMEs in Vietnam this paper asked the simple questions: Are politically connected firms (i) more likely to get formal credit and (ii) if obtaining finance, do they receive cheaper loans. Results reveal—controlling for unobserved time-invariant firm-level heterogeneity, productivity self-selection concerns, and access to alternative credit markets—that having a firm owner that is (or becomes) a member of the Communist Party of Vietnam (CPV) is linked with a lower likelihood of being constrained in formal financial markets. In addition, politically connected firms obtaining formal finance face on average lower cost-of-capital than non-connected SMEs. However, results also indicate that the impact of political connections is most valuable during periods of financial distress. Whether this preferential treatment in formal credit markets of politically connected firms is a causally dominating mechanism with respect to the overall impact on firm performance is a question going beyond this paper.

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