Subnational governance institutions and
the development of private manufacturing enterprises in Vietnam

by

Bach Ngoc Thang

National Economics University

207 Giai Phong Road, Hai Ba Trung District

Hanoi, Vietnam

Email: thangbn@neu.edu.vn, or bnthang@gmail.com

Tel: +84 4 36 280 280, ext. 5107; or +84 165 443 1750

Abstract

This paper examines the impacts of the subnational governance institutions on the private manufacturing firms' development in terms of new entry, firm size and labor productivity growth during 2006-2014. Vietnam's context during this period provides best opportunities for examining the subnational institutions' effects on the private firms' entry and growth, given vast differences in the institutional quality across provinces and the increasing contribution of the private firms to the national economy. The empirical results suggest that contract enforcement raises private firms' entry and firm size growth, while reduction of unofficial cost payments persistently increase firm size growth and labor productivity growth over the sort- to medium-time intervals. Moreover, improved transparency has medium-term implications for labor productivity growth, and lower entry barriers improve labor productivity growth in the short run, but are detrimental to growth in the medium term. These empirical findings provide concrete evidences for further institutional reforms at the provincial level in Vietnam.

Key words: governance institutions, entry regulation, firm entry, labor productivity growth.

JEL: D73, O40, P26

Acknowledgments

1. Introduction

The relationship between institutions and economic growth is examined by Acemoglu (2009, 2012), indicating that institutions are fundamental determinants of a country's long-run economic growth and its transformation from a poor to a prosperous country. Acemoglu's institutional theory and the endogenous growth theories (Romer 1990; Grossman and Helpman 1991; Aghion and Howitt 1992) both suggest that a country will not be able to secure sustained growth in the long run if it does not develop the institutional environment that encourages innovations, knowledge accumulation and diffusion. It is also empirically verified that institutional developments help close the output-per-worker gap across countries (Cavalcanti and Novo 2005). Vietnam acknowledges institutional reforms as new incentives for economic development in the coming period after having experienced some negative shocks (both within and outside the country) that recently drove growth rates far beneath the potential level as archived in the first 20 years of the 1986 *Doi Moi* policy. The annual GDP growth rates have been slow down since 2008 at an average figure of 5.7% per annum, well beneath the average figure of 7.1% in previous 20 years.

This study examines the impacts of the subnational governance institutions in Vietnam on the private manufacturing firms' performance in terms of new entry, firm size and labor productivity growth during 2006-2014. To the best of the author's knowledge, there have been few studies on this nexus in a transitional economy like Vietnam. A number of previous studies investigated to some extent the interplay between institutions and firms' performance (for example, Tran et al. 2009; Nguyen et al. 2013; Malesky et al. 2015), but none of them have considered the subnational governance institutions' impacts on new firm entry and growth. Evidences on both the short- and medium-term effects of institutions is important, as firms normally choose to follow the "rules of the game" for transactional, or short-term, benefits, in a country with weak formal institutions like Vietnam (Nguyen et al. 2015). In addition, the paper has for the first time employed the integrated governance institutions concept as suggested by Dixit (2009) to examine its effects on firms' performance. This concept is believed to yield a more complete picture on the relationship between institutions and economic performance.

Vietnam's context provides best opportunities for examining the subnational institutions' effects on the private firms' entry and growth, given vast differences in the institutional quality across provinces (Meyer and Nguyen 2005; VNCI-VCCI 2006) and the increasing contribution of the

private firms to the national economy (Bach 2014). According to General Statistics Office's annual enterprise census, of the whole manufacturing sector, private enterprises accounted for 88 percent of its registered businesses and 40 percent of its total asset in 2014, up from 82 percent and 31 percent in 2006. The empirical results suggest that contract enforcement significantly improve private firms' entry and firm size growth in the manufacturing sector during 2006-2014. Quantitatively, one average point improvement in the index of contract enforcement one year earlier would increase the entry rate by 1 percent. The entry rate would increase to 1.3 percent if the improvement in contract enforcement realized two years earlier. Lower entry barriers hinder firm size growth, and have positive productivity growth impacts only in the short run. Reduced unofficial cost payments and enhanced contract enforcement facilitate firm size growth in terms of total asset, and the magnitude of this impact enlarges over longer time horizons. Reduction of unofficial cost payments consistently benefits labor productivity growth over short- to medium-terms, and improved private firms' access to public information has medium-term impacts on labor productivity growth.

The paper is structured as follows. Section 2 is literature review of the subnational institutions and its impacts on firms' performance. Section 3 is data and methodology. It is followed by the section on results and discussions. Section 5 gives out concluding remarks and policy recommendations.

2. Literature Review

2.1 Understanding subnational governance institutions

North (1990) provides a well-known definition of institutions as "humanly devised constraints that structure political, economics, and social interactions". He also mentions the differences between formal and informal institutions as the former are constraints documented in the institution, laws, property rights, and the latter are informal constraints through social relations, norms, practices and conducts. In combination of economic theories and quantitative methods, the study successfully explains major economic and institutional changes in history in many countries. Institutional research is primarily conducted on country aggregates, focusing on the impact of institutions on the long-run economic growth. Empirical results indicate that institutions have a positive impact on the long-run economic growth in the countries having a proper respect of property rights and contract enforcement.

Governance institutions have been mentioned intensively in its relationship with economic activities as "the structure and functioning of the legal and social institutions that support economic activities and economic transactions by protecting property rights, enforcing contracts, and taking collective actions to provide physical and organizational infrastructure" (Dixit 2009). Protection of property rights encourages people to save and invest, because they are not afraid of losing money in the capital markets, and also not have to spend their time and efforts guarding their property. Contract enforcement is integral part of the contractual institutions that accommodates firms' arm-length transactions. In these institutions, the juridical system's role is to guarantee that counterparty cheating is prevented, and people have to fulfill their promised role in the transaction. In the third component of the economic governance institutions, according to Dixit (2009), the government's role is to provide social safety nets, facilitation of internalization of externalities, and the control of public bads, such as free-riding.

Governance is at the third level of the institutional system (Williamson 2000). The other two above levels are the embeddedness, including customs, tradition, norms, religion; and the institutional environment, or formal rules of the game, which is related to property rights. The governance institutions are thus more related with the play of the game that govern how contractual relations are executed in practices. It goes beyond the rules of the game (property) to include a perfectly functioning legal system for defining contract laws and enforcing contracts. This definition is important, since respect of property rights does not *per se* guarantee that transactions are safe (no cheating) for parties involved, and the associated transaction costs are minimized in practices.

2.2 Related empirical studies

Deregulation of entry is a common approach to improve the market institutions in the formerly central planning economies. This aims to increase competition in the formerly highly regulated industries. During 2003-2008 there were more than 193 reforms in 116 countries aiming to improve the business environment that enables new firm entry (Djankov 2009). In a study of the economic impact of formal entry regulations, Djankov et al. (2002) shows that corruption and informal economic activities are rampant in the countries having heavy entry barriers (in terms of the number of procedures, time and cost). In these countries heavy entry regulations do not result in high-quality public and private goods to be supplied in the market. This indicates that huge entry barriers do not "screen" the good suppliers to the market, but to provide personal gains to

politicians and public officials. Klapper et al. (2006) indicates that entry regulations hinder new firm entry, particularly in the industries facing high natural entry (due to low entry barriers in terms of economies of scale and product differentiations). In a study on the impact of institutions on new firm entry in Russia, Bruno et al. (2013) suggests that firm entry is low in the industries facing high natural entry rates in the regions subject to greater political fluidity in terms of gubernatorial change (a proxy for competition in the regional political systems). The low entry rates are due to decreased entry of large and medium firms that are more likely to rely on personal networks with top politicians normally secured by the continuation of a certain gubernator.

Regarding the impacts of entry deregulations and firm size registration removals on output, employments, entry and investment, Aghion et al. (2006) shows that growth is archived in the industries located in the states with pro-employer labor market institutions rather than in those states with pro-employee labor market institutions. Investments in ICT are negatively associated with the costs of starting a business and registering property (Jerbashian and Kochanova 2016). Hallward-Driemeier et al. (2010) investigates the dispersed impacts of formal and informal institutions on firms' growth in Africa, indicating that disparity in policy enforcement within a country discourages employment growth. In addition, proxies for formal institutions do not have significant impacts on firms' growth, and the gaps between formal and informal institutions are more likely to enlarge in the countries with heavy regulations.

A number of studies show huge differentials in provincial governance institutions in Vietnam (Meyer and Nguyen 2005; VNCI-VCCI 2006). This could be attributed to differed initial conditions and poor capacity at the provincial level under the processes of democratization and decentralization. Meyer and Nguyen (2005) find that differences in the provincial institutions in Vietnam have a significant impact on the project location choice and the penetration strategy enacted by foreign investors. The availability of scare resources has a deterministic role in the location choice and 100 percent foreign ownership. Institutional pressures in the presence of state-owned enterprises (SOEs) results in joint ventures. The presence of SOEs discourages investment and growth in the private sector as suggested by Nguyen and Freeman (2009). It is argued that the provincial institutions have a role in the relationship between export strategies and performance of small and medium enterprises in Vietnam.

In another study on the relationship between the provincial governance institutions and private investment in Vietnam, McCulloch et al. (2013) find that transparency stimulates private investment. Similar effect is also found in Malesky et al. (2015). The provincial competitiveness is a significant determinant of firms' performance across provinces in Vietnam, but most of this competitiveness is related to the provincial authorities' interventions for the private sector development, other than improvement in the formal governance institutions (Tran et al. 2009). Corruption at the provincial level negatively affects private investment, employment and per capita income (Dang 2016). Doan et al. (2014) indicate that the subnational governance institutions have a positive impact on firm survival, though the rate of impact decreases over time. Labor training, juridical quality and contract enforcement help improve firm performance in Vietnam during the 2006-2012 period (Pham and Nguyen 2014).

3. Data and Methodology

3.1 Sources of data

There are two sources of data used in this study. The first is the annual surveys on the Provincial Competitiveness Index (PCI) conducted by the Vietnam Chamber of Commerce and Industry (VCCI) since 2006. Annually, there were about ten thousands private firms across 63 provinces, which were randomly chosen to participate in the surveys. The PCI reflected private firms' feedbacks on the local business environment, the quality of economic governance, and the administrative reforms at the provincial level this is conducive to the private economic sector development. The second source of data is the annual enterprise surveys conducted by the General Statistical Office (GSO). The surveys collected all information related to firms' performance and input usage since 2000. It targets all firms nationwide having operated till the year's end of investigation. For this study's purposes, all manufacturing private enterprises within 2-digit 2007 Vietnam System of Industrial Classification (VSIC2007) are retained for analysis.

### 3.2 Some summary statistics

The quality of subnational governance institution

Figure 1 shows four composite indices that represent the quality of economic governance institutions across 63 provinces in Vietnam during 2006-2014, which were constructed from the PCI data. The indices are scaled from one to ten, where higher values represent better quality of

economic governance institutions. They are entry regulation, transparency, unofficial cost payment, and contract enforcement.

Entry regulation measures time, costs and procedures associated with business registrar at the local authorities. It thus reflects the ease of opening businesses at the local level. During 2006-2014, quality of entry regulation was valued highest among four indices, averaging from 7.4 in 2006 to 8.3 in 2014. It seemed to improve overtime, except 2010 and 2013. Transparency measures private firms' accessibility to public information related to legal documents, budget information, and planning. It reflects timeliness, completeness, and predictability of the public information disclosure that is relevant to the local businesses. The transparency index was valued stable overtime, averaging from 5.3 to 6.0 during 2006-2014. It is noticeable that the transparency index converged overtime, exhibiting smaller differences in transparency across 63 provinces. Similar to transparency, unofficial cost payments seemed not improve overtime. It measures the frequency and severity of corrupt practices at the local level. On average, it ranked below entry regulation and above transparency. The quality of contract enforcement represents the credibility and effectiveness of the local juridical system in dealing with cases of breaching contracts related to property rights and firms' arm-length transactions. It performed worst among the four indices, averaging at 3.8 in 2006 and improved to 5.8 in 2014. The quality of contract enforcement differs greatly across provinces, so does the index of unofficial cost payments.

**Figure 1: Four dimensions of the subnational governance institutions**
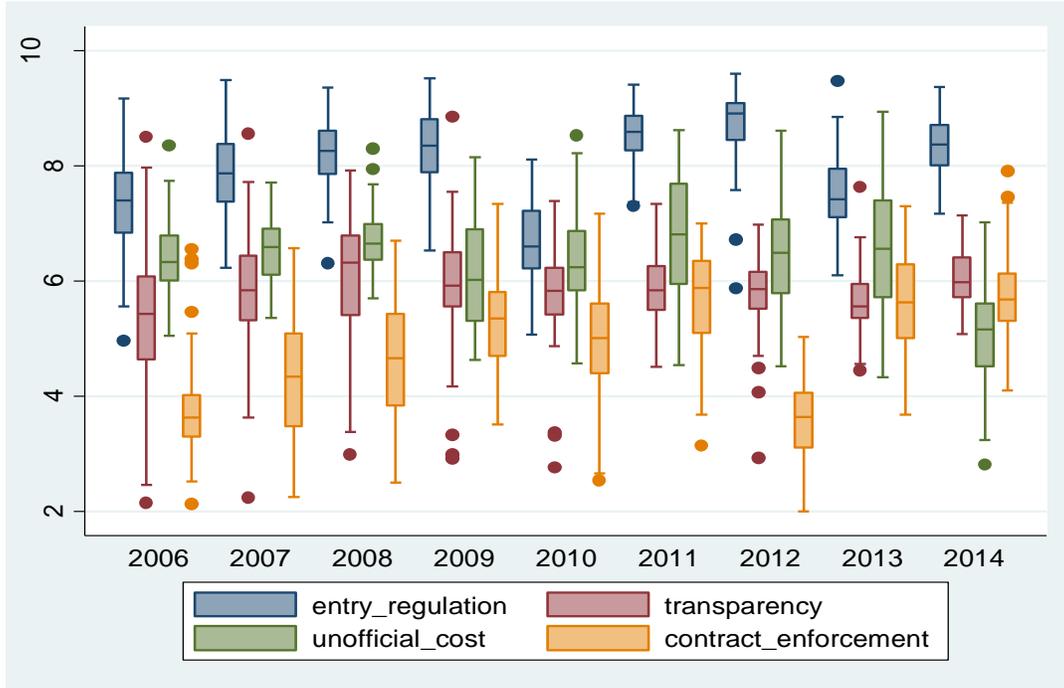
Source: VCCI, The PCI.

The private manufacturing firms

Figure 2 shows the trend of firm size's evolution during 2006-2014. The average number of labors per firm decreased from 70 in 2006 to 47 in 2014. In the meantime, the average total asset per firm increased from about VND11 billion to VND30 billion during over 2006-2014, indicating the averaged worker is equipped with more asset over time. The average revenue per firm raised from VND14 billion to VND34 billion over 2006-2014.

Figure 2: Firm size and performance in 2006-2014
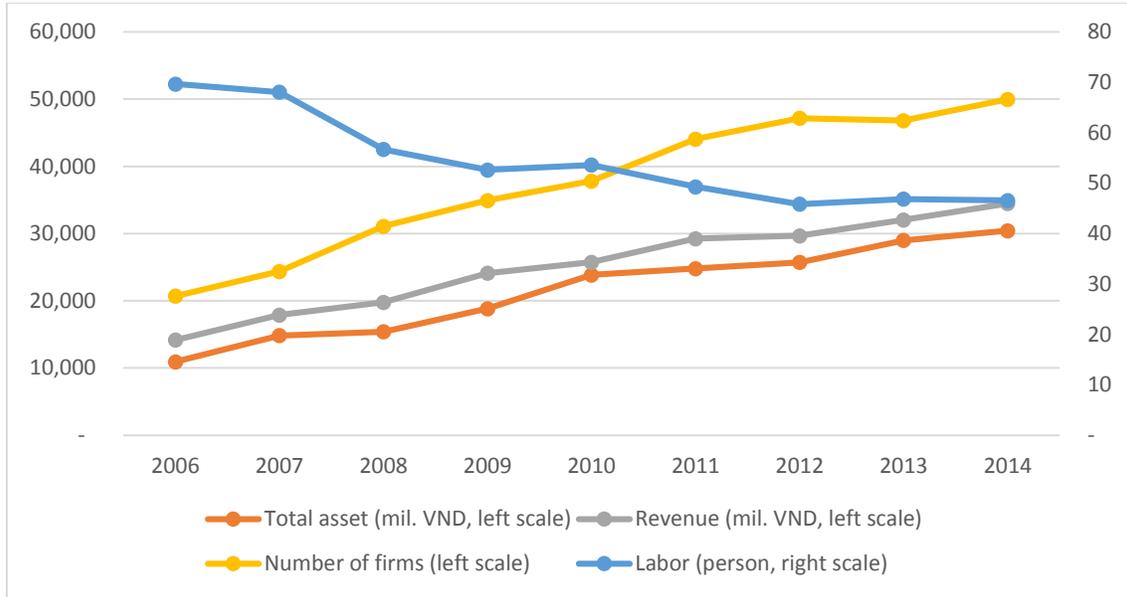
Source: GSO, The annual enterprise survey.

Figure 3 indicates the entry rates and industry concentration ratios during 2006-2014. The annual entry rates are defined as the number of firms entering at year T and T-1 divided with the total numbef of firms operating at year T. This defination is to guarantee that recent entrants are taken into account, given a considerable number of one-year firms, firms that entering and exiting in the same year. The annual entry rates seemed to decrease ove time. The entry rate decreased from 40 percent in 2006 to 22 percent in 2014. This pattern exhibits aftermaths of the Gobal Financial Crisis (GFC) in 2008, and the domestic credit crunch during 2011-2014. Figure 3 also exhibits the industry concentration ratios during 2006-2014. This concentration ratios are defined by the market shares, in terms of revenue, of the top-5 firms in a given industry. The ratios slightly decreased over time, from 89 percent in 2006 to 86 percent in 2014, indicating greater competition in the manufacturing sector.

Figure 3: Entry rates and industry concentration ratio during 2006-2014
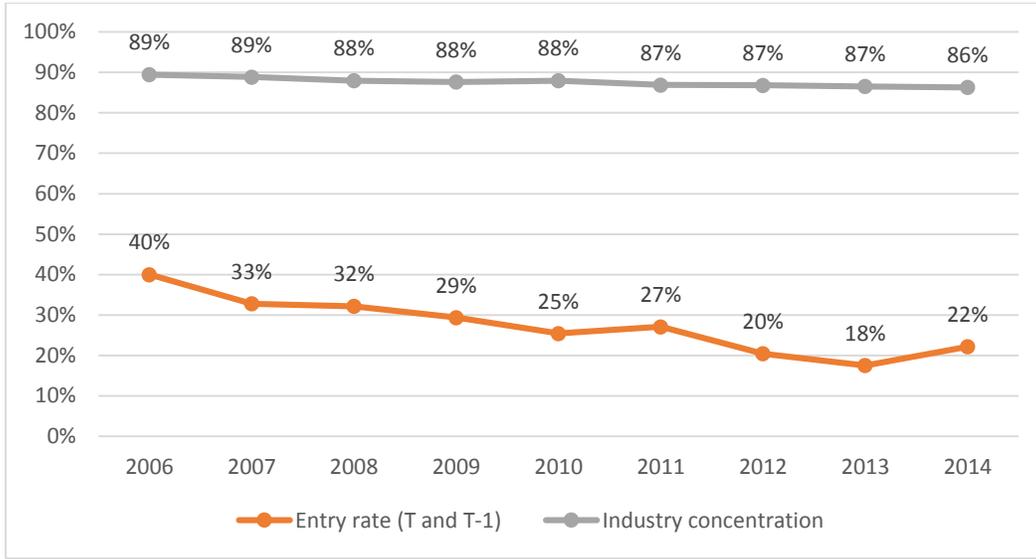
Source: GSO, The annual enterprise survey.

3.3 Methodology

There are three following benchmark models for regression analysis. The first uses the industry-province level data of 2-digit manufacturing industries across 63 provinces to examine the effects of subnational governance institutions on the private firms' entry during 2006-2014. The second and third models use the firm-level data to examine the effects of subnational governance institutions on firm size growth and labor productivity growth over time. The first model regresses the lagged values of the subnational institutional quality on the entry rates during 2006-2014. Using of the lagged values is important as firm entry is responsive to improvement in the institutional quality a couple of years earlier. The institutional quality comprises of three dimensions as suggested by Dixit (2009); namely protection of private property, contract enforcement, and collective actions. Referring to the PCI data, the index of unofficial cost payments is used as a proxy for respect/protection of private property, the index of legal institutions for contract enforcement, and the index of transparency for collective actions. Since the 2006-2014 period is distinguished with huge entry of private firms, the index of market entry is used as an additional dimension representing the subnational institutional quality, which is denoted by entry regulation. The first benchmark model is defined as follows:

$$entry\ rate_{i,r,t} = \beta_1.entry\ regulation_{r,t-1(2)} + \beta_2.transparency_{r,t-1(2)} + \beta_3.unofficial\ cost_{r,t-1(2)} + \beta_1.contract\ enforcement_{r,t-1(2)} + \gamma.industry\ concentration_{i,r,t} + \epsilon_i + \theta_r + \mu_t + \varepsilon_{i,r,t} \qquad (1)$$

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Where:

- $entry\ rate_{i,r,t}$ is the ratio of new entering firms in industry i of province r at year t, devivided with the total operating firms. These new entering firms include firms entering in year t and those entering in $t-1$.
- $entry\ regulation_{r,t-1(2)}$ is the index measuring the ease of registering businesses in province r lagged year $t-1$ and $t-2$; the higher the value the less barriers in terms of time, cost, and procedures in the business registrar.
- $transparency_{r,t-1(2)}$ is the index of transparency in province r lagged year $t-1$ and $t-2$; the higher the value the better the public information disclosure.
- $unofficial\ cost_{r,t-1(2)}$ is the index of unofficial cost payment in province r lagged year $t-1$ and $t-2$; the higher the value, the lower frequency and less severity of unofficial cost payments.
- $contract\ enforcement_{r,t-1(2)}$ is the index of contract enforcement in province r lagged year $t-1$ and $t-2$; the higher the value the higher credibility and effectiveness of the juridical systems in dealing with cases breaching of contracts related to property rights and firms' arm-length business transactions.
- $industry\ concentration_{i,r,t}$ is defined as the market share accumulated by the top-5 firms in terms of revenue in industry i of province r at year t.
- ϵ_i represents the unobservable industry-specific effects that are time-invariant and differ across industries. They include industry characteristics related to technology, scale economies, and product differentiation.
- θ_r represents the unobservable province-specific effects that are time-invariant and differ across provinces. They include infrastructure, geography, and economic development levels.
- μ_t denotes the unobservable year-specific effects that control for common macroeconomic shocks. These are particularly relevant as the study period was characterized with the GFC and the domestic credit crunch.
- $\beta_i (i = 1,2,3,4)$ and γ are the coefficients to be estimated.
- $\varepsilon_{i,r,t}$ is the usual random errors.

In the above model, control of industry concentration is important as entry is dependent on the market share accounted by the top producers within a given industry. In the highly concentrated industries, entry rates could be low as entrants encounter more competitive pressures. Also, control of industry-, province-, and year-specific-effects are crucial since entry rate is likely to differ greatly across industry, province, and over time.

The second benchmark model analyses the effects of governance institutions on firm size growth over time. It uses the same set of the subnational institutional variables as above, but differ in using change of the institutional quality over a number of time horizons. This specification is important given low levels of institutional quality in a transition economy like Vietnam. Improvement in the institutional quality deems to yield proper justification for the private sector development. The model's details are as follows:

$$\Delta_p \ln(total\ asset)_{n,t} = \beta_1.\Delta_p entry\ regulation_{r,t} + \beta_2.\Delta_p transparency_{r,t} + \beta_3.\Delta_p unofficial\ cost_{r,t} + \beta_1.\Delta_p contract\ enforcement_{r,t} + \gamma.age_{n,t-p} + \epsilon_i + \theta_r + \mu_t + \varepsilon_{n,i,r,t} \qquad (2)$$

Where:

- $\Delta_p \ln(total\ asset)_{n,t}$ is change in the logarithmic value of total asset of firm n over $t - p$ and $t, p = 1, ..., 5$. This value represents the growth rate of total asset over certain period of time.
- Δ_p denotes the difference of the pth order of the variables of interest. This represents change in the variables of interest over the time interval p.
- $age_{n,t-p}$ is firm n's age lagged at year $t - p$. This control variable is important as firm's age might affect firm's size growth; namely, young firms could exhibit higher growth potential.
- $\varepsilon_{n,i,r,t}$ is the usual random error.
- All the other variables and notations are defined above.

The third benchmark model examines the effects of governance institutions on labor productivity growth overtime. It comprises the same set of institutional variables as model (2), but includes change in firm size as an additional explanatory variable. The model's details are as follows:

$$\Delta_p \ln(labor\ productivity)_{n,t} = \beta_1.\Delta_p entry\ regulation_{r,t} + \beta_2.\Delta_p transparency_{r,t} + \beta_3.\Delta_p unofficial\ cost_{r,t} + \beta_1.\Delta_p contract\ enforcement_{r,t} + \gamma.age_{n,t-p} + \Delta_p \ln(total\ asset)_{n,t} + \epsilon_i + \theta_r + \mu_t + \varepsilon_{n,i,r,t} \qquad (3)$$

Where:

- $\Delta_p \ln(labor\ productivity)_{n,t}$ is change in the logarithmic value of labor productivity of firm n over $t - p$ and $t, p = 1, ..., 5$. $labor\ productivity$ is defined as revenue over labor.
- All the other variables and notations are defined above.

4. Results and Discussions

4.1 Subnational governance institutions and firm entry

Table 1 reports impacts of the subnational governance institutions on the private firm entry during 2006-2014. There are two model specifications which relate four aspects of the subnational governance institutions to the private firm entry; including entry regulations, transparency, unofficial cost, and contract enforcement. One-year and two-year lags of governance institutions are respectively used in the two model specifications. The empirical results show that improvements in entry regulation, transparency, and unofficial cost payments have no significant effects on the private firm entry. These qualitative results remain unchanged

with institutional quality lags of one year and two years. However, the quality of contract enforcement has positive effects on the private firm entry. The estimated coefficients for *Contract enforcement $_{Year\,(-1)}$* and *Contract enforcement $_{Year\,(-2)}$* are respectively positive and statistically significant at the levels of 5 percent. This qualitative finding remains unchanged even controlling for industry concentration ratio, year-specific effect, industry-specific effect, and province-specific effect. Quantitatively, one average point improvement in the index of contract enforcement one year earlier would increase the entry rate by 1 percent. The entry rate would increase to 1.3 percent if the improvement in contract enforcement realized two years earlier.

Table 1: Subnational governance institutions and firm entry

Dependent variable: Entry rate	Year (-1)	Year (-2)
Entry regulation $_{Year(-1)}$	-0.008	
	(0.007)	
Transparency $_{Year(-1)}$	-0.004	
	(0.006)	
Unofficial cost $_{Year(-1)}$	-0.002	
	(0.006)	
Contract enforcement Year(-1)	0.010**	
	(0.005)	
Entry regulation $_{Year(-2)}$		0.006
		(0.007)
Transparency $_{Year(-2)}$		-0.009
		(0.006)
Unofficial cost $_{Year(-2)}$		0.005
		(0.006)
Contract enforcement Year(-2)		0.013**
		(0.005)
Industry concentration	-0.051*	-0.052*
	(0.028)	(0.028)
Sigma	0.317***	0.308***
	(0.003)	(0.003)
Year-specific effects	Yes	Yes
Industry-specific effects	Yes	Yes
Province-specific effects	Yes	Yes
Log likelihood	-4,136	-3,481
Pseudo R2	0.119	0.123
Number of observations	8,588	7,578

Notes: Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

4.2 Subnational governance institutions and firm size growth

In a deregulation period, firm entry could be high but there is no guarantee that the successful entrant could survive and grow in size over time. For longer term survival and growth, firms need an accommodative business environment that allows for greater transparency, lower corruption, and improved quality of contract enforcement. Table 2 show the estimated results for the impacts of entry regulation, transparency, unofficial cost, and contract enforcement on firm size growth over different time horizons from one year to five year time intervals. The firm size growth is defined as change in firms' total asset over time. Less entry regulation seems to

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hamper the firm size growth over the medium term from two to five years, as the estimated coefficients for *Entry regulation* for these time intervals are negative and highly statistically significant at the level of one percent, except for the two-year interval having the significance level of 5 percent. Lower entry barriers thus entails fiercer competition to firms in the medium term, making firms insecure in investment. Additionally, less regulation of entry enables more small-sized firms to enter the market without prior enquiry into their growth potential upon successful entrance. There are two reasons why less regulation might have negative impacts on firm size growth. The magnitude of this impact enlarges over longer time horizons. Specifically, one average point improvement in entry regulation would decrease firm size growth by 0.7 percent over the two-year time interval, and by 1.5 percent, 1.8 percent, 2 percent respectively over three to five-year time intervals.

Table 2: Subnational governance institutions and firm size growth

Dependent variable: **Total asset growth**	1-year interval	2-year interval	3-year interval	4-year interval	5-year interval
Entry regulation	0.003	-0.007**	-0.015***	-0.018***	-0.020***
	(0.003)	(0.003)	(0.004)	(0.005)	(0.006)
Transparency	0.003	-0.004	0.003	0.004	0.002
	(0.003)	(0.004)	(0.004)	(0.005)	(0.006)
Unofficial cost	0.006***	0.022***	0.029***	0.028***	0.027***
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Contract enforcement	0.016***	0.027***	0.034***	0.034***	0.030***
	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)
Age (lagged)	-0.004***	0.001	0.0003	-0.006**	-0.012**
	(0.000)	(0.001)	(0.001)	(0.003)	(0.006)
Year-specific effects	Yes	Yes	Yes	Yes	Yes
Industry-specific effects	Yes	Yes	Yes	Yes	Yes
Province-specific effects	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.034	0.031	0.031	0.031	0.027
Number of observations	226,034	156,916	108,235	72,203	47,908

Notes: Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Improvement in transparency has no statistically significant effects on firm size growth across time intervals. The government's respect of private property is important for firm size expansion. The estimated coefficients for the variable *Unofficial cost* are positive and statistically significant at the level of one percent across all five time intervals from one to five years. Additionally, the magnitude of this effect gets larger over the medium term. One average point improvement in the index of unofficial cost helps raise firm size growth by 0.6% over the one-year interval, and by

2.2 percent, 2.9 percent, 2.8 percent, 2.7 percent over respectively two- to five-year time intervals. Firms might view persistent reductions in unofficial cost payments as credible efforts made by the local governments in improving the business environment. They are responsive to these efforts by making more investment in the medium term. This finding provides concrete evidences to the fight against corruption in the developing countries like Vietnam. Small-sized private enterprises could not grow up in the medium term if corruption is rampant, meaning private property and investments are not respected and not protected by the government.

The effects of contract enforcement on firms' size growth are even larger than reduced unofficial cost payments. Contract enforcement represents the credibility and effectiveness of the juridical system in dealing with cases where counterparties breach a contract with the others. The estimated results show that one average point improvement in the index of contract enforcement is associated with a 1.6-percent increase in firm size growth rates over the one-year interval. This nexus would respectively enlarge to 3.4 percent and 3 percent over the four- and five-year time intervals. Similar to the unofficial cost payment' effect, improvement in contract enforcement benefits firm size growth over time. Manufacturing enterprises are eager to expand their production if the local governments not only respect private property by reducing unofficial payments, but also consistently build up the juridical system that is effective in defining contracts, and in improving contract enforcement.

4.3 Subnational governance institutions and labor productivity growth

The preceding section has indicated that improvements in the subnational governance institutions raise firm size growth, and this effect is larger over longer time horizons. Another enquiry might arise as whether better governance institutions speed up labor productivity growth to firms over time. The timing of institutional effects is important as any credible institutional reforms require commitments. Table 3 show that lower entry barriers benefit revenue labor productivity growth only in the short run, as the estimated coefficients for entry regulation over one- to three-year intervals are positive and statistically significant. In the medium term, freer entry seem to raise competition to incumbents that discourage labor productivity growth, since the estimated coefficient for entry regulation over the five-year interval is negative and statistically significant at the level of one percent.

Transparency seems not benefit labor productivity growth in the short run as the estimated coefficient for transparency over the one- and two-year intervals are negative and statistically

significant at the level of one percent. This finding is understandable since Vietnamese firms conventionally benefit from personal relationships and insider's information in their business practices. Enhanced transparency could harm firms' productivity, as it temporarily break up these relational assets that could only benefit firms' growth in the short run. However, improved transparency eventually benefit firms' productivity growth in the medium term, as a larger number of firms are able to get accessed to public information on planning and budgets in a timely manner. Quantitatively, the estimated coefficient for transparency over the five-year interval is positive and statistically significant at the level of 5 percent. Specifically, one average point improvement in the index of transparency would raise labor productivity growth by 1.6% over the five-year window.

Table 3: Subnational governance institutions and labor productivity growth

Dependent variable: Productivity growth	1-year interval	2-year interval	3-year interval	4-year interval	5-year interval
Entry regulation	0.012***	0.015***	0.010**	-0.002	-0.016**
	(0.004)	(0.004)	(0.005)	(0.006)	(0.007)
Transparency	-0.018***	-0.012***	0.0005	0.008	0.016**
	(0.004)	(0.004)	(0.005)	(0.006)	(0.007)
Unofficial cost	0.006**	0.018***	0.019***	0.015***	0.011***
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Contract enforcement	-0.023***	-0.014***	-0.017***	-0.019***	-0.016***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)
Total asset	0.032***	0.004	0.009**	0.016***	0.017***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)
Age (lagged)	-0.013***	0.011***	-0.008***	0.006**	0.002
	(0.000)	(0.001)	(0.001)	(0.003)	(0.006)
Year-specific effects	Yes	Yes	Yes	Yes	Yes
Industry-specific effects	Yes	Yes	Yes	Yes	Yes
Province-specific effects	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.019	0.015	0.013	0.013	0.010
Number of observations	226,034	156,916	108,235	72,203	47,908

Notes: Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Unlike transparency, the positive effects of reducing unofficial cost payments are persistent across one- to five-year time intervals. These effects enlarge overtime. Over the one-year interval, one average point improvement in the index of unofficial cost raise labor productivity growth by 0.6 percent, increasing to 1.8 percent and 1.9 percent over the two- and three-year windows, then decelerating to 1.5 percent and 1.1 percent over the four- and five-year intervals. These findings are theoretically sound as reducing unofficial payments help firms put aside more

resources for investments that benefit labor productivity growth in the medium term. In addition, firms are more eligible to expand production as they do not have to factor in unofficial costs in their business decisions, enabling them to benefit more from scale economies.

One striking result from Table 3 is that there is a negative association between contract enforcement and labor productivity growth. This interplay is persistent across one- to five-year time windows. This might be due to low levels and poor improvement of contract enforcement during 2006-2014. In this period, contract enforcement ranked worst among the four indices of the governance institutions across provinces. Improving firms' labor productivity growth requires persistent improvements of the juridical systems relating to contract enforcement, but the index of contract enforcement was low and changed abruptly during 2006-2014 (see Figure 1). It is likely that low credibility of the juridical systems in dealing with cases of breaching contracts harms private firms' productivity growth in the medium term.

5. Conclusion

This paper examines the impacts of the subnational governance institutions on the private manufacturing firms' performance in terms of new entry, firm size and labor productivity growth during 2006-2014. Vietnam's context during this period provides best opportunities for examining the subnational institutions' effects on the private firms' entry and growth, given vast differences in the institutional quality across provinces and the increasing contribution of the private firms to the national economy. The empirical results suggest that contract enforcement significantly improve private firms' entry in the manufacturing sector. Lower entry barriers hinder firm size growth, and have positive productivity growth impacts only in the short run. Reduced unofficial cost payments and enhanced contract enforcement facilitate firm size growth in terms of total asset, and the magnitude of this impact enlarges over longer time horizons. Reduction of unofficial cost payments consistently benefits labor productivity growth throughout one- to five-year time intervals, but improved transparency has medium-term implications for firms' labor productivity growth.

Some policy recommendations could be drawn from the above empirical findings. Development of a functioning legal system for defining contracts laws and improving contract enforcement is important for the private sector development in Vietnam. The challenge for this endeavor is how to improve the credibility of the juridical systems to encourage private firms' use of the courts whenever any counterparties breaches a signed contract. In practices, private firms choose to

deal contract violations by themselves, given high time and costs, and complicated procedures associated with the formal legal proceedings. In addition, it is important to ensure a timely and equal access of private firms to public information in the fields of planning information, policies; infrastructure projects related to roads, industrial zones, and power supply. The transparency channel seems to be hardest in terms of implementation, as it requires at least medium- to long-run commitments from the government. Reducing unofficial cost payments is another channel for enhancing private firms' performance in terms of size and productivity growth. This calls for improvements in commitments to integrity from both government's officials and the business community, and changes in the accountability systems.

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