

# Subnational Governance Institutions and The Development of Private Manufacturing Enterprises in Vietnam

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## **Abstract**

*This paper examines the impacts of subnational governance institutions on the development of private manufacturing firms in terms of new entry, firm size and labor productivity growth during 2006-2014 in Vietnam. Vietnam's context during this period provides the best opportunities for examining the effects of subnational institutions on the entry and growth of private firms, given vast differences in the institutional quality across provinces and the increasing contribution of the private sector to the national economy. The empirical results suggest that aspects of the provincial governance institutions differ significantly in terms of their effects on private firms' entry and growth during the study period. The conventional approach of entry deregulation seems to not induce the entry and sustained growth of private firms, but more fundamental aspects of transparency, private property protection, and contract enforcement better serve the private sector development over longer time horizons. These findings have important implications for the next stage of institutional reforms in a transitional economy such as that of Vietnam.*

**Keywords:** Governance institutions; entry regulation; firm entry; labor productivity growth.

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## 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 an 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* (renovation) policy.<sup>1</sup>

In a transitional economy like that of Vietnam institutional reforms have important effects on the private sector development. Since the *Doi Moi* policy, which aimed to transform Vietnam from a centrally planned economy to a market oriented one, the reform process has gone through several phases. In the early 1990s, the Private Enterprise Law and the Company Law for the first time created a legal basis for the establishment of private companies, which were formerly prohibited under the centrally planned system. Though being made legal for operation, private companies were

subject to heavy regulations and discrimination (World Bank, 2005). It was not until the Enterprise Law in 2000 that the State's mindset was drastically changed in regulating the private sector. The law greatly simplified the business registration procedures where the business community were allowed to "register first, then to check". Accordingly, hundreds of business licenses were abolished, leading to much-reduced time and costs for business registration (World Bank, 2005). The private sector responded progressively to this deregulation of entry. By 2009's end, there were 178,852 private firms having real operation, accounting for 89 percent of the total number of firms, an almost six fold increase as compared to the corresponding figure in 2000 (Central Institute of Economic Management, 2010).

Vietnam is no exception in the deregulation of entry. Over 2003-2008, 193 entry reforms took place in 116 countries (Djankov, 2009). However, there is debate on whether less entry regulation is associated with socially superior outcomes. Pigou's (1938) public interest theory suggests more regulation due to market failures, ranging from monopoly power to externalities. On the contrary, the public choice theory calls for less regulation as the regulation of entry either keeps out competitors and raises incumbents' profits (Stigler, 1971), or is pursued for the benefit of politicians and bureaucrats (McChesney, 1987; De Soto, 1990; Shleifer and Vishny, 1993). Empirically, there have been a large number of cross-country studies on entry, or entrepreneurship and the effects of regulation (for example, Djankov et al., 2002; Munemo, 2012; Dreher and Gassebner, 2013; Estrin et al., 2013). However, few

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within-country studies have been conducted on the regulation-entry nexus.

This study goes beyond the current literature by not only looking into entry effects of regulation, but also the subnational governance institutions' effects on firm performance in terms of firm size and labor productivity growth. Modern institutional economics suggest that firm entry responds not only to pre-entry regulations but also to more fundamental aspects of institutions that are pertinent to firm growth in the medium term. These aspects shape the business environment constraining firms upon successful entry. They have long-run implications for firm growth, particularly in a transition economy' characterized by a weak institutional quality as currently experienced in Vietnam. Deregulation of entry could induce more firms to enter the market, particularly in heavily regulated industries, but this does not guarantee firm growth in the medium run. This calls for a broader concept to examine the institution-entry-growth nexus at the micro level. In his paper, Dixit's (2009) governance institutions concept is employed to shed light on the impacts of subnational governance institutions in Vietnam on the performance of private manufacturing firms in terms of new entry, firm size and labor productivity growth during 2006-2014. In this concept, more fundamental aspects of institutions are considered, including protection of property rights, contract enforcement, and collective actions in providing physical and organizational infrastructure.

This paper contributes to the institution-growth literature in the following three ways. First, a number of previous studies investigated to some extent the interplay between

institutions and firm performance (for example, Klapper et al., 2006; Aghion et al., 2006; Tran et al., 2009; Nguyen et al., 2013; Bruno et al., 2013; Malesky et al., 2015), but none of them have considered the more fundamental aspects of institutions, as suggested by Dixit (2009), on firm performance. This deems to shed light on the next generation of institutional reforms in a transitional economy like Vietnam's. Second, this paper seeks evidences on both the short and medium-term effects of institutions on firm size and labor productivity growth. On the institution-growth nexus, time horizons matter as firms normally choose to follow the "rules of the game" for transactional or short-term benefits, in a country with weak formal institutions (Nguyen et al., 2015). Third, the paper's within-country approach is beneficial as previous studies of institutions and entry across countries face problems of unobserved heterogeneity (Djankov et al., 2002).

Vietnam's context provides the best opportunities for examining the effects of subnational institutions on the entry and growth of private firms, given the vast differences in institutional quality across provinces (Meyer and Nguyen, 2005; Vietnam Competitiveness Initiatives, 2006) and the increasing contribution of private firms to the national economy. According to the 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, an increase respectively from 82 percent and 31 percent in 2006. The empirical results suggest that aspects of provincial governance institutions differ significantly in terms of their effects on private firms' entry

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and growth during the study period. The conventional approach of entry deregulation seems to not induce the entry and sustained growth of private firms, but more fundamental aspects of transparency, private property protection/respect, and contract enforcement better serve the private sector development over longer time horizons. 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 was realized two years earlier. Improved private property protection and enhanced contract enforcement facilitate firm size growth in terms of total assets, and the magnitude of this impact enlarges over longer time horizons. Better private property protection persistently benefits labor productivity growth, and improved transparency has medium-term impacts on labor productivity growth.

This paper is structured as follows. Section 2 is a literature review of the interplay between institutions and economic performance. Section 3 presents data and methodology. This is followed by a section on results and discussion. Section 5 gives our 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 the 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 those countries having a proper respect for property rights and contract enforcement.

*Governance institutions* have been mentioned intensively in their 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 do not have to spend their time and effort guarding their property. Contract enforcement is an integral part of the contractual institutions that accommodate the arm’s-length transactions of firms. In these institutions, the juridical system’s role is to guarantee that counter party cheating is prevented, and people have to fulfill their promised role in transactions. In the third component of 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.

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Governance is at the third level of the institutional system (Williamson, 2000). The other two levels above governance are embeddedness, including customs, tradition, norms, religion; and the institutional environment, or formal rules of the game, which are related to property rights. Governance institutions are thus more related with the play of the game that governs how contractual relations are executed in practice. 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 the parties involved, and the associated transaction costs are minimized in practice.

There have been a large number of cross-country studies on the institution-growth nexus; for example, to name a few, Djankov et al., 2002; Djankov, 2009; Barseghyan, 2008; Hallward-Driemeier et al., 2010. There is recently a growing number of within-country studies on the nexus, as this approach avoids problems of unobserved heterogeneity that are prevalent in cross-country studies (Djankov et al., 2002). The within-country studies use micro data, and take advantage of large differences in the quality of institutions across regions and industries within a given country over time, to provide more concrete evidence on the interplay between institutions and growth at more disaggregated levels. Recent studies along this line include Meyer and Nguyen, 2005; Nguyen and Freeman, 2009; Tran et al., 2009; Bruno et al., 2013; and Malesky et al., 2015.

## **2.2. Related empirical studies**

Deregulation of entry is a common approach

to improve 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 to enable new firm entry (Djankov, 2009). In a study of the economic impact of formal entry regulations, Djankov et al. (2002) show that corruption and informal economic activities are rampant in 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 do provide personal gains to politicians and public officials. However, there is debate on whether less entry regulation is associated with socially superior outcomes. Pigou’s (1938) public interest theory suggests more regulation due to market failures, ranging from monopoly power to externalities. On the contrary, the public choice theory calls for less regulation as the regulation of entry either keeps out competitors and raises incumbents’ profits (Stigler, 1971), or is pursued for the benefit of politicians and bureaucrats (McChesney, 1987; De Soto, 1990; Shleifer and Vishny, 1993).

Klapper et al. (2006) indicate that entry regulations hinder new firm entry, particularly in 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) suggest that firm entry is low in those industries facing high natural

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entry rates in the regions subject to greater political fluidity in terms of gubernatorial change (a proxy for competition in regional political systems). The low entry rates are due to the 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 governor.

Regarding the impacts of entry deregulations and firm size registration removals on output, employment, entry and investment, Aghion et al. (2006) show 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 information and communication technology are negatively associated with the costs of starting a business and registering property (Jerbashian and Kochanova, 2016). Hallward-Driemeier et al. (2010) investigate 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 firm growth, and the gaps between formal and informal institutions are more likely to enlarge in countries with heavy regulations.

A number of studies show huge differentials in provincial governance institutions in Vietnam (Meyer and Nguyen, 2005; Vietnam Competitiveness Initiatives, 2006). This could be attributed to different 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 Viet-

nam have a significant impact on the project location choice and the penetration strategy enacted by foreign investors. The availability of scarce 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 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 provincial governance institutions and private investment in Vietnam, McCulloch et al. (2013) find that transparency stimulates private investment. A similar effect is also found in Malesky et al. (2015). Provincial competitiveness is a significant determinant of firm 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 subnational governance institutions have a positive impact on firm survival, though the rate of impact decreases over time.

### **3. Methodology and data**

#### **3.1. Methodology**

*The operationalisation of different aspects of subnational governance institutions*

This paper employs Dixit's (2009) frame-



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work in the operationalization of subnational governance institutions using PCI data. According to this framework, there are three aspects of governance institutions that support economic activities. The first aspect is the effectiveness of protecting property rights. The unofficial cost payment index in the PCI data measures the frequency and severity of corrupt practices, where higher values imply *less* corrupt practices at the provincial level. This index thus captures the extent to which private property rights are protected; namely, its higher values represent better protection/respect of property rights. This index is named as *private property protection* in the following regression models. The second aspect of governance institutions is to undertake collective actions to provide physical and organizational infrastructure. Dixit (2009) suggests that the government's role is to provide facilitation of internalization of externalities, and the control of public bads, such as free-riding. The *transparency* index in the PCI data could be used as a proxy for this aspect of governance institution, as poor transparency might induce free-riding and collusions that are detrimental to the business community as a whole. The index measures private firms' accessibility to public information related to legal documents, budget information, and planning that constitute the business environment constraining firm operation. The index reflects timeliness, completeness, and predictability of the public information disclosure that is relevant to the local businesses. The higher the value of the index, the more transparency is achieved at the provincial level. Contract enforcement is the third aspect of the governance institution that is relevant to economic

activities. Contract enforcement is undertaken though the legal systems where the juridical system plays an important role. The PCI data has an index that measures the quality of the legal systems at the provincial level. The higher the value of the index, the better the quality and legitimacy of the legal systems in resolving disputes or breaches of contracts. This index is named as *contract enforcement* in the following regression models.

In addition, since the period 2006 – 2014 is characterized with a huge entry of private firms, this study uses the entry cost index in the PCI data as a proxy for entry regulation by local authorities. The index measures time, costs and procedures associated with business registration at the local authorities. It thus reflects the ease of opening businesses at the provincial level; the higher the value of this index, the easier the firms face entering the market. This index is named as *entry regulation* in the following regression models.

#### *The estimation strategy*

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 entry of private firms during 2006-2014. The second and third models use the firm-level panel data during 2006-2014 to examine the effects of subnational governance institutions on firm size growth and labor productivity growth overtime. The first model regresses the lagged values of the subnational institutional quality on the entry rates during 2006-2014. Using 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 three dimensions as suggested by Dixit (2009); namely *private property protection*, *transparency*, and *contract enforcement*. *Entry regulation* is an additional aspect of the governance institution, as the 2006-2014 period is distinguished with a huge entry of private firms.<sup>2</sup> The first benchmark model is defined as follows:

$$\text{entry rate}_{i,r,t} = \beta_1 \cdot \text{entry regulation}_{r,t-1(2)} + \beta_2 \cdot \text{transparency}_{r,t-1(2)} + \beta_3 \cdot \text{private property protection}_{r,t-1(2)} + \beta_4 \cdot \text{contract enforcement}_{r,t-1(2)} + \gamma \cdot \text{industry concentration}_{i,r,t} + \epsilon_i + \theta_r + \mu_t + \varepsilon_{i,r,t} \quad (1)$$

Where:

- *entry rate*<sub>*i,r,t*</sub> is the ratio of new entering firms in industry *i* of province *r* at year *t*, divided by the total operating firms. These new entering firms include firms entering in year *t* and those entering in *t - 1*.
- $\beta_1 \cdot \text{entry regulation}_{r,t-1(2)}$  is the index measuring the ease of registering businesses in province *r* lagged year *t - 1* and *t - 2*; the higher the value the fewer barriers in terms of time, cost, and procedures in the business registrar.
- *transparency*<sub>*r,t-1(2)*</sub> 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.
- *private property protection*<sub>*r,t-1(2)*</sub> is the index of private property protection in province *r* in lagged years *t - 1* and *t - 2*; the higher the value, the better the protection/respect of private property.
- *contract enforcement*<sub>*r,t-1(2)*</sub> is the index of contract enforcement in province *r* lagged year *t - 1* and *t - 2*; the higher the value the

higher the credibility and effectiveness of the juridical systems in dealing with cases of breach of contract related to property rights and firms' arm-length business transactions.

- *industry concentration*<sub>*i,r,t*</sub> 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*.
- $\epsilon_i$  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.
- $\theta_r$  represents the unobservable province-specific effects that are time-invariant and differ across provinces. They include infrastructure, geography, and economic development levels.
- $\mu_t$  denotes the unobservable year-specific effects that control for common macroeconomic shocks. These are particularly relevant as the study period was characterized with the Global Financial Crisis (GFC) and the domestic credit crunch.
- $\beta_i$  (*i* = 1,2,3,4) and  $\gamma$  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 for by the top producers within a given industry. In 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 the 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 sub-national institutional variables as above, but differs in using change specifications over a number of time horizons. This specification is important given the low levels of institutional quality in a transition economy like that of Vietnam. Improvement in the institutional quality deems to yield a proper justification for private sector development. Although changes in institution quality might not be realized in the short run, different time intervals are set to examine both the short and medium effects of institutions on firm performance. The model's details are in equations (2) and (3) as follows:

$$\Delta_p \ln(\text{total asset})_{n,t} = \beta_1 \cdot \Delta_p \text{entry regulation}_{r,t} + \beta_2 \cdot \Delta_p \text{transparency}_{r,t} + \beta_3 \cdot \Delta_p \text{private property protection}_{r,t} + \beta_4 \cdot \Delta_p \text{contract enforcement}_{r,t} + \gamma \cdot \text{age}_{n,t-p} + \epsilon_i + \theta_r + \mu_t + \varepsilon_{n,i,r,t} \quad (2)$$

Where:

- $\Delta_p \ln(\text{total asset})_{n,t}$  is change in the logarithmic value of the total assets of firm  $n$  over  $t - p$  and  $t$ ,  $p = 1, \dots, 5$ . This value represents the growth rate of total assets over a certain period of time.
- $\Delta_p$  denotes the difference of the  $p^{\text{th}}$  order of the variables of interest. This represents change in the variables of interest over the time interval  $p$ .
- $\text{age}_{n,t-p}$  is firm  $n$ 's age lagged at year  $t - p$ . This control variable is important as firm age might affect firm size growth; namely, young firms could exhibit higher growth potential than old firms due to learning effects.

- $\varepsilon_{n,i,r,t}$  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 changes in firm size as an additional explanatory variable. The model's details are as follows:

$$\Delta_p \ln(\text{labor productivity})_{n,t} = \beta_1 \cdot \Delta_p \text{entry regulation}_{r,t} + \beta_2 \cdot \Delta_p \text{transparency}_{r,t} + \beta_3 \cdot \Delta_p \text{private property protection}_{r,t} + \beta_4 \cdot \Delta_p \text{contract enforcement}_{r,t} + \gamma \cdot \text{age}_{n,t-p} + \Delta_p \ln(\text{total asset})_{n,t} + \epsilon_i + \theta_r + \mu_t + \varepsilon_{n,i,r,t} \quad (3)$$

Where:

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

The specification (3) includes both firm age and firm total assets as the control variables. The former has some implications for the labor productivity growth of firms, as young firms are likely to exhibit more growth potential (due to learning effects). The latter is to control for firm size in its relation to labor productivity growth. The effect of firm size could be prevalent in some industries due to economies of scale.

### 3.2. Sources of data and summary statistics

#### 3.2.1. Sources of data

There are two sources of data used in this study. The first is the annual surveys of the Pro-

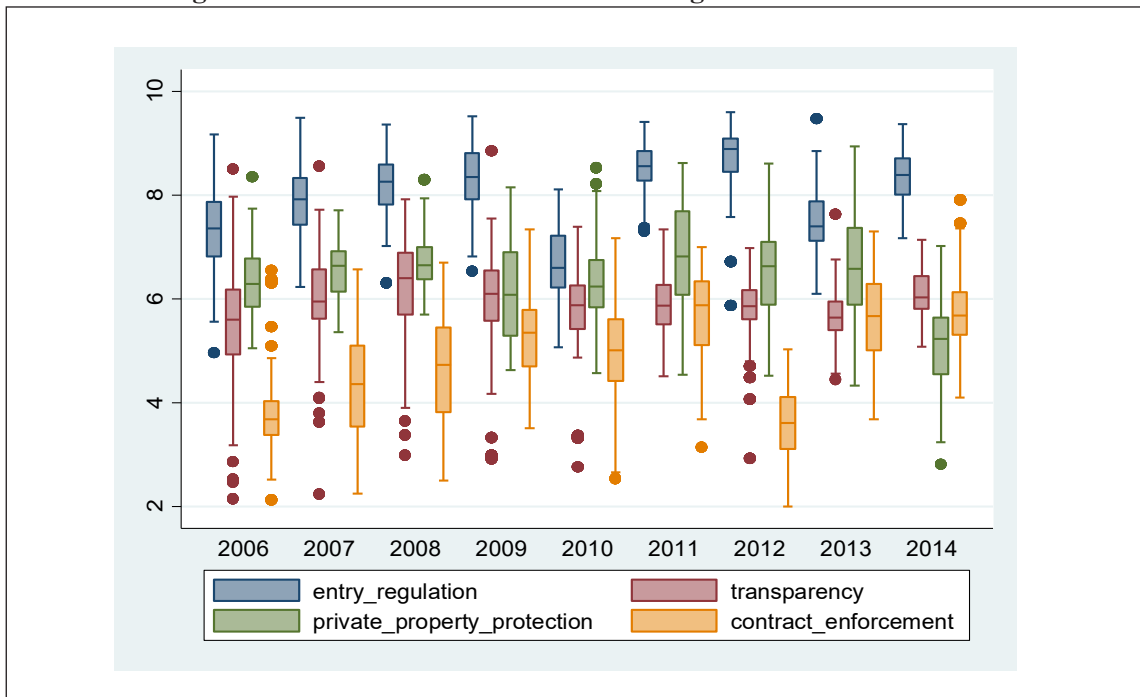
vincial Competitiveness Index (PCI) conducted by the Vietnam Chamber of Commerce and Industry (VCCI) since 2006. Annually, there were about ten thousands private firms across 63 provinces, which were randomly chosen to participate in the surveys. The PCI reflected private firms' feedback on the local business environment, the quality of economic governance, and the administrative reforms at the provincial level that were conducive to private economic sector development. All institutional variables (at a provincial level) in the benchmark models from (1) to (3) above are constructed from the PCI data. The second source of data is the annual enterprise surveys conducted by the Gen-

eral Statistical Office (GSO). These surveys have collected all information related to firms' performance and input usage since 2000. They target all firms nationwide having operated till the year's end of investigation. For this study's purposes, all manufacturing private enterprises within the 2-digit 2007 Vietnam System of Industrial Classification (VSIC2007) are retained for analysis. All firm and industry-level variables in the benchmark models from (1) to (3) above are constructed from the GSO enterprise data.

### 3.2.2. Summary statistics

- *The quality of subnational governance institution*

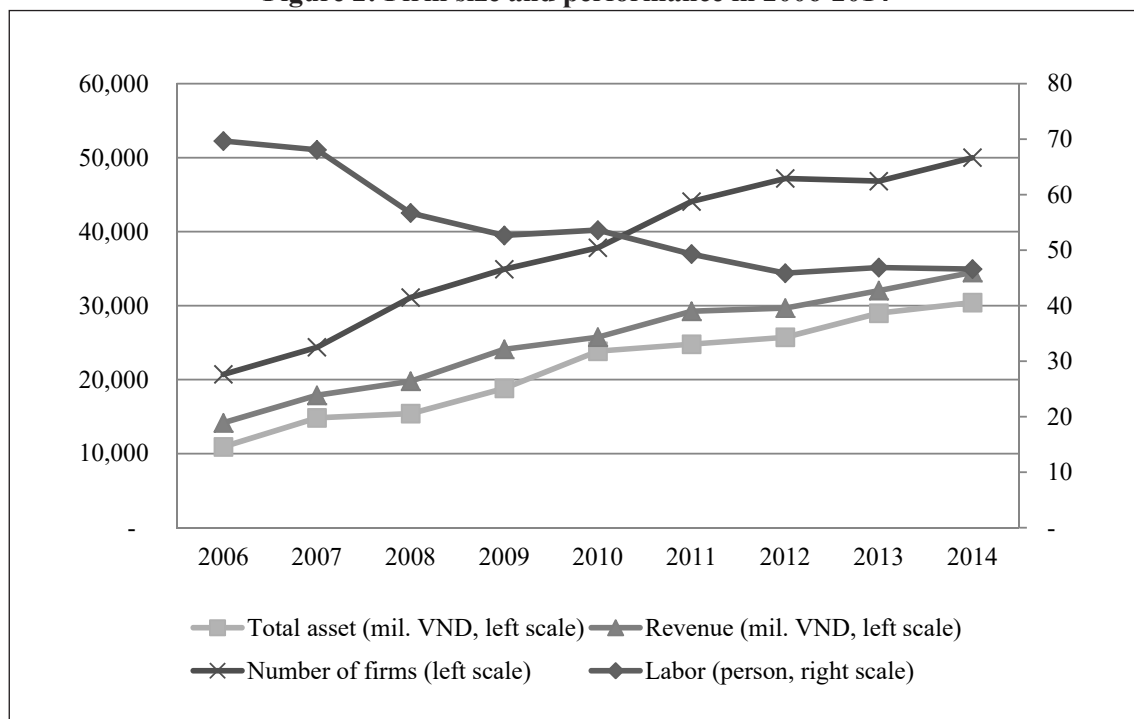
**Figure 1: Four dimensions of subnational governance institutions**



Notes: The lines in the middle of each box is the median value; the upper and lower hinges of each box denotes the 75<sup>th</sup> and 25<sup>th</sup> percentiles, respectively; the two adjacent lines represent the upper and lower adjacent values; and the dots outside the two adjacent lines are outliers.

Source: VCCI, The PCI.

**Figure 2: Firm size and performance in 2006-2014**



Source: GSO, *The annual enterprise survey*.

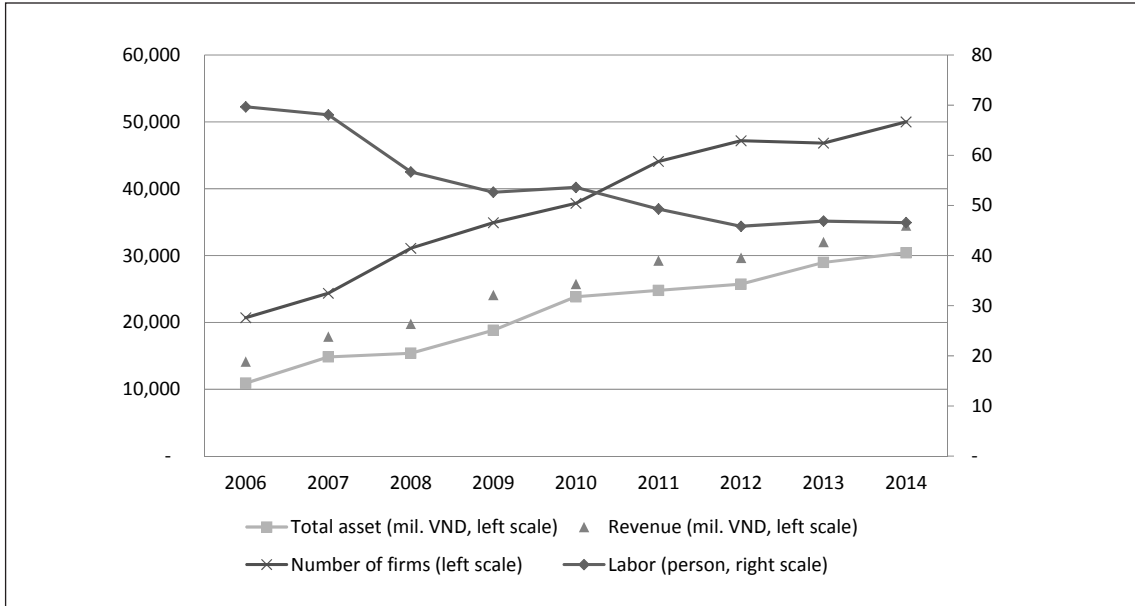
Figure 1 shows four composite indices that represent the quality of economic governance institutions across 63 provinces in Vietnam during 2006-2014, which were constructed from the PCI data. The indices are scaled from one to ten, where higher values represent the better quality of economic governance institutions. They are entry regulation, transparency, private property protection, and contract enforcement. Overall, the four indices changed remarkably over time, and varied sharply across provinces. During 2006-2014, the 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 over time, except in 2010 and 2013, reflecting less time, costs, and procedures in business registration. The transparency

index was valued as stable overtime, averaging from 5.3 to 6.0 during 2006-2014, where higher values exhibit more transparency at the local level. Similar to transparency, private property protection seemed to not improve over time. On average, it ranked below entry regulation and above transparency. Contract enforcement performed worst among the four indices, averaging 3.8 in 2006 and improving to 5.8 in 2014, where higher values represent better contract enforcement. The quality of contract enforcement differs greatly across provinces, so does the index of private property protection.

*- The development of private manufacturing firms during 2006-2014*

Figure 2 shows the trend of firm size evolu-

**Figure 3: Entry rates and industry concentration ratio during 2006-2014**



Source: GSO, *The annual enterprise survey*

tion during 2006-2014. The average number of laborers per firm decreased from 70 in 2006 to 47 in 2014. In the meantime, the average total assets per firm increased from about VND11 billion to VND30 billion during 2006-2014, indicating the average worker is equipped with more assets over time. The average revenue per firm rose from VND14 billion to VND34 billion over 2006-2014.

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 by the total number of firms operating at year T. This definition is to guarantee that recent entrants are taken into account, given a considerable number of one-year firms, firms that enter and exit in the same year. The annual entry rates seemed to decrease over time. The entry rate decreased

from 40 percent in 2006 to 22 percent in 2014. This pattern exhibits aftermaths of the Global Financial Crisis (GFC) in 2008, and the domestic credit crunch during 2011-2014. Figure 3 also exhibits the industry concentration ratios during 2006-2014. These 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.

#### 4. Results and discussion

##### 4.1. Subnational governance institutions and firm entry

Table 1 reports impacts of the subnational governance institutions on private firm entry during 2006-2014. There are two model specifications which relate four aspects of the sub-

**Table 1: Subnational governance institutions and firm entry**

| <b>Dependent variable:<br/>Entry rate</b>       | <b>Year (-1)</b>    | <b>Year (-2)</b>    |
|---|---------------------|---------------------|
| Entry regulation <sub>Year(-1)</sub>            | -0.008<br>(0.007)   |                     |
| Transparency <sub>Year(-1)</sub>                | -0.004<br>(0.006)   |                     |
| Private property protection <sub>Year(-1)</sub> | -0.002<br>(0.006)   |                     |
| Contract enforcement <sub>Year(-1)</sub>        | 0.010**<br>(0.005)  |                     |
| Entry regulation <sub>Year(-2)</sub>            |                     | 0.006<br>(0.007)    |
| Transparency <sub>Year(-2)</sub>                |                     | -0.009<br>(0.006)   |
| Private property protection <sub>Year(-2)</sub> |                     | 0.005<br>(0.006)    |
| Contract enforcement <sub>Year(-2)</sub>        |                     | 0.013**<br>(0.005)  |
| Industry concentration                          | -0.051*<br>(0.028)  | -0.052*<br>(0.028)  |
| Sigma   | 0.317***<br>(0.003) | 0.308***<br>(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.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

national governance institutions to private firm entry<sup>3</sup>; including entry regulations, transparency, private property protection, 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 private property protection have no significant effects on private firm en-

try. 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 private firm entry. The estimated coefficients for *Contract enforcement*<sub>Year (-1)</sub> and *Contract enforcement*<sub>Year (-2)</sub> are respectively positive and statistically significant at levels of 5 percent. 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 was realized two years earlier.

#### 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 accommodating business environment that allows for greater transparency, better private property protection, and improved quality of contract enforcement. Table 2 shows the estimated results for the impacts of entry regulation, transparency, private property pro-

tection, 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 the change in a firm's total assets over time. Fewer entry regulations seem to hamper the firm size growth over the medium term, as the estimated coefficients for *entry regulation* for these time intervals are negative and highly statistically significant.<sup>4</sup> This finding is supported by Stigler's (1971) theory of regulatory capture which suggests that "regulation is acquired by the industry and is designed and operated primarily for its benefits." Stricter regulation benefits the incumbent firms, as it is designed to protect their rent creation and extraction. Deregulation of entry thus reduces their incentives for business expansion over time. The magnitude of the regulatory impact

**Table 2: Subnational governance institutions and firm size growth**

| <b>Dependent variable:<br/>Total asset growth</b> | 1-year interval      | 2-year interval     | 3-year interval      | 4-year interval      | 5-year interval      |
|---|----------------------|---------------------|----------------------|----------------------|----------------------|
| Entry regulation                                  | 0.003<br>(0.003)     | -0.007**<br>(0.003) | -0.015***<br>(0.004) | -0.018***<br>(0.005) | -0.020***<br>(0.006) |
| Transparency                                      | 0.003<br>(0.003)     | -0.004<br>(0.004)   | 0.003<br>(0.004)     | 0.004<br>(0.005)     | 0.002<br>(0.006)     |
| Private property protection                       | 0.006***<br>(0.002)  | 0.022***<br>(0.003) | 0.029***<br>(0.003)  | 0.028***<br>(0.003)  | 0.027***<br>(0.003)  |
| Contract enforcement                              | 0.016***<br>(0.002)  | 0.027***<br>(0.003) | 0.034***<br>(0.003)  | 0.034***<br>(0.004)  | 0.030***<br>(0.004)  |
| Age (lagged)                                      | -0.004***<br>(0.000) | 0.001<br>(0.001)    | 0.0003<br>(0.001)    | -0.006**<br>(0.003)  | -0.012**<br>(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.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$



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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 and 2 percent respectively over three to five-year time intervals.

Improvement in transparency has no statistically significant effects on firm size growth across time intervals. This might be due to the fact that transparency in terms of providing general documents on planning, regulations, and state budget is not beneficial to firms in their firm size decisions over short to medium-terms. Firms tend to benefit more from market-specific information that is more relevant to their economic performance (Tran et al., 2009). The government's respect for private property is important for firm size expansion. The estimated coefficients for the variable *private property protection* 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 private property protection helps raise firm size growth by 0.6% over a one-year interval, and by 2.2 percent, 2.9 percent, 2.8 percent and 2.7 percent respectively over two to five-year time intervals. Firms might view persistent improvements in private property protection as credible efforts made by the local governments in improving the business environment. They are responsive to these efforts by enlarging firm size in the medium term. This finding provides concrete evidence for the fight against corruption in developing countries like Vietnam. Small-sized private enterprises could not grow 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 the size growth of firms are even larger than improvements in private property protection. Contract enforcement represents the credibility and effectiveness of the juridical system in dealing with cases where counterparties breach a contract with 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 a 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/protect 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 subnational governance institutions raise firm size growth, and this effect is larger over longer time horizons. Another enquiry might arise as to whether better governance institutions speed up labor productivity growth for firms over time. The timing of institutional effects is important as any credible institutional reforms require time commitments. Table 3 shows that lower entry barriers benefit

**Table 3: Subnational governance institutions and labor productivity growth**

| <b>Dependent variable:<br/>Productivity growth</b> | 1-year interval      | 2-year interval      | 3-year interval      | 4-year interval      | 5-year interval      |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Entry regulation                                   | 0.012***<br>(0.004)  | 0.015***<br>(0.004)  | 0.010**<br>(0.005)   | -0.002<br>(0.006)    | -0.016**<br>(0.007)  |
| Transparency                                       | -0.018***<br>(0.004) | -0.012***<br>(0.004) | 0.0005<br>(0.005)    | 0.008<br>(0.006)     | 0.016**<br>(0.007)   |
| Private property protection                        | 0.006**<br>(0.003)   | 0.018***<br>(0.003)  | 0.019***<br>(0.003)  | 0.015***<br>(0.004)  | 0.011***<br>(0.004)  |
| Contract enforcement                               | -0.023***<br>(0.003) | -0.014***<br>(0.003) | -0.017***<br>(0.004) | -0.019***<br>(0.004) | -0.016***<br>(0.005) |
| Total asset  | 0.032***<br>(0.003)  | 0.004<br>(0.003)     | 0.009**<br>(0.004)   | 0.016***<br>(0.004)  | 0.017***<br>(0.005)  |
| Age (lagged)                                       | -0.013***<br>(0.000) | 0.011***<br>(0.001)  | -0.008***<br>(0.001) | 0.006**<br>(0.003)   | 0.002<br>(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. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

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 seems 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 to benefit labor productivity growth in the short run as the estimated coefficient for transparency over the one and two-year intervals is negative and statistically significant at the level of one percent. This finding is understandable since Vietnamese firms

conventionally benefit from personal relationships in their business practices. Enhanced transparency could harm firms' productivity in the short run, as it temporarily breaks up these relational assets that would otherwise provide them with short-term benefits. In addition, Tran *et al.* (2009) suggest that transparency in terms of providing information on regulations is less important than providing market information on firm performance. However, improved transparency eventually benefits firm productivity growth in the medium term. This finding has important implications, as firms normally choose to follow the "rules of the game" for transactional or short-term benefits in a country with weak formal institutions (Nguyen *et al.*

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2015). Quantitatively, the estimated coefficient for transparency over the five-year interval is positive and statistically significant at a 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.

Unlike transparency, the positive effects of private property protection 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 private property protection raises 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 enhancing private property protection, namely reducing unofficial payments, helps firms put aside more resources for investments that benefit labor productivity growth. 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 economies of scale.

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. Tran *et al.* (2009) suggest that low credibility of the juridical system in contract enforcement harms private firms' economic performance. In this environment, firms do not trust the juridical systems and choose to deal with breaches of contract by themselves, given high costs and the low probability of success if pursued. In addition, in the study peri-

od, contract enforcement ranked worst among the four indices of the governance institutions across provinces. It might take time for significant effects of contract enforcement to become evident, as improving firms' labor productivity growth requires persistent improvements in the quality of the juridical systems over time.

## 5. Conclusion

This paper examines the impacts of subnational governance institutions on the performance of private manufacturing firms in terms of new entry, firm size and labor productivity growth during 2006-2014. Vietnam's context during this period provides the best opportunities for examining the effects of subnational institutions on private firms' entry and growth, given the vast differences in institutional quality across provinces and the increasing contribution of private firms to the national economy. The empirical results suggest that aspects of provincial governance institutions differ significantly in terms of their effects on private firms' entry and growth during the study period. The conventional approach of entry deregulation seems to not induce the entry and sustained growth of private firms, but more fundamental aspects of transparency, private property protection, and contract enforcement better serve private sector development over longer time horizons. 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 was realized two years earlier. Better private property protection and enhanced contract enforcement facilitate firm size growth in terms of total assets, and the magnitude of this impact

enlarges over longer time horizons. Additionally, enhancements in private property protection persistently benefits labor productivity growth, and improved transparency has medium-term impacts on labor productivity growth.

Some policy recommendations can be drawn from the above empirical findings. Deregulation of entry is only suitable in the early stages of private sector development. The next stages require deeper institutional reforms in more fundamental aspects of transparency, private property protection, and contract enforcement. Development of a functioning legal system for defining contract 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 breach a signed contract. In practice, private firms choose to deal with contract violations by themselves given the high time commitment

and costs, and the complicated procedures associated with the formal legal procedures. In addition, it is important to ensure timely and equal access of private firms to public information in the fields of the law, budget, and planning documents. The transparency channel seems to be the hardest in terms of implementation, as it requires at least medium to long-term commitments from the government. Private property protection is another channel for enhancing private firm performance in terms of size and productivity growth. This calls for improvements in commitments to integrity from both government officials and the business community, and changes in the accountability systems. Good governance practices in the areas of transparency, accountability, and participation as suggested by Nguyen et al. (2017) could be considered to enhance the quality of subnational governance institutions in a transition economy like that of Vietnam.

### Appendix: Correlation matrix

|                             | Entry rate | Entry regulation | Transparency | Private property protection | Contract enforcement | Industry concentration |
|-----------------------------|------------|------------------|--------------|-----------------------------|----------------------|------------------------|
| Entry rate                  | 1          |                  |              |                             |                      |                        |
| Entry regulation            | -0.037     | 1                |              |                             |                      |                        |
| Transparency                | 0.003      | 0.180            | 1            |                             |                      |                        |
| Private property protection | 0.043      | 0.133            | 0.133        | 1                           |                      |                        |
| Contract enforcement        | -0.064     | 0.121            | 0.186        | 0.049                       | 1                    |                        |
| Industry concentration      | 0.002      | 0.039            | -0.130       | 0.038                       | -0.018               | 1                      |

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### Notes:

1. The annual GDP growth rates have slowed down since 2008 to an average figure of 5.7% per annum, well beneath the average figure of 7.1% in the previous 20 years.
2. See the appendix for a correlation matrix between entry, industry concentration and key variables of interest.
3. The inclusion of specific effects is important given large differences in entry rates across years, industries, and provinces. The differences might be attributed to economic shocks, industry characteristics, and initial conditions. Some of these differences are unobservable, but they could be accountable for the inclusion of the specific effects.
4. Table 2 uses change specifications, so only those firms that survive over certain periods of time are retained for analysis. The effects of institutions on firm size expansion are thus applicable to these incumbent firms.

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