

# LOCAL GOVERNANCE AND BUSINESS PERFORMANCE IN VIETNAM: TRANSACTION COSTS PERSPECTIVE

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**Abstract:** The (generalised) transaction costs perspective that comprises both a view on institutions and on organisations is adopted in order to explain why growth of small and medium-sized enterprises (SMEs) may vary across regions of an emerging economy. Furthermore, again based on the transactions costs argument, it is argued that young and small private firms gain more from improvement of local governance than old and large firms do. Next, regions differ not only at the level of regulation and policy, but also at the level of informal institutions. It follows, that depending on the institutional history in different parts of the country, SMEs are expected to respond differently to the incentives provided by local governance. Empirical results based on more than 300,000 SMEs in Vietnam during the 2006-2012 period show that the higher quality local governance positively influences local SMEs revenue growth, and consistent with the transaction costs argument this effect is stronger for young and small firms. In addition, it is found that local governance matters more where institutional history suggests less support for entrepreneurship.

**JEL codes:** D02, H73, L25, L26, N95, P37, P48, R58

**Key words:** Transaction costs, governance, institutions, local government, entrepreneurship, Vietnam

## 1. Introduction

Williamson (1985), in his seminal work on transaction costs builds on Coase (1937), and argues that when the type of organisation matches the attributes of its chosen economic activity, this leads to superior performance. These core attributes relate to the extent of cognitive complexity, asset specificity, and behavioural risks (of opportunism). Here, an overarching concept is that of minimising transaction costs, where transaction is a generic term that denotes any value-generating form of human cooperation. Thus, transaction costs of a given form of an organisation is the mirror image of this organisation effectiveness in facilitating some specific type of a value-generating human (economic) cooperation. In turn, institutions represent a different, broader form of human organisation (Williamson, 2000); they affect both the transaction costs faced by those who engage in value-enhancing (economic) cooperation, and at the same time lead to another problem of matching: between the type of economic organisation and the type of institutional environment: the matching that has again implications for which types of firms perform best.

While the classic presentation of the transaction costs theory (Williamson, 1985) assumes a mature market economy as its institutional context, a generalised approach (Williamson, 2000) accounts for variety in institutions and therefore extends the analysis to emerging markets. Institutions differ from organisations in that they are more difficult to change. In particular, we may distinguish between the most stable level of informal institutions (culture), long-term constitutional rules, and lower level government regulations (e.g. Estrin et al. 2013).

From the transaction costs perspective, the key dimension at the highest (constitutional) level relate to security of property rights; the latter implies effective constraints on the executive branch of the government, which typically come from a strong and independent judiciary (Estrin et al., 2013). This is the feature missing in most of the developing economies (Easterly, 2013). However as noticed by Weingast (1995) it may be partly compensated by ‘market supporting federalism’: interregional competition combined with officials being

rewarded on regional economic performance. This model applies to China drawing on its tradition of meritocracy (Fukuyama, 2011), but also to Vietnam, which makes it an interesting case to explore.

Federalism implies a variation of the local governance quality across space (Efendic, Mickiewicz, & Rebmann, 2015). The style of local administration and governance matter: the phenomena located at the lower level of institutional hierarchy (as defined by Williamson, 2000) become increasingly relevant.

In addition, in transition economies, e.g. Vietnam, business environments are partially shaped by the market systems, but remain subject to the discretionary actions of governments. There is pronounced uncertainty, induced by the political and economic transition: under conditions of institutional change, “points of orientation” for firms and other economic agents are no longer fixed (Lachmann, 1971). This ambiguity of formal institutions further suggests that local governance and informal institutions (cultural settings) play a remarkable role in shaping local business environments. However, the literature has yet to help us understand the exact nature of these local forces, and the possible mechanisms of their impacts on local entrepreneurship performance (Cooke & Lin, 2012).

To address this gap, this article adopts the perspective of transaction costs and of new institutional economics that originates from the former as its theory framework and examines two aspects of local governance quality. The first one corresponds to corruption and transparency, which are functionally related (Collier, 2002; McCulloch et al., 2013). Corruption relates to the power of public office being used as a rent-seeking tool for personal benefits contravening the rules of the game (Jain, 2001); lack of transparency implies the uneven distribution of information among economic agents that are not dissimilar (Du & Mickiewicz, 2016). Both increase transaction costs of doing business.

Second, it is observed that in weak institutional environments, where regulatory frameworks are unclear and underdeveloped, the creativity, flexibility and cleverness of local governments to interpret and implement central policies, as well as to design their own initiatives for local entrepreneurship sector<sup>1</sup> are particularly

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<sup>1</sup> Here, the entrepreneurship sector is understood as the young, small and private companies, following Du and Mickiewicz (2016).

important, especially if the local officials are rewarded for local economic performance (Weingast, 1995).

Nonetheless, the proactivity of local governments is largely ignored in existing literature<sup>2</sup>.

This paper proposes that the aspects of local governance highlighted above affect the transaction costs that local SMEs face and are therefore crucial for their performance (Davidsson & Henrekson, 2002; Stenholm, Acs, & Wuebker, 2013). It is moreover expected that local governance has more influence on the performance of the young and small businesses than it does on the old and large ones (Du and Mickiewicz, 2016), and as will be explored, it is here that the transaction costs perspective offers good insights.

Local governance however may be endogenous (Santarelli and Tran, 2012). Province with a developed entrepreneurial sector may be subject to more pressure to improve the quality of local governance. To properly address the direction of causality effect, this paper makes use of several instruments for local governance quality including the tenure of provincial leaders, the frequency of change in leadership, and the number of years that leaders stay in power (see: McCulloch et al., 2013). These variables are strongly correlated with local governance quality but are uncorrelated with local firms' growth performance. The IV-GMM technique is employed to analyse a panel of more than 300,000 SMEs operating in 63 provinces of Vietnam during the 2006-2012 period, and the results support the positive effects of local governance quality on local SMEs growth performance.

It is also postulated that local governance matters more in regions where institutional history renders less support for entrepreneurship. In that sense, alongside the low end of institutional hierarchy (local regulatory and policy practices) the high end (culture) counts as well. While looking at the current quality of local governance, this paper also accounts for the fact that entrepreneurial performance may be also affected by long-term cultural persistence. To explore this, a historical event that is exogenous to the development process of SMEs in Vietnam is utilised: the 1954 Geneva Conference partitioned the country into two states, the North and the South Vietnam. The former was supported by China and Russia, whereas the latter was supported by the US

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<sup>2</sup> See however: Audretsch, Belitski, and Desai (2015)

(Makino & Tsang, 2011). Although in 1975 the North Vietnamese army captured the South, and the Socialist Republic of Vietnam was established unifying the two states, this study reveals that after four decades of reunification there is a difference in the way the economic institutions work in the South as compared with the North. In particular, consistent with the argument that will be present below, the effects of variation in local governance in the North are more significant than in the South. In other words, the quality of governance becomes more important where it needs to compensate for the lack of business tradition that became culturally-embedded.

This article's contribution is to utilise concepts taken from the transactions costs theory to provide better understanding on the impact of the regional business environment on entrepreneurial performance. Following Du and Mickiewicz (2016) this paper breaks the implicit assumption that the country-wide constitutional configurations in emerging market economies have homogenous effects on the entrepreneurship sector. The results also highlight both the low-level regulations and policies, and the persistent impact of the high-level informal institutions on business performance regardless of the transformation of the formal institutions. Finally, by forming transaction costs theory based priors on the expected differential impact of governance on SMEs, conditional on their age and size, and testing those, this study complements existing works that do not consider these interactive effects (Beck, Demirgüç-Kunt, & Maksimovic, 2008).

Our results are of paramount importance to policymakers. They reinforce previous calls for better understanding of the specific governance structures and informal institutions in order to effectively assist local entrepreneurship sector (Li & Zahra, 2012). Importantly, the results imply that business performance is strongly influenced by local governance quality, and by policies which can be amended and improved in the short and medium-term (Charron & Lapuente, 2013; Parks & Oakerson, 2000; Savitch & Vogel, 2000; Ye, 2009).

## 2. Context: business performance and institutions in Vietnam

Vietnam is an interesting context for studying local governance arrangements and their influence on SMEs due to its on-going economic and political transformation. In 1991, on the promulgation of the Company Law, private businesses were legalized; and were encouraged since 1999 by the amendment of the Law, as entry barriers for the private sector were reduced. Despite its recent establishment and fragile development, private sector contributed considerably to the economic growth of Vietnam in the last decade (Nguyen & Dijk, 2012; Nguyen, Le, & Bryant, 2013; Tran & Santarelli, 2014). In particular, the private sector accounts for 95% of total registered capital, 65% of national revenue, 97% of registered businesses, and 64% of employees<sup>3</sup>.

While in North Vietnam industries were initially built following the Soviet blueprint, the South Vietnam was transformed away from market economy only since 1975, and shortly after, the economic liberalisation in Vietnam was initiated. This historical diversity can be treated as an exogenous factor that is reflected in the differences in local informal institutions across regions of Vietnam (Makino & Tsang, 2011). Moreover, the informal institutions are expected, according to the institutional theory, to persist despite the unification four decades ago that instituted a single formal framework for the entire nation.

In addition, the variation of local institutions has been magnified due to the extensive decentralisation program during the *Doimoi* process<sup>4</sup> (Lan Phi & Anwar, 2011). The foundation of this program was the promulgation of the 1996 (revision in 1998) State Budget Law which grants local governments autonomy in their fiscal strategies. Local governments are considerably independent from the central government in their revenue and expenditure decisions, and they have substantial freedom to determine their local governance and regulatory frameworks for local businesses.

In general, given that the entrepreneurship sector in Vietnam is much younger and smaller in comparison with the Chinese, the former may be more sensitive to local governance environments (Cooke & Lin, 2012). This

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<sup>3</sup> Source: [https://www.gso.gov.vn/Default\\_en.aspx?tabid=515](https://www.gso.gov.vn/Default_en.aspx?tabid=515)

<sup>4</sup> *Doimoi* is the term describing the radical economic transformation in Vietnam that started from 1986.

makes Vietnam a relevant and arguably more interesting context for examining the impacts of local institutions on the growth of young and small businesses than the better understood Chinese context (e.g. Du and Mickiewicz, 2016).

### **3. Theoretical background and hypotheses**

This section utilises the transaction costs / institutional theory perspective to examine how the quality of local governance including corruption, transparency and proactivity influences local SMEs performance, and how such effects may be moderated by both firm age and size, and the informal institutions.

#### **3.1. Local governance and entrepreneurship performance**

We see corruption as the abuse or misuse of public authority by government officials and politicians in order to serve their private interests by taking advantage of their decision rights over social benefits. There are three reasons for the influence of corruption on SMEs performance, all based on the transaction costs arguments.

First, corruption impedes value-enhancing business cooperation, as it implies “the change in time frame within which occurs the desired action” (Husted, 1994: 19). It gives rise to delays, or impose constraints on entrepreneurs in gaining access to productive resources. Corrupt bureaucracies may delay the distribution of permits and licenses, thereby slowing down the process through which new ventures could be established and technological advances could be applied (North, 1990).

Second, bureaucratic government may create barriers to information in order to benefit from corruption (Caetano & Caleiro, 2009); yet to explain that kind of behaviour we need to reach beyond the narrow neoclassical economic theory and allow for the possibility of opportunism. Moreover, as argued by Husted (1994: 19), with respect to corruption we see another aspect that is at the core of the transactions cost perspective: “cognitive limitations are significant ... especially as one face large bureaucratic structures in many

third world countries, it often becomes difficult to know” with whom to transact in a corrupt way to get things done.

This also implies that entrepreneurs may need to develop specific human capital: local competence and knowledge that facilitates operating in the corrupt environment (Husted, 1994). In corruptive environment, entrepreneurs have to invest more time and efforts in building relational capital with local governments (McCulloch et al., 2013; Du, Guariglia, and Newman (2013). Moreover, they need to protect their specific investments forging trust relations anchored in repeated transactions between the donor and the recipient (Husted, 1994). Yet, this shifts entrepreneurial efforts from productive activities to rent-seeking activities, which may hamper growth.

Finally, there is the direct financial costs of corruption. Hunt and Laszlo (2012) and Estrin et al. (2013) propose that corruption could be regarded as a kind of tax. In contrast, if local business environment is associated with lower corruption practices, small and medium-sized businesses could reduce their costs, improve competitive advantage and eventually their economic performance. In this context, Husted (1994) distinguishes between two types of corruption. With the ‘market corruption’, dealings are standardised: they relate to activities such as obtaining business permits, and may come with unofficial but commonly known prices therefore directly affecting costs. In contrast, the ‘parochial corruption’ relates to larger, more idiosyncratic transactions, like large construction contracts. Here specific human capital and competence may play a decisive role, consistent with the transactions costs perspective (Husted, 1994).

Turning to the second, related dimension of governance, the administrative transparency is both a factor that may amplify corruption (Collier, 2002) and an important direct determinant of local SMEs’ performance. Lack of transparency typically concerns the uneven distribution of information that leads to uneven distribution of resources (e.g. capital) between the economic actors that are not dissimilar (Du and Mickiewicz, 2016). Cost of



acquiring information increases, and complexity of regulations clashes with cognitive constraints characterising any managers or entrepreneurs, as stressed by the transaction costs theory (Williamson, 1985).

Specifically, in the case of Vietnam, non-transparent distributions of information on planning and legal documents necessary to run businesses, or new policies and laws being poorly communicated to firms, were found to negatively influence regional economic performance (Hansen, Rand, & Tarp, 2009). Parallel to the impact of corruption, non-transparency requires entrepreneurs to build political connections in order to obtain access to resources necessary for their operations (McCulloch et al., 2013), implying higher transaction costs, yet unlike corruption it does not automatically imply illegal activities. Again the strategy however involves allocating effort to unproductive activities.

As already argued, similar to many emerging market economies, Vietnam's constitutional features do not offer effective constraints on the executive branch of the government, which implies there are no strong guarantees for private property rights. However, as in China, this effect is partly alleviated by market-supporting federalism (Waingest, 1995) and elements of meritocracy conducive to regional competition: local governors are evaluated according to regional performance, and they are endowed with sufficient scope of decision rights to make this competition meaningful. This implies that besides the two interconnected aspects of corruption and transparency, the local leadership' proactivity is also important.

Incompleteness of any laws and institutions is a feature stressed by the transaction costs theory. These characteristics relates even more to transition economies. Weak and incomplete formal institutions imply in turn that there are more ways in which local authorities may proactively create an entrepreneurship-friendly business environment. One of the approaches is to be creative and clever in implementing central policy, and working within sometimes unclear national regulatory frameworks to assist and interpret those in favour of local private firms. National laws and policies, if implemented by local governments in a smart way, can become remarkably conducive to business performance (Green & Moser, 2013).

In general, local governance features including corruption, administration transparency, and proactivity in planning and implementing the entrepreneurship-friendly policies could reduce local transaction costs, thereby there are expected to be important determinants of SMEs growth and performance. This leads us to the following hypotheses:

**H1:** In a given region, (a) governmental transparency, (b) freedom from corruption, and (c) proactivity of the local leadership will be positively associated with local SMEs revenue growth.

## **3.2. Factors moderating the effects of local governance**

### **3.2.1. Differences in transaction costs by firm's age and size**

SMEs in Vietnam are on average very young and small (Meyer, Tran, & Nguyen, 2006), and under weak institutional environments the incumbent, large companies are in an advantageous position (Aidis, Estrin, and Mickiewicz, 2008). Another words, being old and large may condition positively how the firm is impacted by the policy environment (Du & Mickiewicz, 2016). More generally, the literature on entrepreneurship widely recognizes that both young age and small size are liabilities to SMEs preventing them from gaining full access to productive resources (Du & Girma, 2012; Giordani, 2015). This is for the following reasons.

First, young and small firms have yet to accumulate sufficient resources; they are inferior to large and old firms in terms of operational capability. Therefore higher transaction costs in the environment that is in access to external resources impede their economic performance and growth.

Second, young and small firms are confronted with a severe asymmetric information problem because they have yet to establish trackable operational records, or to successfully build trusts in their operations (Nguyen & Rose, 2009). Nguyen, Le, and Freeman (2006) suggest that in the absence of effective market institutions and business

data, banks in Vietnam face considerable uncertainties in lending to private firms. Consequently, banks employ a combination of uncertainty avoidance, and reliance on trust in their lending decisions. An environment where signalling own economic performance and potential for growth is more difficult, will hamper the firms that are new and small more.

Third, consistent with the discussion above, under a corrupt and non-transparent local environment, firms need to develop specific human capital and skills facilitating access to resources (Husted, 1994). With respect to petty, 'market' corruption, where frequently repeated transactions imply unofficial prices paid for say easier access to information and resources, the specific skills may not be needed. However in line with the transaction costs theory, this specific human capital becomes more important for larger, complex, and less standard operations, such as for example getting a large construction contract from the government; this may often imply multi-party unofficial bargaining. Developing such capabilities to corrupt takes time and resources, and that gives comparative advantage to large and established companies. At the same time, such complex corrupt transactions create high gains, and this has implications for relative performance.

Forth and related, where transactions are not supported by governance, they may be supported instead by long term relational capital (Williamson, 1985). By definition, formal governance cannot support corrupt transactions. And both large and old firms may again have an advantage in building such network capital, both because of repeated dealings, and because of multiple parallel dealings. More generally, both Goto (2012) and Santarelli and Tran (2013) suggest that social capital is particularly important in the case of Vietnam economy, where economic transactions are usually supported by personal relations rather than arm-length principles. Yet again, local conditions differ, leading to relative importance of (costly) relational capital versus formal governance.

For all these reasons, in transition economies such as Vietnam, the processes of accumulating resources and alleviating cognitive constraints may be frustrating for young and small private companies (Pincus, 2009). This leads us to expect that if local governments are able to reduce the average transaction costs for local businesses

by freedom from corruption, improving administration transparency, and being entrepreneurially proactive in their policies, young and small firms will gain more benefits than the old and large ones. Hence:

**H2:** The effect of (a) local governmental transparency, (b) freedom from corruption, and (c) proactivity is stronger on small firms compared to large ones.

**H3:** The effect of (a) local governmental transparency, (b) freedom from corruption, and (c) proactivity is stronger on young firms compared to old ones.

### **3.2.2. Informal institutions**

We just considered how the lowest level of Williamson's (2000) institutional hierarchy: firms' attributes interact with the level of (local) policies and regulation. We argue however that, equally important, the impact of local regulations and policies interact with the highest institutional level of informal institutions: norms, culture, and codes of conduct embedded in the shared cognition. Due to the incompleteness of formal institutions, the role of informal institutions is particularly significant in emerging countries where the formal institutions remain weak and underdeveloped (Zhou, 2013).

In regional entrepreneurship research, a number of empirical studies show that informal institutions differ significantly across regions within a country (Moodysson & Zukauskaitė, 2014; Pur & Moore, 2010; Rodríguez-Pose, 2013). This may then lead to more or less entrepreneurship-friendly policies and governance structures which affect local entrepreneurship activities (Fritsch & Storey, 2014). The commitment and consistency of local governments in implementing entrepreneurs-friendly policies and governance enhance trust in (local) institutions and facilitate the generalized trust (trust in unknown individuals) among economic actors (Efendic et al., 2015). While reducing transaction costs, these governance and policy improvements then, over a longer period, enable the formation of a regional entrepreneurship culture which once established, tends to persist over time (Fritsch & Mueller, 2004).

The persistence of regional entrepreneurship culture is recently investigated primarily using the case of West and East Germany. Fritsch and Storey (2014) suggest that the social acceptance or legitimacy of entrepreneurship remains higher in the West than in the East, even after more than two decades of reunification. This is because the culture of the West is more tolerant to individualism, independence, innovation, and achievement. Similar results could be expected for Vietnam, where the South was exposed to more pro-entrepreneurial culture until 1975. This paper subscribes to the arguments of Fritsch and Wyrwich (2014) that regional culture of entrepreneurship could be regarded as a spatially sticky characteristic, and postulate that SMEs in the South of Vietnam, on average, perform better than SMEs in the North of Vietnam in terms of economic growth.

In addition, it is suggested that in regions with less heritage of pro-entrepreneurial informal institutions (in the North), the impact of local governance is more significant. In other words, the quality of governance and proactive policies of local governments matter more where local informal institutions are less accommodating to entrepreneurship. Another words, it is expected that as the pro-entrepreneurial culture in the South already helps firms to achieve strong growth; the marginal effects of local governance on the firms in the South may be lower in comparison to the effects on firms in the North. This expectation is supported by the view that good governance, with strong commitments and stability over time, may be more important where there is stronger need to offset the weaknesses in the formal and informal institutional structures (Estrin et al., 2013; see also: Williamson, 2000). Therefore, in summary:

**H4:** The effect of (a) local governmental transparency, (b) freedom from corruption, and (c) proactivity is stronger on SMEs in North Vietnam regions compared to SMEs in South Vietnam regions.

## **4. Data and variables**

### ***4.1. Data***

Our empirical tests rely on a combination of several datasets. The first is the Annual Survey on Enterprises of Vietnam General Statistics Office (GSO). It is a 13-year panel from 2000 to 2012 containing firm-specific information for all of manufacturing, mining, and service sectors in the economy. However, the study period in this paper is seven years, 2006-2012, due to the availability of the second dataset: Provincial Competitiveness Index (PCI)<sup>5</sup>, which was first created for a sample of regions in 2005 and then for all of 63 provinces and municipal cities. The survey is a product of the collaboration between Vietnam Chamber of Commerce (VCCI) and the U.S Agency for International Development (USAID). PCI is a provincial institutional index, a weighted average of the 9 sub-indices, each measuring a different aspect of local formal or informal governance. Consistent with the discussion above, the empirical analysis focuses on the Transparency, Informal Charge (corruption), and Proactivity indices, but below the results related to Legal Institutions are also presented. Definition and summary statistics of these indices are presented in Appendix 1. The third dataset is the GSO Provincial Annual Report which includes information about provincial population, consumption, and the accumulated value of FDI and state-owned firms in the regions.

#### ***4.2. Variables and summary statistics***

To clean the data, all of the firms with negative total assets, fixed assets, depreciation and employees are dropped, and likewise those whose fixed assets are greater than total assets. The outliers are controlled by censoring the top and bottom 1% of observations in the distributions of each variable used. Only small and medium-sized businesses (as defined by the Law on Enterprises of Vietnam) are selected<sup>6</sup>. The final sample in regressions constitutes 307,591 firm-year observations over 7 years.

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<sup>5</sup> Details of PCI methodology please visit [www.eng.pcivietnam.org](http://www.eng.pcivietnam.org).

<sup>6</sup> According to the Vietnam Enterprise Law, there are 4 types of firms in terms of size. Microenterprises are firms operating with less than 10 employees. Small enterprises are firms having 10 to 200 employees and total registered capital less than 20 billion VND (approximately 1 million USD). Medium enterprises are firms having 200-300 employees and total registered capital less than 100 billion VND (approximately 5 million USD). And large enterprises are firms operating with more than 300 employees and 100 billion VND registered capital. Capital is the first criterion in categorization.

#### 4.2.1. *Dependent variables: revenue growth*

The dependent variable in this study is the revenue growth of SMEs, measured by the percentage change of sales revenue between two consecutive years. We focus on firm's growth taken as an indicator of overall performance. Unlike profits, it has the advantage of being more robust to tax-avoidance accounting manipulation that is quite notorious in emerging market economies. To position our study in the literature of regional economics, our measure of performance can be more easily discussed and compared to the existing literature. However, we also test the robustness of the findings using profitability measures and the results remain similar.<sup>7</sup>

Table 1 shows the definition and summary statistics of the variables. On average, revenue growth of SMEs is around 5% per year. However, the large standard deviation and a wide range between the minimum and the maximum values indicate considerable variation in the revenue performance.

#### **[Table 1: Variables definition and summary statistics]**

#### 4.2.2. *Independent variables: local governance quality*

For the freedom from corruption and administrative transparency this paper uses two indices in the PCI dataset: Informal Charges and Transparency. The former is a measure of how much firms pay in informal charges (bribe), how much of an obstacle those extra fees pose for their business operations, whether payment of those extra fees results in expected results or "services," and whether local officials use compliance with local regulations to extract rents.

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<sup>7</sup> We test the robustness of the results by running the regressions using profitability as the dependent variables, including Earning after tax, earnings before interest and tax (EBIT), ROS, and ROA. We use both IV-GMM and FE estimators. The results overall support our main hypothesis concerning the positive effects of local governance on local SMEs performance. The results are available under request.

In turn, transparency is a measure of whether firms have access to the proper planning and legal documents necessary to run their businesses, whether those documents are equitably available, whether new policies and laws are communicated to firms and predictably implemented, and if the provincial webpage has business-related facility.

In order to measure the proactivity of local government towards the entrepreneurship sector, this paper make uses of the Proactivity of Provincial Leadership index, which is a measure of the creativity and cleverness of local officials in implementing central policy, designing their own initiatives for private sector development, and working within sometimes unclear national regulatory frameworks to assist and interpret those in favour of local private firms<sup>8</sup>.

According to Table 1, change in freedom from corruption, with positive mean, is the only governance aspect that improved during the period. The other two governance dimensions: transparency and proactivity both change with negative means. Thus, the direction of the institutional transformation process remains ambiguous. This result is consistent with the recognition of Nguyen et al. (2013) that Vietnamese government is losing its momentum in improving the nation's institutional frameworks. However, within the country, there is significant institutional variation among provinces represented by the wide range between the minimum and maximum values; likewise, the standard deviations of the specified governance variables are large.

#### *4.2.3. Control variables*

Following the literature, firm-specific covariates previously found to significantly influence small and young businesses' performance are included. They are: firm age, size, asset structure and ownership. Firm age is measured as the number of years since an SME was established. Size is measured in natural log of the number of employees an SME hires in a particular year. On average, SMEs in Vietnam are only 7 years old with about 44 employees. The young age and small size liabilities of most of SMEs in Vietnam may indicate that they may be relatively fragile and easily influenced by external environment, including local governance, consistent with

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<sup>8</sup> Details of the PCI methodology are available at: <http://eng.pcivietnam.org/phuong-phap-c9.html>



the arguments already discussed. This article also includes assets structure variable, which is a ratio of fixed assets to total assets, to control for firm-level financial and technological characteristics.

To control for ownership sectors, three dummies are specified: for private, state-owned and foreign-owned SMEs. Specifically, the private sector accounts for nearly 90% of total registered firms, while the state sector is 6% and the foreign sector is 4% of total firms respectively. It should be noticed that observations are firms-years, in which a firm is allowed to change its ownership structure annually resulting from any mergers or acquisition across ownership sectors.

In addition to firm-level control variables, entrepreneur-specific variables are also included (Santarelli & Tran, 2012). Owner age may also be seen as a proxy for the experience and social capital that an entrepreneur has accumulated. And owner gender is a dummy variable taking value 1 for male and 0 for female. In the Vietnamese context it is also correlated with education.

To control for the macro-characteristics, several provincial level variables are included (Santarelli & Tran, 2012, 2016). First, “construction per capita” is the per capita value of government spending on local infrastructure. Second, “consumption per capita” measures the average expense of each person in a particular year in a province. This variable proxies the local economic level of development. Third, “FDI per capita” and “SOE per capita” are variables capturing the accumulated values of FDI and state-owned firms’ capital in each province. The two variables are normalised by the provincial population. Finally, “distance” is the variable to measure the distance from each province to the closet economic centre city<sup>9</sup>. This variable is to control for the economic inter-linkages across provinces which are likely to affect revenue growth performance.

Finally, this paper also uses geography to proxy for historical persistence of informal institutions. In particular, the seventeenth parallel was the provisional military demarcation line between the North and South Vietnam, introduced by the Geneva Accords of 1954. The North was leaded by the Communist Party of Vietnam while

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<sup>9</sup> In Vietnam, there are five largest economic centres which are administratively defined as municipalities cities: Hanoi, Haiphong, Hochiminh, Danang, and Cantho.

the South was supported by the US. The country became united after the military victory of the North in 1975, and at that time the Soviet blueprint for development, including collectivisation and suppression of the private economic activity, was applied in the South. Yet the latter period lasted only for about ten years that is until the reforms in the whole country were initiated from 1986 onwards. This specific history allows us to create a dummy variable – the South which takes the value of 1 for provinces to the south of the seventeenth parallel which were far less exposed to traditional type of Soviet command economy, and take value 0 for provinces to the north of the parallel.

### 5. Empirical specification

The main hypothesis about the influence of local governance on the revenue growth of SMEs is tested using a growth equation in the following form:

$$(1) RG_{igt} = \beta_0 + \beta_1(\text{Firm level controls}_{igt}) + \beta_2(\text{Owner level controls}_{igt}) \\ + \beta_3(\text{Province level controls}_{gt}) + \beta_4(\text{Governance indicators}_{gt}) + v_j + v_t + v_i + \mu_{it}$$

where  $i$  denotes an SME,  $g$  is the province, and  $t$  a particular year. Thus  $RG_{igt}$  is the revenue growth of an individual SME  $i$  in province  $g$  in year  $t$ . The term  $(\text{Firm level controls}_{igt})$  represents a matrix of firm-level variables including firm age, firm size, ownership, and asset structure,  $(\text{Owner level controls}_{igt})$  is a matrix of two columns including owner age, and owner gender, and  $(\text{Province level controls}_{gt})$  includes province construction expenditures, consumption value, cumulative value of FDI, of capital of SOEs, and distance to the closet municipalities. The governance variables:  $(\text{Governance indicators}_{gt})$  represent aspects of local governance, i.e. freedom from corruption, administration transparency, and governmental proactivity. The model includes an industry-specific component  $v_j$ , and a time-specific component  $v_t$ , which are controlled by corresponding dummies. The term  $v_i$  represents all time-invariant, firm-level fixed effects that may influence revenue growth. Finally,  $\mu_{it}$  is the idiosyncratic error.

It is important to recognise that not only local governance affects entrepreneurship, but the effect may also be reversed: entrepreneurship development may influence the quality of institutions (Carbonara, Santarelli, & Tran, 2016). Regions with a strong entrepreneurial sector may be subject to more bottom-up pressure to adopt business-friendly governance. Given that the entrepreneurial sector is an important contributor to the development of emerging countries, the influence of local businesses on local governance environment is expected to be present.

To address this simultaneity (endogeneity) problem, this paper proposes the use of instrumental variables within the context of generalised method of moments estimator (IV-GMM)<sup>10</sup>. In particular, external instrumental variables are employed to mitigate potential endogeneity. Therefore, the results obtained are more consistent and reliable.

The key issue when looking for potential instruments is to find external variables that are correlated with the endogenous local governance variables, but uncorrelated with firm growth performance. This paper suggests the following set of variables that meets these requirements.

The first IV is the period in office of the provincial leaders. In Vietnam, due to the single Communist Party political system, power is centralised at the provincial leader's disposal. Because the provincial leaders are appointed by the central government, this variable is unlikely to be correlated with local business performance. At the same time, it is expected that corruption, transparency, and proactivity of a province in a particular period are significantly dependent on the leader's characteristics and period in office. In this study, period in office is measured by the number of months (average for a given year) that a leader is in his position. Yet, a priori, arguments can be built both for negative and positive relationship. On the one hand the longer the tenure, the more corruption, less transparency and less proactivity a province may experience, as local informal structures of special interests may become more entrenched. Yet, on the other hand, short tenure may also create incentives for rapid rent extraction. We therefore remain agnostic as to the expected sign of the effect.

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<sup>10</sup> The command in Stata is `ivreg2` with the two-step feasible GMM estimation (`gmm2s` option).

Second, measuring the changing of leaders' regimes, the "leader switch" dummy variable is used as instrument for local governance variables. Because power is highly concentrated at the leaders' disposal, and each leader may have different managing style and idiosyncratic knowledge of local administration, the switching of leaders in a province may initially trigger more corruption, less transparency, and less proactivity, due to the lack of knowledge of the incoming leader. Thus, while it is assumed that long tenure results in deterioration of governance practice, a switch in leadership positions may temporarily lead to deterioration in local practices due to temporary problems with monitoring. The "leader switch" variable is a dummy which takes value of 1 if there is a change of provincial leader in a year, and value 0 otherwise.

Finally, this paper also uses variables capturing the specific time points in tenure years which can make corruption more likely. The "third year" dummy take value of 1 if a leader is in the third year of his tenure, and 0 otherwise. According to the data, in actual practice leaders are most likely to be changed every three years. Therefore, in the third years of his tenure, anticipating their demotion, the leaders may have more incentives to be corrupt, and to become less proactive. The fifth year may have similar effect – it is the last year in the five-year official tenure period of appointment by the central governments. The "fifth year" dummy take value 1 if a leader is in the fifth years of his tenure, and 0 otherwise.

Over-identification test is employed to investigate whether the external variables are truly exogenous. The Hansen (J) tests confirm the validity of the suggested IV. Moreover, VIF test confirms that there is no serious multicollinearity among regressors (Appendix 3). However, using the Cumby-Huizinga test for autocorrelation of the current error term with the error terms up to 5 lags, we find that autocorrelation is significant in our data. Given that an absence of autocorrelation in the error process is unusual in time series analysis, we estimate the equations with HAC -heteroskedasticity and autocorrelation robust standard errors, choosing a bandwidth of 5 (the highest possible considering the time length of the using data). The use of bandwidth is combined with robust HAC SEs produces statistics that are robust to both arbitrary heteroskedasticity and arbitrary autocorrelation.

Before discussing the findings, the modelling and estimation methods for testing the exploratory hypotheses on the moderating effects of firm age and size will be presented. Extending the above benchmark specification, next the moderation effects of firm age and size on the relationship between local governance and SMEs revenue growth were tested using the following augmented specifications:

$$(2) \begin{aligned} RG_{igt} = & \beta_0 + \beta_1(\text{Firm level controls}_{igt}) + \beta_2(\text{Owner level controls}_{igt}) \\ & + \beta_3(\text{Province level control}_{gt}) + \beta_4(\text{Governance indicators}_{gt}) \\ & + \beta_5[(\text{Governance indicators})_{gt} \times (\text{Age}_{igt})] + v_j + v_t + v_i + \mu_{it} \end{aligned}$$

$$(3) \begin{aligned} RG_{igt} = & \beta_0 + \beta_1(\text{Firm level controls}_{igt}) + \beta_2(\text{Owner level controls}_{igt}) \\ & + \beta_3(\text{Province level controls}_{gt}) + \beta_4(\text{Governance indicators}_{gt}) \\ & + \beta_5[(\text{Governance indicators})_{gt} \times (\text{Size}_{igt})] + v_j + v_t + v_i + \mu_{it} \end{aligned}$$

The specification (2) includes an interaction term between local governance and firm age ( $\text{Age}_{igt}$ ), and specification (3) is for the interaction with firm size ( $\text{Size}_{igt}$ ).

In addition, to explore the potential moderating effect of historically defined geography on the relationship between local governance and SMEs revenue growth, the following augmented specification is used:

$$(4) \begin{aligned} RG_{it} = & \beta_0 + \beta_1(\text{Firm level controls}_{igt}) + \beta_2(\text{Owner level controls}_{igt}) \\ & + \beta_3(\text{Province level controls}_{gt}) + \beta_4(\text{Governance indicators}_{gt}) + \beta_5(\text{South}_g) \\ & + \beta_6[(\text{Governance indicators})_{gt} \times (\text{South}_g)] + v_j + v_t + v_i + \mu_{it} \end{aligned}$$

This specification includes the ( $\text{South}_g$ ) dummy which takes value of 1 if the province is in the South of Vietnam, and the interaction terms between local governance variables with this dummy [ $(\text{Governance})_{igt} \times (\text{South}_g)$ ]. This interactive term is to capture the complementary effect between informal institutions and local governance.

All the equations are first estimated using a fixed effect (FE) panel estimator, corrected by robust standard errors clustered on province level per year, relying on *reghdfe* routine for Stata<sup>11</sup>. The use of the FE estimator could, to some extent, alleviate estimation biases due to unobserved heterogeneity and potential endogeneity in the model. Hausman tests for each specification indicate the appropriateness of the panel FE over the random effect estimator. Next, the GMM IV panel estimator is applied. These are reported as models (1) to (3) below. However, for the specifications with the interaction terms, this paper uses only fixed effects (instead of the IV-GMM technique), because the use of IV-GMM on these specifications did not meet the over-identification tests.

## 6. Empirical results

Regression results are reported in Table 2.1 and Table 2.2. Columns (1), (2), and (3) correspond to the benchmark specification for the three local governance forces separately: corruption, transparency, and proactivity. Columns (4) to (7) exhibits results of the interaction between local governance and firm age, columns (8) to (11) are interactions with firm size, and finally the results of the interaction between the South dummy and local governance indicators are shown in columns (12) to (16).

### [Table 2.1 and 2.2: Regression Results]

In all specifications, the coefficients of the three local governance variables: transparency, freedom from corruption, and proactivity are positive and precisely determined. This result is consistent with the hypothesis H1 that firms in regions with stronger local governance arrangements perform better in terms of revenue growth.

Comparing the economic magnitude of the effects, transparency has the strongest impact on firm revenue growth. One point of transparency improvement leads to 2.1% revenue growth, all else constant. Decrease in

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<sup>11</sup> The use of the *reghdfe* is appropriate for multiple levels of fixed effects. The routine use novel and robust algorithm to efficiently absorb the fixed effects from different levels of observations, and iteratively removes singleton groups by default, to avoid biasing the standard errors, see Correia (2014).

corruption has a slightly smaller impact, with 1.4% of total revenue growth for each point of corruption reduction. Finally, leadership proactivity is the least economic influential on firm growth, for 1 point of improvement, there is 0.2% of total revenue growth.

The negative and strongly significant coefficients of the interaction terms of local governance variables with firm age in columns (4) to (6), and with firm size in columns (7) to (9) are consistent with the hypotheses H2 and H3 that the effects of local governance on small and young firms are stronger than those on large and old firms.

Graph 1.1 to 1.3 present the margins of revenue growth by firm age, size, and region<sup>12</sup>. Specifically, graph 1.1 indicates that as corruption diminishes, there is positive effect on young firms and at the same time there is little effect on old firms. Graph 1.2 exhibits a pattern in which there is a positive effect of diminished corruption on small firms, yet there is actually negative effect of diminished corruption on large firms. This indicates that a corrupt environment gives a strong advantage to large firms at cost of small firms. Similar to rent seeking, corruption comes with high transaction costs, and in those deals, large firms benefit from economies of scale. The pattern corresponds to the one described by Vorley and Williams (2016) for Bulgaria and Romania, where large firms benefit strongly from corrupt links with the government at cost of small firms. This upshot of the finding is that weak local governance may inhibit entrepreneurial firms in particular, while conversely improving local governance can assist entrepreneurial firms even more than their larger counterparts.

To explore the impact of being located in the South on revenue growth, the South dummy and the corresponding interaction terms are included in regressions, and results are presented in columns (13) to (16). The positive and significant coefficients of the dummy in all specifications indicate that firms established in South Vietnam perform better than those in North Vietnam. More importantly, the negative and precisely determined coefficients of the interaction terms between local governance variables and the South dummy

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<sup>12</sup> For the sake of saving space, this paper exhibits the predictive margins of the corruption variable only. The predictive margins of other governance variables: transparency, and proactivity are similar to the one of corruption. These graphs are available on request.

indicate that the effect of local governance in the North is stronger than that in the South. Therefore, the hypothesis H4 is supported. The predictive margins of the corruption variable are presented in graph 1.3. When local governance is weak, the gap between the North and the South in growth outcomes is large. However, as local governance quality is improved, the gap gradually diminishes. This result may suggest that regions with initially weak informal institutions towards entrepreneurship are able to facilitate local entrepreneurship sector by improving local governance quality.

### [Graph 1.1 to 1.3]

#### 6.1. Extension: the effect of legal policies

While it was argued above that corruption, transparency and proactivity are the key dimensions of the provincial level governance affecting performance of SMEs, this paper also explored the impact of law enforcement. Here, we follow McCulloch et al. (2013), who used the corresponding indicator, labelled *Legal Policies*, in estimations of investment by Vietnamese firms and found it insignificant. The indicator corresponds to the perceived effectiveness of legal institutions.

What is to be expected? Under conditions of the rule of law, effective law enforcement should have positive impact. However, under opaque legal system and administration, the incentives of adjudicators may become distorted. Punishment instead of enforcement of justice may become the objective of an adjudicator as argued by Glaeser et al. (2001). Under these conditions the impact may be ambiguous, and in particular may even be harmful on small and young firms. Additional finding consistent with this intuition is reported in the Appendix 2. In addition, effectiveness of law enforcement appears to have no effect in the South, where it may be combined with stronger pro-entrepreneurship culture, while it has negative effect in the North.

Regression results are reported in Table 2.1 and Table 2.2. Columns (1), (2), and (3) correspond to the benchmark specification for the three local governance forces separately: corruption, transparency, and proactivity. Columns (4) to (7) exhibits results of the interaction between local governance and firm age,



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In all specifications, the coefficients of the three local governance variables: transparency, freedom from corruption, and proactivity are positive and precisely determined. This result confirms the hypothesis H1 that firms in regions with stronger local governance arrangements perform better in terms of revenue growth.

In term of the economic magnitude of the effects, transparency has the strongest impact on firm revenue growth. One point of transparency improvement leads to 2.1% revenue growth, all else constant. Decrease in corruption has a slightly smaller impact, with 1.4% of total revenue growth for each point of corruption reduction. Finally, leadership proactivity is the least economic influential on firm growth, for 1 point of improvement, there is 0.2% of total revenue growth.

The negative and strongly significant coefficients of the interaction terms of local governance variables with firm age in columns (4) to (6), and with firm size in columns (7) to (9) confirm the hypotheses H2 and H3 that the effects of local governance on small and young firms are stronger than those on large and old firms.

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To explore the impact of being located in the South on revenue growth, the South dummy and the corresponding interaction terms are included in regressions, and results are presented in columns (13) to (16). The positive and significant coefficients of the dummy in all specifications indicate that firms established in South Vietnam perform better than those in North Vietnam. More importantly, the negative and precisely determined coefficients of the interaction terms between local governance variables and the South dummy indicate that the effect of local governance in the North is stronger than that in the South. Therefore, the hypothesis H4 is supported. The predictive margins of the corruption variable are presented in graph 1.3. When local governance is weak, the gap between the North and the South in growth outcomes is large. However, as local governance quality is improved, the gap gradually diminishes. This result may suggest that regions with initially weak informal institutions towards entrepreneurship are able to facilitate local entrepreneurship sector by improving local governance quality.

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#### *6.2. Extension: the effect of legal policies*

While it was argued above that corruption, transparency and proactivity are the key dimensions of the provincial level governance affecting performance of SMEs, this paper also explored the impact of law enforcement. Here, we follow McCulloch et al. (2013), who used the corresponding indicator, labelled *Legal Policies*, in estimations of investment by Vietnamese firms and found it insignificant. The indicator corresponds to the perceived effectiveness of legal institutions.

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by Glaeser et al. (2001). Under these conditions the impact may be ambiguous, and in particular may even be harmful on small and young firms. Additional finding consistent with this intuition is reported in the Appendix 2. In addition, effectiveness of law enforcement appears to have no effect in the South, where it may be combined with stronger pro-entrepreneurship culture, while it is negative effect in the North.

## **7. Discussion and conclusion**

This paper follows the call of Williamson (2000) to further develop the new institutional economics theory based on transaction costs approach by considering the first institutional level – culture, the second level – formal (constitutional level) institutions, the third level – (local) governance, and finally the firms’ attributes, all interacting to produce effects on individual business performance. More specifically, by extending Rothstein and Teorell (2008), this paper proposes that freedom from corruption, administrative transparency, and proactivity in designing and implementing entrepreneurship-friendly policies are important arrangements of local governance, especially in the context of an emerging market economy, and especially for supporting the development of young and small firms. While most existing studies focus on the impact of broad institutional configurations on entrepreneurial activities, this paper argues that local governance quality may have more significant influence on the local entrepreneurship sector. This argument is based on an observation that young and small firms are typically geographically constrained to local business environments, which in turn are strongly shaped by local governance structures (Aidis, 2005; Carlsson et al., 2013). Using the IV-GMM method to control for possible endogeneity caused by the inverse effects of entrepreneurship performance on local governance quality, it is found that local governance quality including corruption, transparency, and proactivity are important determinants of local SMEs growth performance.

At the same time, the results suggest that local governance matter more for young and small businesses than for the old and large ones. This could be explained by reasoning that young age and small size are liabilities to SMEs. Old and large firms with accumulated capital and resources are able to alleviate these liabilities, thereby becoming less sensitive to local governance. More than that, the pattern of the results suggests that corruption,

while constraining significantly small companies to grow, may be actually beneficial to large companies. This is consistent with both findings and argument by Vorley and Williams (2016) who see corruption as more than just inflicted by government administration on small companies, but to much extent as a collusion between large companies and the government; where large companies with well established access to corrupt officials collude with the latter against the small firms. Likewise, Husted (1994), utilising the transaction costs approach, argues that the 'parochial' corruption (more idiosyncratic corrupt transactions of higher significance) is supported by relational capital based on multiple transactions. As argued here, that in turn gives advantage to large and established companies.

This paper also examines the interplay between the informal institutions and the local governance quality. It is expected - in line with the institutional theory - that pro-entrepreneurial culture could moderate the effects of local governance. Empirical results found in this article indicate that governance quality of local governance matters more where, historically, local institutions were less supportive to entrepreneurship.

This study, in both theoretical arguments and empirical findings, makes important contributions to literature concerned with facilitating entrepreneurship, and more specifically with performance of private young and small companies in emerging markets. The proposed framework provides arguments that the shift in focus of theory towards lower levels of institutions should be accompanied with the appropriate shift in the unit of empirical analysis. In particular, it is proposed that the effect of institutions of governance is salient at sub-national levels because governance is more a concern about how governments deliver policies, rather than what they deliver (Rothstein & Teorell, 2008). It is reasonable to propose that local governments are more involved in the delivering process because they are at the end of the governance system, being in charge of implementing and enforcing central policies. At the same time, as already argued, this conclusion may be specific to constitutional settings, where lack of effective constraints on the executive branch of the government is to some extent compensated by 'market preserving federalism' (Weingast, 1995) and elements of meritocracy, so that the regional authorities retain a degree of autonomy and face incentives to support regional development. These

conditions are characteristics for China and Vietnam, but do not hold in Russia for example (Du and Mickiewicz, 2016). A call for more comparative studies follows immediately from this observation.

This constitutional feature of 'market preserving federalism' helps to explain why the results show that besides freedom from corruption and transparency, the proactivity of local governments also plays an important role in enhancing business performance. Again, it is an interesting question to see to which extent the proactive leadership of local governments towards local entrepreneurship sectors is important in other emerging countries, where institutional frameworks remain underdeveloped and incomplete.

It follows, that findings in this paper have implications for policymakers in transition economies. Even where the institutional settings are weak, local governments may create a more even playing field for local firms by focusing on their governance arrangements. By improving local governance quality, local authorities are able to reduce the gap in revenue growth between the small and the large firms. More importantly, the findings suggest that in regions with initially less pro-entrepreneurial culture, local governments could particularly help in facilitating entrepreneurship by improving local governance quality. To entrepreneurs, the commitment and stability in policies of local governments could, to some extent, introduce similar incentives and trust as the (missing) pro-entrepreneurial informal institutions. Considering the fact that informal institutions take time to change, governance should be the instrument that local governments in transition economies could utilize to maintain and accelerate the development of their entrepreneurship sector, which ultimately may also become the growth engine of the whole economy.

Last but not least, this study has some important limitations that future research may want to address.

First, as already discussed, the findings in this study may be country-specific. Especially in the case of Vietnam, due to the single Communist Party political regime, great power is centralised at the local leader's disposal, but like in China, there are also meritocratic elements of regional political competition based on delivering positive effects on regional development. Therefore, future research investigating informal forces of local governance may want to examine other economies with different political systems and traditions. For example, Brazil and

Russia may be an interesting case to compare with Vietnam and China, utilising the new institutional economics – transaction costs framework. For Brazil, its constitution combines a higher degree of democratic accountability for its leaders, with federalism. For Russia, there is no democratic accountability, and no federalism except in name, and the incentives for local governors may not prioritise economic development (on both countries, see: Aidis et al., 2008). How these different conditions play out affecting local business performance at micro level remains an interesting question.

Second, the use of the PCI indices to measure the quality of local informal governance is not entirely satisfying. The survey questions focus on entrepreneurs' perceptions of local governance; therefore, survey outcomes may be subjective to the participants. Saying that, the shared perceptions of business people is what actually drives their decisions in regional contexts (Bosma, 2009). However, future research could carefully design some indicators based on objective indicators and collect primary data to retest the robustness of the results found in this article. More generally, while credible country-level institutional indices exist (see for example Carbonara et al. 2016 for a recent application), there is very little in terms of available measures that capture regional heterogeneity. One way to overcome the problem may be to generate these indicators indirectly, synthesizing those from company level data, capturing the extent of distortions, see for example Du and Mickiewicz (2016).

Third, future research concerning the persistence of regional cultures, including between the South and the North of Vietnam could make use of more rich set of variables in addition to using dummies. And accounting for a number of additional differences between the regions such as locational, demographic, and economic factors could be interesting in order to further investigate the robustness of the results on the effects of institutional persistence on micro performance. More generally, there is still a scarcity of multilevel conceptualisations and empirical studies on regional entrepreneurial sectors (Fritsch and Storey, 2014; Turok et al., 2017), and this paper is a minor step in that direction.

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**Table 1: Variable definitions and summary statistics**

<b>Variable</b>	<b>Definition</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min.</b>	<b>Max.</b>
Revenue growth	The percentage change of sales revenue growth between two consecutive years: $\ln(\text{revenue})_{it} - \ln(\text{revenue})_{it-1}$	0.05	1.41	-12.35	12.34
Age	Years of operation since establishment	6.67	5.44	1	33
Ownership	Code “1” state-owned SMEs, code “2” private SMEs, code “3” foreign-owned SMEs	1.98	0.32	1	3
Size	Natural log of the number of employees (reported the number of employees)	43.84	70.08	10	475
Assets structure	The ratio of firm fixed assets to total assets	0.24	0.25	0	0.94
Owner age	Age of the owner of the firm	44.64	9.88	16	90
Owner gender	Code “1” male, code “2” female	0.70	0.46	0	1
Provincial construction	The value of spending for local infrastructure systems, in million VND per capita	9.32	6.76	0.59	37.94
Provincial consumption	The value of average consumption of a province in a particular year, in billion VND per capita	24.13	14.64	2.01	50.58
Cumulative value of FDI	Cumulative value of FDI of a province in a particular year, in billion VND per capita	667.82	568.94	0.14	2561.76
Value of SOEs capital	Value of state-owned firms of a province in a particular year, in billion VND per capita	88.32	145.91	0.43	634.42
Distance	Distance from a province to the closet economic centre, in km	91.68	123.74	1	499
Corruption	The difference of the Informal charges indicator in two consecutive years: $\text{Informal charges}_{it} - \text{Informal charges}_{it-1}$	0.04	0.83	-3.39	3.62
Transparency	The difference of the Transparency indicator in two consecutive years: $\text{Transparency}_{it} - \text{Transparency}_{it-1}$	-0.05	0.62	-2.99	3.05
Proactivity	The difference of the Proactivity indicator in two consecutive years: $\text{Proactivity}_{it} - \text{Proactivity}_{it-1}$	-0.22	1.10	-5.46	6.18
Legal Policies	The difference of the Legal institutions indicator in two consecutive years: $\text{Legal institutions}_{it} - \text{Legal institutions}_{it-1}$	-.2245	1.501	-3.738	4.020
South	Code “1” if a firm locates to the South of the 17 <sup>th</sup> parallel, and “0” otherwise				

*Note:* Studying panel encompasses all of 63 provinces and municipal cities in Vietnam in the period 2006-2012. Governance variables obtained from the Provincial Competitiveness Index (PCI) dataset. Firm-specific variables are obtained from the Annual Enterprises Survey of the Vietnam General Statistical Office. All values are depreciated to 2010 price using official inflation rate.

Table 2.1: Regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm age	-0.002* (0.001)	-0.026*** (0.000)	-0.023*** (0.000)	-0.057*** (-0.010)	-0.074*** (-0.010)	-0.054*** (-0.010)	-0.061*** (-0.010)
Firm size	0.112*** (0.007)	0.078*** (0.004)	0.095*** (0.003)	0.207*** (-0.009)	0.205*** (-0.009)	0.207*** (-0.009)	0.206*** (-0.009)
Assets structure	-0.022 (0.030)	0.019 (0.016)	0.039*** (0.012)	-0.112*** (-0.030)	-0.109*** (-0.030)	-0.111*** (-0.030)	-0.110*** (-0.030)
Owner age	-0.003*** (0.000)	-0.007*** (0.000)	-0.006*** (0.000)	-0.064*** (-0.010)	-0.053*** (-0.010)	-0.072*** (-0.010)	-0.070*** (-0.010)
Owner gender	0.058*** (0.019)	0.084*** (0.009)	0.063*** (0.007)	0.199*** (-0.022)	0.192*** (-0.022)	0.200*** (-0.022)	0.189*** (-0.022)
Provincial construction	-0.012 (0.008)	-0.009*** (0.001)	-0.002 (0.002)	0.028*** (-0.002)	0.026*** (-0.002)	0.028*** (-0.002)	0.026*** (-0.002)
Provincial consumption	0.019*** (0.003)	-0.001*** (0.000)	0.002*** (0.000)	0.060*** (-0.003)	0.055*** (-0.003)	0.061*** (-0.003)	0.056*** (-0.003)
Distance	-0.000** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)	0.007*** (-0.002)	0.006*** (-0.002)	0.007*** (-0.002)	0.006*** (-0.002)
Value FDI	-0.000*** (0.000)	0.000*** (0.000)	-0.000*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Value SOEs	-0.001*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Transparency	<b>2.066***</b> <b>(0.300)</b>			0.0638*** (-0.007)			0.0242*** (-0.007)
Corruption		<b>1.436***</b> <b>(0.103)</b>			0.141*** (-0.008)		0.127*** (-0.009)
Proactivity			<b>0.230***</b> <b>(0.035)</b>			0.044*** (-0.005)	0.015*** (-0.005)
Transparency × Firm age				-0.005*** (-0.001)			-0.001** (-0.001)
Corruption × Firm age					-0.007*** (-0.001)		-0.005*** (-0.001)
Proactivity × Firm age						-0.005*** (0.000)	-0.003*** (0.000)
Hausman p_value	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Observations	307,591	307,591	307,591	307,591	307,591	307,591	307,591
Hansen (J) p_value	0.35	0.93	0.84	NA	NA	NA	NA
R-squared	NA	NA	NA	0.350	0.352	0.350	0.352

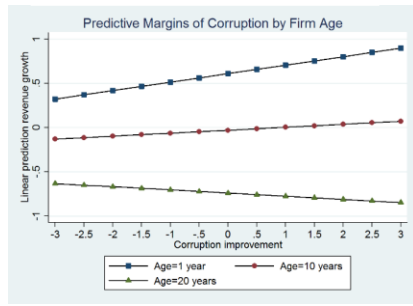
Table 2.2: Regression results

	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Firm age	-0.066*** (-0.010)	-0.072*** (-0.010)	-0.066*** (-0.010)	-0.071*** (-0.010)	-0.071*** (-0.010)	-0.073*** (-0.010)	-0.078*** (-0.010)	-0.073*** (-0.010)	-0.079*** (-0.010)
Firm size	0.208*** (-0.009)	0.213*** (-0.009)	0.194*** (-0.009)	0.208*** (-0.009)	0.206*** (-0.009)	0.206*** (-0.009)	0.205*** (-0.009)	0.206*** (-0.009)	0.205*** (-0.009)
Assets structure	-0.113*** (-0.030)	-0.115*** (-0.030)	-0.110*** (-0.030)	-0.115*** (-0.030)	-0.112*** (-0.030)	-0.112*** (-0.030)	-0.110*** (-0.030)	-0.113*** (-0.030)	-0.111*** (-0.030)
Owner age	-0.055*** (-0.010)	-0.055*** (-0.010)	-0.059*** (-0.010)	-0.058*** (-0.010)	-0.051*** (-0.010)	-0.046*** (-0.010)	-0.047*** (-0.010)	-0.052*** (-0.010)	-0.046*** (-0.010)
Owner gender	0.190*** (-0.022)	0.153*** (-0.022)	0.188*** (-0.022)	0.147*** (-0.022)	0.205*** (-0.022)	0.205*** (-0.022)	0.199*** (-0.022)	0.205*** (-0.022)	0.198*** (-0.022)
Provincial construction	0.028*** (-0.002)	0.026*** (-0.002)	0.028*** (-0.002)	0.026*** (-0.002)	0.029*** (-0.002)	0.029*** (-0.002)	0.028*** (-0.002)	0.029*** (-0.002)	0.028*** (-0.002)
Provincial consumption	0.059*** (-0.003)	0.054*** (-0.003)	0.061*** (-0.003)	0.054*** (-0.003)	0.060*** (-0.003)	0.059*** (-0.003)	0.058*** (-0.003)	0.062*** (-0.003)	0.058*** (-0.003)
Distance	0.008*** (-0.002)	0.006*** (-0.002)	0.008*** (-0.002)	0.006*** (-0.002)	0.007*** (-0.002)	0.007*** (-0.002)	0.006*** (-0.002)	0.008*** (-0.002)	0.006*** (-0.002)
Value FDI	-0.070*** (0.000)	-0.067*** (0.000)	-0.069*** (0.000)	-0.068*** (0.000)	-0.072*** (0.000)	-0.075*** (0.000)	-0.069*** (0.000)	-0.073*** (0.000)	-0.069*** (0.000)
Value SOEs	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Transparency	0.201*** (-0.016)			0.023 (-0.016)		0.048*** (-0.006)			0.019*** (-0.006)
Corruption		0.522*** (-0.018)		0.492*** (-0.018)			0.117*** (-0.007)		0.116*** (-0.007)
Proactivity			0.177*** (-0.010)	0.060*** (-0.010)				0.011** (-0.004)	-0.016*** (-0.005)
Transparency × Firm size	-0.051*** (-0.004)			-0.003 (-0.004)					
Corruption × Firm size		-0.125*** (-0.004)		-0.115*** (-0.004)					
Proactivity × Firm size			-0.051*** (-0.003)	-0.023*** (-0.003)					
South					1.246*** (-0.427)	1.250*** (-0.426)	1.168*** (-0.427)	1.238*** (-0.427)	1.161*** (-0.427)
Transparency*South						-0.066*** (-0.008)			-0.0153* (-0.009)
Corruption*South							-0.089*** (-0.009)		-0.082*** (-0.009)
Proactivity*South								-0.026*** (-0.006)	0.00134 (-0.006)
Hausman p_value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Observations	307,591	307,591	307,591	307,591	307,591	307,591	307,591	307,591	307,591
R-squared	0.350	0.356	0.351	0.357	0.350	0.350	0.352	0.350	0.352

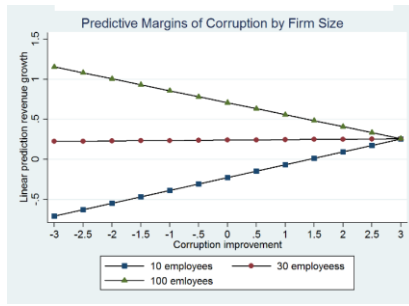
Note: The results reported from columns (1) to (3) were estimated using IV-GMM estimator (routine *ivreg2* with *gmm2s* option in Stata). The results reported from columns (3) to (16) were estimated using fixed effect panel estimator (routine *reghdfe* in Stata). All specifications include 7-year dummies, 2-digit industry dummies, and 3 ownership dummies (private, state-owned and foreign-owned). The figure reported in parentheses are heteroskedasticity and autocorrelation(HAC) robust standard errors clustered by region per year. Hansen (J) tests for the validity of IVs. Hausman test statistics are reported for the endogeneity of fixed effects. VIF test confirms that there is no serious multicollinearity among regressors. \*\*\* indicates significant at 1%. \*\* indicates significant at 5%. \* indicates significant at 10%.

Graphs: Predictive margins of revenue growth on firm age, size, and region

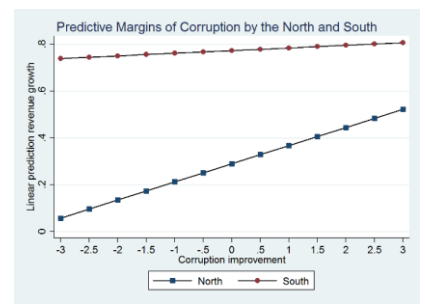
**Graph 1.1: Firm age**



**Graph 1.2: Firm size**



**Graph 1.3: Regions**



## Appendix 1: Governance index definition and summary statistics

Variable	Definition	Mean	S.D.	Min.	Max.
Corruption	Measures how much firms pay in informal charges, how much of an obstacle those extra fees pose for their business operations, whether payment of those extra fees results in expected results or "services," and whether provincial officials use compliance with local regulations to extract rents. The indicator is two-digit value, ranging from 1 to 10, the higher the score, the lower the charges (corruption).	6.48	0.80	4.52	8.62
Transparency	Measures whether firms have access to the proper planning and legal documents necessary to run their businesses, whether those documents are equitably available, new policies and laws are communicated to firms and predictably implemented. The indicator is two-digit value, ranging from 1 to 10, the higher the score, the more transparent.	5.79	0.97	2.15	8.85
Proactivity	Measures the creativity and cleverness of provinces in implementing central policy, designing their own initiatives for private sector development, and working within sometimes unclear national regulatory frameworks to assist and interpret in favour of local private firms. The indicator is two-digit value, ranging from 1 to 10, the higher the score, the more proactive.	5.05	1.46	1.39	9.39
Legal Policies	Measures the private sector's confidence in provincial legal institutions; whether firms regard provincial legal institutions as an effective vehicle for dispute resolution, or as an avenue for lodging appeals against corrupt official behaviour. The indicator is two-digit value, ranging from 1 to 10, the higher the score, the more proactive.	4.60	1.16	2.00	7.34

*Note:* Studying panel encompasses all of 63 provinces and municipal cities in Vietnam in the period 2006-2012, obtained from the Provincial Competitiveness Index (PCI).

## Appendix 2: Estimates of sales growth with Legal Policies included as governance indicator

VARIABLES:	(1)	(2)	(3)
Firm age	-0.042*** (-0.010)	-0.059*** (-0.010)	-0.081*** (-0.010)
Firm size	0.206*** (-0.009)	0.140*** (-0.010)	0.207*** (-0.009)
Asset structure	-0.111*** (-0.030)	-0.109*** (-0.030)	-0.114*** (-0.030)
SOEs	-0.199*** (-0.050)	-0.214*** (-0.051)	-0.224*** (-0.051)
FOEs	-0.246 (-0.222)	-0.21 (-0.222)	-0.244 (-0.219)
Owner age	-0.081*** (-0.010)	-0.0613*** (-0.010)	-0.027*** (-0.010)
Owner gender	0.161*** (-0.022)	0.124*** (-0.022)	0.172*** (-0.022)
Provincial construction	0.024*** (-0.002)	0.023*** (-0.002)	0.024*** (-0.002)
Provincial consumption	0.055*** (-0.003)	0.054*** (-0.003)	0.048*** (-0.003)
Distance	0.007*** (-0.002)	0.006*** (-0.002)	0.005*** (-0.002)
Cumulative FDI value	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Cumulative SOE value	0.00*** (-0.000)	0.001*** (-0.000)	0.001*** (-0.000)
Legal policies	-0.151*** (-0.007)	-0.461*** (-0.016)	-0.127*** (-0.006)
Legal policies*firm age	0.001*** (-0.001)		
Legal policies*firm size		0.110*** (-0.004)	

	South		1.172***
			(-0.430)
	Legal policies*South		0.127***
			(0.007)
Hausman p_value	0.000	0.000	0.000
Observations	307,591	307,591	307,591
R-squared	0.352	0.357	0.351

Note: The results were estimated using fixed effect panel estimator (routine *reghdfe* in Stata). All specifications include 7-year dummies, 2-digit industry dummies, and 3 ownership dummies (private, state-owned and foreign-owned). The figure reported in parentheses are robust standard errors clustered by region per year. Hausman test statistics are reported for the endogeneity of fixed effects. \*\*\* indicates significant at 1%. \*\* indicates significant at 5%. \* indicates significant at 10%.

### Appendix 3: VIF test of multicollinearity

Variable	VIF	1/VIF
Firm age	1.300	0.769
Firm size	1.140	0.879
State-owned dummy	1.170	0.857
Foreign-owned dummy	1.170	0.852
Owner age	1.190	0.842
Owner gender	1.100	0.906
Assets structure	1.130	0.883
Construction per capita	2.860	0.350
Consumption per capita	2.180	0.458
Distance to closet municipal city	2.040	0.489
cumulative value of FDI	1.680	0.594
cumulative value of SOEs	1.910	0.523
Improvement of Corruption	1.170	0.853
Improvement of Proactivity	1.270	0.790
Improvement of Transparency	1.240	0.806
Mean	1.500	