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Difference in the role of public governance for enterprises performance of ownership types in Vietnam

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ABSTRACT

This paper aims to examine the difference in role of public governance on the performance of each business ownership type in Vietnam. Using FGLS regression and Blinder – Oaxaca decomposition methods, the study finds out gaps of enterprises performance among state-owned enterprises, non-state enterprises and FDI enterprises in Vietnam in the period 2016–2019. The variation is due to business characteristics and distinction between ownership types. Besides, the decomposition results show that public governance is a factor of the enterprises performance's differentiation in Vietnam, and state-owned enterprises are often more favoured than FDI enterprises and non-state enterprises. Incentives for state-owned enterprises are mainly presented in policies, such as information public and transparency, reducing time-cost, reducing informal charges and local fair competition promotion. Meanwhile, incentives for FDI enterprises are mainly presented in policies, such as land policy, information public and transparency, reducing time-cost, fair competition promotion, business support services, local legal frame and security. Specifically, the study implies that improving public governance in Vietnam in the period 2016–2019 has resulted in positively effect on state-owned enterprises' performance and fairly low effect on those of FDI enterprises and non-state enterprises.

I. Introduction

Institutional theory demonstrates that good institutional environment would create favourable conditions for enterprises to operate and develop (Baumol 1990; North 1990). Most empirical studies also support that a country with good public governance, transparency business environment and corruption under control would encourage business growth and development (Choi et al. 2015; Chu 2017; Faruq & Weidner 2017; Lasagni et al. 2015; Le et al. 2021; Le & Nguyen 2017; Martins et al. 2020; Nguyen et al. 2017, 2019, 2013; Tan et al. 2017, 2016; Xie et al. 2017). However, empirical studies also conclude that effect of public governance on enterprise performances varies among different business ownership types. State-owned enterprises (SOEs) having large size and close relations with state agencies officer would often receive privileges and incentives in accessing resources (Le et al. 2021; Nguyen et al. 2013). Chu (2017) states

that improving public governance would result in a positive effect on enterprises performance of SOEs and foreign direct investment (FDI) enterprises rather than non-state enterprises. In addition, Le et al. (2021) argue that reducing informal charges would improve the total factor productivity (TFP) of SOEs more than non-state enterprises, however the more authorities transparency was to achieved, the less effect of this factor on the TFP of SOEs. Al Amosh & Khatib (2022) also shows that foreign ownership and state ownership play an important role in the environmental, social and governance performance of enterprises.

Vietnam is a transition economy with many reforms about the economic and social environment following the socialist-oriented market economy (Nguyen et al. 2019) and has achieved positive results with the average GDP growth rate in the recent period 2016–2020 reaching 5.99%/year (Ministry of Planning and Investment 2021).

Vietnam's economy used to be regarded as a centrally planned economy with a significant government intervention shown by government ownership in various SOEs and since the 1986 economic reform, the privatization has been regarded as a remedy to overcome the inefficiencies of SOEs, develop the private economy, and stimulate economic growth in Vietnam (Nguyen et al. 2019). Realizing the role of enterprises in economic development with a contribution of over 60% to GDP in the period 2016–2020, besides legal documents, leaders in Vietnam have issued additional many executive documents aimed at supporting enterprises and promoting the development of the private economy to become an important driving force of the socialist-oriented market economy. In the period 2017–2020, the number of enterprises in Vietnam has increased from 654,633 to 811,538 enterprises, with an average growth rate of 7.4%/year and non-state enterprises currently account for about 97% of the total number of enterprises (Ministry of Planning and Investment 2021). However, from 2020, due to the complicated development of the Covid-19 pandemic, growth in most economic sectors and fields has begun to slowdown and decline, consequences on production, business activities, import, export of enterprises. Beside that, although non-state enterprises account for a large proportion but statistics from the Ministry of Planning and Investment (2021) display that while only 18.8% of SOEs made losses in 2019, this proportion in the FDI enterprises were 45.6% and the non-state enterprises were 49%; at the same time, the non-state enterprises was the only sector that recognized decrease in profit before tax over the same period, reaching 277.6 VND Trillion, down 13.9%, while the FDI enterprises increased by 6.4%, the SOEs increased by 8.4%. This raises the research question is recent solutions to improve public governance in Vietnam has brought positive results to enterprises performance across all ownership types?

Although the trend of difference in enterprises performance among business with different ownership types has been demonstrated in the studies of Choi et al. (2015), Chu (2017), Le et al. (2021), Nguyen et al. (2019), Nguyen et al. (2013), Tran et al. (2016), there is still research gap in exploring the role of public governance in shaping this difference. Therefore, the research objective of this study is to answer the above research question, at the same time recommend some policy implications to achieve the quality of public governance, contributing to creating favourable conditions and equality for business development.

This of the paper is structured as follows: After this introduction, Section II will present a theoretical overview and previous empirical research. Section III will present the model, data and estimation method. Research results and discussion will be presented in Section IV. Finally, the conclusion and policy implications, limitations of the study and future research directions will also be presented in section V.

II. Literature review

Public governance, enterprises performance and institutional theory

When reviewing the history of public governance, Hughes (2003) believes that administrative management conception has appeared since ancient Egypt. Although the administrative system has existed for a long time, the traditional model of public management was only really formed and developed at the end of the 19th century with Max Weber's study about the bureaucracy. In the 1980s and early 1990s of the 20th century, the trend of shifting from the traditional public management model to the new public management model has begun, considered as an innovative approach to the traditional model (Hood 1991; Pollitt 1993).

Lynn et al. (2001) argue that public governance is the laws, rules, regulations, judicial decisions and administrative management activities to provide public goods and services to the people in a country. Meanwhile, enterprises performance is the ability of one firm to efficiently exploit the available resources to achieve target objectives; and usually reflected through financial and non-financial targets to provide information about the extent to which the firm's objectives are being accomplished (Lebas & Euske 2006). According to institutional theory (North 1990), a country that has good institutional environment and public governance, which is reflected through the quality and

implementation of laws, rules and regulations, especially provisions in contract and property right protection would reduce transaction costs, enhance investment activities, encourage enterprises to invest in technological innovation and product improvement (Baumol 1990), thereby promoting the enterprises performance. Good public governance also contributes to strengthening trust, improving service quality, strengthening supervision activities, and contributing to improving the performance of government organizations (Alqooti 2020). An effective government, rules and regulations promulgated in a flexible manner will create favourable conditions for the development of the private sector, encourage investment and promote economic growth (Al-Naser & Hamdan 2021). Hamdan et al. (2020) has also shown that good public governance will promote entrepreneurship, thereby creating a driving force to promote economic growth.

The impact of public governance on enterprises performance

There are many aspects of interest to economists when studying enterprises performance, such as Adeosun & Owolabi (2021) investigating the ownership types of enterprises in Nigeria, Ebrahim Seyadi & Elali (2021) studying the impact of strategic agility on the competitiveness of small and medium enterprises in the Kingdom of Bahrain. Regarding the impact of public governance on enterprises performance, the literature review shows that previous empirical studies often apply regression techniques to estimate the impact of public governance on enterprises performance. For studies carried out across many countries, the Worldwide Governance Indicator (WGI) of World Bank and the Corruption Perceptions Index (CPI) of Transparency International are two indicators commonly used to measure the quality of public governance. Choi et al. (2015) investigation for enterprises in China, Lasagni et al. (2015) study for enterprises in Italy, or Faruq & Weidner (2017) based on enterprises data in 74 countries around the world, Martins et al. (2020) study for enterprises in 117 developing and emerging countries all indicate that public governance has positive impact on enterprises performance. In Vietnam, the Provincial Competitiveness Index (PCI) is often used by the studies to measure the institutional environment and the quality of public governance because it is an index that can calculate and assess the quality of economic governance and administrative reform efforts of the local governments (Chu 2017; Le et al. 2021; Le & Nguyen 2017; Nguyen 2021; Nguyen et al. 2017, 2019, 2013; Tan et al. 2017; Tran et al. 2016; Vu et al. 2018). Empirical studies in Vietnam also exhibit similar results to other studies in the world when most of them show that public governance has positive impact on enterprises performance. However, because public governance is measured through 10 components of PCI, so not all of the components have positive effect on enterprises performance, but may have negative effect (Chu, 2017; Tran et al. 2016) or no effect (Tan et al. 2017; Tran et al. 2016).

Ownership types, public governance and enterprises performance

Literature review also reveals that SOEs are mainly presented in transition economies in order to implement public policies, public services and resolve market failures (Le et al. 2021). The characteristics of SOEs are large size, having close relationship with state officers and having many privileges and incentives in accessing development resources, such as bank loans and land, therefore, it is likely that SOEs would not support to create transparent business and investment environment because it could reduce the privileges and benefits for SOEs. (Le et al. 2021; Nguyen et al. 2013). In Vietnam, after more than three decades of innovation, SOEs are still considered as "'leading role'" in the economy. The process of economic reform and trade liberalization in Vietnam in recent years has set a dual goal of promoting the private sector and maintaining the leading role of the SOEs sector. According to Nguyen et al. (2013), this issue is considered as one of the reasons leading to the difference in the implementation of economic reform at the provincial level. In particular, provinces that favour state ownership would tend to facilitate SOEs receiving more incentives and support rather than non-state enterprises, at the same time, SOEs will be able to access resources and market better than non-state enterprises (Nguyen et al. 2013).

Although Le et al. (2021), Nguyen et al. (2013) studies have displayed the possibility of bias in the implementation of business support policies, however, most previous studies only considered solely the impact of business types on enterprises performance (Choi et al. 2015; Le et al. 2021; Nguyen et al. 2013; Xie et al. 2017), there are few studies examining the simultaneously influence of public governance and firm types on enterprises performance. In Vietnam, although most studies show that the components used to measure public governance have different effects on enterprises performance, but when simultaneously studying the impact of public governance and the firm types on enterprises performance, the studies only suspense at the level of interaction between the overall public governance and the firm types, but have not yet analysed the interaction between the firm types and the components used to measure public governance. Typically, by using the interaction variable between PCI and firm types, Chu (2017) concluded that improving public governance would result in higher enterprises performance of state-owned enterprises than those of FDI enterprises, and higher enterprises performance of FDI enterprises in comparison to non-state enterprises. When comparing the impact of the institutional environment on the performance of SOEs and non-state enterprises, Nguyen et al. (2019) pointed out that the Government should strongly privatize by reducing the Government's ownership rate in enterprises to less than 25% or concentrating on keeping the Government's ownership rate in enterprises above 75% if they wants to improve enterprises performance. Le et al. (2021) also exhibits that reducing informal charge would improve TFP of SOEs more than non-state enterprises. However, if the state transparency is achieved, the effect of this factor on the TFP of SOEs would decrease.

III. Research design

Research methodology

The Feasible Generalized Least Squares (FGLS) estimation method is applied to estimate the impact of public governance on enterprises performance. This study adopts data of enterprises in 63 provinces and cities in Vietnam in a short period of time (T = 4), so it often arises heteroscedasticity and autocorrelation, while popular panel data estimation methods (Pooled OLS, FEM and REM) cannot simultaneously overcome these problems. Therefore, the FGLS estimation method is applied in this case to control heteroscedasticity and autocorrelation (Gujarati, 1998). Based on the approach of Faruq and Weidner, (2017), Martins et al. (2020), this study estimates the model for each enterprises group: SOEs, non-state enterprises and FDI enterprises. The regression coefficient of the public governance in each model will be the basis for measuring and comparing the impact of public governance on the performance of SOEs, non-state enterprises and FDI enterprises. In addition, this study also uses the Blinder – Oaxaca decomposition techniques for the linear model (Le et al. 2015) to examine the difference in enterprises performance among various ownership types.

According to the Blinder – Oaxaca decomposition model (Blinder, 1973; Oaxaca, 1973), when there are two groups S and P with the dependent variable Y and the explanatodry variables X, the dependent variable Y can be presented as follows:

$$Group\ S : Y^s = X^s\beta^s + \varepsilon^s \tag{1}$$

$$Group\ P : Y^p = X^p\beta^p + \varepsilon^p \tag{2}$$

Where X^s and X^p are explanatory variables of group S and group P, respectively. β^s and β^p are the parameters estimated for group S and group P, respectively.

The average values of the variables and parameters estimated in each group are follows:

$$\bar{Y}^s = \beta_0^s + \bar{X}^s\hat{\beta}^s + u^s \tag{3}$$

$$\bar{Y}^p = \beta_0^p + \bar{X}^p\hat{\beta}^p + u^p \tag{4}$$

Average distance between group S and group P (or vice versa):

$$\bar{Y}^s - \bar{Y}^p = \left(\beta_0^s - \beta_0^p\right) + \left(\bar{X}^s\hat{\beta}^s - \bar{X}^p\hat{\beta}^p\right) \tag{5}$$

After adding and subtracting $\bar{X}^p\hat{\beta}^s$, Equation (6) can be rewritten as:

$$\bar{Y}^s - \bar{Y}^p = \left(\beta_0^s - \beta_0^p\right)$$
$$+ \left[\left(\bar{X}^s - \bar{X}^p\right)\hat{\beta}^s + \bar{X}^p\left(\hat{\beta}^s - \hat{\beta}^p\right)\right] \quad (6)$$

Therefore, the difference is described as follows: Overall difference (R):

$$R = \left(\beta_0^s + \bar{X}^s\hat{\beta}^s\right) - \left(\beta_0^p + \bar{X}^p\hat{\beta}^p\right) = E + C + U \quad (7)$$

The difference due to observed characteristics (E):

$$E = \left(\bar{X}^s - \bar{X}^p\right)\hat{\beta}^s \quad (8)$$

The difference due to coefficients (C):

$$C = \bar{X}^p\left(\hat{\beta}^s - \hat{\beta}^p\right) \quad (9)$$

Unexplainable difference (U):

$$U = \left(\beta_0^s - \beta_0^p\right) \quad (10)$$

The difference due to distinction (D):

$$D = C + U \quad (11)$$

Empirical model

The research model is based on a Cobb-Douglas production function as following:

$$Y_{i,t} = A_{i,t}f_{i,t}\left(X_j\right) = A_{i,t}X_{j,i,t}^{\beta j} \quad (12)$$

Where, $Y_{i,t}$ is the output of firm i at time t; $A_{i,t}$ is the technological capacity or the total productivity factor of firm i at time t; X_j are the inputs of firms. Following the studies of Chu (2017), Le et al. (2021), Le & Nguyen (2017), suppose that the firm combines two inputs, which are capital (K) and labour (L), and adds the public governance into the research model, Equation (13) is now rewritten in linear function as follows:

$$InY_{i,t} = \alpha_0 + \beta 1 InK_{i,t} + \beta_2 InL_{i,t} + \sum^{\gamma_j} PCI_{j,i,t} + \varepsilon_{i,t} \quad (13)$$

In which:

$Y_{i,t}$: is enterprises performance (VND Billion), as measured by the average revenue of firms in province i in year t (Le & Nguyen, 2017). In addition, the study also uses firm productivity indicators to estimate the enterprises performance (Choi et al. 2015; Tan et al. 2017), which is measured by revenue/number of employees of firms in province i in year t (VND Billion/employee).

$K_{i,t}$: is average capital of firms in province i - in year t (VND Billion).

$L_{i,t}$: is average number of employees of firms in province i in year t (employees).

$PCI_{j,i,t}$: is the vector of variables representing the public governance, measured by the PCI index of province i in year t (Chu, 2017; Le et al. 2021; Le & Nguyen 2017; Nguyen 2021; Nguyen et al. 2017, 2019, 2013; Tan et al. 2017; Tran et al. 2016; Vu et al. 2018), including 10 sub-index (measured on a scale of 1 to 10, the higher the score, the better the management quality) which are: (i) Market entry costs (PCI_1); (ii) Land access and security of tenure (PCI_2); (iii) Transparency and access to information (PCI_3); (iv) Time costs of regulatory compliance (PCI_4); (v) Informal charges (PCI_5); (vi) Fair competition (PCI_6); (vii) Proactivity of provincial leaders (PCI_7); (viii) Business support services (PCI_8); (ix) Labour training (PCI_9); (×) Legal institutions and security (PCI_{10}).

Data

The study uses enterprises data in the period 2016–2019 in 63 provinces and cities in Vietnam in The White Book on Vietnamese Businesses 2021 published by the Ministry of Planning and Investment. The PCI index is collected from the annual reports of VCCI and USAID in Vietnam. The sample size in the study is 252 observations.

Descriptive statistics

Statistical results in Table 1 exhibit that SOEs have the highest average revenue, reaching 601.319 VND Billion, followed by FDI enterprises with average revenue of 560.981 VND Billion and non-state enterprises with average revenue of 22.541 VND Billion. The average productivity of SOEs is

Table 1. Descriptive statistics.

Variable	Unit	Obs.	Mean	Std Dev	Min	Max
Average revenue	*VND Billion*					
SOEs		252	601.319	706.090	15.111	5,077.545
Non-state enterprises		252	22.541	9.808	7.432	72.875
FDI enterprises		252	560.981	1,044.112	0.000	7,417.455
Average productivity	*VND Billion/employee*					
SOEs		252	2.613	3.913	0.111	37.252
Non-state enterprises		252	2.268	15.900	0.269	253.540
FDI enterprises		252	1.752	4.521	0.000	47.377
Average employees	*employee*					
SOEs		252	291.643	219.456	23.765	1,492.357
Non-state enterprises		252	18.624	6.625	0.169	47.675
FDI enterprises		252	463.703	450.151	0.000	2,246.822
Average capital	*VND Billion*					
SOEs		252	812.427	1,196.743	50.929	9,399.250
Non-state enterprises		252	26.504	12.361	9.294	85.677
FDI enterprises		252	499.112	771.407	0.000	5,074.796
PCI index		252	62.566	3.641	52.990	73.400
Market entry costs (PCI_1)		252	7.752	0.685	5.860	9.280
Land access and security of tenure (PCI_2)		252	6.375	0.700	4.160	7.890
Transparency and access to information (PCI_3)		252	6.361	0.398	5.260	7.440
Time costs of regulatory compliance (PCI_4)		252	6.722	0.783	4.830	8.900
Informal charges (PCI_5)		252	5.736	0.851	3.340	8.290
Fair competition (PCI_6)		252	5.582	0.958	3.120	8.010
Proactivity of provincial leaders (PCI_7)		252	5.622	0.857	3.410	8.370
Business support services (PCI_8)		252	6.168	0.699	4.180	7.820
Labour training (PCI_9)		252	6.360	0.771	4.460	8.240
Legal institutions and security (PCI_{10})		252	6.050	0.797	3.860	7.990

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.

the highest, reaching 2.613 VND Billion/employee, followed by non-state enterprises with 2.268 VND Billion/employee and FDI enterprises with 1.752 VND Billion/employee. On average, the number of employees working in FDI enterprises is the largest, with 463 employees, followed by SOEs with 291 employees and the lowest is non-state enterprises with 18 employees. SOEs have the highest average capital, reaching 812.427 VND Billion, followed by FDI enterprises with 499.112 VND Billion and the lowest is non-state enterprises with 26.504 VND Billion. The public governance in the period 2016–2019 is reflected through the PCI index with an average value of 62.566 points, the lowest is 52.990 points and the highest is 73.400 points. The details of each component index are presented in Table 1.

Testing for multicollinearity

The results of the variance inflation factor (VIF) in Table 2 show that the VIF of each variable in the research model does not exceed 10, so it can be

Table 2. The variance inflation factor (VIF).

	VIF			VIF		
Variable	SOEs (1)	Non-state enterprises (2)	FDI enterprises (3)	SOEs (4)	Non-state enterprises (5)	FDI enterprises (6)
lnL	1.41	1.17	2.13	1.81	1.27	2.83
lnK	1.49	1.22	2.20	1.80	1.30	2.57
PCI	1.12	1.09	1.09			
PCI_1				1.58	1.60	1.59
PCI_2				2.53	2.46	2.44
PCI_3				1.35	1.38	1.36
PCI_4				2.42	2.31	2.32
PCI_5				3.20	3.09	3.31
PCI_6				2.01	1.94	2.10
PCI_7				3.10	3.16	3.16
PCI_8				1.32	1.33	1.41
PCI_9				1.61	1.40	1.46
PCI_{10}				2.25	2.11	2.19

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.

excluded the possibility of multicollinearity which causes serious influence on the estimated results of the research model (Gujarati 1998).

IV. Empirical results and discussion

Regression results

The estimation results by FGLS method presented in Table 3 reveals that the coefficients of PCI variable in columns (1) and (3) have positive sign and statistically significant at 1%, implying that public governance has positive effect on revenue of SOEs and FDI enterprises, however, there is no evidence about public governance having influence on revenue of non-state enterprises since the coefficient of PCI variable (Column 2) is not statistically significant. At the same time, while public governance has no impact on the productivity of SOEs and FDI enterprises because the coefficients of PCI variables in columns (4) and (5) are not statistically significant, but public governance has negative effect on the productivity of non-state enterprises because the coefficient of the PCI variable (Column 5) is negative and statistically significant at 1%. Chu (2017) argues the reason why public governance clearly expresses the trend of positive impact on the performance of SOEs and FDI enterprises, in which SOEs receive a lot of support and incentives, such as: incentives in borrowing capital, interest rates, land use and being assigned important projects with low risk and high profitability. Similarly, FDI enterprises are always 'red carpet' welcomed

with a series of incentives relating to land and tax, whilst non-state enterprises with small scale, outdated machinery and equipment, face many difficulties in accessing capital, land, information which consequent in low competitiveness. To reinforce this research result, as well as the argument of Chu (2017), this study estimates the impact of each components used to measure public governance on enterprises performance by ownership types. The detailed estimation results are presented in Table 4.

The results in Table 4 show that there are 7/10 components used to measure public governance, including: Transparency and access to information (PCI_3), Time costs of regulatory compliance (PCI_4), Informal charges (PCI_5), Fair competition (PCI_6), Proactivity of provincial leaders (PCI_7), Business support services (PCI_8), Labour training (PCI_9) having impact on revenue of SOEs (Column 1). While only 2/10 factors, including: Land access and security of tenure (PCI_2) and Labour training (PCI_9) having influence on revenue of FDI enterprises (Column 3). For non-state enterprises group (Column 2), the regression results indicate that there are 3/10 factors, including: Transparency and access to information (PCI_3), Proactivity of provincial leaders (PCI_7) and Business support services (PCI_8) having impact on the revenue of enterprises, but two of them carry negative sign (PCI_3 and PCI_8).

Besides, when exploring detailed components used to measure public governance, the regression results demonstrate that Fair competition (PCI_6) is the only factor that has positive impact on

Table 3. Role of public governance on enterprises performance by ownership types in Vietnam.

Variable	lnY			Y/L		
	SOEs (1)	Non-state enterprises (2)	FDI enterprises (3)	SOEs (4)	Non-state enterprises (5)	FDI enterprises (6)
lnL	0.016	0.057	0.464***	-3.065***	-23.82***	-0.432***
	(0.48)	(1.61)	(14.22)	(-9.90)	(-11.33)	(-7.57)
lnK	0.729***	0.402***	0.711***	1.976***	4.435***	0.645***
	(25.7)	(11.7)	(24.70)	(12.23)	(3.40)	(10.81)
PCI	0.058***	0.001	0.011***	0.0281	-0.671***	0.0114
	(9.90)	(-0.45)	(2.94)	(1.34)	(-6.84)	(1.48)
Constant	-2.343***	1.515***	-1.816***	4.806***	97.53***	-0.799
	(-6.00)	(7.22)	(-5.60)	(2.85)	(9.81)	(-1.50)
Observation	252	252	252	252	252	252
Wald Chi^2 (3)	1,342.61	159.22	1,215.41	161.88	128.70	138.78
p-value	0.000	0.000	0.000	0.000	0.000	0.000
Modified Wald Chi^2 (63)	44,050.32	14,255.46	1.9e+07	1.9e+05	3,230.18	2.8e+07
p-value	0.000	0.000	0.000	0.000	0.000	0.000
Wooldridge F (1,62)	0.020	32.944	28.579	10.613	10.356	471.432
p-value	0.888	0.000	0.000	0.001	0.002	0.000

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.
Y is measured by the average revenue of firm; *, **, *** denote statistical significance at 10%, 5%, 1%.

Table 4. The role of the components used to measure public governance on enterprises performance by ownership types in Vietnam.

	lnY			Y/L		
Variable	SOEs (1)	Non-state enterprises (2)	FDI enterprises (3)	SOEs (4)	Non-state enterprises (5)	FDI enterprises (6)
lnL	0.168***	0.090**	0.454***	-2.663***	-14.23***	-0.645***
	(3.14)	(2.08)	(11.87)	(-6.46)	(-6.10)	(-5.89)
lnK	0.628***	0.416***	0.766***	1.952***	4.149***	1.003***
	(16.07)	(9.96)	(20.02)	(10.01)	(3.58)	(7.70)
PCI_1	0.068	0.005	0.009	-0.106	0.527	-0.022
	(1.60)	(0.36)	(0.30)	(-0.99)	(1.25)	(-0.22)
PCI_2	0.002	0.022	0.079**	0.063	-0.908*	0.118
	(0.05)	(1.07)	(2.32)	(0.43)	(-1.90)	(0.92)
PCI_3	0.136**	-0.061**	-0.025	0.043	-0.903	0.027
	(2.22)	(-2.20)	(-0.54)	(0.27)	(-1.32)	(0.16)
PCI_4	0.228***±	0.028	0.037	0.129	-0.150	0.028
	(4.81)	(1.59)	(1.20)	(0.87)	(-0.36)	(0.25)
PCI_5	0.205***	-0.003	-0.028	0.073	-0.037	-0.078
	(4.27)	(-0.20)	(-0.96)	(0.68)	(-0.08)	(-0.78)
PCI_6	0.066**	0.006	0.024	0.187**	-0.0004	0.008
	(1.98)	(0.45)	(1.00)	(2.00)	(-0.00)	(0.11)
PCI_7	-0.142***	0.029*	-0.023	-0.146	-0.202	-0.024
	(-2.84)	(1.68)	(-0.84)	(-1.29)	(-0.58)	(-0.21)
PCI_8	0.116***	-0.032*	-0.021	-0.003	-0.688*	0.003
	(2.80)	(-1.89)	(-0.72)	(-0.03)	(-1.84)	(0.03)
PCI_9	0.109***	0.026	0.110***	-0.120	0.070	-0.160
	(2.75)	(1.33)	(3.28)	(-0.80)	(0.15)	(-1.38)
PCI_{10}	0.016	-0.003	0.006	-0.088	-0.187	-0.001
	(0.40)	(-0.26)	(0.23)	(-0.78)	(-0.51)	(-0.01)
Constant	-4.105***	1.324***	-2.509***	4.587	43.440***	-0.170
	(-6.92)	(3.66)	(-3.89)	(1.63)	(4.11)	(-0.09)
Observation	252	252	252	252	252	252
Wald Chi^2 (12)	1,091.08	151.59	1,039.34	115.15	38.14	70.47
p-value	0.000	0.000	0.000	0.000	0.000	0.000
Modified Wald Chi^2 (63)	1.4e+05	18,465.46		34,635.86	22,182.54	2.2e+06
p-value	0.000	0.000		0.000	0.000	0.000
Breusch and Pagan Lagrangian Chibar^2 (01)			165.90			
p-value			0.000			
Wooldridge F (1,62)	0.234	41.294	32.569	12.250	9.739	366.789
p-value	0.631	0.000	0.000	0.000	0.002	0.000

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.
Y is measured by the average revenue of firm; *, **, *** denote statistical significance at 10%, 5%, 1%.

productivity of SOEs (Column 4), whilst Land access and security of tenure (PCI_2) and Business support services (PCI_8) negatively affect the productivity of non-state enterprises (Column 5). These findings are consistent to those of Chu (2017), Le et al. (2021), Nguyen et al. (2019) which concludes public governance positively influent the SOEs and FDI enterprises groups. However, the results of this study are more specific to the extend of the effect of detailed components used to measure public governance on the enterprises performance by ownership types.

Results in Table 4 show that Land access and security of tenure (PCI_2) have positive impact on the revenue of FDI enterprises at 5% significance, but have negative impact on the productivity of non-state enterprises at 10% significance. The study of Chu (2017), Tan et al. (2017) argues that if enterprises can access information on land use

planning, land price lists easily and quickly, enterprises could operate and develop more effectively. However, by analysing each type of enterprise, this study demonstrates that the non-state enterprises group still face difficulties in accessing land, and the solutions which are implemented to improve the quality of land management of the local government mainly positively affect FDI enterprises group.

The regression results in Table 4 showing that Transparency and access to information (PCI_3) have positive impact on the revenue of SOEs at 5% significance, but negative impact on the revenue of non-state enterprises at 5% significance which indicate that SOEs have advantage in accessing local development plans, as well as necessary legal documents during business operations, on the other hand, opinions of non-state enterprises have not been given due attention in the process of

formulating and implementing policies. This finding is consistent with studies of Chu (2017), Le et al. (2021), Nguyen et al. (2017), Nguyen et al. (2013).

Efforts in administrative reform, improving public service ethics, as well as limiting enterprises inspection, and minimizing time costs to implement regulations (PCI_4) have contributed to creating favourable conditions for enterprises to enhance their performance (Chu, 2017; Tan et al. 2017), however, these efforts have only had impact on SOEs at 1% significance. At the same time, the regression results in Table 4 also partly reflect the local authorities' solutions in cutting informal costs in production and business activities (PCI_5), creating fair competition investment environment (PCI_6) have created pressure and forced SOEs to change their operations in positive direction, thereby improving the revenue and productivity of SOEs at 5% significance. The findings also exhibit that local leaders flexibly apply the regulation when implementing Central policies, as well as being creative and dynamic in making their own initiatives when applying policies which sometimes are not clear from the Central government, to benefit the firm, to develop the private sector (PCI_7) shall limit the incentives for SOEs, contributing to creating more fair business investment environment, thereby reducing SOE's revenue at 1% significance, but positively influencing revenue of non-state enterprises at 10% significance. This result is consistent with those of Le et al. (2021).

In addition, the regression results show that Business support services (PCI_8) have positive impact on the revenue of SOEs at 1% significance, but have negative impact on the revenue and productivity of non-state enterprises at 10% significance which implies that trade promotion activities, provision of legal advice to businesses, support in finding business partners, development of local industrial zones/clusters and the provision of technology services to enterprises mainly benefits SOEs. Simultaneously, efforts in promoting vocational training and skill development of the workforce to support local industries (PCI_9) also have positively influence on the revenue of SOEs and FDI enterprises at 1% significance, but have no impact on the enterprises performance of the non-state enterprises. The above business support

activities have created a crowding effect on the non-state enterprises, causing them more difficult to compete with SOEs and FDI enterprises, consequent in lower enterprises performance.

The estimated results of the regression models also present that the size of labour and the amount of capital are the factors affecting the enterprises performance. This result is consistent with economic theories and similar to the studies of Chu (2017), Le & Nguyen (2017), Tran et al. (2016). However, this study did not find evidence that the Market entry costs (PCI_1), Legal institutions and security (PCI_{10}) have influence on enterprises performance.

Results of the Blinder - Oaxaca decomposition

The regression coefficients are estimated from the research models in Table 4 and the mean values of each explanatory variable are synthesized to perform the Blinder – Oaxaca decomposition, the specific results are presented in Table 5.

The differences in performance among SOEs, non-state enterprises and FDI enterprises based on the Blinder – Oaxaca decomposition method are presented in Tables 6, Tables 7, 8. Accordingly, the Blinder – Oaxaca decomposition results in Table 6 show that the overall difference in revenue between SOEs and non-state enterprises is 2.878 (R value in Column 1), where the differential due to observed characteristics (independent variables) is 2.327 (E value in Column 2), the differential due to distinction is 0.550 (D value in Column 3) in which the differential due to coefficients is 5.979 (C value in Column 3) and the unexplainable difference (intercept coefficient) is −5.429 (U value in Column 3). The differences due to observed characteristics and the differential due to coefficients have increased the revenue gap between SOEs and non-state enterprises, while unexplainable difference reduced the gap. There are 8/10 components used to measure public governance with positive sign, including: PCI_1, PCI_3, PCI_4, PCI_5, PCI_6, PCI_8, PCI_9, PCI_{10} (Column 3), which indicates that public governance tends to have more positive impact on revenue of SOEs than non-state enterprises. In relation to the productivity, the overall difference between SOEs and non-state enterprises is 0.921 (R value in Column 4), where the differential due to observed characteristics is

Table 5. The coefficients and mean values of the variables.

Variable	lnY			Y/L					
	β^{SOE}	$\beta^{Non-state}$	β^{FDI}	β^{SOE}	$\beta^{Non-state}$	β^{FDI}	$\overline{X}^{SOE}$	$\overline{X}^{Non-state}$	$\overline{X}^{FDI}$
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
lnL	0.168	0.090	0.454	-2.663	-14.230	-0.645	5.465	2.858	5.496
lnK	0.628	0.416	0.766	1.952	4.149	1.003	6.196	3.187	5.469
PCI_1	0.068	0.005	0.009	-0.106	0.527	-0.022	7.752	7.752	7.752
PCI_2	0.002	0.022	0.079	0.063	-0.908	0.118	6.375	6.375	6.375
PCI_3	0.136	-0.061	-0.025	0.043	-0.903	0.027	6.361	6.361	6.361
PCI_4	0.228	0.028	0.037	0.129	-0.150	0.028	6.722	6.722	6.722
PCI_5	0.205	-0.003	-0.028	0.073	-0.037	-0.078	5.736	5.736	5.736
PCI_6	0.066	0.006	0.024	0.187	-0.0004	0.008	5.582	5.582	5.582
PCI_7	-0.142	0.029	-0.023	-0.146	-0.202	-0.024	5.622	5.622	5.622
PCI_8	0.116	-0.032	-0.021	-0.003	-0.688	0.003	6.168	6.168	6.168
PCI_9	0.109	0.026	0.110	-0.120	0.070	-0.160	6.360	6.360	6.360
PCI_{10}	0.016	-0.003	0.006	-0.088	-0.187	-0.0009	6.050	6.050	6.050
Constant	-4.105	1.324	-2.509	4.587	43.440	-0.170			

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.
β^{SOE} and $\overline{X}^{SOE}$, $\beta^{Non-state}$ and $\overline{X}^{Non-state}$, β^{FDI} and $\overline{X}^{FDI}$ are the coefficients and mean values of the variables for the group of SOEs, non-state enterprises, and FDI enterprises respectively.

−1.068 (E value in Column 5) reducing the productivity gap between the two groups, the differential due to distinction is 1.989 (D value in Column 6) in which the differential due to coefficients is 40.842 (C value in Column 6) increasing the productivity gap and the unexplainable difference is −38.853 (U value in Column 6) reducing the productivity gap between SOEs and non-state enterprises. There are 8/10 components used to measure public governance with positive sign, including: PCI_2, PCI_3, PCI_4, PCI_5, PCI_6, PCI_7, PCI_8, PCI_{10} (Column 6), reveal that public governance tends to have more positive influence on productivity of SOEs rather than non-state enterprises.

The results of the Blinder – Oaxaca decomposition in Table 6 exhibit that there exists differences in performance between SOEs and non-state enterprises. In general, the performance of SOEs is higher than non-state enterprises, and there is distinction between them, and SOEs are favoured more than non-state enterprises. The decomposition results have also shown that Transparency and access to information (PCI_3), Time costs of regulatory compliance (PCI_4), Informal charges (PCI_5), Fair competition (PCI_6), Business support services (PCI_8), Legal institutions and security (PCI_{10}) are the components used to measure public governance that tend to have positive impact on enterprises performance of SOEs more than those of non-state enterprises. This result is similar to the studies of Chu (2017), Le et al. (2021), Nguyen et al. (2019) and also consistent with the discussion of regression results in Table 4.

When studying the difference in performance between SOEs and FDI enterprises, the Blinder – Oaxaca decomposition in Table 7 shows that the overall difference in revenue between two groups is 0.604 (R value in Column 1), where the differential due to observed characteristics is 0.451 (E value in Column 2), the differential due to distinction is 0.153 (D value in Column 3) in which the differential due to

Table 6. Difference in enterprises performance between SOE and non-state enterprises.

Variable	lnY			Y/L		
	(1)=((a)*(g))-((b)*(h))	(2)=(a)*((g)-(h))	(3)=(h)*((a)-(b))	(4)=((d)*(g))-((e)*(h))	(5)=(d)*((g)-(h))	(6)=(h)*((d)-(e))
lnL	0.661	0.438	0.223	26.119	-6.941	33.060
lnK	2.565	1.889	0.676	-1.129	5.873	−7.002
PCI_1	0.488	0.000	0.488	-4.907	0.000	−4.907
PCI_2	-0.128	0.000	-0.128	6.190	0.000	6.190
PCI_3	1.253	0.000	1.253	6.018	0.000	6.018
PCI_4	1.344	0.000	1.344	1.875	0.000	1.875
PCI_5	1.193	0.000	1.193	0.631	0.000	0.631
PCI_6	0.335	0.000	0.335	1.046	0.000	1.046
PCI_7	-0.961	0.000	-0.961	0.315	0.000	0.315
PCI_8	0.913	0.000	0.913	4.225	0.000	4.225
PCI_9	0.528	0.000	0.528	-1.208	0.000	−1.208
PCI_{10}	0.115	0.000	0.115	0.599	0.000	0.599
Constant	-5.429		-5.429	-38.853		−38.853
Total	**2.878**	2.327	0.550	**0.921**	-1.068	1.989
E			2.327		-1.068	
C			5.979			40.842
U			-5.429			−38.853
D = C+ U			0.550			1.989
R = E + C + U	**2.878**			**0.921**		

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.
E is the differential due to observed characteristics, C is the differential due to coefficients, U is unexplainable difference, D is the differential due to distinction, R is overall difference; sum of columns (1) and (4) equal to R.

Table 7. Difference in enterprises performance between SOE and FDI enterprises.

| Variable | lnY | | | Y/L | | |
	(1)=((a)*(g))-((c)*(i))	(2)=(a)*((g)-(i))	(3)=(i)*((a)-(c))	(4)=((d)*(g))-((f)*(i))	(5)=(d)*((g)-(i))	(6)=(i)*((d)-(f))
lnL	-1.577	-0.005	-1.572	-11.007	0.085	-11.092
lnK	-0.299	0.456	-0.755	6.608	1.418	5.190
PCI$_1$	0.457	0.000	0.457	-0.651	0.000	-0.651
PCI$_2$	-0.491	0.000	-0.491	-0.351	0.000	-0.351
PCI$_3$	1.024	0.000	1.024	0.102	0.000	0.102
PCI$_4$	1.284	0.000	1.284	0.679	0.000	0.679
PCI$_5$	1.336	0.000	1.336	0.866	0.000	0.866
PCI$_6$	0.234	0.000	0.234	0.999	0.000	0.999
PCI$_7$	-0.669	0.000	-0.669	-0.686	0.000	-0.686
PCI$_8$	0.845	0.000	0.845	-0.037	0.000	-0.037
PCI$_9$	-0.006	0.000	-0.006	0.254	0.000	0.254
PCI$_{10}$	0.061	0.000	0.061	-0.527	0.000	-0.527
Constant	-1.596		-1.596	4.757		4.757
Total	**0.604**	0.451	0.153	**1.007**	1.503	-0.496
E		0.451			1.503	
C			1.749			-5.253
U			-1.596			4.757
D = C+ U			0.153			-0.496
R = E + C + U	**0.604**			**1.007**		

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.
E is the differential due to observed characteristics, C is the differential due to coefficients, U is unexplainable difference, D is the differential due to distinction, R is overall difference; sum of columns (1) and (4) equal to R.

coefficients is 1.749 (C value in Column 3) and the unexplainable difference is -1.596 (U value in Column 3). The differences due to observed characteristics and the differential due to coefficients increase the revenue gap between SOEs and FDI enterprises, while unexplainable differences reduce the gap. There are 7/10 components used to measure public governance with positive sign, including: PCI$_1$, PCI$_3$, PCI$_4$, PCI$_5$, PCI$_6$, PCI$_8$, PCI$_{10}$ (Column 3) pointing out that public governance tends to have more positive impact on revenue of SOEs than FDI enterprises. The Blinder – Oaxaca decomposition results also show that the overall difference in productivity between SOEs and FDI enterprises is 1.007 (R value in Column 4), in which the differential due to observed characteristics is 1.503 (E value in Column 5) increasing the productivity gap between the two groups, the differential due to distinction is -0.496 (D value in Column 6) in which the differential due to coefficients is -5.253 (C value in Column 6) reducing the gap and the unexplainable difference is 4.757 (U value in Column 6) increasing the productivity gap between SOEs and FDI enterprises. There are 5/10 components used to measure public governance with positive sign, including: PCI$_3$, PCI$_4$, PCI$_5$,

PCI$_6$, PCI$_9$ (Column 6) showing that public governance tends to positively affect productivity of SOEs more than those of FDI enterprises.

The results of the Blinder – Oaxaca decomposition in Table 7 present difference in performance between SOEs and FDI enterprises, in particularly the performance of SOEs is higher than FDI enterprises and this finding is consistent with study of Chu (2017). Besides, there is distinction between SOEs and FDI enterprises which has widened the revenue gap but reduced the productivity gap between them. The decomposition results have pointed out Transparency and access to information (PCI$_3$), Time costs of regulatory compliance (PCI$_4$), Informal charges (PCI$_5$), Fair competition (PCI$_6$) are the components used to measure public governance that tend to positively impact enterprises performance of SOEs more than those of FDI enterprises.

The Blinder – Oaxaca decomposition results in Table 8 suggest that the overall difference in revenue between non-state enterprises and FDI enterprises is -2.274 (R value in Column 1), where the differential due to observed characteristics is -1.187 (E value in Column 2), the differential due to distinction is -1.087 (D value in Column 3) in which the differential due to coefficients is -4.920 (C value in Column 3) and the unexplainable difference is 3.833 (U value in Column 3). The differences due to observed characteristics and the differential due to coefficients increase the revenue gap between non-state enterprises and FDI enterprises, while unexplainable differences reduce the gap. There are 8/10 components used to measure public governance with negative sign, including: PCI$_1$, PCI$_2$, PCI$_3$, PCI$_4$, PCI$_6$, PCI$_8$, PCI$_9$, PCI$_{10}$ (Column 3) which indicates that public governance tends to have more positive impact on revenue of FDI enterprises than non-state enterprises. The overall difference in productivity between non-state enterprises and FDI enterprises is 0.086 (R value in Column 4), in which the differential due to observed characteristics is 28.074 (E value in Column 5) increases the productivity gap between the two groups, the differential due to distinction is -27.988 (D value in Column 6), in which the differential due to coefficients is -71.598 (C value in Column 6) reducing the gap and the unexplainable difference is 43.610 (U value in Column 6) increasing the productivity gap between non-state

Table 8. Difference in enterprises performance between non-state enterprises and FDI enterprises.

Variable	lnY			Y/L		
	(1)= ((b)*(h))-((c)*(i))	(2)=(b)* ((h)-(i))	(3)=(i)* ((b)-(c))	(4)= ((e)*(h))-((f)*(i))	(5)=(e)* ((h)-(i))	(6)=(i)* ((e)-(f))
lnL	-2.238	-0.237	-2.001	-37.126	37.543	-74.670
lnK	-2.864	-0.949	-1.914	7.737	-9.469	17.206
PCI$_1$	-0.031	0.000	-0.031	4.256	0.000	4.256
PCI$_2$	-0.363	0.000	-0.363	-6.541	0.000	-6.541
PCI$_3$	-0.229	0.000	-0.229	-5.916	0.000	-5.916
PCI$_4$	-0.060	0.000	-0.060	-1.197	0.000	-1.197
PCI$_5$	0.143	0.000	0.143	0.235	0.000	0.235
PCI$_6$	-0.100	0.000	-0.100	-0.047	0.000	-0.047
PCI$_7$	0.292	0.000	0.292	-1.001	0.000	-1.001
PCI$_8$	-0.068	0.000	-0.068	-4.262	0.000	-4.262
PCI$_9$	-0.534	0.000	-0.534	1.463	0.000	1.463
PCI$_{10}$	-0.054	0.000	-0.054	-1.126	0.000	-1.126
Constant	3.833		3.833	43.610	0.000	43.610
Total	**-2.274**	-1.187	-1.087	**0.086**	28.074	-27.988
E		-1.187			28.074	
C			-4.920			-71.598
U			3.833			43.610
D = C+ U			-1.087			-27.988
R = E + C + U	**-2.274**			**0.086**		

Source: Estimated results of data in The White Book on Vietnamese Businesses 2021, VCCI and USAID.

E is the differential due to observed characteristics, C is the differential due to coefficients, U is unexplainable difference, D is the differential due to distinction, R is overall difference; sum of columns (1) and (4) equal to R.

enterprises and FDI enterprises. There are 7/10 components used to measure public governance with negative sign, including: PCI$_2$, PCI$_3$, PCI$_4$, PCI$_6$, PCI$_7$, PCI$_8$, PCI$_{10}$ (Column 6) which demonstrates that public governance tends to positively affect productivity of FDI enterprises more than those of non-state enterprises.

The results of the Blinder – Oaxaca decomposition in Table 8 show that there is a difference in performance between non-state enterprises and FDI enterprises. In general, non-state enterprises have lower revenue but higher productivity in compared to FDI enterprises; moreover, there is variation between them, and FDI enterprises are more favoured than non-state enterprises. The decomposition results also suggest that Land access and security of tenure (PCI$_2$), Transparency and access to information (PCI$_3$), Time costs of regulatory compliance (PCI$_4$), Fair competition (PCI$_6$), Business support services (PCI$_8$), Legal institutions and security (PCI$_{10}$) are the components used to measure public governance that tend to positively affect enterprises performance of FDI enterprises more than those

of non-state enterprises. This result is consistent with the discussion of regression results in Table 4 and study of Chu (2017).

V. Conclusion and policy implications

By combining FGLS regression and Blinder – Oaxaca decomposition methods, this study shown that overall, public governance has a positive impact on the enterprises performance in the period 2016–2019 in Vietnamese through policies to support land, transparency of information, and reduction of time costs for businesses, control corruption, promote fair competition, pioneering leadership, support services and train workers for businesses, and these results are similar to the case of enterprises in China (Choi et al. 2015), enterprises in Italy (Lasagni et al. 2015), as well as enterprises in the countries studied by Faruq & Weidner (2017) and Martins et al. (2020). However, the study also shown that because SOEs receive a lot of incentives and FDI enterprises are always 'red carpet' welcomed with a series of incentives relating to land and tax, so this effect is mainly evident in the type of SOEs and FDI enterprises. In addition, empirical results finds out gaps of enterprises performance among state-owned enterprises, non-state enterprises and FDI enterprises, specifically, SOEs have higher revenue and productivity than FDI enterprises and non-state enterprises, and although having higher revenues than non-state enterprises, FDI enterprises' productivity is lower than non-state enterprises. The enterprises performance's interval is due to enterprises' characteristics and discrimination among ownership types.

The decomposition results further strengthen the discovery that further strengthen the discovery that non-state enterprises in Vietnam are less likely to benefit from supportive government policies and public governance is a factor of discrimination, in particular, state-owned enterprises are often more favoured than FDI enterprises and non-state enterprises. Incentives for state-owned enterprises are mainly presented in information public and transparency (PCI$_3$), reducing time cost policy (PCI$_4$), reducing informal charges policy (PCI$_5$) and local fair competition promotion policy (PCI$_6$). Meanwhile, incentives for FDI enterprises are available in policies, such as land policy (PCI$_2$),

information public and transparency (PCI$_3$), reducing time-cost (PCI$_4$), fair competition promotion (PCI$_6$), business support services (PCI$_8$), local legal frame and security (PCI$_{10}$).

The results have implied that there are differences in the influence of public governance on enterprises performance of varied ownership types in Vietnam, more specifically improving public governance in the period 2016–2019 results in positively effect to state-owned enterprises' performance and little effect to those of FDI enterprises and non-state enterprises. Through more than three decades of innovation with many reforms about the economic and social environment of the Government Vietnam, the private sector has gradually shown its important role and position, but the process of implementing policies to support enterprises still biases and incentives for SOEs. The research results suggest policy implications, Vietnam in particular also countries in transition need to continue to promote the positive results achieved in improving the quality of public governance to promote enterprises performance. At the same time, it is necessary to continue to review, adjust, supplement and perfect the policies are being implemented to support enterprises, in which focus is on land policy, research and innovation in ways to disclosure and transparency information, reduction of administrative procedures, prevention of corrupt behaviour of public officials when handling administrative procedures, enhancement of dynamism and creativity of local authorities in handling administrative procedures, new problems arise, and innovate business support services to ensure that they meet the actual needs of businesses and improve the quality of dispute resolution of the court and justice system thus to create transparent, open and fair business environment, ensuring the multi-sector economy development and economic sectors equality.

In addition to the main findings, this study is also limited in data access, so this study only uses enterprises data of 63 provinces and cities in Vietnam in the period 2016–2019 for analysis. Beside that, with the use of panel data with a short observation period, the study has not considered the latency and time factors related to public governance because when policies change, it often takes time to affect enterprises performance. Further studies can also follow the direction on overcoming the limitations of this study related to sample size, policy lag, or exploring the role of public governance on technological innovation, labour innovation to improve enterprises performance, or continue shall explore the causes leading to the difference in the enterprises performance, especially the decomposition and step by step identifying the components that make the difference but unexplained in this study (U component).

Disclosure statement

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