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The effects of business environment and supply chain governance on business strategies and company performance

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ABSTRACT

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This study aims to examine the effects of the business environment and supply chain governance on business strategies and their impact on the performance of state-owned enterprises in Indonesia. Using Partial Least Square (PLS) and quantitative research, this study took state companies management and commissioners as the respondents. The study concludes that the business environment has a positive and significant effect on business strategy, and supply chain governance has a positive and significant effect on business strategy. Moreover, the results show that the business environment influences corporate performance, and supply chain governance has an effect on corporate performance. Business strategy influences corporate performance, and business strategy can mediate the influence of the business environment on corporate performance. Lastly, business strategy can mediate the influence of supply chain governance on corporate performance. The results theoretically confirm the supply chain governance in business practice and practically encouraged the company management to develop risk-management and effective internal controls to create competitive business climate and more agile supply chain management.

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1. Introduction

As they have important roles in many countries, the performance of state-owned enterprises (SOEs) has been paid attention, especially its contribution to the national economy. Their profitability and other financial performance indicators have been challenged. Studies on business performance of SOEs have been conducted (Shawtari et al., 2017; Yu & Lee, 2016; Wang et al., 2016; Subramanian, 2015; Hu & Leung, 2012). Heo (2018) by quoting World Bank study in 2014 shows that SOEs played significantly to the national economy of developed and developing countries. They contributed 20% of global/international investments and created a 5% workforce. They also took more than 10% of World big companies. However, SOEs have also faced challenges such as their financial performance, services, debt due date, budget constraint, less-competitive climate, inefficiency, and other unsatisfied performance results relative to those of private companies in their same industries (Riswanto, 2021). This hinders fiscal burden and risks for a state. State-owned enterprises (SOEs) in Indonesia have grown as state investment increased. Based on Central Government Consolidated Financial Statements of the Republic of Indonesia for the year 2011 to 2019, growth of the state investments on SOEs touched its peak as 47,79% in 2015. Their profits were around 5,56% to 8,08% of Indonesian GDP, and 30% of 113 SOEs reported losses (BPK RI, 2020). Some studies disclose that performance of companies is influenced by company's business strategies (Kaliappen & Hilman, 2013; Nupus & Ichwanudin, 2021; Laukkanen et al., 2013; Vickery et al., 2003). Business strategies are coordinated actions applied by companies to achieve their competitive advantages in product markets (Hitt et al., 2015). Nonetheless, a less optimal business strategy phenomena of SOEs in Indonesia can be seen such as disharmony strategies in up and down stream as well as cross sectoral business development, competition and business overlaps in same industrial sectors, lack of business differentiating capabilities and innovation (SOE Ministry, 2020). On the other hand, a study reveals that privatized SOEs

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records better performance in terms of profit and return on assets (ROA) generation than that of fully owned SOEs (Astami et al., 2010). In achieving better performance, companies need effective business strategies as they are affected by conducive business environment (Qi et al., 2011; Amoako-Gyampah, 2003; Ward et al., 1995), and good supply chain governance (Boström et al., 2015; Vurro et al., 2009; Bitran et al., 2007). Business environment is an external and internal influence to companies (Krapez et al., 2012). Ministry of SOEs in Indonesia (2020) identifies phenomena of business environment of Indonesian SOEs, such as complexity and overlaps of cross sector regulations, multi stakeholders, and less-effective decision making, difficulties to hire best talent, not output oriented and bureaucratic management, gaps in HR management among SOEs, and talent shortage for director positions. Supply chain governance consists of rules in managing relations among shareholders, management, creditors, government, employees, and other stakeholders in implementing their rights and obligations in managing company supply chains. It is a system in controlling companies (Mughal, 2019). Dual or multiple positions are common in SOEs as 397 state officials are also posted as commissioners (Ombudsman RI, 2020). This study is intended to measure influence of business environment and supply chain governance on business strategies and their impact on Company performance in Indonesia.

2. Literature review

Business environment relates to company ability to adapt and anticipate external and internal influence which affects company management processes (David & David, 2015; Kruse, 2013; Wheelen et al., 2012). This can be measured through internal and external company dimensions (Struwig et al., 2019; Chadee & Roxas, 2013; Lim et al., 2010). Supply chain governance (SCG) focuses on implementing policies and regulations by leading, controlling and guiding the supply chain for the creation of supply chain efficiency with institutional arrangements, structures and systems. Specifically, in institutional governance, SCG is to manage relations among shareholders, shareholders, management, creditors, government, employees, and other stakeholders (Kataike et al., 2019; Sadma, 2021). One of supply chain governance goals is to have protection, equal treatment, and added values for all stakeholders to create greater efficiency (Haat et al., 2008; OECD, 2004; FCGI, 2001). Institutional supply chain governance can be measured through dimensions such as commitment in implementing it, roles of shareholders, board of directors, board of commissioners, information disclosures and transparency, and internal controls (Kataike et al., 2019; Gakpo et al., 2021; Oruke et al., 2020; Zuchruf et al., 2019). Business strategy is commitment and integrated and coordinated actions applied by companies in achieving competitive advantages by utilizing their core competencies in markets (Pearce & Robinson, 2015; Hubbard & Beamish, 2011). This business strategy can be measured by dimensions such as cost leadership strategy, differentiation strategy (Lopez-Cabarcos et al., 2015; Chang & Chuang, 2011). Company performance is achievement of company activities in certain periods with such measures (David & David, 2015; Hubbard & Beamish, 2011). This performance can be measured by financial and non-financial dimensions (Manes-Rossi et al., 2020; Coletta & Lima, 2020; Muin et al., 2020; Pham & Nguyen, 2019; Khongmalai & Distanont, 2017). Based on the descriptions, the following hypotheses were proposed:

H₁: There is a significant effect of business environment on business strategy.

H₂: Supply chain governance has a significant effect on business strategy.

H₃: There is a significant effect of business environment on company performance.

H4: Supply chain governance has a significant effect on company performance.

H₅: There is a significant effect of business strategy on company performance.

H₆: Business strategy mediates the relationship between business environment on company performance.

H₇: Business strategy mediates the relationship between supply chain governance on company performance.

3. Research method

This study uses quantitative research with the explanatory survey method. In this method, hypotheses are tested by a relevant statistical analysis technique. The explanatory survey method is applied to find cause-effect relationships and test influence of independent variables on dependent variables (Sekaran & Bougie, 2016). The sample is all SOEs, which are 113 companies in Indonesia. Samples are taken by using simple random sampling. This study collected questionnaires from company directors and commissioners. The study data are collected from questionnaires using Likert Scale 1-5 with such grades, which are 1= strongly disagree to 5= strongly agree. Data are analysed by the descriptive analysis of respondent characteristics and the Partial Least Square (PLS) analysis. The descriptive analyses of respondent characteristics are conducted by applying SmartPLS 3rd version (Indriyanto & Supomo, 2002).

4. Results

To test the validity and reliability, the outer model involves tests of discriminant validity, and composite reliability. Table 1 reveals that all indicators have loading factor values >0.7 and all constructs have AVE >0.5. Therefore, convergent validity is accepted as required. Second, the discriminant validity is tested by the square root of AVE, the Fornell-Larcker Criterion (Garson, 2016). As AVE square root values of all latent variables are higher than those of all correlations with other variables. Furthermore, the composite reliability test by Cronbach's alpha results shows that all constructs meet criteria of composite

reliability. Table 1 discloses the Cronbach's alpha of 0.991 > 0.7 and composite reliability of 0.991 > 0.7. All measures confirm that the model is valid and reliable.

Table 1Discriminant Validity and Cronbach's alpha

Variable	SCG	PERF	BE	BS	Cronbach's alpha
SCG	0.901				0.990
PERF	0.834	0.923			0.991
BE	0.795	0.871	0.898		0.986
BS	0.670	0.832	0.697	0.936	0.984

Valid: $\sqrt{\text{AVE}} > \text{r}$; $\sqrt{\text{AVE}}$ PERF = 0,923; $\sqrt{\text{AVE}}$ SCG > 0,901; $\sqrt{\text{AVE}}$ BE = 0,898; $\sqrt{\text{AVE}}$ BS = 0,936

To examine Goodness of Fit, this study uses the R Square, Q Square, and Standardized Root Mean Square Residual (SRMR) values to assess the goodness of fit. Chin (1998) argues that the R square value of 0.67 shows a strong model; 0.33 moderate, and 0.19 weak. Q square value is categorized by small, moderate, and big. Q square value is 0.02, it is small, Q square is 0.15 medium, Q square is 0.35, big. SRMR explains good fit, with perfect fit model if SRMR<0.08; fit model for SRMR between 0.08 – 0.10. and not fit model, for SRMR >0.10. Table 2 reveals the goodness of fit of this research supported by strong and moderate endogen variables (R Square) big Q Square and fit (SRMR 0.08 – 0.10).

Table 2Goodness of Fit

Endagen Veriable	Goodness of Fit Model Parameter		
Endogen Variable	R Square	Q Square	SRMR
KIN	0.882	0.743	0.045
SB	0.522	0.451	

R-Square: 0.67 strong; 0.33 moderate; 0.19 weak. Q-square: 0.02 small; 0.15 medium; 0.35 big. SRMR: <0.10 fit

Moreover, adjusted R-Square shows the determination coefficient which describes contributions of all exogen and endogen variables. Table 2 reveals that the adjusted R-Square of the performance is 0.878. This means that 87,8% the Company performance is affected by business environment, supply chain governance, and business strategy, and the rest 12,8% the Company performance is influenced by other variables. Furthermore, the business environment and supply chain governance contribute 51.1% to the business strategy, and the rest of 48.9% affected by other variables as represented by the value of the adjusted R-square.

Table 3
Direct Effect

Path		Path Coefficient	T statistics (O/STDEV)	p-values
•	$SCG \rightarrow PERF$	0.266	3.624	0.000
•	$SCG \rightarrow BS$	0.317	2.808	0.005
•	$BE \rightarrow PERF$	0.397	4.898	0.000
•	$BE \rightarrow BS$	0.445	3.494	0.001
•	$BS \to PERF$	0.377	4,873	0.000

Significance Level 5%; significant path coefficient if p-value<0.05 and T statistics >1.96

As to examine the direct effects, Table 3 shows direct effect and significance test results. The analysis with path found the influence of business environment on business performance (BE \rightarrow PERF, p-value is 0.000 with T-stat. = 4.898 and positive path coefficient of 0.397. Because the results showed the value is acceptable by using the criteria of p-value<0.05, T-stat. >1.96, and positive path coefficient, so that business environment has positive influence and significance on the business performance. Thus, the first hypothesis was accepted. Path analysis also showed the influence of supply chain governance on business performance (SCG → PERF), p-value is 0.000. with T-stat. = 3.624, and positive path coefficient (0.266). The path analysis results confirmed that the value is acceptable by using the criteria of p-value<0.05, T-stat. >1.96, and positive path coefficient. Thus, the second hypothesis stating that supply chain governance has positive influence and significance on the business performance was accepted. Regarding the influence of the business environment on business strategy (BE > BS), the results showed that p-value is 0.001 (<0.05) with T-stat. =3.494 (>1.96), and a positive path coefficient of 0.445. This confirms that the business environment has a positive influence and significance on the business strategy. Thus, the third hypothesis was accepted. Moreover, path analysis showed the influence of supply chain governance on business strategy $(SCG \rightarrow BS)$, p-value is 0.005 with T-stat. = 2.808, path coefficient is 0.317. Compared with the acceptance limit by using the criteria of p-value <0.05, t-stat. >1.96, and positive path coefficient, the results confirmed that supply chain governance has positive influence and significance on business strategy. Therefore, the fourth hypothesis was accepted. Lastly, the path results showed the influence of business strategy on company performance (BS \rightarrow PERF), indicated by p-value is 0.000 (<0.05) with T-stat. of 4.873 (>1.96), and path coefficient (+)0.377. Thus, the fifth hypothesis stating that business strategy has positive influence and significance on the business performance was accepted.

Table 4
Indirect Effect

Indirect Path	Indirect Path Coefficient	T-statistics	<i>p</i> -values		
$BE \rightarrow BE \rightarrow PERF$	0.168	2.638	0.009		
$SCG \rightarrow BS \rightarrow PERF$	0.119	2.250	0.025		
Significance level 5%; significant path coefficient if p-value<0.05 and T statistics >1.96					

Furthermore, to examine the indirect effect, in this study, the business strategy is the intervening variable, which mediates influence of business environment and supply chain governance on the company performance. To test the contribution of this business strategy in mediating those variables, indirect influence is tested by specific indirect effect PLS analysis. Table 4 reveals that the indirect effect p-value business environment and supply chain governance on the company performance through business strategy. First on the path of business environment indirect effect to the company performance through the business strategy, the test results in p-value is 0.009 < 0.05 and t-stat. is 2.638 > 1.96. This concludes that business strategy is significant in mediating indirect influence of the business environment on the company performance. Thus, the seventh hypothesis highlighting the mediating effect of business strategy on business environment and the performance is accepted. Second, on the indirect effect of supply chain governance on the Company performance through the business strategy, p-value is 0.025 < 0.05 with t-stat. of 2.250 > 1.96. This means that the business strategy significantly mediates indirect supply chain governance on the performance. Thus, the seventh hypothesis highlighting the mediating effect of business strategy on supply chain governance and the performance is accepted.

Table 5Hypothesis Test Results

Nο Results Conclusions Hhypotheses Business environment has a significant effect on business Path coefficient= 0.445; t-stat.= 3.494; p-Accepted value= 0.001 Supply chain governance has a significant effect on business Path coefficient= 0.317; t-stat.= 2.808; p 2 Accepted value= 0.005 strategy Business strategy has a significant effect on company Path coefficient= 0.397; t-stat.= 4.898; p-3 Accepted value= 0.000 performance Supply chain governance has a significant effect on Path coefficient= 0.266, t-stat.= 3.624; p-Accepted company performance value= 0.000 Path coefficient= 0.377, t-stat.= 4.873; p-Business strategy has a significant effect on company 5 Accepted value= 0.000 performance Business strategy mediates the relationship of business Path coefficient= 0.168, t-stat.= 2.638; p-6 Accepted environment on company performance Business strategy mediates the relationship of supply chain Path coefficient= 0.119; t-stat.= 2.250; p-Accepted value= 0.025 governance on company performance

Significance Level 5%; hypothesis is accepted if p-value<0.05; t-stat. >1.96 (two tail test)

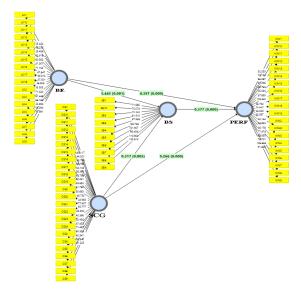


Fig. 1. Estimated Result of PLS Model – Bootstrapping

5. Conclusion

The study concludes that the business environment has a positive and significant effect on business strategy, and supply chain governance has a positive and significant effect on business strategy. Moreover, the results showed that the business environment influences corporate performance, and supply chain governance influences corporate performance. Business strategy influences corporate performance, and business strategy can mediate the influence of the business environment on corporate performance. Lastly, business strategy can mediate the influence of supply chain governance on corporate performance. Statistically, the the results showed that the path coefficient measuring influence of business environment on performance is 0.397, and that of supply chain governance on performance is 0.266; and that of business strategy on performance is 0.377. This means that the most influenced variables on the company performance are business environment and business strategy, besides supply chain governance. Furthermore, business environment affects strongly relative to supply chain governance on business strategy as path coefficient of business environment on business strategy is greater (0.445) that of supply chain governance on business strategy (0.317). This study suggests company management and governments to improve performance of SOEs. First, regarding the business environment, the company should have qualified human resources who meet competence standards, a consistent reward and punishment system, commitment, and quick response to latest technologies. In the supply chain governance, company management should develop risk-management and effective internal controls to create more agile supply chain management. In terms of the business strategy, quick response of emerging market changes, new product development, new brand development, and cost efficiency of production must be considered as the business strategy. Regarding company performance, the management needs to estimate, do best, monitor periodically on sales growth, net profit, return on equity (ROE), return on asset (ROA), and return on investment (ROI). As one of the specific items in supply chain governance, particularly for state companies, government and regulators are advised to restructure the organizations to make the companies more agile in doing their businesses, to measure burden and costs of the companies in conducting public service obligations required by the government. For future research, it is hoped that next research examines different models of research which can be developed by considering other independent and intervening variables which may affect company performance. Some variables such as company capabilities and transformational leadership can be considered to have influence on the business strategy and performance.

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