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Alliance Management Capabilities and Enterprise Resilience—The Mediating Role of Information Technology Capabilities: The Case of Indonesia's State-Owned Enterprises †

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Abstract: Based on dynamic capability theory, this study examines Alliance Management Capabilities (AMCs) in fostering the enterprise resilience (ER) of Indonesia's State-Owned Enterprises (SOEs) and their subsidiaries. Information Technology Capabilities (ITCs) are used as mediating variables. The study was administered through an online survey using questionnaires to the board of director members and senior managers. There were 322 valid responses received. The findings of the PLS-SEM analysis show that AMCs influence the creation of ER and ITCs. ITCs mediate the relationship between AMCs and ER. The findings could provide the management and policymakers the ability to develop a strategy for building and improving ER. This study broadens the scope of prior research in ER and dynamic capability theory in SOEs in emerging economies. The findings offer novelty to the limited literature on enterprise resilience in public organizations from dynamic capability theory operating in emerging markets.

Keywords: alliance management capabilities; dynamic capability theory; enterprise resilience; sustainability; Indonesia; information technology capabilities; state-owned enterprises

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1. Introduction

The rapid changes have increased the importance of the issue of growing uncertainty that emphasizes the critical role of organizational resilience in surviving, adjusting, and thriving in an unpredictable world [1,2]. Resilience comprises pre-event preparation for hardships, a post-event response that enables effective and prompt turnaround, and the capabilities for novel regeneration through creativity [3]. Enterprises must cultivate resilience to succeed in dynamic situations [4,5]. A growing number of companies are focusing on developing dynamic capabilities to stay ahead of the competition and be resilient [6].

AMCs are the ability to develop, expand, or rearrange the enterprise's asset value by creating collaboration with an ally [7] and the capacity to handle several collaborations. The research on AMCs is quite new [8]. AMCs help elucidate alliance success, which may be essential for surviving in a continually shifting ecosystem [9,10].

Companies must be flexible, agile, and resilient in a dynamic business context [11] and should rely on solid information structures and capabilities in this digital era. The technology captures data and converts them into information, including alliance information, as bases for decision-making [12]. Organizations with excellent information collection, analysis, and usage capabilities could foresee developments and take proactive modifications

to reduce the negative impacts of uncertainties [13]. Thus, enterprise resilience depends on the capacity to gather and process resources to deal with the environment and utilize information, knowledge, experiences, and other resources [14].

This study integrates dynamic capabilities and ER to understand better how dynamic capabilities (in this case, AMCs and ITCs) may better assist Indonesia's SOEs in building and improving enterprise resilience. The research questions in this study are: (1) Do AMCs influence enterprise resilience? (2) Do ITCs influence enterprise resilience? (3) Do AMCs influence ITCs? And (4) do ITCs mediate the relation between AMCs and enterprise resilience? The article consists of the following structure: first, a discussion of the theoretical foundation which leads to the development of hypotheses; second, it explains the methodology; the third part presents empirical study and findings; then, it will be summarized with the discussion of the key results of the study.

2. Literature Review and Hypothesis Development

2.1. Enterprise Resilience and Dynamic Capabilities

Firms may encounter difficulties achieving their objectives in a business setting that is dynamic and uncertain [15]. Companies must be flexible, agile, and resilient [11]. According to [16], resilience is formed through dynamic development that necessitates continuous activity. Resilience is defined as the processes of reasoning, anticipating, adapting, improvising, and recovering after coping with unexpected adverse incidences [1]. Developing or creating resilience occurs before, during, and following an adverse event with minimal impact on organizational effectiveness [2]. Thus, resilient firms are not only reactive but also proactive in preventing disruptions before they occur. Refs. [17,18] propose a dynamic capabilities perspective on organizational resilience processes that happen prior to, throughout, and after an adverse event [19]. Thus, resilience is dynamic in nature, demonstrating businesses' responses to a dynamic landscape [1].

This dynamic approach has already been mentioned by [20], who state that resilience is about surviving and taking proactive measures to identify and prepare mitigation strategies that will ensure stability and victory in the face of adverse shocks. Dynamic capabilities [21] are the outcomes of two separate components of capability, namely dynamic capability and operational capability [22], that strengthen a firm's resilience [23]. Dynamic capabilities include sensing, capturing, and transforming the company's resources according to the need. In this regard, technology, especially information technology, plays a crucial role [24,25].

SOEs have played a crucial part in the world economy, despite the wave of privatization over the past two decades [26]. Due to implicit government support and their frequently dominant market positions, SOEs may be less concerned with operational efficiency, including resilience and sustainability, than private companies [27]. SOEs are companies that are either wholly or partially managed by the state [28]. They exist in both developing and industrialized nations [29]. Due to the essential character of their role, the poor performance of SOEs is an issue of concern for stakeholders because their failure could pose a threat to national economic development [30]. Therefore, improving the performance of SOEs remains crucial for many governments [29]. Despite emphasizing resilience in public policy and management, little research has been conducted on how public sector companies attain resilience [31].

Figure 1 demonstrates the research framework presented for this study.

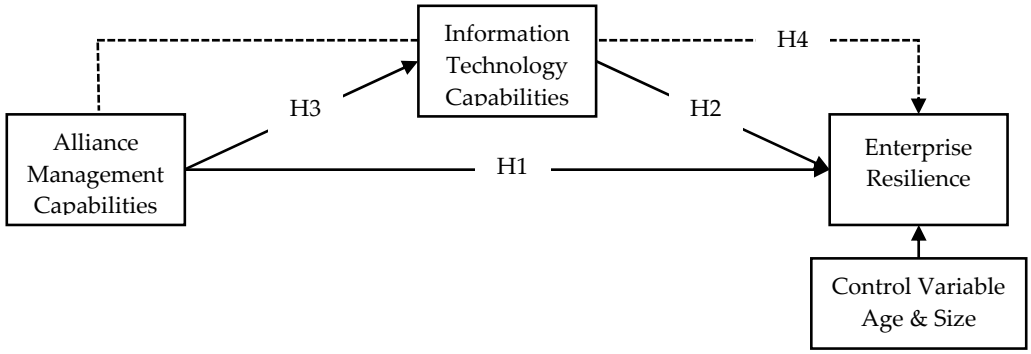

Figure 1. Research framework.

2.2. Relationship between Alliance Management Capabilities and Enterprise Resilience

In a dynamic business climate, it is essential to cultivate dynamic core capabilities [25]. AMCs could be chosen as the capabilities that should be implemented to support business results [8]. Ref. [32] found that strategic alliances are a significant source of assets and know-how and could create competitiveness. Ref. [33] cite alliance development as a typical illustration of dynamic capability. Alliance capabilities will assist businesses, including SOEs, in developing, sharing, and accessing knowledge from partners and investigating network use [34]. The vast majority of research on AMCs is conceptual studies [8]. Alliance is one of the strategy options that could be chosen to shine a spotlight on opportunities and make the most of favorable conditions to be resilient [35]. Businesses must have sufficient resources to create resilience capabilities, such as solid alliances [36].

Hypothesis 1 (H1). *Alliance Management Capabilities significantly influence enterprise resilience.*

2.3. Relationship between Information Technology Capabilities and Enterprise Resilience

High levels of uncertainty in the economic landscape necessitate adaptability on the part of enterprises, and information technology capabilities are viewed as a means of reacting more quickly to a changing environment [37]. A study by [38] defines Information Technology Capability (ITC) as an organizational capability and empirically investigates the relationship between IT capability and business performance. She categorized Organization-specific IT assets as IT infrastructure, human IT resources and intangibles enabled by IT [38]. Ref. [39] defined ITCs as a company's capacity to expand competitive agility through the delivery of better products and services within short production cycle times and to cultivate a high-skilled and dynamic team. Ref. [40] states that ITCs are vital for the agility and robustness of enterprises. Numerous firms view ITCs as significant and distinctive assets that give them competitiveness [41]. Ref. [12] ITCs may assist businesses in identifying and capitalizing on opportunities in a volatile environment.

Companies that successfully take advantage of the situation and capitalize on it may receive support from technological capabilities that allow them to deploy, reconfigure, and protect their assets during and after the crisis and provide firms with immediate and long-term competitive advantages [42]. ITCs improve the company's responsiveness to interruptions and unforeseen shifts [43]. ITC is highly correlated with agility, contributing to the development or enhancement of organizational resilience [44]. Thus, enterprise resilience depends on the capacity to gather and process resources in order to deal with environmental instability [14]. Better ITCs enhance a company's sensing and information processing capabilities, enabling it to react quickly to unanticipated events and successfully compete in a dynamic situation. They also improve the company's responsiveness to interruptions and unforeseen shifts [40,45–47].

Hypothesis 2 (H2). *Information Technology Capabilities significantly influence enterprise resilience.*

2.4. Relationship between Alliance Management Capability and Information Technology Capabilities

Enterprises are not similarly effective at foreseeing and handling the complex nature of a changing business environment, given the presence of substantial inter-firm disparities in their capacity to generate value through collaboration [10]. Ref. [6] found that AMCs significantly influence ITCs. Ref. [48] discovered that companies with superior ITCs could benefit more from an alliance and boosts alliance performance. Strategic alliances are fragile and necessitate communication and coordination. ITCs play their role in such situations [49] and in integrating alliance activities and understanding better partner's initiatives [48].

Hypothesis 3 (H3). *Alliance Management Capabilities significantly influence Information Technology Capabilities.*

2.5. Information Technology Capabilities Mediate the Relationship between Alliance Management Capabilities and Enterprise Resilience

The dynamic and unsure business climate has compelled the organization to determine its means of survival. This dynamic business climate necessitates adaptation and prospering in an unknown environment, where organizational agility and resiliency are essential and provide the foundation for survival [50]. Ref. [51] revealed that collaborative knowledge facilitates the development of proactive e-business responses. In addition, they discovered the mediation role of ITCs in the form of e-business proactiveness in the relationship between collaborative knowledge development and firm agility, which is a component of enterprise resilience. A study by [14] shows that organizations could improve their resilience by using digital technology in their operations and alliances. The deployment of digitalization enhances the productivity of processing information, allows enterprises to manage resources, including alliances, better, and respond quickly to disasters [52]. Xie et al. [14] identify that digital technology proficiency moderates the business network-resilience relationship in SOEs more than in private enterprises.

Hypothesis 4 (H4). *Information Technology Capabilities mediate the relationship between Alliance Management Capabilities and enterprise resilience.*

3. Methodology

This quantitative research approach employs a cross-sectional time frame and survey methodology. The unit analysis of this study is Indonesia's SOEs and their subsidiaries because of their vital role and contribution to the national economy and social welfare [53]. We targeted the Board of Directors (BOD) and senior management of SOEs listed on the website of the Indonesia Ministry of State-Owned Enterprises (https://bumn.go.id; accessed on 30 April 2020) and the website of each SOEs as respondents. The survey instrument was pre-tested to assure the accuracy and applicability of the measuring instruments. We conducted the common method bias test using the procedures mentioned by [54]. Our cover letter also mentioned that we maintained their answers and comments as private and anonymous. We also conducted a pilot test with thirty-six (36) board members and senior managers from the SOEs and subsidiaries. SPSS was utilized to assess the reliability and validity of the pilot test's results. The outcome is satisfactory. Firm size (average revenue over the past three years) and firm age (number of years since inception) served as control variables in this study, since these two variables impact enterprise performance or survivability [55].

A survey used a questionnaire to collect data. There were 114 SOEs and 530 SOE subsidiaries in total in the period of survey (June 2020–August 2020). Because to the participants' tight schedules and the nature of the field research that was conducted during Indonesia's lockdown regulation because of the COVID-19 pandemic, this study used an online questionnaire using Google Forms.

4. Results and Discussion

The study examined 322 instances of valid data from online surveys. Then, the data were analyzed using SPSS 23 and the partial least squares structural equation modeling (PLS-SEM) method with reflective models. Seventy-seven percent of the enterprises are more than ten years old. Over fifty-two percent of enterprises have had more than 1000 billion IDR average revenue in the last three years. Meanwhile, the informant's characteristics are dominated by men (85%), 86% over 40 years old, and 66.5% on the company board.

4.1. Assessment of Measurement Model

We performed four preliminary tests before conducting the PLS-SEM assessment analysis using SmartPLS 3 [56]. The preliminary results are non-normal distributed data, with no evidence of common method bias. There are also no collinearity and non-response bias issues. Table 1 shows the measurement model assessment. Internal reliability Cronbach's Alpha (CA) and Composite Reliability (CR), and validity (convergent and discriminant) met the criteria [57,58]. SRMR value as the goodness of measure for PLS-SEM is less than 0.08 and is considered a good fit [59]. The Variance Inflation Factors (VIF) of the variables in the datasets are below 3, so collinearity is not an issue among the predictor constructs [60].

Table 1. Measurement model assessment.

	Internal Consistency		**Convergent Validity**	**Discriminant Validity**	**Model Fit**	**Collinearity**
	CA	**CR**	**AVE**	**HTMT**	**SRMR**	**VIF**
AMCs	0.936	0.947	0.666			
ITCs	0.936	0.946	0.663	<0.90	0.064	<3.3
ER	0.940	0.948	0.568			

4.2. Assessment of Structural Model and Hypotheses Test

PLS-SEM is a nonparametric method; thus, bootstrapping is employed to determine statistical significance [57,61]. Shown in Table 2, the R^2 (explained variance of the endogenous variables), f^2 (the effect size of predictor relationship), and Q^2 (the predictive relevance of the model) [57,61].

Table 2. Structural model assessment.

Variable and Relationship	**R^2**	**f^2**	**Q^2**
ER	0.698 (substantial)		0.388 (medium)
ITC	0.481 (moderate)		0.314 (medium)
AMCs → ITCs		0.686 (substantial)	
AMCs → ER		0.927 (substantial)	
ITCs → ER		0.115 (small)	

Table 3 exhibits the hypotheses test with all hypotheses supported.

Table 3. Hypotheses test.

Hypotheses	**B**	***SD***	***t*-Value ***	***p*-Value ***	**Decision**
H1: AMCs → ER	0.635	0.044	14.467	0.000	Supported
H2: ITCs → ER	0.262	0.050	5.278	0.000	Supported
H3: AMCs → ITCs	0.694	0.041	17.017	0.000	Supported
H4: AMCs → ITCs → ER	0.182	0.034	5.420	0.034	Supported

* *Supported: t*-value > 1.96 (two-tailed), $p < 0.05$.

5. Discussion

This research investigates the relationship between AMCs and ITCs with enterprise resilience. This study also examines the mediating role of ITCs on the relationship between AMCs and enterprise resilience. The findings indicate that AMC significantly affects ER, as suggested by previous research [35,44,47]. The findings suggest that having alliances and the competence to handle those alliances could allow businesses to reach their ultimate objective securely and successfully. The Ministry of SOEs could utilize this outcome to draft appropriate regulations, processes, and guidelines for SOEs to form reciprocal and long-lasting alliances. The results of the analysis support the hypothesis that ITCs have a significant effect on ER (as reported in earlier research). This finding indicated that SOEs and their subsidiaries must devote, build, and strengthen ITCs in order to proactively detect, capture opportunities, and transform enterprises' resources to create more agile enterprises. This research demonstrates the evidence to support the hypothesis that AMC has a significant effect on ITCs [6,48]. The results indicate that ITCs mediate the relationship between AMCs and enterprise resilience. This result suggests that businesses can create and enhance their resilience by forming alliances, managing them effectively, and increasing their ITCs.

6. Conclusions

This research extends the literature on AMCs, ITCs, and organizational resilience from the perspective of dynamic capability theory, particularly for state-owned firms in emerging economies which is still limited. The size and age of SOEs do not influence their capability to build their resilience. The results may be used to study SOE resilience in other developing countries and to compare private and public enterprise resilience that helps decision-making processes. These study results may convince the Ministry of SOEs to build and enhance the dynamic capabilities of all SOEs, including subsidiaries, to increase resilience. The Ministry of SOEs may create resiliency standards and measures.

This research has flaws. First, perceptual self-rating assessments can be worrisome. Second, a cross-sectional temporal horizon was used, and data were collected during COVID-19, and thus could have been affected by the conditions and environments, which could have been different if the data had been collected earlier. Third, this study only focuses on two dynamic capabilities (ITCs and AMCs). Fourth, it relies on a single informant, a board member, or a senior manager. Personal bias can occur. Nevertheless, these limits could open avenues for new research.

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References

1. Williams, T.A.; Gruber, D.A.; Sutcliffe, K.M.; Shepherd, D.A.; Zhao, E.Y. Organizational response to adversity: Fusing crisis management and resilience research streams. *Acad. Manag. Ann.* **2017**, *11*, 733–769. [CrossRef]
2. Linnenluecke, M.K. Resilience in business and management research: A review of influential publications and a research agenda. *Int. J. Manag. Rev.* **2017**, *19*, 4–30. [CrossRef]
3. Kantur, D.; İşeri-Say, A. Organizational resilience: A conceptual integrative framework. *J. Manag. Organ.* **2012**, *18*, 762–773. [CrossRef]
4. Heredia, J.; Rubiños, C.; Vega, W.; Heredia, W.; Flores, A. New strategies to explain organizational resilience on the firms: A cross-countries configurations approach. *Sustainability* **2022**, *14*, 1612. [CrossRef]
5. Wieczorek-Kosmala, M. A study of the tourism industry's cash-driven resilience capabilities for responding to the COVID-19 shock. *Tour. Manag.* **2022**, *88*, 104396. [CrossRef]
6. Dubey, R.; Bryde, D.J.; Graham, G.; Foropon, C.; Kumari, S.; Gupta, O. The role of alliance managementt, big data analytics and information visibility on new-product development capability. *Ann. Oper. Res.* **2021**, 1–25. [CrossRef]
7. Helfat, C.E.; Finkelstein, S.; Mitchell, W.; Peteraf, M.; Singh, H.; Teece, D.; Winter, S.G. *Dynamic Capabilities: Understanding Strategic Change in Organizations*; Blackwell: London, UK, 2007.
8. Kohtamäki, M.; Rabetino, R.; Möller, K. Alliance capabilities: A systematic review and future research directions. *Ind. Mark. Manag.* **2018**, *68*, 188–201. [CrossRef]
9. Schilke, O.; Goerzen, A. Alliance management capability: An investigation of the construct and its measurement. *J. Manag.* **2010**, *36*, 1192–1219. [CrossRef]
10. Sluyts, K.; Matthyssens, P.; Martens, R.; Streukens, S. Building capabilities to manage strategic alliances. *Ind. Mark. Manag.* **2011**, *40*, 875–886. [CrossRef]
11. Ciampi, F.; Marzi, G.; Rialti, R. Artificial Intelligence, Big Data, Strategic Flexibility, Agility, and Organizational Resilience: A Conceptual Framework Based on Existing Literature. In Proceedings of the International Conferences on WWW/Internet 2018 and Applied Computing, Budapest, Hungary, 21–23 October 2018; Volume 15, pp. 51–58.
12. Cetindamar, D.; Phaal, R.; Probert, D. Understanding technology management as a dynamic capability: A framework for technology management activities. *Technovation* **2009**, *29*, 237–246. [CrossRef]
13. Srinivasan, R.; Swink, M. Leveraging supply chain integration through planning comprehensiveness: An organizational information processing theory perspective. *Decis. Sci.* **2015**, *46*, 823–861. [CrossRef]
14. Xie, X.; Wu, Y.; Palacios-Marqués, D.; Ribeiro-Navarrete, S. Business networks and organizational resilience capacity in the digital age during COVID-19: A perspective utilizing organizational information processing theory. *Technol. Forecast. Soc. Change* **2022**, *177*, 121548. [CrossRef]
15. Almeida, R.; Teixeira, J.M.; Mira da Silva, M.; Faroleiro, P. A conceptual model for enterprise risk management. *J. Enterp. Inf. Manag.* **2019**, *32*, 843–868. [CrossRef]
16. Hamel, G.; Välikangas, L. The quest for resilience. *Harv. Bus. Rev.* **2003**, *81*, 52–63, 131. Available online: http://www.ncbi.nlm.nih.gov/pubmed/12964393 (accessed on 2 January 2022). [PubMed]
17. Van der Vegt, G.S.; Essens, P.; Wahlström, M.; George, G. Managing risk and resilience. *Acad. Manag. J.* **2015**, *58*, 971–980. [CrossRef]
18. Helfat, C.E.; Martin, J.A. Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *J. Manag.* **2015**, *41*, 1281–1312. [CrossRef]
19. Conz, E.; Magnani, G. A dynamic perspective on the resilience of firms: A systematic literature review and a framework for future research. *Eur. Manag. J.* **2019**, *38*, 400–412. [CrossRef]
20. Somers, S. Measuring resilience potential: An adaptive strategy for organizational crisis planning. *J. Contingencies Cris. Manag.* **2009**, *17*, 12–23. [CrossRef]
21. Teece, D.J.; Pisano, G.; Shuen, A. Dynamic capabilities and strategic management. *Strateg. Manag. J.* **1997**, *18*, 509–533. [CrossRef]
22. Cepeda, G.; Vera, D. Dynamic capabilities and operational capabilities: A knowledge management perspective. *J. Bus. Res.* **2007**, *60*, 426–437. [CrossRef]
23. Zhao, E.Y.; Fisher, G.; Lounsbury, M.; Miller, D. Optimal distinctiveness: Broadening the interface between institutional theory and strategic management. *Strateg. Manag. J.* **2016**, *38*, 93–113. [CrossRef]
24. Augier, M.; Teece, D.J. Dynamic capabilities and the role of managers in business strategy and economic performance. *Organ. Sci.* **2009**, *20*, 410–421. [CrossRef]
25. Teece, D.J. Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strateg. Manag. J.* **2007**, *28*, 1319–1350. [CrossRef]
26. Asian Development Bank. State-Owned Enterprises and Economic Development in Asia. In *Reforms, Opportunities, and Challenges for State-Owned Enterprises*; Ginting, E., Naqvi, K., Eds.; Asian Development Bank: Metro Manila, Philippines, 2020; pp. 1–43.
27. Okhmatovskiy, I. Performance implications of ties to the government and SOEs: A political embeddedness perspective. *J. Manag. Stud.* **2010**, *47*, 1020–1047. [CrossRef]
28. PwC's Public Sector Research Centre. State-Owned Enterprises Catalysts for Public Value Creation? 2015. Available online: https://www.pwc.com/gr/en/publications/assets/state-owned-enterprises-catalysts-for-public-value-creation.pdf (accessed on 11 January 2022).

29. Heo, K. *Effects of Corporate Governance on the Performance of State-Owned Enterprises*. Washington, D.C., WPS8555. 2018. Available online: http://documents.worldbank.org/curated/en/523421534424982014/Effects-of-corporate-governance-on-the-performance-of-state-owned-enterprise (accessed on 14 December 2020).
30. Okhmatovskiy, I.; Grosman, A.; Sun, P. Hybrid governance of state-owned enterprises. In *Oxford Handbook of State Capitalism and the Firm*; Wright, M., Wood, G., Cuervo-Cazurra, A., Sun, P., Okhmatovskiy, I., Grosman, A., Eds.; Oxford University Press: Oxford, UK, 2021.
31. Van der Stede, W.A.; Chow, C.W.; Lin, T.W. Strategy, choice of performance measures, and performance. *Behav. Res. Account.* **2006**, *18*, 185–205. [CrossRef]
32. Ireland, R.D.; Hitt, M.A.; Vaidyanath, D. Alliance management as a source of competitive advantage. *J. Manag.* **2002**, *28*, 413–446. [CrossRef]
33. Eisenhardt, K.M.; Martin, J.A. Dynamic capabilities: What are they? *Strateg. Manag. J.* **2000**, *21*, 1105–1121. [CrossRef]
34. Abdullah, N.H.N.; Said, J. Enhancing the governance of government linked companies via strategic management accounting practices and value creation. *Procedia Econ. Financ.* **2015**, *28*, 222–229. [CrossRef]
35. Inigo, E.A.; Ritala, P.; Albareda, L. Networking for sustainability: Alliance capabilities and sustainability-oriented innovation. *Ind. Mark. Manag.* **2017**, *89*, 550–565. [CrossRef]
36. Välikangas, L.; Romme, A.G.L. Building resilience capabilities at Big Brown Box, Inc. *Strateg. Leadersh.* **2012**, *40*, 43–44. [CrossRef]
37. Cai, Z.; Liu, H.; Huang, Q.; Liang, L. Developing organizational agility in product innovation: The roles of IT capability, KM capability, and innovative climate. *R D Manag.* **2017**, *49*, 421–438. [CrossRef]
38. Bharadwaj, A.S. A resource-based perspective on information technology capability and firm performance: An empirical investigation. *MIS Q.* **2000**, *24*, 169–196. [CrossRef]
39. Clark, C.E.; Cavanaugh, N.C.; Brown, C.V.; Sambamurthy, V. Readiness change- capabilities in organization: Insights from the bell atlantic experience. *Manag. Inf. Syst. Q.* **2010**, *21*. [CrossRef]
40. Mandal, S. Exploring the influence of IT capabilities on agility and resilience in tourism: Moderating role of technology orientation. *J. Hosp. Tour. Technol.* **2019**, *10*, 401–414. [CrossRef]
41. Mikalef, P.; Pateli, A. Information technology-enabled dynamic capabilities and their indirect effect on competitive performance: Findings from PLS-SEM and fsQCA. *J. Bus. Res.* **2017**, *70*, 1–16. [CrossRef]
42. Gu, M.; Yang, L.; Huo, B. The impact of information technology usage on supply chain resilience and performance: An ambidexterous view. *Int. J. Prod. Econ.* **2021**, *232*, 107956. [CrossRef] [PubMed]
43. Wamba, S.F.; Gunasekaran, A.; Akter, S.; fan Ren, S.J.; Dubey, R.; Childe, S.J. Big data analytics and firm performance: Effects of dynamic capabilities. *J. Bus. Res.* **2017**, *70*, 356–365. [CrossRef]
44. Sabahi, S.; Parast, M.M. Firm innovation and supply chain resilience: A dynamic capability perspective. *Int. J. Logist. Res. Appl.* **2019**, *23*, 254–269. [CrossRef]
45. Chae, H.C.; Koh, C.E.; Park, K.O. Information technology capability and firm performance: Role of industry. *Inf. Manag.* **2018**, *55*, 525–546. [CrossRef]
46. Dubey, R.; Gunasekaran, A.; Childe, S.J.; Blome, C.; Papadopoulos, T. Big data and predictive analytics and manufacturing performance: Integrating institutional theory, resource-based view and big data culture. *Br. J. Manag.* **2019**, *30*, 341–361. [CrossRef]
47. Wamba, S.F.; Dubey, R.; Gunasekaran, A.; Akter, S. The performance effects of big data analytics and supply chain ambidexterity: The moderating effect of environmental dynamism. *Int. J. Prod. Econ.* **2020**, *222*, 107498. [CrossRef]
48. Lioukas, C.S.; Reuer, J.J.; Zollo, M. Effects of information technology capabilities on strategic alliances: Implications for the resource-based View. *J. Manag. Stud.* **2016**, *53*, 161–183. [CrossRef]
49. Schreiner, M.; Kale, P.; Corsten, D. What really is alliance management capability and how does it impact alliance outcomes and success? *Strateg. Manag. J.* **2009**, *30*, 1395–1419. [CrossRef]
50. Altschuller, S.; Gelb, D.S.; Henry, T.F. IT as a resource for competitive agility: An analysis of firm performance during industry turbulence. *J. Int. Technol. Inf. Manag.* **2010**, *19*. Available online: https://scholarworks.lib.csusb.edu/jitim/vol19/iss1/1 (accessed on 22 March 2022).
51. Al-Omoush, K.S.; Simón-Moya, V.; Sendra-García, J. The impact of social capital and collaborative knowledge creation on e-business proactiveness and organizational agility in responding to the COVID-19 crisis. *J. Innov. Knowl.* **2020**, *5*, 279–288. [CrossRef]
52. Joseph, J.; Gaba, V. Organizational structure, information processing, and decision making: A Retrospective and roadmap for research. *Acad. Manag. Ann.* **2020**. [CrossRef]
53. Khatri, Y.; Ikhsan, M. Enhancing the development contribution of indonesia's state-owned enterprises. In *Reforms, Opportunities, and Challenges For State-Owned Enterprises*; Ginting, E., Naqvi, K., Eds.; Asian Development Bank: Mandaluyong, Philippines, 2020; pp. 88–132.
54. Podsakoff, P.M.; MacKenzie, S.B.; Podsakoff, N.B. Sources of method bias in social science research and recommendations on how to control it. *Annu. Rev. Psychol.* **2012**, *63*, 539–569. [CrossRef]
55. Yasuda, T. Firm growth, size, age and behavior in Japanese manufacturing. *Small Bus. Econ.* **2005**, *24*, 1–15. [CrossRef]
56. Ringle, C.M.; Wende, S.; Becker, J.M. SmartPLS 3. 2015. Available online: https://www.smartpls.com (accessed on 20 March 2022).

57. Hair Jr, J.; Hult, G.T.; Ringle, C.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed.; SAGE Publications, Inc.: Thousand Oaks, CA, USA, 2017; ISBN 9781483377445.
58. Henseler, J.; Ringle, C.M.; Sarstedt, M. A New criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* **2015**, *43*, 115–135. [CrossRef]
59. Henseler, J.; Dijkstra, T.K.; Sarstedt, M.; Ringle, C.M.; Diamantopoulos, A.; Straub, D.W.; Ketchen David, J., Jr.; Hair, J.F.; Hult, G.T.M.; Calantone, R.J. Common beliefs and reality about PLS: Comments on rönkkö and evermann (2013). *Organ. Res. Methods* **2014**, *17*, 182–209. [CrossRef]
60. Diamantopoulos, A.; Siguaw, J.A. Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *Br. J. Manag.* **2006**, *17*, 263–282. [CrossRef]
61. Chin, W.W. Commentary issues and opinion on structural equation modeling. *MIS Q.* **1998**, *22*, vii–xvi.