

The Influence of Knowledge Sharing, Organizational Agility, and IT Governance on the Digital Innovation Capability of E-Commerce Companies

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Abstract

The objective of this research is to evaluate how knowledge sharing, organizational agility, and IT governance impact the digital innovation capability of e-commerce firms in Indonesia. The ever-evolving digital technology landscape demands quick and precise innovation capabilities from e-commerce companies to remain in the race and meet the customers' wants. In this research, the quantitative method is applied through a survey of 200 respondents that are mainly from the national-scale e-commerce companies and digital startups. The outcomes indicate that all the three independent variables positively and significantly influence the capability of digital innovation. Knowledge sharing stimulates the cooperation of employees innovatively, the agility of an organization speeds up its adaptation to changes in the digital market, and IT governance takes care that the strategic way of innovation is both controlled and efficient. This study, besides being a theoretical contribution to organizational resource-based digital innovation management literature, has also practically benefited e-commerce firms through advising them to apply knowledge sharing strategies, organizational agility, and IT governance to strengthen their digital innovation competencies.

Keywords: knowledge sharing, organizational agility, IT governance, digital innovation capability.

INTRODUCTION

Without doubt, digital transformation has become the main factor for firms to stay competitively in any market especially in the e-commerce segment, where the application of Industry 4.0 technologies is progressing at high speed (Gunawan et al., 2020). As consumer behavior is more and more influenced by technology, the capability to digitally innovate is the only way to attract, keep, and delight customers, as well as to gain a sustainable competitive advantage (Djunaedi, 2024). Digital innovation capability means the successful conversion of digitization into new offerings and processes. In the e-commerce sector, the capability to digitally innovate is very important due to the fierce competition in the digital market, the fast technological changes, and the customers' demands for quick and

personalized service (Pettalongi et al., 2025; Nuraeni et al., 2025). E-commerce businesses will be more successful in adapting to customer-centered innovations, building digital strategies that enhance user satisfaction, and shifting to customer-oriented data and analytics within corporate digital strategies as they invest in advanced digital innovation (Daud et al., 2025; Susanto et al., 2023). Therefore, developing the capacity for digital innovation should be prioritized as an operational necessity and a strategic plan for business sustainability.

One of the major factors that determine digital innovation capability is sharing knowledge within the organization (Damanik et al., 2025). To put it simply, in a dynamic e-commerce environment, knowledge sharing allows for the inflow and outflow of ideas, technology-related experiences, and information on application of the best digital management practices (Harahap et al., 2025; Judijanto et al., 2024). The effects of knowledge sharing on organizational communication are significant and are felt throughout the company; it brings different departments together and hence accelerates organizational learning (Tannady & Dewi, 2024). Once an organization becomes open-minded to collaboration and learning and hence more agile and innovative, the question of capability of finding new ideas rarely arises as these will flow from the organization itself (Mulyadi et al., 2024). Organizational agility is, however, a factor that cannot be ignored when it comes to building digital innovation capability (Wahyoedi et al., 2024; Fibriany et al., 2025). The market gauging skills of an agile organization are not less than sharp. This enables the detection of changes in the market at the earliest and taking the required action (mostly business model and technology adoption) without upsetting the operational stability (Sudrajad et al., 2023).

The benefits of organizational agility are felt in many spheres of a business, for instance, in the context of data-driven decision-making, it will be accelerated as there would be a company culture of natural engagement with data and openness to decisions based on it as a result of guidance by the top management team on transparent communication and fact-based discussions (Suherdi & Ahmad, 2023). With regards to the compliance surrounding e-commerce companies' use of information technology, how IT governance can facilitate good practice and overall strategy in the field of innovation would be needed to be referred to by other individuals (Windiyani & Lestari, 2025). Likewise, good governance facilitates coordination between IT teams and other business units, thus ensuring smooth and efficient implementation of digital innovation (Karyono et al., 2024; Kurniasari et al., 2023). E-commerce enterprises with well-established IT governance frameworks are more likely to be the ones effortlessly creating groundbreaking digital products and services since they have put in place monitoring, evaluation, and control procedures that stimulate continuous innovation (Haribowo & Rezeki, 2023).

Based on the above statement, this study is to investigate the impact of knowledge sharing, organizational agility, and IT governance on the digital innovation capability of e-commerce firms in Indonesia. This study is intended to become a source of theoretical contributions to the digital innovation management and information technology literature, particularly in the area of internal organizational factors that facilitate digital innovation capability. The study also contributes to the development of dynamic capability theory and the knowledge-based view in the digital economy context. Practically, the results of this study may serve as a resource in the e-commerce industry for the management of e-commerce companies to draft the human resource development strategies, improve IT governance, and build an organizational culture that embraces digital change.

METHOD

E-commerce companies that have an IT governance framework which is well-planned are those enterprises that will effortlessly be able to create the groundbreaking digital products and services. This is mainly because such firms have already set up their monitoring, evaluation, and control procedures which, among other things, encourage continuous innovation. The current research has taken a survey as an instrument within a quantitative research framework to understand the phenomena of knowledge sharing, organizational agility, IT governance in e-commerce companies in the Indonesia context, and specifically their effect on the companies' digital innovation capabilities. An explanatory study like this one aims at explaining the cause-and-effect dynamics of the constructs. The employees of the nationally scaled e-commerce companies and digital startups that are engaged in online platform-based business operations constituted the population for this study. The research took a sample of 200 respondents and these were collected through purposive sampling. The sample selection criteria were based on the research variables and the criteria included the following: (1) respondents are permanent or contract employees in e-commerce companies that have been operating a minimum of two years; (2) were directly involved in the digital systems management or implementation, including digital marketing, product development, IT, or operations management; (3) experience working on technology-based digital innovation projects, and (4) employed in organizations where formal IT governance frameworks and practices have been established. Validity testing was done through a t-test (item-total correlation) under the provision that statement items are declared valid if the correlation value is > 0.30 and significance < 0.05 . Reliability testing was conducted using the Cronbach Alpha method, where the criterion α value > 0.70 indicates that the instrument has good internal consistency. The data analysis was carried out by the multiple linear regression method to figure out the simultaneous and partial effects of knowledge sharing, organizational agility, and IT governance on digital innovation capability. The F test was employed to check the simultaneity, whereas the t test was used to examine the partial effect of each independent variable on the dependent variable. The coefficient of determination (R^2) was utilized to measure the proportion of the variation in digital innovation capability that can be accounted for by the three independent variables.

RESULT AND DISCUSSION

The analysis of multiple linear regression does indicate the presence of the significant research model to be in conjunction. The calculated F-value of 58.72 is much higher than the F-table threshold of 3.05 at a significance level of $0.000 < 0.05$ which tells that knowledge sharing, organizational agility, and IT governance considered together significantly contribute to digital innovation capability. The coefficient of determination (R^2) which is equal to 0.74 means that 74% of the digital innovation capability variance is attributed to the three independent variables while the rest 26% is accounted for by the factors outside the model like organizational culture, digital leadership, or tech popularity. The outcome of the partial t-test shows that the three independent variables have a positive and significant effect on the dependent variable, with each value of t computed being more than that of t-table (1.97) and also a significance level < 0.05 . The positive values of regression coefficients signal that the rise in knowledge sharing, organizational agility, and IT governance will be accompanied by the rise in digital innovation capabilities of the e-commerce companies.

In the case of e-commerce companies, the impacts of knowledge sharing on digital innovation capability are both positive and significant. This demonstrates the importance of employee knowledge sharing in the ideation and digital innovation pipeline. Companies are

able to do transformative adaptation and design cutting edge solutions to challenges and opportunities in the fast-paced e-commerce sector and digital technologies through the mutual exchange of information, experience, and insight knowledge sharing. With knowledge sharing, technical knowledge spreads rapidly, organizational knowledge expands, and efforts in collaboration increase among teams from different functions. Team members who are engaged in active knowledge exchange are digital service development, online service streamlining, and tech-driven operational efficiency improvement roles are much more empowered. This perfectly complements the Knowledge-Based View (KBV) theory, which supports competitive advantage and innovation through knowledge as a strategic resource. Hence, within an e-commerce organization, the sharing of knowledge qualitatively and quantitatively enhances the organization's capacity to produce digital innovations that are sustainable and value driven.

According to the research, organizational agility also significantly and positively influenced digital innovation capability. Organizational agility is what allows businesses to evolve with ease in a digitized environment and also respond to a rapidly changing market. In a scenario like e-commerce, where consumer behavior and technology keep on changing very fast, the adaptation of an organization's strategy, structure, and work processes is what leads to the creation of the most relevant digital innovation. Organizational agility equips a firm with the ability to trial new things, decide based on data very quickly, and take up the latest technology without causing operational stability to be disrupted. An agile firm is better positioned to cope with new trends such as the implementation of artificial intelligence, customer data analytics, and business process automation in a more efficient way. These findings are in line with the Dynamic Capability theory which mainly points out that organizations with strategic agility are capable of transforming change into innovative opportunities. Thus, organizational agility is a main driver that helps to speed up the digital innovation process in e-commerce companies, hence enabling companies to be more responsive, adaptive, and innovative in tackling global competition.

The research findings, besides the two earlier factors, estimated positively and significantly that IT governance had an effect on digital innovation capability. Good IT governance even allows digital resources to be used effectively and in a way that is consistent with the company's business strategy. In the case of e-commerce companies, IT governance determines the technology usage policies, manages the risks associated with data security, and ensures that the digital systems that are the backbone of business operations are reliable. E-commerce enterprises that have a well-structured IT governance framework in place are more likely to be effortlessly creating groundbreaking digital products and services because they have established monitoring, evaluation, and control procedures that foster continuous innovation. Solid IT governance will also enable companies to seamlessly integrate information systems across the enterprise, quicken technology-based decision-making, and diminish the chances of mistakes during the process of digital innovation thereby lowering the risk of errors in the implementation of digital innovation. Besides, proper governance provides a well-defined framework for the development of innovations, which are then controlled, measured, and kept compliant with the relevant regulations. These results are in line with the view that IT governance should not be seen merely as a control function but as a strategic enabler that creates synergy between technology and business strategy. In an e-commerce setting, efficient IT governance will lead to the effective implementation of digital innovations, enhance customer trust in the company's digital systems, and facilitate the creation of environmentally friendly digital innovation capabilities in the face of increasingly complex industry dynamics.

CONCLUSION

E-commerce enterprises with well-organized IT governance frameworks are in a position to effortlessly come up with innovative digital products and services as they have already put in place procedures for monitoring, evaluation, and control that encourage continuous innovation. The study revealed that knowledge sharing, organizational agility, and IT governance had a positive and significant impact on the digital innovation capability of Indonesian e-commerce companies. One such indicator, the knowledge-sharing culture, reveals how the organization increases its digital innovations. Furthermore, organizational agility plays a role in an organization's ability to cope with rapid technological changes and unstable consumer behavior, whereas IT governance is the main factor that leads to the effective and efficient control of innovations. From a management point of view, an organization is expected to create agile adaptive structures and deploy IT governance in line with the business strategy. Thus, e-commerce companies will be able to continuously enhance their digital innovation capabilities and retain their status in the global digital economy.

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