

The Influence Of Cross-Functional Collaboration, Top Management Support And Employee Digital Competence On Digital Innovation Capability In Multinational Service Companies

Yanuar Latief¹, Haris Karyadi², Kushariyadi³, Iwan Henri Kusnadi⁴, Baren Sipayung⁵, Hakim⁶

¹ Prodi Manajemen, STIE Bisnis Indonesia

² Prodi Manajemen, STIE GICI

³ Prodi Logistik Migas, PEM AKAMIGAS

⁴ Prodi Magister Ilmu Pemerintahan, STISIP Bina Putera Banjar

⁵ Prodi Manajemen Keuangan Sektor Publik, Politeknik Bisnis Kaltara

⁶ Prodi Ekonomi Pembangunan, Universitas Nahdlatul Ulama Alghazali Cilacap

e-mail: yanuar.latief@stiebi.ac.id

Abstract

This study aims to explore the influence of Cross-Functional Collaboration, Top Management Support and Employee Digital Competence on Digital Innovation Capability in a global service business. This study integrates quantitative research methodologies and survey methods by giving questionnaires to 210 workers and managers of a worldwide service firm by employing purposive sample approach. The prerequisites of respondents were that they had been working for at least two years, were active in the use of digital technology in their professional activities and had experienced the use of digital technology in the context of innovation or digital transformation efforts. The data analysis method was multiple linear regression. Prior to the study, the data were tested for validity, reliability, normalcy, heteroscedasticity, and multicollinearity, as well as classical assumption tests. The results indicated that Cross-Functional Collaboration, Top Management Support, and Employee Digital Competence had a partial and simultaneous positive and significant effect on Digital Innovation Capability. The findings of the research reveal that an organization's digital innovation skills may be strengthened by strengthening cross-functional collaboration, active support from top management and developing digital competencies of workers.

Keywords: Cross-Functional Collaboration, Top Management Support, Employee Digital Competence, Digital Innovation Capability

INTRODUCTION

Rapid developments in digital technology have changed the global competitive environment, especially the multinational services industry. Multinational services firms are under pressure to innovate continuously to provide services that are quicker, more personalised, more efficient and more technology-based (Alfiana et al., 2023). In an increasingly competitive world a company's capacity to develop and adopt digital innovations is a key driver in sustaining a competitive edge. Digital Innovation Capability is one of the capabilities focused on in the age of digital transformation (Wikansari et al., 2023). Digital innovation competency is the ability of an organization to develop, adapt and use digital technology to produce new goods, services, processes and business models that provide additional value for customers and the company. This capacity is important since multinational services firms are operating in a dynamic environment with a very quick pace of technological development (Estede et al., 2025). Organizations with high capacity for digital innovation will be better able to adapt to changing consumer wants, exploit new market possibilities, and enhance operational efficiency by using digital technology (Prasetyaningrum & Hakim, 2025).

One of the main aspects believed to affect Digital Innovation Capability in international service firms is Cross-Functional Collaboration. Cross-functional collaboration is a measure of the level of cooperation and coordination between different functions or departments within an organization to achieve common goals (Wahda et al., 2019). Cross-functional cooperation is essential in the digital innovation process, since innovation is not just the responsibility of the information technology department but also of marketing, operations, human resources, finance and customer service departments (Mustafa & Suparwata, 2024). When businesses work well together, they may pool a range of viewpoints, information and skills to provide more comprehensive and creative solutions. Furthermore, Top Management Support is a key component that is hypothesized to affect Digital Innovation Capability in international service firms (Mardiani et al., 2024). In the digital transformation era, the position of senior management is vital since they may set the strategic direction, allocate resources, and build an organizational culture that encourages innovation. Support from top management may be shown by cash allocation, development of technology infrastructure, training and establishing policies that foster digital innovation (Sudadi et al., 2023). Another element considered to impact digital innovation capability in international service organizations is the digital competence of employees. Digital competence of the employee is the person's capacity to utilize, comprehend, manage and exploit digital technology to support job tasks and produce innovation (Zakaria et al., 2025; Asmawi et al., 2023). Employee digital competence is a strategic asset that defines the success of organizational innovation, especially in international service firms that are increasingly dependent on digital technology (Mutoffar et al., 2024; Aziza, 2025).

In addition to internal organizational factors, the increasingly complex global business environment requires multinational service firms to develop adaptive and agile innovation capabilities. The rapid emergence of new digital platforms, artificial intelligence, cloud computing, and data analytics has transformed how services are designed, delivered, and evaluated. Companies that fail to keep pace with these technological developments may

experience declining competitiveness and customer satisfaction. Therefore, strengthening Digital Innovation Capability has become a strategic priority for multinational service organizations seeking long-term sustainability and growth.

Despite the growing importance of Digital Innovation Capability, many multinational service firms still face challenges in implementing digital transformation initiatives effectively. Organizational silos, limited communication among departments, inadequate managerial commitment, and disparities in employees' digital skills often hinder the innovation process. These challenges can reduce the effectiveness of digital technology adoption and limit the organization's ability to generate innovative solutions that meet changing customer expectations.

Previous studies have highlighted the significance of organizational collaboration, leadership support, and employee competencies in fostering innovation. However, most existing studies have examined these factors independently, with limited attention given to their simultaneous influence on Digital Innovation Capability, particularly within the context of multinational service firms. As a result, there remains a need for empirical research that integrates these variables into a comprehensive framework to better understand their collective contribution to digital innovation outcomes.

Furthermore, multinational service firms operate across diverse geographical, cultural, and regulatory environments, making the management of digital innovation more complex than in domestic organizations. Differences in work practices, communication styles, and technological readiness among international branches require stronger collaboration mechanisms and leadership support. In this context, employee digital competence becomes increasingly important, as employees are expected to adapt to new technologies and collaborate effectively across organizational and national boundaries.

Based on these considerations, this study seeks to address the existing research gap by investigating the combined effects of Cross-Functional Collaboration, Top Management Support, and Employee Digital Competence on Digital Innovation Capability in multinational service firms. Understanding these relationships is expected to provide valuable insights for both academics and practitioners regarding the key drivers of digital innovation and contribute to the development of more effective digital transformation strategies in the global service industry.

The purpose of this research is to examine the effect of Cross-Functional Collaboration, Top Management Support and Employee Digital Competence on Digital Innovation Capability in international service firms. Theoretically, this research is intended to add to the growth of literature on innovation management, digital transformation and organizational behavior, especially the elements that impact an organization's digital innovation capabilities. This research is also intended to expand our knowledge of the effect of organizational cooperation, managerial support, and digital competency of human resources in the development of digital innovation. The outcomes of this study are likely to provide a reference for the future investigation on comparable themes. In practical terms, this research is projected to bring value to the multinational service firms in establishing more effective strategies to boost digital innovation.

METHOD

The quantitative technique is used to examine the effect of Cross-Functional Collaboration, Top Management Support and Employee Digital Competence on Digital Innovation Capability in multinational service businesses. The technique of study employed is the survey method, with the research instrument in the form of a structured questionnaire produced based on indicators of each variable and assessed using a Likert scale of 1-5. The research sample is comprised of people employed at global organizations in the service industry, including consulting, information technology, banking, logistics and other professional services. The sampling technique used is purposive sampling with the criteria of the respondents being employees or managers who have worked for at least two years in multinational service companies, are involved in the use of digital technology in their daily work activities and have participated in innovation projects, digital transformation or technology-based service development. In this research the number of samples was determined by 210 respondents. Data were collected using surveys sent through a digital portal. The validity of the instrument test was conducted using a t-test, where statement items are said to be legitimate if the t value $>$ t table at a significance level of 5%. Reliability test was done by utilizing Cronbach Alpha with minimum value 0.70. Before the primary analysis, the data were subjected to traditional assumption tests such as tests of normality, heteroscedasticity and multicollinearity to verify the regression model matched the statistical criteria. The basic approach of data analysis for testing the partial and simultaneous influence of independent factors on the dependent variable is multiple linear regression. The significance threshold is 0.05.

RESULT AND DISCUSSION

Based on the findings of data processing of 210 respondents comprising of workers and managers in a global service organization, all research instruments are pronounced legitimate and reliable. The results of the validity test show that all statement items in the variables of Cross-Functional Collaboration, Top Management Support, Employee Digital Competence, and Digital Innovation Capability have a calculated t value greater than the t table at the significance level of 5%. Thus, all items are declared valid and feasible to be used in research. The results of the reliability test shows that all variables have Cronbach Alpha value over 0.70. This shows that the research instrument has a strong degree of consistency. The outcome of the multiple linear regression analysis indicated that concurrently the Cross-Functional Collaboration, Top Management Support, and Employee Digital Competence had a significant influence on the Digital Innovation Capability with a significance value of the F test of less than 0.05. The three independent factors also had a significant positive influence on Digital Innovation Capability to some extent according to the findings of the t test. The R^2 value of the coefficient of determination demonstrated that the three independent variables in the study model could explain most of the variance in Digital Innovation Capability.

Results of the research show that cross-functional cooperation positively and significantly enhance digital innovation capabilities in multinational service firms. This implies that the higher the level of collaboration between functions within an organization, the higher

the company's ability to generate and implement digital innovation. Digital innovation in international service businesses usually arises from a mix of competences originating in many areas, such as information technology, marketing, operations, finance, and human resources. Cross functional collaboration facilitates sharing of varied knowledge, experiences and perspectives leading to more holistic innovative solutions. Furthermore, good interdepartmental interaction allows the decisionmaking process and the implementation of innovations to be accelerated. Conversely, the existence of organizational silos and a lack of coordination between work units can hinder the flow of information and slow the innovation process. The findings of this research support the knowledge integration idea that knowledge integration within different organizational roles might boost innovative capabilities. Previous research also shows that cross-functional collaboration has a positive influence on innovation performance, organizational agility, and the success of digital transformation.

The research findings reveal a favorable and substantial effect of Top Management Support on Digital Innovation Capability in multinational service firms. This implies that the greater the amount of senior management support and commitment to digital innovation, the better the organization's potential to originate and develop technology-based innovations. Top management has a strategic role in influencing the trajectory of an organisation's digital transformation via the creation of a vision, the allocation of resources and the cultivation of an organisational culture that facilitates innovation. Management assistance might be in the form of technology investment, personnel competence development, provision of digital infrastructure and room for new trials. The active support of senior management for digital innovation makes digital innovation more motivating for workers to engage in the process of transformation and technological development. Rather, the absence of support from management affects poor organizational commitment to innovation and impedes the execution of digital transformation. The findings of this research are consistent with strategic leadership theory, which indicates that strategic leadership is an important element in the success of organizational innovation. Previous studies have also shown that senior management support has an effect on innovation success, digital transformation and organizational performance.

The study results show that Employee Digital Competence has a positive and significant effect on Digital Innovation Capability in multinational service companies. This suggests that the higher the digital competence of the workforce, the higher the firm's ability to provide value-added digital innovations. In the era of digital economy, workers are required not only to be able to utilize technology, but also they must find the opportunity to use technology to improve service quality and business process efficiency. Employees with a high level of digital competence are more adaptable to the latest improvements in technology and are more active in coming up with innovative ideas. They are also better able to utilize diverse digital platforms to foster collaboration, analyze data and develop technology-based services. On the other hand, a lack of digital competence may be a barrier to the innovation process and reduce the effectiveness of technology implementation in the firm. The results of this study are consistent with the human capital theory which states that the competence and talents of an individual are important assets for the creation of an organization's competitive

advantage. Another research also reveals that employee digital competence influences the inventive skills, digital transformation and corporate competitiveness.

CONCLUSION

Based on the results of research that has been done, it can be concluded that Cross-Functional Collaboration, Top Management Support and Employee Digital Competence have been proven to have a positive and significant effect on Digital Innovation Capability in multinational service companies, both partially and simultaneously. The research findings suggest that cross-functional cooperation is a critical way to increase an organization's capacity to synthesize diverse knowledge, experience, and views from different organizational functions to generate more successful digital innovation. Top management support is also a key facilitator for enhancing digital innovation capabilities via allocation of resources, strategic support and fostering an organizational culture supportive of digital transformation. Moreover, employee digital competence has been shown to be a significant aspect to enhance the organization's capacity to create and execute digital innovation, since strong digital competence makes it possible for workers to use technology efficiently in job activities and innovation processes. These three variables are strategic aspects that contribute to success in digital innovation in global service firms working in a dynamic and competitive business environment. Therefore, firms are recommended to promote cross-functional cooperation, boost top management engagement in digital transformation and build staff digital competency via continual training and development.

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