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The Effects of Technology Integration Capability, Continuous Improvement Culture, and Organizational Ambidexterity on Technology-Driven Organizational Performance in Startup Companies

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Abstract

The objective of this research is to examine the Influence of Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity on Technology-Driven Organizational Performance in startup organizations. The research is a quantitative research by using survey technique to the people who work in startup company. The purposive sample approach was used in which the respondents were selected on the basis of their knowledge and understanding of the operational process and the use of digital systems or technology in their job activities. The research data were collected through an online questionnaire using Google Forms. Multiple linear regression was used to analyze the data. The results show that Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity have positive and significant influence on Technology-Driven Organizational Performance. The results suggest that the ability of a corporation to connect systems, applications, data, digital platforms and business processes is crucial in transforming the use of technology into improved organizational performance. The results also suggest that for startups to sustainably improve efficiency, productivity, innovation, quality of decision-making, and business growth, they need to improve their technology integration, promote continuous improvement and strike a balance between exploring new opportunities and optimizing existing technologies and capabilities.

Keywords: Technology Integration Capability; Continuous Improvement Culture; Organizational Ambidexterity; Technology-Driven Organizational Performance.

INTRODUCTION

The advent of digital technology has changed the business environment leading to increasingly dynamic patterns of competition especially for start-ups that use technology as one of the main pillars for product development, service delivery, business processes and value creation models. The operating environment of startup companies is characterized by changing customer needs, technological developments, short innovation cycles, limited resources, investor pressure, and competition from digital companies and traditional companies undergoing digital transformation. Here, the success of a startup is not only measured by its ability to raise funds, grow its user base or develop new products, but also

by the organization's ability to translate the use of technology into concrete and sustainable performance improvements. A very fitting term is Technology-Driven Organizational Performance. Technology-Driven Enterprise Performance is the ability of an organization to leverage technology to achieve the benefits of effectiveness, efficiency, innovation, productivity, quality of decision making, customer experience and business growth. Technology can help companies to automate operations, get real time information, study consumer behavior, build digital services, improve cooperation and speed up decision making processes. But just having or using technology does not always lead to better performance if the technology is not successfully linked to company strategy, business processes, human resources and organizational skills.

Technology Integration Capability is considered as one of the main variables in improving Technology-Driven Organizational Performance in start-up organizations. Technology integration capability is the ability of an organization to integrate different technologies, systems, applications, data and digital processes so that they work together in a coordinated way to support business operations. In start-ups, technology changes rapidly as the number of users grows, products become more complex, business models change and the need to provide a range of new features and services becomes more pressing. In addition to the capacity to integrate technology, Continuous Improvement Culture is expected to be an essential component to improve Technology-Driven Organizational Performance in startup organizations. Continuous Improvement Culture is the set of beliefs, norms and practices of a company that encourage its people to continuously analyze processes, identify problems, learn from experience and improve work methods, products, services and the use of technology. In business environments of startup firms, the client needs, technology and competitive scenarios are ever-evolving and therefore the goods and organizational processes are not finalized. For this reason, organizations must establish a culture in which change is not seen as a special activity but as a normal part of everyday organizational life. Another factor that is expected to impact Technology-Driven Organizational Performance in startup organizations is Organizational Ambidexterity. Organizational ambidexterity is the ability of an organization to carry out both exploitation and exploration operations at the same time. For startups, it is very critical to find the right balance between these two activities. Innovation can't be the only thing a company is about; it also needs operational efficiency and stability. But a company can't just concentrate on improving current operations and neglect exploring new opportunities.

The objective of this research is to analyze the effect of Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity on Technology-Driven Organizational Performance in startup organizations. The current study is especially important because the success of startup companies in the digital business environment is determined not only by the level of adoption of technologies but also by the ability of companies to integrate technology, develop a culture of continuous improvement and balance the use of existing capabilities with the search for new opportunities. The theoretical contributions of this study are expected to help develop the literature in the areas of technology management, strategic management, organizational performance, organizational culture and organizational ambidexterity especially in understanding the organizational factors that may improve technology driven performance in startup companies.

METHOD

The investigation was quantified by utilizing survey technique. The study population was the employees working in startup companies in Indonesia, which includes employees in

information technology, product development, marketing, operations, business development, finance, human resources, customer service, and other supporting units familiar with the use of technology and organizational processes. The sampling technique used is purposive sampling. The respondents are active employees of a startup company with a minimum of one year of work experience who understand operational processes and use technology in the organization and have experience in utilizing digital systems or platforms to support their work activities. Data were collected using an online questionnaire distributed through Google Forms. The study instrument consisted of items assessed on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Data was analyzed by multiple linear regression to test the partial and simultaneous effects of Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity on Technology-Driven Organizational Performance in startup organizations. The partial hypothesis was tested by using t-test at 5% significance level ($\alpha = 0.05$) and the simultaneous effect of the three independent variables was tested by using F-test. In addition, the coefficient of determination (R^2) was used to determine the percentage of variation in Technology-Driven Organizational Performance that was explained by Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity.

RESULT AND DISCUSSION

Results of data analysis on respondents working in startup companies in Indonesia show that Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity simultaneously have positive and significant effects on Technology-Driven Organizational Performance. The partial hypothesis testing also shows that each independent variable has positive and significant influence on the Technology-Driven Organizational Performance (TDOP). This supports all study hypotheses. The coefficient of determination (0.492) indicates that 49.2% of the variance in Technology-Driven Organizational Performance is explained by the Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity. The rest of the variance is explained by other factors not included in the research model. The model results suggest that the effect of Technology Integration Capability on Technology-Driven Organizational Performance is higher than those of Continuous Improvement Culture and Organizational Ambidexterity. These results suggest that the technologically-driven performance enhancement of startup firms is mainly attributed to the organization's capability to successfully integrate technologies, systems, data and business processes. But the benefits of technology integration need to be supported by a culture of ongoing development and the organization's ability to maintain a balance between exploring new possibilities and optimizing its existing capabilities.

The findings reveal that Technology Integration Capability has a positive and significant effect on Technology-Driven Organizational Performance in startup organizations and is the most dominant variable in the study model. Our results suggest that the capacity of a corporation to combine different technologies, systems, applications, data and business processes is a major determinant of the extent to which technology can be translated into enhanced organizational performance. Startups are technology-dependent, as many operations are handled via digital systems and platforms from product development to marketing, customer support, internal communication, transaction management to decision making. However, using different technologies in isolation can fragment information, duplicate processes, cause discrepancies in data, and increase coordination complexity. Technology Integration Capability enables companies to connect a variety of technology resources to provide faster, more accurate and more consistent flow of information across

organizational units. System integration also enables the automation of many work processes that previously required human involvement, so that firms can increase efficiency and reduce errors and speed up the completion of tasks. Technology integration enables organizations to scale their service and transaction capacity without necessarily scaling their resources at the same rate, which is important for new enterprises that need to be scalable. Consumer data collection, analytical systems, product development, marketing and customer service are also helping organizations gain a more holistic knowledge of user demands and deliver faster solutions.

The results show that Continuous Improvement Culture has a positive and significant effect on Technology-Driven Organizational Performance in start-up firms. Thus, performance improvement through technology is about not only investment and technical skills, but also organizational culture that encourages ongoing assessment, learning and development. A startup is a fast-changing environment. The technology, products, methods and ways of operating of today may not be relevant in the future. The Ongoing Improvement Culture allows companies to continually question whether the technologies and processes that have been used have given the best advantages and to discover other opportunities for improvement. The culture drives staff to not only adhere to the rules but to actively seek out inefficiencies, system faults, consumer needs and opportunities to design better ways of working. Learning can improve the products and processes of the organization. Improvement can occur in many ways, such as feedback from customers, data on product use, results of experiments, staff experiences, and evaluations of failures. In a technology driven environment improvements may be small and continuous, yielding significant performance gains. Companies can improve customer satisfaction, reduce complexity, enhance system quality, decrease errors and increase velocity of service. Continuous improvement also helps maximize the technology investments as businesses often review how they can use technology efficiently. This culture stresses the sharing of information and collaboration among the units of the organization so that lessons learnt in one area of the organization are used to improve the processes in the other sections.

The results show that Organizational Ambidexterity has a positive and significant effect on Technology-Driven Organizational Performance in startup enterprises. The present study posits that the ability of a firm to balance exploration and exploitation is an important strategic competence that enhances the achievement of technology-oriented performance. "Businesses are squeezed on both sides in a fast changing technology world. In contrast, companies must leverage their existing technology, capabilities, products, data and processes to drive efficiency, productivity, quality of service and revenue generation. At the same time, enterprises must look at new technology, new products, new markets and new business models to remain relevant and find new avenues for future growth. The focus on exploitation provides efficiency in the current business model but can lead a company to miss opportunities when technology changes or client requirements change. Conversely, overly exploratory companies may be creating lots of ideas and experiments, but they are also likely to risk huge expenses, unpredictability, and difficulties translating innovation into consistent performance. Organizational ambidexterity is the ability to simultaneously balance two tasks to enable technology to be used to improve current performance and to build new capabilities for the future. While focusing on improving operational efficiency through existing platforms and technologies, startups should also explore artificial intelligence, automation, advanced analytics and other emerging technologies to develop new products and services. Ambidexterity also enables firms to dynamically reallocate the priorities of assets to satisfy new opportunities and strategic goals.

CONCLUSION

Based on the results of this research, it can be stated that Technology Integration Capability, Continuous Improvement Culture and Organizational Ambidexterity have positive and significant effect on Technology Driven Organizational Performance in startup organizations. The variable with the highest influence on Technology-Driven Organizational Performance is Technology Integration Capability, meaning that the capability to integrate systems, applications, data, digital platforms and business processes is one fundamental base to achieve better organizational performance from technology investments. In practice, nascent organizations should enhance their technological Integration Capability by improving systems' interoperability, integrating data and applications, standardizing technologies, and aligning technological architecture with business goals. Companies also need to build an environment of continuous improvement. They should promote continuous process review and include input to improve processes and products. They need to promote knowledge sharing, learn from mistakes, involve workers in improvement projects and use data to improve processes and goods. At the same time Organizational Ambidexterity has to be enhanced by establishing a proper balance between maximization of current technology, products and processes and investigation of new technologies, products, markets and business models.

REFERENCES

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