

INCREASING INNOVATION PERFORMANCE THROUGH INTER ORGANIZATIONAL COLLABORATION IN DIGITAL ERA

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ABSTRACT

This study aims to determine the role of intra-organizational knowledge sharing, inter-organizational collaboration, and digital platform capability to increase innovation performance. Intra-organizational knowledge sharing is considered as an important step for knowledge management in an organization. This research is also based on the role of intra-organizational collaboration which is considered important for inter-organizational interaction and which is important for information to create innovation. The digital platform capability in this current era are able to encourage increased innovation performance. The respondents used in the study were 105 fashion SME owners in Semarang City. The data analysis technique used Smart PLS type 3.3. The results of this study indicate that intra-organizational knowledge sharing and inter-organizational collaboration have a positive and significant impact on increasing innovation performance. This research also showed that the digital platform capability can increase innovation performance. This study discusses the process of sharing knowledge and implementing collaboration between organizations, as well as the importance of encouraging the digital platform capability to collaborate between organizations to increase innovation performance. SMEs can reach a tipping point where it becomes critical for their growth to implement more productive methods with digital technology platform support into business operations which will lead to better business decisions. The importance of conceptualized digital platform capabilities in organizations that have the ability to respond to technological advances that exist in the business. This means that digital platform capabilities can be a moderating variable between intra-organizational collaboration and innovation performance.

KEYWORDS: *Digital platform capability, innovation performance, inter organizational knowledge sharing, intra organizational collaboration*

1 INTRODUCTION

The current era is the era of digitalization. The era that has changed the current state of the world uses digital in all its activities. Advances in digitalization change lifestyles that are very different from the previous lifestyle and also affect daily activities related to activities outside the home, especially in fields such as education, business, and ect. This phenomenon is a challenge for business people, including the impact on Micro, Small and Medium Enterprises (SMEs). SMEs are one of the sources of the Indonesian economy. However, SMEs are usually characterized as having limited

resources, informal strategies, flexible structures that reduce their resilience and put them at risk of increased competition (Konsti-Laakso, Pihkala, & Kraus, 2012). To respond these challenges, innovation is a strategic choice for this sector (Rosenbusch, Brinckmann, & Bausch, 2011). (Classen, Van Gils, Bammens, & Carree, 2012) stated that SMEs rely less on internal development to drive their innovation.

This research builds on recent research on the impact of digitalization on today's small businesses. These include shortages of raw materials, declining sales, bottlenecks in production and distribution systems, lack of capital, and lack of cooperation in information technology knowledge. The ability of SMEs to fully respond to changes required by digital systems (Cenamora, Parida, & Wincent, 2019). Discuss about digitalization, this is also relevant to the era of skills that businesses must have today, and organizations need to have an agile environment that can respond quickly and efficiently to changes. From some of the phenomena above, we can conclude that collaboration skills in organizations and digitalization are important to increase the productivity of a company. In addition, it is very important for SMEs to be able to respond quickly to changes in the current digital era. With this, this study will analyze the internal skills that must be possessed in running a business, namely the role of intra organizational knowledge sharing and inter organizational collaboration.

This research is motivated by the existence of several previous research gaps regarding the relationship between inter organizational collaboration and innovation performance variables. Based on research conducted by (Kurdve, Bird, & Laage-Hellman, 2020) recommends that further research is needed on inter organizational collaboration on innovation performance that can be applied in an industry using ISP (Innovation Support Programs). Then, research according to (Zahoor & Al-Tabbaa, 2020) also recommends empirical research on the relationship between inter organizational collaboration on innovation performance. This study aims to increase innovation performance in the digital era for SMEs in the city of Semarang. So that further research is needed to improve the innovation performance of SMEs in the digitalization era.

Recently innovation has become the center of attention among businesses (Calabrese, Sala, Fuller, & Laudando, 2021). Innovation consists of every new practice added to the organization, including tools, products, processes, policies, and projects. Technical innovations related to products, services and production technology are related to basic activities and related to products or processes (Fariborz, 1991). (Latifi, Nikou, & Bouwman, 2021) stated that the problems of SMEs were due to internal problems, namely the low quality of human resources, lack of skills, and lack of an entrepreneurial spirit, and the lack of ability to use digital in the management process and market information.

Knowledge sharing in an organization helps the HRM department to reuse and rejuvenate the existing knowledge in the organization when exchanging knowledge with the organization, which in turn increases the innovation capability of SMEs, this plays an active role in increasing the innovation capacity within the organization. To stay competitive in the market, organizational knowledge and expertise must be shared (Gold, Malhotra, & Segars, 2001). Intra organizational knowledge sharing can encourage

the formation of new ideas, ideas, creativity and problem solving, so that intra organizational knowledge sharing has a positive impact on innovation performance. This research is also refers to (Zhao, Jiang, Peng, & Hong, 2020), explains this regarding an increase innovation performance when implementing knowledge sharing in organizations. However, intra organizational knowledge sharing alone has not been able to optimize innovation performance, if not supported by collaborating with other organizations/industry (inter organizational collaboration).

The ability to collaborate is a collaborative effort between dispersed teams this increases the possibility of combining ideas and knowledge in new ways. Internal development to encourage SMEs innovation and more on inter organizational collaboration to overcome resource constraints and encourage innovation (Classen et al., 2012). Companies that collaborate with other companies primarily to look for new ideas or ways to reduce the uncertainty associated with the introduction of an innovation market. These two variables are believed to be able to affect the performance of SMEs in the digitalization era and are able to increase organizational effectiveness.

Then, the relationship between inter organizational collaboration on innovation performance is moderated by the digital platforms capability where this is a novelty that can encourage collaboration, which is a core competency, competitive advantage, and a differentiator that requires strategic thinking, mindset innovation, exploitation of change and the unrelenting need for adaptation (Cenamor et al., 2019). SMEs can reach a tipping point where it becomes critical for their growth to adopt more productive methods by incorporating the use of digital technology platforms into business operations will lead to better business decisions (North et al., 2018). According to research (Eslami, M., 2020), digital technology is able to encourage the relationship between collaboration and innovation. This is based on evidence that SMEs can be considered to have good innovations if they start with a high level of trust and strong relationships supported by collaboration and knowledge sharing (Estensoro et al., 2021).

2 MATERIALS AND METHODS

2.1 MATERIALS

Intra Organizational Knowledge Sharing and Innovation Performance

Intra organizational knowledge sharing is a process within an organization about learning and creating knowledge (Ahokangas et al., 2021). Knowledge sharing is a knowledge management process, such as knowledge storage and transfer, knowledge can be made explicit and socialized, and individuals can internalize, absorb, and accumulate external knowledge (Foss, Husted, & Michailova, 2010). Meanwhile, according to (Eslami, M., 2020) assume that knowledge sharing is the transfer and distribution of knowledge systematically between individuals in the organization through a variety of different ways. Based on the existing definitions, it can be concluded that intra organizational knowledge sharing is a learning process within the organization by sharing knowledge between individuals in the organization by involving experience that can be used as a source of knowledge sharing. Knowledge

sharing can improve organizational innovation performance and requires organizations to provide support within an organization (Xie & Li, 2015). With intra organizational knowledge sharing, we can share and exchange information, impart and collect knowledge, and improve innovation performance. According to (Baumane-Vitolina, Woschank, Apsalone, Šumilo, & Pacher, 2022), innovation results from the exchange of knowledge and experience between parties in an organization. This is based on the findings (Kim & Shim, 2018) that knowledge transfer has a positive impact on SMEs innovation performance. Based on the results of previous studies, to create an innovation performance needs to be supported by the company's willingness to share knowledge within an organization. So that the first hypothesis in this study is that intra organizational knowledge sharing significantly influences innovation performance.

Inter Organizational Collaboration and Innovation Performance

Inter organizational collaboration is a collaboration between companies to share resources and capabilities to meet dynamically changing market demands (Eslami, M., 2020). Then (Chung & Lee, 2020) explained that the organization requires collaboration and participation between individuals to design, produce, and sell products together to build synergies by establishing relationships. From some of the definitions above, it can be concluded that inter-organizational collaboration is a willingness to collaborate, share resources, participate, and establish external relationships with other companies and strengthen each other to create creativity and innovation. Collaboration on organizations has a positive effect on innovation performance (Zahoor & Al-Tabbaa, 2020). According to (Faems, Van Looy, & Debackere, 2005) states that companies that collaborate with partners to generate innovations have access to complementary resources, knowledge transfer, and exchange tools. Based on the results of previous studies, to create an innovation performance needs to be supported by the ability to collaborate between organizations. So the second hypothesis in this study is that inter organizational collaboration significantly influences innovation performance.

Moderating Role of Digital Platform Capability

Digital capabilities are defined as organizational competencies, skills and talents to operate digital technologies to develop new products or services (Khin & Ho, 2019). Then, according (Lenka, 2017) explained that digital skills are the skills and abilities to work with technology. Digital platform capability is the ability possessed by a person in using digital to carry out daily activities (Calabrese et al., 2021). For this reason, digital platform capabilities are skills in using websites, mobile applications, or mobile phones to respond to cultural changes caused by digital technology and meet the demands and challenges of the digital world. (Eslami, M., 2020) said that the ability to use digital platforms is a strategic skill related to the ability to use technology to achieve certain goals and build an individual's social status, and information skills related to searching, selecting, and processing information from various sources to create innovation. Digital platform capability is also related to the ability of human resources to develop collaboration and innovation by utilizing digital technology (Nasiri, Ukko, Saunila, Rantala, & Rantanen, 2020). In this study, the role of digital platform capability moderates the relationship between inter organizational collaboration and innovation performance. In an effort to

improve innovation performance, it is supported by collaborating between organizations. Previous studies revealed that collaboration is needed because innovation is an alternative to improve innovation performance. In this study, the role of digital platform capability facilitates the relationship between collaboration and innovation performance in an organization. With the capabilities of digital platforms, companies learn how to manage their business by studying websites, using apps, being knowledgeable about operational technologies, and responding to changing corporate culture. Based on previous research, digital platform capability will assist intra organizational collaboration to increase innovation performance. So the third hypothesis in this study is that digital platform capability moderates the relationship between intra organizational collaboration and innovation performance.

Empirical Model

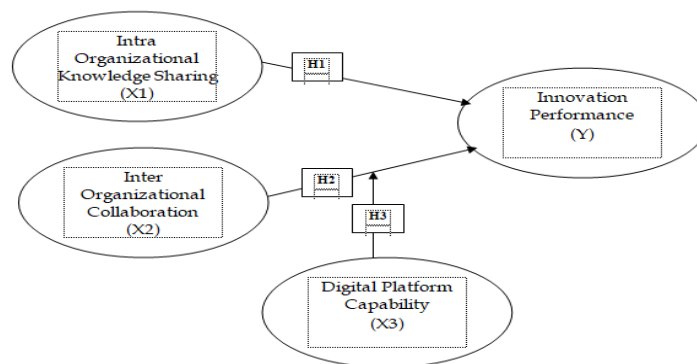


Figure 1: Empirical Model

2.2 METHODS

The sample used in this study is SMEs of fashion who have an employees and use digital platforms in their business processes with a minimum of 2 years of business experience. The number of samples analyzed there are 105 respondents from the entire study population whose number is unknown. This research used purposive sampling. For this purpose, sampling has taken into account the characteristics of the population so that the sample becomes a representative study. Taking into account the sample size of the existing population, the number of samples of 105 is calculated using the formula described by Ferdiand (2014). For this reason, 150 google forms were distributed to respondents and finally analyzed. Data analysis used correlation test and structural equation modeling using PLS (partial least square) type 3.3 software to analyze the data. The scale used is 1 to 7 to analyze the data based on the data search results with indicators from each variable as below :

Variable Operational Definition (DOV)

First, Intra organizational knowledge sharing is a learning process within the organization by sharing knowledge between individuals in the organization by involving experience that can be used as a source of knowledge sharing. The indicators of intra organizational knowledge sharing are share knowledge without being asked, share experiences and success stories, gather knowledge from other individuals, and gather successful experiences from other individuals, Chuang (2013) and (van den Hooff & de Leeuw van Weenen, 2004).

Second, Inter organizational collaboration is a behavior to cooperate externally with other companies and strengthen each other to create creativity and innovation. The indicators of inter organizational collaboration are willingness to cooperate, willingness to share resources, willingness to participate, and willingness to build relationships (Eslami, M., 2020) dan (Chung & Lee, 2020).

Third, Digital platform capability is the skill in using websites, mobile applications, or cell phones to respond to cultural changes caused by digital technology and meet the demands and challenges of the digital world. The indicators of digital platform capability are capability to use web sites, capability to use mobile apps, capability to keep up with cultural changes, and capability to meet digital challenges (Khin & Ho, 2020).

Fourth, Innovation performance is the company's ability to innovate in the form of new products, new services, new markets, new workflows. The indicators of innovation performance are creating new products, creating new work process innovations, and creating new services (Fariborz, 1991).

3 RESULT AND DISCUSSION

Tabel 1. Hypothesis Test Results

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Result	Conclusion
Intra organizational knowledge sharing => Innovation performance	0.261	0.263	0.119	2.201	0.028	Positive Significance	Accepted
Inter organizational collaboration => Innovation performance	0.282	0.278	0.077	5.667	0.000	Positive Significance	Accepted
Digital platform capability* Inter organizational collaboration => Innovation performance	-0.185	-0.182	0.063	2.962	0.003	Positive Significance	Accepted

Source: Output SmartPLS 3.3, (2022).

Intra Organizational Knowledge Sharing and Innovation Performance

The results of testing hypothesis 1 showed that Intra Organizational Knowledge Sharing has a positive and significant effect on Innovation Performance with a path coefficient ($O = 0.261$) and a t value of $2.201 > 1.96$ with a p value of $0.028 < 0.05$, then H_0 is rejected and H_1 is accepted, so that it can be concluded that intra organizational knowledge sharing has a strong, positive and significant effect on innovation performance. Implementation in the field shows that SMEs who use Intra organizational knowledge sharing tend to share knowledge without being asked, share experiences and success stories, gather knowledge from other individuals, gather successful experiences from other individuals. Thus, the first hypothesis proposed in this study, namely intra organizational knowledge sharing has a significant effect on innovation performance, is accepted. The relationship between Intra organizational knowledge sharing and innovation performance refers to previous research, according to (Kim & Shim, 2018) explained that intra organizational knowledge sharing has a significant positive effect on innovation performance.

Inter Organizational Collaboration and Innovation Performance

The results of testing hypothesis 2 showed that Inter organizational collaboration has a positive and significant effect on Innovation Performance with a path coefficient ($O = 0.282$) and a t value of $5.667 > 1.96$ with a p value of $0.000 < 0.05$, then H_0 is rejected and H_2 is accepted, so it can be concluded that Inter organizational collaboration has a strong, positive and significant effect on Innovation performance. Implementation in the field shows that SMEs who use Inter organizational collaboration tend to be willing to cooperate, share resources, participate, build relationships. Thus, the second hypothesis proposed in this study, namely Inter organizational collaboration has a significant effect on Innovation performance, is accepted. The relationship between Inter organizational collaboration and innovation performance refers to previous research, according to (Zahoor & Al-Tabbaa, 2020) explained that Inter organizational collaboration has a significant positive effect on innovation performance.

Moderating Role of Digital Platform Capability

The results of testing hypothesis 3 show that digital platform capability is able to moderate Inter organizational collaboration with Innovation Performance with a path coefficient ($O = -0.185$) and a t value of $2.962 > 1.96$ with a p value of $0.003 < 0.05$, then H_0 is rejected and H_3 is accepted. , so it can be concluded that digital platform capability can be a moderating variable to encourage inter organizational collaboration to improve innovation performance. Implementation in the field shows that SMEs have digital platform capability by using web sites, mobile apps, keeping up with cultural changes, meeting digital challenges. Thus, the third hypothesis proposed in this study, namely digital platform capability to moderate inter organizational collaboration with innovation performance, is accepted.

4 CONCLUSION

Discussion

Increasing innovation performance in SMEs can be done with the role of intra organizational knowledge sharing and inter organizational collaboration. Digital platform capability is also able to encourage to improve innovation performance. These findings also contribute to the development of theories about problems in SMEs, in which SMEs are usually characterized as having limited resources, informal strategies, flexible structures that reduce their resilience and put them at risk of increased competition (Konsti-Laakso, Pihkala, & Kraus, 2012).

Managerial Implications

SMEs of fashion in Semarang consider that intra-organizational knowledge sharing, inter-organizational collaboration, and digital platform capabilities are considered important to improve innovation performance, so that SMEs can make sustainable efforts by implementing knowledge sharing and collaboration, as well as having good digital capability. This can be done by gathering knowledge from other individuals, willingness to participate, and ability to use mobile applications.

Limitations and Future Research

The limitations of this study include the distribution of the questionnaire. This research only took a fairly narrow sample, namely SMEs in Semarang only. So that further research can expand the sample taken. This research can still be developed for further research agendas by developing models, adding new variables, and adding new hypotheses.

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