

The Role of Digital Innovation in SMEs: A Financial Performance Perspective

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Abstract

This research identifies the driving factors of SMEs' digital innovation and their effects on improving SMEs' financial performance during the COVID-19 pandemic, intending to discover the mediating role of digital innovation in improving SMEs' financial performance through innovation orientation, IT readiness, and digital capability. The type of research is quantitative with a sample of 188 SMEs actors in Surakarta and its surroundings who have adopted e-commerce and fintech, with SEM-PLS modeling analysis. The results show that digital innovation has an important role as a mediator for the variables of digital orientation, IT readiness, and digital capability that affect the improvement of SMEs' financial performance during the COVID 19 pandemic. SMEs that carry out digital innovation through e-commerce and fintech have increased financial performance compared to previously, this was seen from the percentage increase in sales and profits compared to the previous one. This research gives contribution to the new knowledge about the digital innovation of SMEs, the new conceptual framework that connects digital innovation with business performance from the perspective of financial performance. The significant positive effect of digital innovation on improving financial performance shows that it is important for small enterprise to improve their digitization skills and knowledge in business development to fulfill customer needs and improve performance for future business sustainability.

Keywords: digital innovation; digital orientation; it readiness; digital capability

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1. Introduction

The effects of the COVID-19 pandemic have encouraged SMEs to do numerous innovations to survive during the crisis of economic. According to the result from a survey of the effects from the covid-19 pandemic that has been done by LIPI, amount of 94.69% from the total of SMEs had a decline in sales, which more than 75% was experienced by 49.01% of the ultra-micro enterprise. Afterward, 43.3% of micro-enterprise, 40% of small-enterprise, and 45.83% of medium-enterprise. The development of SMEs with a digital base becomes an alternative to rescue the SME's

sector during the Covid-19 pandemic era (Wahyuningtyas et al., 2022)(Tambunan, 2020). Recently, considerable efforts have been made to develop business innovation (Maulina & Dewi, 2020). Many types of research on innovation are associated with SMEs (Mangifera & Et.al, 2021).

This research gives contribution to the new knowledge about the digital innovation of SMEs. First, showing the new conceptual framework that connects digital innovation with a business performance from the perspective of financial technology of SMEs. The test of the financial framework in this research can fill the

literature gap by providing empirical evidence of the relationship between digital innovation factors in the perspective of the financial performance of SMEs. Second, this research aims to test the factors which drive digital innovation, especially in the SMEs context through the digital orientation, technology availability, and digital capability to improve SME's financial performance

The phenomenon of innovation in SMEs that is happening at this time is business digitalization, which means the businesses are run by applying the new digital technology (Ansong & R.Boateng, 2019). The companies must successfully do innovation through the digital technology to improve the business performance, include to increase experiences and involvements, minimizing the operations, and creating new business models or on the other side, the company will be destroyed of the other competitor companies which implement these strategies (Giantri et al., 2021) (Ong & Chen, 2013). In this definition, digital innovation can be conceptualized as the solution of innovative technology which integrates the digital technology that appears to support the digitization of non-technology businesses like banking, healthcare, manufacturing, and retail. Along with the growing importance of digitization, digital innovation has become an important research agenda because of the increasing requirement for the new digital solution. Up till now, there is research related to digital innovation in SMEs, regardless of various researchers of company digital innovation. The majority of studies about digital innovation notice the innovation through technical perspective, architectural, and information system (Wroblewski, 2018), however not in the managerial perspective. On the other side, the context of this research was a majority in the general industry, yet not in SMES's (Häikiö &

Koivumäki, 2016) (Eidhoff et al., 2016). In innovation in the various industries, there is still a lacks literature on the factors driving digital innovation in the SMEs sector (S. Khin & Ho, 2019).

Accordance to the theory of resources and dynamic capability theory which can be the reference in research to build and test the conceptual framework. Digital innovation can not be reached without a serious commitment to the emerging technologies, companies that want to develop the prime innovation in the competition must have a strong technology orientation (Teece et al., 2009) (Situmorang, 2018). They define technology orientation as companies' commitment to practice the new technology and be responsive to the change of technology. Remembering the emergence of digital technology, companies must have an orientation to adopt digital technologies, companies need to have the capability to manage and take advantage of the digital technology in the best way in the innovation process because capability can quicken the innovation process by integrating and mobilizing human and technological strengths and resources. A study by (Y. Liu et al., 2021) states that managing digital innovation can be a challenge, however, it is necessary prepared for the necessary resources and capabilities. (Teece 2013)defines that the dynamic capabilities approach provides a coherent framework for developing and managing capabilities in a way that will build a business's competitive advantage.

In the terms of digital innovation, digital capability and digital orientation are needed to integrate digital technology with professional digital talents. Drawing on the theory of dynamic capability, digital capability can be considered as a dynamic capability, which is drawn as an organization's capability to create products and new processes and respond to the

changing of market conditions (Teece & Linden, 2017). Meanwhile, digital capability completes the digital orientation of a company because only a company that has the skill to manage the new technology that is ready to adopt that technology and capable to commit to change the technology becomes the new product. Likewise, the company which capable digitally needs commitment and readiness to hug the new technology to develop the new product that brings competitive advantages. Therefore, we reckon that digital capability and digital orientation are compatible and complete each other to reach products innovation because innovation is proved driven by technology orientation (Z. Zhou et al., 2018) and enabled by technology capability (J. Liu et al., 2021). SMEs need to optimize their business performance. Business performance is the result of the implementation of a job, both physical (material) and non-physical (immaterial) with indicators of achievement of work results, compared with predetermined targets (Mukarromah & Astuti, 2020). Currently, the problem of the financial performance of SMEs is still becoming the main concern of researchers (Yasa et al., 2019)(Rokhayanti, 2015). SMEs need to develop digital capability, digital orientation and utilize the availability of technology to improve business performance. If the digital capability, digital business orientation, and technology availability support can be developed so that it can increase innovation opportunities and can affect in the increase the financial performance of SMEs. Remember the importance of digital innovation strategy for SMEs, according to the model which is developed for big companies (Canhoto et al., 2021) (Salleh et al., 2017) and align strategic maturity model Luftman (2000) can be used as a reference to investigate this phenomenon in SMEs, with some adaptations (Gutierrez et al.,

2009), the finding from empirical studies that has been done with big companies might not be transferable to SMEs, due to SMEs have unique and different characteristics from the companies. For example, the factors such as environmental and organizational aspects of the business ecosystem are commonly used in the research in big companies yet can not be applied in the small companies (Salleh et al., 2017).

That kind of observation implies that despite SMEs digitalization might be partly depending on the ability of business managers who also can be found in the big companies, this small enterprise can follow a special approach due to their unique characteristic, beyond the size boundaries of the enterprise and the resource which they had (Canhoto et al., 2021). It is important to contribute knowledge about digital innovation in the context of SMEs due to SMEs' innovative digital solutions are supporting the sustainability of small enterprises during the crisis of economic.

2. Literatur Review

2.1 Digital Innovation

Digital innovation is defined by Nambisan et al., (2017) as the creation of market demands, processes, or business models that are generated by using digital technology. That definition covers various innovation outcomes, such as new products, platforms, and services also the experiences of the new customer and the other value paths, in another sense of all business activities carried out through the use of digital technology and digital processes (S. Nambisan et al., 2017). In this research, digital innovation is defined as an innovative business activity through the utilization of e-commerce and fintech. Research related to digitalization has been made by Purwana (2017) and Febriyantoro

& Arisandi (2018) conclude that digitalization in the marketing has positive and significant effect on financial performance of SMEs. Therefore, we defined digital innovation as the development of sales service, or the new solution to run products marketing activities using the digital technology.

Business digitalization with high growth in this pandemic era makes the financial performance of SMEs become increase so that the sales and marketing process becomes more practical and easy to be applied through the various media (Adella & Rio, 2021). Therefore, the digitalization of SMEs brings changes effect in the sales and marketing process to become more effective and efficient. That change was begun from an idea that moves both evolutionary or revolutionary which can bring innovation in the technology sector (Reinald Kasali., 2015). Only a few pieces of literature are available on the conceptualization of digital innovation and its driving factors and results (Khin & Ho, 2019). There needs empirical study of the driving factors in digital innovation in the context of small SMEs industries. According to this literature, the proposed hypothesis is :

H1. Digital innovation has a positive effect on financial performance.

2.2 Digital Orientation and Digital Innovation

The resource-based view (RBV) has been used in many innovation literature to explain how the company can get a competitive advantage and superior performance. The principle of this theory expresses company's superior performance can be distributed to resources and specific skills for the company which is rare and difficult to be imitated by competing

companies (Barney et al., 2001). According to the RBV theory to conceptualize digital orientation towards digital technology trends as an important asset for small companies for business sustainability in the future, because they will get lost if they do not start switching to digital-based technology to support marketing activities and business transactions. This research conceptualizes the digital orientation based on Gatignon dan Xuereb (1997) who defines business as a digitally- orientated business that has the capability and willingness to use digital technology and use it in business development innovation. They can adapt to the new technological development, thus they can develop the business through the application of innovative technology.

In this research, digital orientation is conceptualized as a technology orientation in a small enterprise context and defined as the commitment of business actors towards the implementation of digital technology in carrying out their business activities through the implementation of e-commerce and fintech (Henfridsson et al., 2014). The companies which have digital orientation are more open to digital technology and tend to accept digital initiatives quickly with commitment (K. Z. Zhou & Li, 2010). As a term Extension from technology orientation, digital orientation is a new concept, thus only a few related pieces of literature can be found. Therefore, literature about digital orientation is referenced and contextualized in this research, because these two terms have the same concept (S. Khin & Ho, 2019)). Some interesting research can be written as the correlation between digital orientation and technology. Meanwhile, some researchers have found a positive correlation between technology orientation and product innovation (Yang et al., 2012;

Hortinha et al., 2011). Zhou et.al. (2005) have found that digital orientation has a positive correlation to technology-based innovation yet has no effect on market-based innovation Khin et al., (2012). The Small enterprise without applying technology and adopting proper digital technology, will not have the ability to develop properly innovative solutions with today's business trends. Therefore, this study conceptualizes the digital orientation and the digital capability as driving factors of digital innovation in the small enterprise, so that the hypothesizes that can be proposed are as follow :

H2. Digital orientation has a positive effect on digital innovation.

H2a. Digital orientation has a positive effect on financial performance.

2.3 IT Readiness and Digital Innovation

Technology readiness is defined as the availability of technology infrastructure to facilitate digital innovation and innovation. Technology readiness is the existence of structure and element in an organization that enables the company to fully utilize information technology and communication (Singh et al., 2021). From the early year of the 2000s until the present, the appearance of the new digital technology which is activated by the internet such as smartphone gadgets has driven radical changes in customer strategy and expectations regarding response times and accessibility of multiple channels. If the companies are equipped with technological tools and have high technological competence, thus, there is a big chance that introducing more technologies will bring less threat to the organization.

Technology infrastructure is expected compatible enough to accommodate the

upgraded technology and the workforce is also assumed to be able to use the technology directly. A company that is equipped with technology resources can apply certain digital technology such as big analytical data, social media. The businesses which have complete and up-to-date technology infrastructure is more have benefited because they can design business models and innovate existing products and offerings into digitally enabled solutions. Therefore, we have hypothesized as follow :

H3. IT readiness has a significant effect on digital innovation

H3a. Technology readiness has a significant effect on financial performance.

2.4 Digital Capability and Digital Innovation

Skill and technological competency are important resources needed for the innovation process (Rachinger et al., 2019). It does not matter how good technology is used in a business, the use and the services are still necessary to be managed effectively and efficiently (Agostini & Nosella, 2020). The company's dynamic capability view identifies the dynamic capability as the main source of sustainable competitive advantage in changing competitive landscape (Teece et al., 2009). Although the literature about digital capability related to innovation in the context of digital technology that emerging digital technologies is sparse, the positive impact of technological capabilities on innovation has received wide support (Charaani et al., 2021). Digital capability is measured by two aspects, they are called dynamic managerial capability and organizational capability. The dynamic managerial capability involves managerial knowledge which is connected to understanding the current situation, future developments, market situations, and adapting to change. (Wahyuningtyas et al.,

2022) managerial human capital includes control of digital knowledge, digital experience, and expertise in using digital technology. Organizational ability describes the control of learning and development activity, networking management and the ability to reach potential market (Li et al., 2018).

Even though several significant studies have supported the correlation between capability and technology innovation, only a few papers have reported on the effect of digital capability on digital innovation. S. Khin & Ho (2019) was identified that digital capability has a positive effect on digital innovation. Digital capability is very important to change customers' experience, operational process, and business model (Westerman, 2012). Skill gaps emerge as one of the obstacles in the digital transformation process. Digital capability needs to be implemented to realize the full potential of strategic change, and capability has become an important element for incumbent companies to compete in the digital era (Sousa-Zomer et al., 2020; Warner and Wager, 2019). The company needs the new dynamic capability for remaining competitive in the digital era, which relies on the company's ability to experience disruption and seize and reconfigure business elements appropriately and sustainably (Raj et al., 2020; Svahn et al., 2017; Vial, 2019). According to the arguments and this dynamic capability theory, this research proposes the hypothesizes as follow :

H4. The digital capability has a positive effect on digital innovation

H4a. The digital capability has a positive effect on financial performance.

3. Method

This research uses the purposive sampling method as the sampling technique, where the researcher chooses the samples subjectively and purposively (Ferdinand, 2006). This technique is well known as the subjective sampling technique. Respondents were selected by their experiences minimum of one year on adopted e-commerce and fintech. The number of samples is 188 SMEs small enterprise entrepreneurs who spread in the Central Java region and outside Central Java. Determination for the number of samples which must be fulfilled in this model is based on the method of the minimum number of 100-200 samples with a maximum Likelihood Examination (Ferdinand, 2014).

The data were analyzed using PLS-SEM where the data were processed by SmartPLS 3 software program. First, the outer model was processed to test the validity (convergent and discriminant) and reliability. The validity convergent test was viewed by outer loading value between 0.5-0.7, thus $AVE > 0.5$. Furthermore, for discriminant validity test was based on Fornell-Larcker Criterion and Cross Loadings. Then, the reliability analysis was based on Cronbach's alpha and composite reliability > 0.7 . Second, the inner model was processed to test the hypothesis that has been generated. Before the hypothesis test, the first step was to test the correlation between constructs by looking at the R-squared (the criteria (1 - 0.75) "strong", (0.74 - 0.5) "moderate", and (0.49 - 0.25) "weak" (Ghozali and Latan, 2015:78), the value of Q-square (Q²) with criteria $Q^2 > 0$ "has the predictive ability" (Chin, 2010), and the value of Godness of Fit with the criteria of 0.1 "feasibility of the small model", 0.25 "feasibility of the medium model", and 0.36 "feasibility of the large model" (Tenenhaus, 2005). Furthermore is the hypothesis test, to discover the effect

that is happened referring (positive/negative) from the coefficient result, and using t-statistics > 1.645 (hypothesis is not rejected) and p-value < 0.05 (the hypothesis is significant).

4. Results and Discussion

4.1. Respondent Profile

In this research, the respondents amounted to 194 business actors, however from that amount which fulfilled the research criteria were amount 188 respondents, was consisted of SMES's entrepreneurs in the culinary sector, processing industries, convections, crafts, batiks which have been adopted e-commerce and fintech more than one year, 66% respondents were food and beverage small enterprise, 34% remain were small enterprise in the non-culinary sector. The number of male respondents is more by 63%, and 37% of female respondents are the owners of the businesses. The length of business consists of 57% of small businesses that have been established for less than 1-5 years, amount 125 in the age between 5 – 10 years, and 31% businesses have been run more than ten years. More details were referred to in table 1. as follows.

4.2 Results of Analysis and Discussion

The results of this research showed that Adjusted R squared is above 0.5, thus the results are good. The result of the analysis of the digital innovation variable is in the average value of 0.68 so the R squared is good, also the value of financial performance is 0.807, which means above 0.5. These results showed that digital innovation has a strong effect on financial performance improvement, as shown in the following table 2. :

The result of construct validity value showed that all of the values are more than

0.7, so that validate all of the items have strong correlations to theoretical construction which proposed and validate indicator reliability. The result of composite reliability is more than the threshold value of 0.7, so there is internal consistency reliability. The value of AVE is more than the threshold value which required an amount of 0.5 as presented in table 3 therefore, it shows a positive correlation from the digital orientation antecedent variable, IT readiness, digital capability, digital innovation, and financial performance.

The discriminant validity is tested using Fornell-Lacker criteria as shown in table 4. The value of off-diagonal is smaller than the diagonal value which is being recommended by Garson so that the discriminant validity is determined by the good result. The result of collinearity statistics (VIF) to see correlation test with the inner value of each VIP variable > 5 so that, it does not violate correlation test. The result is in table 4. in the following .

Table 5. can display the correlation between constructs. According to the result can be concluded that between variables have a positive correlation effect. Digital innovation and digital capability have a positive significant effect on financial performance with a p-value < 0.05 , which means innovation and digital capability have a direct correlation on financial performance. The result supports the previous research by Nambisan et al., (2017), Adella & Rio, (2021). Meanwhile, digital orientation and IT readiness have a positive effect but are not significant on the financial performance of SMEs, this is seen from p-value > 0.05 . this is not following research by Khin et al., (2012).

Table 1. Respondents' Profiles

No.	Classifications	Sub Classifications	Frequency	Presentations
1.	Business Owner	Male	117	62%
		Female	71	38%
2	Type of Business	Culinary	124	66%
		Non-culinary	64	34%
3	Business Location	Surakarta	108	57%
		Outer Surakarta	80	43%
4	The length of Business	< 5 years	107	57%
		5 - 10 years	23	12%
		More Than 10 years	58	31%
5	Number of Employees	1 - 4 People	131	70%
		5 - 10 People	26	14%
		More Than 10 People	31	16%
6	Sales Increasing	< 30%	52	28%
		30% - 50%	119	63%
		More Than 50%	17	9
7	Profit Increasing	< 30%	138	73%
		30% - 50%	48	26%
		More Than 50%	2	1%

Source: Primary data processed (2022)

Table 2. Structural Model

Construct	R Square	R Square Adjusted
Digital Innovation	0.680	0.675
Financial Performance	0.807	0.803

Source: Primary data processed (2022)

Table 3. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Digital Capability	0.950	0.951	0.962	0.834
Digital Innovation	0.908	0.909	0.932	0.734
Digital Orientation	0.855	0.859	0.896	0.634
Financial Performance	0.873	0.873	0.913	0.724
IT readiness	0.891	0.900	0.920	0.698

Source: Primary Data Processed (2022)

Table 4. Discriminant Validity Fornell-Lacker

	Digital Capabiity	Digital Inovation	Digital Orientation	Financial Performance	IT Readyness
Digital Capability	0.913				
Digital Innovation	0.732	0.857			
Digital Orientation	0.542	0.667	0.796		
Financial Performance	0.816	0.850	0.634	0.851	
IT Readiness	0.723	0.769	0.714	0.743	0.836

Source: Primary Data Processed (2022)

Table 5. Hypothesis Test

Hypothesis	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
(H1) Digital Innovation -> Financial Performance	0.488	0.064	7.638	0,000	Supported
(H2) Digital Orientation -> Digital Innovation	0.222	0.067	3.303	0,001	Supported
(H2a) Digital Orientation ->Financial Performance	0.074	0.043	1.723	0,085	Not Supported
(H3) IT Readiness -> Digital Innovation	0.354	0.082	4.287	0,000	Supported
(H3a) IT Readiness -> Financial Performance	0.025	0.059	0.419	0,675	Not Supported
(H4) Digital Capability -> Digital Innovation	0.356	0.066	5.364	0,000	Supported
(H4a) Digital Capability -> Financial Performance	0.401	0.070	5.771	0,000	Supported

Source: Primary Data Processes (2022)

According to table 5., the test of correlation mediation between variables indirectly, there is a result that digital innovation becomes a full mediator for digital orientation and digital capability to improve financial performance. If compared the direct correlation between digital orientation to financial performance and digital ability to financial

performance, which is not significant, through digital innovation mediators it becomes significant. This result shows that digital innovation is crucial in its role as a mediator for digital orientation and digital capability in improving the financial performance of SMEs.

Table 6. Specific Indirect Effects

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
Digital Orientation -> Digital Innovation-> Financial Performance	0,108	0,037	2,902	0.004	Supported
IT Readiness -> Digital Innovation -> Financial Performance	0,172	0,045	3,825	0.000	Supported
Digital Capability-> Digital Innovation -> Financial Performance	0,173	0,042	4,125	0.000	Supported

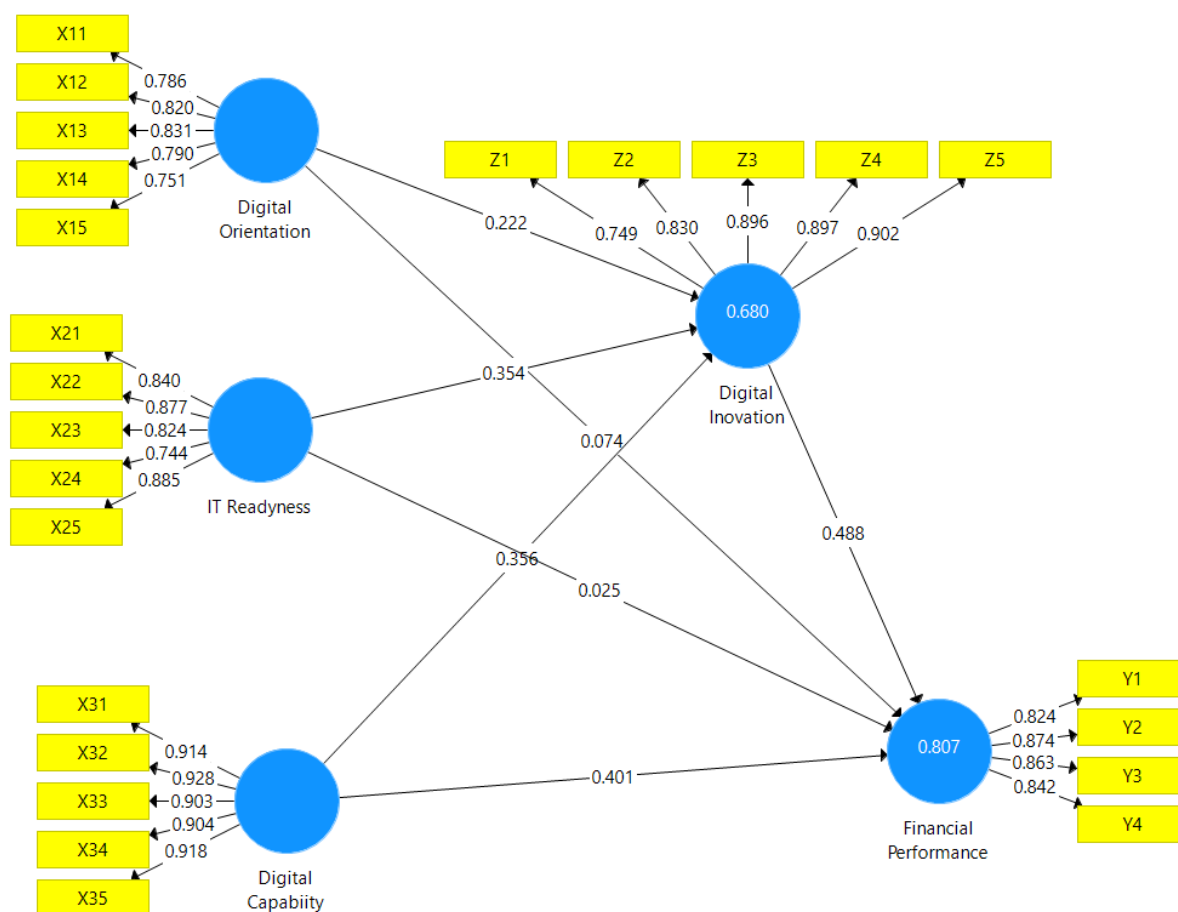
Source: Primary Data Processes (2022)

It shows that the digital innovation of SMEs has an important role to improve the financial performance of SMEs through antecedent factors, called digital orientation, IT readiness, and digital capability. In this case, SMEs which are innovation-oriented through e-commerce and using fintech activity get an improvement of financial performance especially in profit and sales compared to the previous. Digital innovation in this case has a role as a full mediator to improve the SMES's financial performance.

The easiness to access the internet through the use of internet network and the signal network of telecommunication service providers which can reach all regions. The existence of internet network infrastructure supports the entrepreneur in conducting online sales transactions, conducting promotional activities through social media, and serving online payment transactions. The easiness of using smartphones and the use of internet networks encourages entrepreneurs to change their business activities, which were

previously oriented to buyer visits, to switch to using the marketplace and social media as business media during the pandemic. It is proven that through the changes of digital-based business activities they get increased business results compared to before. The increase of their business performance was realized through increased profit, increased sales, an increase of total revenues which increased by more than 30% on average

compared to previous utilizing business digitalization. For small enterprises such as food and beverage, daily capital turnover is crucial, although the profit percentage is not large as long as the daily income and cash flow are smooth, that is their key to surviving during the current economic crisis. In addition, for small enterprises, internal capital is the main source to finance their survival.



Source: Primary Data Processes (2022)

Based on the test results, it shows that digital innovation in SMEs has an important role in improving MSME financial performance through antecedent factors, namely Digital Orientation, technological readiness, and digital capabilities. In this case, SMEs that are oriented to innovate through e-commerce activities and the use of fintech get an increase in financial performance through increased profits and an increase in total sales compared to

before. Business actors revealed that the profit increase reached 30%-50% after innovating online sales, and the profit rate increased by an average of 30%. With an increase in the number of sales, cash flow has increased so that their capital turnover is faster(Suryadi, 2022). Digital innovation in this case acts as a full mediator in improving the financial performance of SMEs. For small businesses such as culinary, daily capital turnover is very important compared

to other industrial sectors, although the percentage of profit is not large as long as the amount of daily income and cash flow is smooth, it is their key to survive during the current economic crisis. In addition, for small businesses, internal capital is the main source of finance for their survival. The small culinary industry sector feels more impacted by digital innovation in running its business compared to other processing industry sectors. With the policy of limiting activities during the COVID-19 pandemic, almost all sales and service transactions are carried out through online media.

Ease of accessing the internet through the use of the internet network and the signal network of telecommunication service providers that can reach all regions. The existence of internet network infrastructure supports business actors in conducting online sales transactions, conducting promotional activities through social media, and serving online payment transactions. The ease of using smartphones and the use of internet networks encourages business actors to change their business activities, which were previously oriented to buyer visits, to switch to using the marketplace and social media as business media during the pandemic. And it is proven that through changes in digital-based business activities they get increased business results compared to before.

In addition, the digital ability factor of business actors as measured by their ability to use digital technology in their business activities is also very important, business actors need to have the ability to create digital content to promote their business, require skills to design products menu features. , designing attractive business products to display in the market to attract buyers. Through the ability to adapt, business actors can optimize their resources to gain profits. Digital capabilities need to be possessed by every small business actor to seize opportunities from environmental changes and technology that is developing all the time. The business environment tends to change dynamically along with the

development of technology and information. Every business is required to be able to innovate and adapt to the changing business climate. (Nambisan et al., 2017).

The significant positive effect of digital innovation on improving financial performance shows that it is important for small businesses to improve their digital skills and knowledge in the development of new digital products to meet the needs of new customers. This finding is in line with the findings of Zhou et al. (2005) which states that technology orientation is beneficial for technology-based innovation. Given the importance of digital capabilities, small businesses should devote their resources to maximizing their capabilities by engaging in training, network expansion, alliances, or entering into similar business associations by sharing knowledge from multiple sources. Digital capabilities can be built with skills, talents, knowledge, and experience related to managing digital technology. Therefore, small culinary businesses need to get attention and cooperation from various parties. They should also develop internal programs and digital skills development units to fill skills gaps. To retain and attract digitally capable consumers. Lewis et al. (2004) argue that business actors must have the ability to provide new opportunities that follow the digital culture of today's society. For policymakers, these findings indicate that government agencies should build initiatives to improve the skills and skills of small business actors through digital entrepreneurship training programs for new prospective entrepreneurs by providing them with an overview through digital education in formal and non-formal schools. In addition, the government could consider more funding for skills improvement and development of the digitization of SMEs.

5. Conclusions

The findings of this study provide benefits for SME entrepreneurs in developing their businesses to further enhance technological innovation

capabilities, especially business digitalization to support business performance and continuity in crisis conditions due to the COVID-19 pandemic. In addition, the results of this study can be used as a reference for parties involved in the development of SMEs to maintain long-term business continuity considering its contribution to the economy in terms of employment and reducing unemployment, which is also the pillar of national economic development. It should be noted that to achieve digital innovation for SMEs, strategy, and support from all parties are needed, which is often called the quadruple helix. The theoretical implication of this research is that this finding provides an additional scientific perspective in the field of small business management by integrating technological aspects as a strategy to improve the financial performance of the SME sector. The minimum number of samples has not been able to describe the universal representation of the SME population in Indonesia. Therefore, it is recommended for further research, which is expected to be able to carry out an in-depth cross-sectoral analysis. It is necessary to deepen in reviewing information from entrepreneurs regarding the constraints and challenges in aspects of production, marketing, and human resources to carry out digital transformation so that a more comprehensive discussion can be obtained.

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