

# The Role of Information Communication Technology on Organizational Ability, Market Environment and Financial Performance



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## ABSTRACT

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*The purpose of this study to test the role of the Information Communication of Technology (ICT) innovation on the relationship between organizational capabilities, and the market environment against company performance. There are still a few studies that connect between the ability of the organization and the market environment through the role of ICT to improve the company's performance into motivation in this study. This research was conducted on MSMEs in Palembang City. This research is quantitative, using primary data obtained through the deployment of the questionnaire, using the purposive sampling method. Then the data was analyzed using Smart-Pls help to test the effect of mediation. The results of the analysis show the ability of the organization influence the adoption of ICT, and the market environment has also influenced the adoption of ICT. In addition, the role of ICT is able to become a liaison between organizational capabilities, and market environment on company performance.*

## 1. INTRODUCTION

Modern managers have Changing requirements of information in stimulated a development of measures and methods which progressing and inform the perspectives and opportunities for current and future performance (Klovienė & Gimzauskiene 2015). Rapid changes in today's business environment requires agility, flexibility and innovation. The process of adaptation and reaction to the business environment can be ensured by a fast

decision-making process, timely information, and appropriate data flow, this is also stimulated by the presence of an accounting information system (AIS). Accounting Information System is part of digitalization in accounting (Knudsen, 2020). Accounting information systems have been used by many organizations to automate and integrate their business operations. The main goal of many businesses to adopt this system is to improve their business efficiency and increase competitiveness (Hla & Teru, 2015).

The acceptance of social media for the purpose of continuing business operations is proof of the existence of applications of Innovation in ICT in organizations, and it is undeniable that the speed with which social media captures market opportunities cannot be doubted. Even this communication technology has become a means of mass communication used in business. Current organizational support is not only limited to support for ICT adoption but also utilizes the product itself, in accordance with (Mohamad, 2013) found that external and internal support had a significant impact on the use of technology. Market environment plays a role in improving the performance of an organization. The environment is the arena in which a company conducts its business, including the industry in which the company operates, competitors, and governments. influencing technological innovation is competitive pressure, market turbulence and institutional intervention (Setiowati et al., 2015). Technology, organizational and environmental have a significant influence on technology adoption (Triono, 2020). The market environment in this study includes competitive pressure, influence of social networks, business ICT support, and adoption acceptance

In an effort to innovate in information and communication technology, of course, it cannot be separated from the things or factors that influence it, both internal and external factors (Chairoel & Riski, 2018). Technological strength, environment, and organizational readiness are factors that can influence an organization's decision to adopt information and communication technology (Chairoel & Riski, 2018). The lack of research related about organization and market environment on performance with the role of ICT innovation has motivated researchers to conduct this study. (Taylor, 2019); (Mohamad, 2013); and (Ali et al., 2016) in his study no link between adoption of ICT and company performance. This research is a follow-up study on previous studies conducted by (Okundaye et al., 2019) dan (Dmitrij Lipaj, 2014).

The OECD found that IT adoption by SMEs is still low compared to large enterprises. There are many reasons behind the low adoption of IT by SMEs. One of them is the low knowledge of the potential of IT in advancing the business and the need for IT to support business processes and the lack of financial support (Fathul Wahid, 2007).

Utilization of ICT is able to bring the organization to good business process. Today information technology (IT) is a common subject of decision making in enterprises, as more and more development and investment initiatives include certain elements of IT, either in enabling or supporting roles. In addition, the evaluation of IT becomes a valuable challenge because it is complex and has an impact on a series of values (Töhönen et al., 2020). Information technology is also considered as an effort to develop and improve company performance (Syarifah, 2017) and support increasing access to ongoing public services (Tri Adi Sumbogo, Gayes Mahestu, 2019). This study aims to examine the extent to which the role of ICT innovation in improving company performance involves its relationship with the organization and the market environment. In an effort to answer the challenges of the organization facing the current of technological developments as an effort to improve its performance which is influenced by internal and external conditions in the environmental uncertainty which is the problem faced today and is raised in this study.

## **2. LITERATURE REVIEW AND HYPOTHESIS**

### **Contingency Theory**

The contingency theory was first proposed by Fiedler (Verkerk, 2010). In contingency theory in the field of accounting, it shows an effort in determining the most appropriate control system for a set of conditions that exist in an organization. theory contingency in management accounting is applied to analyze design and systems such as management accounting systems to present information that can be used by organizations for various purposes and in the face of competition. Some things to consider are:

1. Environment. One thing that is fundamental to this management control system is the influence of the environment in which the organization operates.
2. Technology. The nature of the production process of a product or service is usually determined also by the costs of using the technology.

3. Organizational Size. The size of the organization is a factor that affects both the structure and the unity of control in the organization.
4. Strategy. The strategy owned by the organization has a great influence on the management accounting system and its management control system.

### **Company Performance**

Company performance is the result achieved by a company in an effort to achieve company goals. (Kaplan et al., n.d.) mentions that the company's performance can be identified into financial and non-financial performance. The company's performance can be divided into 4 perspectives, namely the customer perspective, internal business processes, innovation and learning, and finance. In this study, it refers to the company's performance assessment seen from the performance of internal business processes and financial performance (Tsai et al., 2011);(Williams & Naumann, 2015). Internal business performance includes simplification of work, process improvement of data validity, speed of data refinement, internal growth, and communication efficiency. Meanwhile, financial performance includes increasing sales value, reducing inventory, increasing turnover, increasing accounts receivable, and growing profit margins.

### **Information Communication Technology (ICT)**

Information and Communication Technology (ICT) or more familiar with Information Communication Technology (ICT) is a systematic delivery method through technology assistance. ICT adoption is defined as the use of information and communication technology tools (ICTs) including the computer hardware, software, and networks necessary to connect to the internet. (Sunday Chinedu Eze, 2013). In this context, the adoption of ICTs can be described as of three defined stages namely, initiation, adoption, and implementation. (Nguyen, 2018). The initiation stage has to do with assessing ICT Innovation. The adoption stage is one where the decision is made to adopt an ICT innovation. The implementation stage is concerned with the effect of ICT innovation on the company.

Organizational factors in this study were measured using company size, company age, financial flexibility, and information intensity. The size of the company and the age of the company play a significant role in the sustainability of the company's operations, some consider age and size to show the maturity and ability of the company to deal with internal and external conflicts, so that this strength makes performance more stable and even tends

to increase. (Lathifah et al., 2018) found that the size and age of the company affect the performance of intellectual capital. The company's objectives should be in accordance with the expectations of shareholders, one of the indicators is financial performance. Financial stability can predict the company's ability to finance so that company goals are easily achieved. Financial flexibility (Slack Financial) is a leadership consideration in the adoption of an ICT, because the financing in ICT is not small and is expected to have a significant impact on the success of adoption and company performance. In addition to financial flexibility, access to information intensity plays a role when there is a balance of costs incurred with the weight of information distributed within the organization. This balance will form a pattern so as to create efficiency in information through more effective communication. The intensity of communication affects performance (Arifin, 2013).

### **Market environment**

In this study, the market environment includes external/competitive pressures, the influence of social networks, support for ICT businesses, and acceptance of the ease of using ICT. External/competitive pressure to adopt ICT into consideration. The pressure comes from competitors as well as pressure from consumer demand for up-to-date information needs. (Waluyan & Manuputty, 2016) In his research, it is stated that the implementation of Customer Relationship Management has an effect on the company's performance both directly and and sustainable competitive advantage and the application of information technology improves the company's performance. Perceived usefulness partially mediates the relationship between perceived ease of use of local information systems, and perceptions of user attitudes mediate the relationship between perceptions of user convenience and success of local information systems (Maryati et al., 2021).

### **Relationship of organizational capability to Information Communication Technology (ICT) Innovation**

(Ritchie & Brindley, 2005) classify IT adoption barriers into strategic barriers (such as choice of business and network strategy), technological (such as complexity and professional support), and organizational and behavioral barriers such as human resource capacity and perception of risk. Considering that investment in a system not only requires substantial funds, organizational maturity also affects the implementation of a system. However, this is comparable if the intensity of the information provided will have an impact on the sustainability of the company's business. In this case the size of the company,

the age of the company, financial flexibility (financial slack), and the intensity of information are the determining factors in the adoption of an information communication technology in accordance with (Taylor, 2019). Based on the explanation above, the following hypothesis can be drawn.

**H1: The company's ability to influence ICT innovation**

**Relationship of the market environment to Information Communication Technology (ICT)**

The external environment or market is an important factor in innovation. Emergence of market *e-commerce* has created broad market opportunities for retailers and logistics service providers, can increase purchase and sales satisfaction and can facilitate the ability of logistics service providers to manage greater (Leung et al., 2020). In adopting *e-commerce*, influenced by the organization, external influences, and leadership (Kala'lembang, n.d.). According to (Taylor, 2019), Market/external environment includes external/competitive pressures, influence of social networks, support for ICT businesses, and acceptance of the ease of using ICT. Fred and Davis also revealed in TAM Theory that someone who wants to use the system can be determined based on user convenience (*perceived ease of use*) and perceived benefits (*perceived usefulness*) and market factors influencing ICT adoption (Taylor, 2019). Based on the description above, so that the hypothesis is formed is.

**H2: market environment influences ICT innovation**

**Information Communication Technology (ICT) mediates the relationship between organizational capabilities and company performance**

It is not only leadership that has a substantial and direct influence on organizational performance but is also influenced by factors that are beyond the leader's control such as economic conditions, market conditions, government policies, and technological changes. Strong organizational support for developmental changes will lead to technological changes that have an impact on company performance. Information Technology (IT) governance cannot be separated from the role of the organization itself which is used to build a system that helps the company to build a system and in the decision-making process which involves stakeholders and related elements within the company (Waluyan & Manuputty, 2016). Based on the description above, the authors conclude the following hypothesis.

**H3: ICT innovation mediates the relationship between company capabilities and company performance.**

**Information Communication Technology (ICT) mediate the relationship of the market environment to firm performance**

(Sumiati, n.d.) suggested that strategic flexibility and market orientation were found to have a direct effect on innovation and company performance positively. In addition, proven innovation acts as a mediator in the influence of strategy flexibility and market orientation on company performance. Likewise, the company's performance is proven to act as a mediator for each strategy flexibility and market orientation towards innovation. The adoption of ICT is part of a company's innovation in line with the industry in Era 4.0. so that the hypothesis can be drawn that:

**H4: ICT innovation mediates the relationship of the market environment to firm performance**

### **3. RESEACH METHOD**

This research is quantitative with data sources using primary data. One of the primary data was obtained by using a survey method, namely distributing questionnaires containing a number of questions related to organizational capabilities, market environmental factors, ICT innovation and company performance. Prior to the process of distributing the questionnaires, interviews were conducted regarding the accuracy of the respondents or a checklist of the accuracy of the research object through questions using a questionnaire. The questionnaires were distributed randomly. The measurement scale technique uses a Likert measurement scale. With a Likert scale, the answers to each instrument item are rated from very positive to very negative, namely from a scale of 1 to a scale of 5.

The population in this study are MSMEs engaged in culinary, handicraft, fashion, and services and are located in the Palembang City area which already owns and uses ICT. The sample is part of the population (part or representative of the population to be studied). The sample in this study is MSME business actors in the Palembang City area who have implemented ICT in their operations or internal business processes.

While the criteria for selecting the sample are:

1. MSME business actors/employees who have a minimum position of Head of Administration, Head of Sub-Division, IT Manager, Finance Manager, Company Operations Division, or Owner
2. MSME business actors/employees who have knowledge related to IT
3. Business actors/SMEs who have adopted IT in their operations
4. Business actors/employees who have an understanding of the financial statements of MSMEs that are managed
5. Have a minimum working period of 2 years

### **Data analysis method**

The research model that will be used in this study is a tiered structure model and to test the proposed hypothesis, the SEM analysis technique is used (*Structural Equation Modelling*) operated via PLS (*Partial Least Squares*). SEM is one type of multivariate analysis in the social sciences (Sholihin, 2021). PLS is a powerful analytical method and is often referred to as soft modeling because it eliminates OLS (Ordinary Least Squares) assumptions, regression, such as data must be normally distributed because it is multivariate and there is no multicollinearity problem between exogenous variables (Wold, 1985).

The procedure in the SEM-PLS analysis consists of 7 stages (Hair, J,T. Hult, C. Ringle, 2017).

1. Creating path model specifications (*path model*)

In specifying the path model there are two main issues; order and relationship between variables in the model. These two things are very important because they show the hypothesis to be tested (Sholihin, 2021).

2. Making measurement model specifications

The measurement model shows the relationship between the construct and its measuring indicators (often referred to as the outer model in SEM-PLS) based on measurement theory (Sholihin, 2021).

The following are the criteria for judging *outer model* atau *measurement model* in this study are as follows:

- a. *Convergent validity*

From the measurement model with reflexive indicators assessed based on the correlation between item scores/component scores calculated by PLS. The



individual reflexive measure is said to be high if it has a correlation of more than 0.7 with the construct being measured. However, for research in the early stages of developing a measurement scale, a loading value of 0.5 to 0.6 is considered sufficient.

b. *Discriminant Validity*

Another method of assessing *Discriminant Validity* is to compare the value of *square root of average variance extracted (AVE)* each construct with a correlation between the construct and the other constructs in the model (Ahmad Ghozali, 2013). It is recommended that the AVE value should be greater than 0.5 (Ahmad Ghozali, 2013).

3. Collecting and screening data

Data collection and examination is a very important stage in SEM analysis. In the first generation method, the general assumption is that the data is free from error. In the second generation statistical method, the model tries to identify the error component in the data and remove it in the analysis (Sholihin, 2021).

4. Estimating the PLS SEM model

Model estimation was carried out according to the variance-based SEM-PLS algorithm

5. Evaluating the test results of the measurement model

The results of the SEM-PLS are reviewed and evaluated using a systematic process including the evaluation of measurement models and structural models. The goal of SEM-PLS is to maximize the explained variance ( $R^2$ ) of the endogenous construct in the model (Sholihin, 2021).

6. Evaluating the results of structural model testing

The inner model is used to test causality (testing hypotheses with predictive models) and to describe the relationship between latent variables based on substantive theory. Q-square value  $>0$  indicates the model has predictive relevance, on the contrary if the Q-square value 0 indicates the model lacks predictive relevance (Ahmad Ghozali, 2013).

7. Interpret results and draw conclusions

At this stage, interpret the results of the SEM-PLS test to evaluate whether the empirical results support the proposed theoretical model (Sholihin, 2021).

### **Hypothesis test and Mediation effect**

For hypothesis testing using statistical values, for alpha 5% the t-statistic value used is 1.96. So the criteria for acceptance/rejection of the hypothesis are that  $H_a$  is accepted and  $H_0$  is rejected when the t-statistic  $> 1.96$ . To reject/accept the hypothesis using probability then  $H_a$  is accepted if the p value  $< 0.05$  (Ahmad Ghozali, 2013). The mediating effect shows the relationship between the independent and dependent variables through the connecting variable or mediation. The influence of the variable on the dependent variable does not occur directly but through a transformation process represented by the mediating variable (HReuben M. Baron and David A. Kenny, 2018). Testing the mediation effect can be done using regression techniques, but on complex models or model hypotheses, the regression technique becomes inefficient. The Variance Accounted For (VAF) method developed by (HReuben M. Baron and David A. Kenny, 2018) and bootstrapping in the distribution of indirect effects is considered more suitable because it does not require any assumptions about the distribution of variables so that it can be applied to small sample sizes.

The company's performance construct is measured or refers to the performance of internal business processes and financial performance (Tsai et al., 2011). Internal business performance includes Job simplification, Process Data validity improvement, Data refinement speed, Internal growth, and communication efficiency. While financial performance includes, Increase in sales value, Reduce inventory, increase in turnover, increase in receivables, and Profit margin growth.

The Role of Information Communication Technology (ICT) Innovation is a mediating variable that refers to the construct in research (Taylor, 2019) and organizational capability and market environmental factors are independent variables. This variable construct was adopted from the research (Taylor, 2019). Adoption of ICTs can be described as of the three defined stages namely, initiation, adoption, and implementation. Stage initiation has to do with assessing ICT Innovation. The adoption stage is one of those places decisions are made to adopt ICT innovations. The implementation stage is related to the effect ICT innovation in the company. Organizational factors in this study were measured using company size, age company, financial flexibility, and information intensity. market Environment includes external/competitive pressures, network influences

social services, support for ICT businesses, and acceptance of the ease of use of ICT. Pressure external/competitive to adopt ICT into consideration.

### 3. RESULTS AND DISCUSSIONS

#### Respondents' Characteristics

Based on the respondent's data in table 1 there are 79 male and 90 female. While the age with the highest number is in the age range of 20-30 years at 80, and the age with the lowest number is in the range of 51-60 years. Respondents in this study consisted of various positions but still within the sample criteria, ranging from owners, managers, admins, and the part that handles finances.

**Table 1 Respondents' Characteristics**

Description		Total	Total	Presentase (%)	
Gender	Man	79	<b>169</b>	46,7	<b>100</b>
	Woman	90		53,3	
Age	20-30	80	<b>169</b>	47,3	<b>100</b>
	31-40	32		18,9	
	41-50	37		21,9	
	51-60	20		11,8	
Position	Admin	13	<b>169</b>	7,7	<b>100</b>
	Owner	42		24,9	
	Manager	19		11,2	
	Financial department	17		10	
	Administration and sales Bagian	29		17,2	
	Administration and general department	24		14,2	
	Finance and general department	15		8,9	
	Treasurer	10		5,9	

Source; Data processed, 2022

#### Convergent Validity Test

To test convergent validity, it can be assessed by 2 criteria, namely the loading value must be above 0.7 and the *p*-value is significant less than (<0.05) (Hair, J.T. Hult, C. Ringle, 2017). However, (Sholihin, 2021) suggested that the loading value between 0.4-0.7 should be maintained and considered, by reason of the new construct, the impact on *Average Varian Extracted* dan *Composite Reability*. Based on the test results obtained the value of *loading* dan *p-value* ICT Adoption variable, Company Capability Variable, and market environment variable, and company performance have a loading value above 0.7 and a *p*-value less than 0.05 so that the construct on the variable is said to be valid

according to the argument of Sholihin & Ratmono (2020), so that the construct on the variable can be said to be valid.

To test the validity results, it can be done by looking at the value of *Average Variance Extracted*. If value *Average Variance Extracted* above 0.5 then the results of convergent validity using *Loading* and *p-value* said to be valid. From the results of the validity evaluation value test using *Average Variance Extracted*, all variables are at a value above 0.5 with details of the ICT Innovation variable of 0.675, Company Capability of 0.645, Market environment of 0.651, and Performance of 0.567. Based on result value *Average Variance Extracted* the research instrument on the variables of ICT innovation, company capability, market environment and evaluation performance on convergent validity, all variables in this study were declared valid.

### Reliability Test

**Table 2 Laten Variabel Coefficients**

	ICT	Org	Market	Perform
R-squared	0,555			0,477
Adj-R-squared	0,547	0,879	0,874	0,474
Composite reliab	0,926	0,816	0,728	0,921
Cronbach alpha	0,904	0,645	0,651	0,904
Avg. var. extrac	0,675	2,451	2,896	0,567
Full Collin.VIF	2,254			2,960
Q-squared	0,560			0,477

(Source, data processed 2022)

Reliability test can be assessed by looking at the value of *Composite reability* and *Cronbach's Alpha*. A variable is said to be reliable if the value of *Composite reability* and *Cronbach's Alpha* diatas 0,7. in accordance with the (Kock, 2020);(Hair, J,T. Hult, C. Ringle, 2017). Based on table above the ICT Innovation variable, Company Capability, Market Environment, and Performance have value *Composite reability* and *Cronbach's Alpha* above 0.7. Mark *Composite reability* for the ICT Innovation variable of 0.926, Company Capability of 0.879, Market environment of 0.847, and Performance of 0.921 and the value *Cronbach's Alpha* ICT Innovation variable is 0.904, Company Capability is 0.816, Market environment is 0.728, and Performance is 0.904. Based on value *Composite reability* and *Cronbach's Alpha* and research instruments on the variables of ICT Innovation, Company Ability, Market Environment and Performance are declared reliable.

### Lateral Collinearity Test

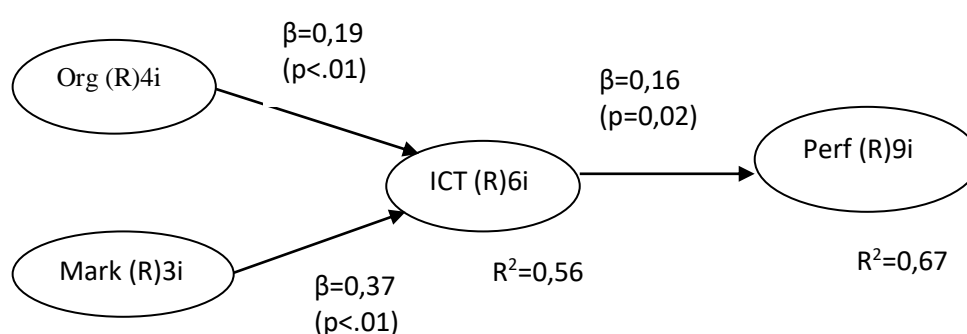
Collinearity is used to test *Common Method Bias*. The criteria are that the full colleniarity test value must be less than 3.3 (Kock, 2013) in order to avoid vertical, lateral collinearity and *Common Method Bias*. Based on the test results in table 4.3 above, the value of *Full Collinearity VIF* all variables below the number 3.3, namely the ICT Innovation variable of 2.254, Company Capability of 2.451, Market environment of 2.896, and Performance of 2.960. So it can be concluded that all variables in this study are free from vertical collinearity, lateral and *Common Method Bias*.

### Model Test

The model test or the *Goodness of Fit* model test is a test carried out to test whether the model in the study is fit or feasible. According to (Sholihin, 2021) To test it is done by looking at the value of *Average R-Squared*, *Average Full Collinearity VIF*, and *Average Path Coefficient* and *p-value*.

Based on the test results in table 5.4, the *Average R-Squared* value is 0.516, the *Average Full Collinearity VIF* is 2.693, and the *Average Path Coefficient* is 0.378 and the *p-value* is smaller than 0.05. So that this research model can be said to be fit or a good model can be done as a model to be tested and analyzed further.

### Hypothesis testing



**Picture 1 SEM Model**

According to Hair, et al (2017) Mediation analysis procedures can be categorized into partial mediation (complementary), partial mediation (competitive), full mediation (only indirect effect), and no mediation (only direct effect), and no mediation (no mediation).

influence). Steps in the analysis procedure by considering the significance value of the indirect and direct influence and the direction of the relationship between indirect and direct influence.

**Table 3 Path Coefficients and p-value**

Path Coefficients			
	ICT	Org	Market
ICT		0,189	0,202
Org			
Market			
Perform	0,160	0,323	0,365
P Value			
	ICT	Org	Market
ICT		0,006	0,003
Org			
Market			
Perform	0,016	<0,001	<0,001

(Source, Processed Data, 2022)

**Hypothesis 1:** Based on the test results, the significance value is less than 0.05 or (0.006) and the *path coefficient* is 0.189 (18.9%) on the company's ability to influence ICT innovation. These results indicate that first hypothesis is supported.

**Hypothesis 2: Market environment affects ICT innovation**

Based on the test results, the significance value is less than 0.05 or (0.003) and the *path coefficient* is 0.202 (20.2%) in the market environment that influences ICT innovation. These results indicate that second hypothesis is supported.

**Hypothesis 3: ICT innovation mediates the relationship between firm capabilities and firm performance**

From the test results, it is obtained that the significance value and the coefficient between the direct relationship between the company's ability and performance are significant at <0.001 (less than 0.05) and the coefficient is 0.232 (23.2%). Then obtained the significance value and coefficient between the indirect relationship between the company's ability to ICT innovation, which is <0.001 (less than 0.05) and a coefficient of 0.430 (43%), and the relationship between ICT Innovation and performance is 0.016 (less than 0, 05) and a coefficient of 0.160 (16%). The results of the direct and indirect

relationship of the two relationships are significant in the same direction (complementary mediation), thus indicating that Hypothesis 3 is supported or ICT innovation is able to mediate the relationship between company capabilities and company performance.

**Hypothesis 4: ICT innovation mediates the relationship of the market environment to firm performance**

From the test results, it is obtained that the significance value and the coefficient between the direct relationship between the market environment and performance are significant at  $<0.001$  (less than 0.05) and the coefficient is 0.365 (36.5%). Then the significance value and coefficient between the indirect relationship between the market environment and ICT innovation are 0.003 (less than 0.05) and a coefficient of 0.202 (20.2%), and the relationship between ICT innovation and performance is 0.016 (less than 0.05) and a coefficient of 0.160 (16%). The results of the direct and indirect relationship of the two relationships are significant in the same direction (complementary mediation), thus indicating that Hypothesis 4 is supported or ICT innovation is able to mediate the relationship of the market environment to company performance.

**Relationship between Enterprise Capability and ICT Innovation**

The impetus and barriers for MSMEs to adopt technology can come from within or outside. One of the factors for technology adoption is the ability to finance the IT sector [57]. According to her speech, Sri Mulyani in her speech revealed that the ability of a country to adopt technology will affect economic development and the country's position in the global value chain. In Indonesia, digital platform users are still dominated by communication media rather than *e-commerce*. However the number of e-commerce transactions has grown very rapidly over the last few years with the support for e-commerce adoption (Kala'lembang, 2020) even able to give birth to various unicorn companies that have been recognized both regionally and internationally.

The company's ability is an ability that can be seen in terms of company size, company age, *financial slack*, and information intensity. This reflects the ability and maturity of an organization in terms of finance, resilience, decisions in an ICT innovation. The results of this study confirm that the company's ability to have an influence on ICT innovation is in line with previous studies (Taylor, 2019).

### **Relationship between Market Environment and ICT Innovation**

According to (Sumiati, 2019.) Strategic flexibility is an ability that the company has in responding to changes that occur in the market. Companies with strategic flexibility tend to be better able to respond to developments than companies that are dynamic in determining strategic decisions and planning. The dynamic nature of the company with strategic flexibility does not make the company always respond to changes that occur in the external environment, especially the market. Companies with good strategic flexibility take several approaches before finally deciding whether to adjust to changes in the external environment or not.

The application of ICT innovation for companies is a response to strategic flexibility, by considering the external environment, especially the market environment, to determine the direction or strategy that will be taken as an effort to improve performance. The market environment in this study includes external/competitive pressures, influence of social networks, support for ICT businesses, and acceptance of the ease of using ICT. The results of this study find that the market environment has an influence on ICT innovation in line with previous findings (Taylor, 2019).

### **Mediating ICT Innovation on the Relationship between Company Ability and Company Performance**

According to (Fathul Wahid, 2007) In implementing technology, cost constraints and human resource capacity need attention, because this *complexity* has proven to be one of the obstacles to IT adoption by SMEs in Indonesia. However, according to (Asrul et al., 2018) It is undeniable that the management of a company must be done by using and utilizing information technology (IT), including SMEs. In addition to the increasingly competitive level of business competition, the need for efficiency and effectiveness in the company's own management requires every company to be ready and adopt the use of this technology. Companies that are not ready and adopt the implementation of IT will automatically be abandoned by customers. So that it is unavoidable that the company's ability to implement IT can improve company results and performance. In addition, the company's ability can be seen from the readiness of the organization itself, the experience and financial capabilities of the organization, this is in line with (Ikhsan et al., 2016).



The company's ability to bridge or become a reinforcing factor for an organization to adopt ICT which in turn has an impact on the performance of the organization itself. In accordance with the results of this study, ICT innovation mediates the relationship between Company Capability and Company Performance in line with the study results (Taylor, 2019) and (Bazhenova et al., 2012).

### **Mediating ICT Innovation on the Relationship between Market Environment and Company Performance**

At this time, MSMEs are a dynamic economic strength point, along with the development of information technology, especially in the fields of business and trade, it will also bring improvements to the company's performance. (Suhardoyo & Utomo, 2017) revealed that every company generally has a goal, namely to obtain a level of productivity that can maximize profits, and the main key to carry out the running of a company for production, distribution and enterprise. However, the company is an interaction to create a relationship between buyers and sellers and not a simple way to just produce products, there are several things that make companies have to change strategies with the increasing number of new competitors, new brands, new use values, lower prices. competition and the number of agents/distributors as intermediaries as well as the needs and desires of the consumer market that change from time to time, therefore it is important in formulating a company's performance strategy. In other words, the company does not only have interactions with internal organizations, but also with external organizations which in this study is the market environment. Nevertheless, the market environment can be one of the competitive advantages that can improve organizational performance (Sar, 2017).

ICT innovation is one of the strategies in responding to several things that arise outside the internal organization. This step was taken as an effort to save the company from being left behind and the credibility of the performance assessed by the stakeholders. This study proves that the external environment in this case the market is able to strengthen companies to think strategically with ICT innovations that have an impact on company.

#### 4. CONCLUSIONS AND SUGGESTIONS

Based on the analysis and discussion, it can be concluded that the market environment has an effect on ICT innovation, and the company's ability has an effect on ICT innovation. Meanwhile, ICT innovation is able to mediate the relationship of leadership, market environment, and company's ability to financial performance. This research has implications for organizations that will improve their performance by considering Innovation in Technology and the importance of MSMEs to continue to learn and apply ICT to improve performance. The suggestions in this study are to add research objects so that the results can be more generalized, in addition to considering aspects of organizational readiness which are supported by the readiness of Human Resources of organizational members such as education.

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