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THE EFFECT OF INFORMATION TECHNOLOGY AND ENTREPRENEURSHIP ON THE E-SERVICES QUALITY THAT HAVE AN IMPACT ON CUSTOMER VALUE: EVIDENCE FROM INDONESIA SMES

Abstract

The handicraft sector is one of the sectors whose sales have increased rapidly in Indonesia. The problem, however, is the unpreparedness of craft SMEs in applying information technology in their sales activities. In addition, there are also problems in understanding the ability of UKM entrepreneurship on the characteristics of online sales. The purpose of this study is to analyze the effect of entrepreneurship and information technology on the quality of e-Services and their impact on customer value in craft SMEs in Indonesia. The results of the study show that there is an influence of entrepreneurship and information technology on the quality of online services and their impact on customer value. Entrepreneurship does not have a direct effect on online service quality and customer value but the entrepreneurship variable has a significant effect on customer value through the quality of e-Services and the quality of e-Services becomes the intervening variable in this study.

1. INTRODUCTION

In the development of the current information era, business owners are required to respond to the increasing societal needs for products and services. The information age places people in possession of media that are able to provide information related to products and services across time and place boundaries. Currently, people can easily access products based on the internet or online networks, in addition to the habit of buying or obtaining goods through traditional methods that have been carried out by the community so far. As is well known, online shopping sites are scattered in cyberspace, across borders, regions and even countries, creating intense competition in increasing product sales for business people. The pattern of online sales is now starting to shift the existence of traditional business people,

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the development of the times will create new things by appearing and destroying old things, which is a law of nature. This is in the business cycle in economic theory (Kasali, 2017). In this context, what about the role and position of Small and Medium Enterprises (SMEs)? It cannot be denied that in Indonesia, SMEs have a very significant role as part of the country's economic growth.

In 2023, after the COVID 19 pandemic era, internet penetration has had a huge impact on small and medium businesses in Indonesia. It is certain that the internet will continue to develop compared to the conditions in 2020, even the quality of Indonesia's internet in 2023 is targeted to be like Singapore (Haryadi et al., 2021). In terms of the use of information technology, currently many types of SMEs are starting to take advantage of it to improve services (Hsieh & Chou, 2018). In this regard, of course, many problems will be faced by medium-sized businesses. One of them is a medium-sized business in the craft sector in Indonesia. In this case, the most important thing, of course, is the readiness of SMEs in the craft sector to take advantage of this both in terms of management knowledge, service quality and so on. Handicraft in Indonesia is one of the sectors that has increased rapidly in terms of sales. Indonesia's large market and online network penetration allow craft sector businesses to take advantage of this media. Online media without boundaries and time is of course a new culture for craft sector business actors. The quality of online-based services (e-Quality Service) is different from the quality of service in ordinary sales in general (Olaleye et al., 2021). E-Services quality certainly has its own characteristics. For business actors in the craft sector who do not understand the characteristics of online sales, this is the main obstacle because they do not understand e-Services Quality, such as promotional needs, creating communities, building networks, after-sales service, and strengthening communication (Keke, 2022). It can be seen that few business entities in the craft sector in Indonesia are using online media, and those that still make regular sales are increasingly damaged by the existence of online-based products.

This resulted in the emergence of a new problem, namely the difficulty of selling products online. Many online craft businesses are growing, but on the other hand, many are closing their online businesses. When a buyer or customer wants to buy a product, of course the business actor, in this case the handicraft sector business in Indonesia, needs something that can ensure that the item or product is in accordance with the needs and desires of the customer. At present there are still many producers, especially SMEs who run their online-based businesses, who do not understand this because in principle the goods offered by business actors cannot be felt by the shape, colour and so on directly by customers. This is in line with the concept that the higher the consumer's attention to the value of a product (in this case the customer value), the tighter the competition for producers to be the best (Knowles et al., 2020). In general, these problems are also experienced by SMEs in Indonesia, especially in the handicraft business sector. The craft business sector in Indonesia is a creativity-based activity as one of the industries that influences the economy and people's welfare. Apart from that, the handicraft industry sector is also capable of absorbing a very high number of workers in Indonesia. Indonesia is a country that focuses on tourism development so that the potential of the craft industry is important in boosting the national and local economy. In line with the development of information technology, making online business lively and making the craft industry even more stretched due to high market demand (Hendriansyah & Udayanti, 2022). However, this does not necessarily mean that the craft industry in Indonesia is developing rapidly. The craft industry is not a commodity that is

easily sold because of human needs. Craft products are highly dependent on the aesthetic aspect of the customer. Craft companies require a certain approach in marketing their products. Some of the problems that occur are business actors, especially handicraft sector businesses, who do not understand the characteristics of information technology so that it becomes the main obstacle in carrying out online-based product services such as promotional needs, creating communities, building networks, to strengthen communication or online. The majority of business people, especially SMEs who run their online business, still think like a traditional business, even though online business has a different character because it is technology-based, of course management knowledge and mastery of technology are needed. In addition, many SMEs do not realize the importance of customer value because of customer characteristics. Those who carry out online transactions are certainly different from ordinary customers. But the extent of the influence of information technology certainly requires deeper study. It can be seen that the scope of the problems that occur are around understanding related to the concept of entrepreneurship, the use of information technology, e-quality service, and customer value.

In the last 12 years, there have been quite a number of studies related to the concept of entrepreneurship, the use of information technology, e-Services quality and customer value at a high level. However, many discussions related to these concepts are carried out partially, such as research related to the influence of entrepreneurship on the quality of online services or research conducted by (Sayedi & Isah, 2013), then other research explores e-Services quality carried out by (Olaleye et al., 2021). Then there is research conducted by (Eizi et al., 2013) who tries to explore in terms of causation and correlation in the context of the use of Information Technology for e-Services quality and identify the relationship between the dimensions of these two variables. Another study that tried to see the relationship between e-Services quality and customer value was conducted by (Raza et al., 2012), (Rita et al., 2019), (Noor, 2022), (Zhuang & Babin, 2015), and (Singh & Kumar, 2023). Based on the discussion related to previous research that has been done, the motivation for conducting this research is

1. The majority of current research related to the concept of entrepreneurship, the use of information technology, e-quality service, and customer value is still being carried out partially and not comprehensively.
2. There is no research that tries to explore the extent to which the concept of entrepreneurship and the use of information technology affect e-Services quality and customer value simultaneously and comprehensively. This is the basis of this research conducted.

The next part of this paper is organized into several sections in the following order: Section 2 describes the materials and methods used, the software used in the research, the data collection mechanisms and the framework for the proposed research concept used in this study, Section 3 contains the research results, discussion of the results obtained as well as discussion regarding research weaknesses and practical aspects of the usefulness of research for industry, especially in this case SMEs, and Section 4 contains conclusions.

2. MATERIAL & METHOD

2.1. Used Terms

The definition of entrepreneurship in general is a process of doing something new or creative and different (innovative) that is useful in providing added value. Entrepreneurship involves three important dimensions, namely innovation, risk taking and proactivity (Corbett et al., 2013).

Information technology is referred to by (Bolívar-Ramos et al., 2013) as Information Technology (IT) or in English known as Information Technology (IT) is a generic term for any technology that helps people create, change, store, communicate and/or disseminate information. Information Technology brings together high-speed computing and communications for data, voice, and video. Examples of IT include not only personal computers, but also telephones, televisions, electronic household appliances and modern mobile devices (such as cell phones). The use of IT to support the various needs and developments of organizations, individuals and companies will certainly bring something positive. The benefits of IT for positive things will certainly get a lot of support from various groups. In this case, (Mohamed et al., 2022) in the same context provides several dimensions regarding the use of information technology. On this basis, there are two dimensions, namely:

1. Benefits including making work easier, useful, and increasing productivity.
2. Effectiveness including increasing efficiency and improving job performance.

There are three keys to providing superior customer service according to (Rita et al., 2019), namely the ability to understand the needs and desires of customers, develop databases that are more accurate than competitors, utilize information obtained from market research. In an online-based business, technology is a reference for service quality for electronic transactions and a measuring tool for service quality. The definition that can be used in this case according to (Basir et al., 2015) that e-Services quality is a website service that facilitates the functions of shopping, purchasing and delivery of products and services carried out effectively and efficiently. (Bogomolov et al., 2020) formulate the dimensions of e-Services quality by making related research maps. Based on related studies, 8 important e-Service quality indicators can be formulated, namely responsiveness, service reliability, ease of use, competence, access, system reliability, timeliness and security.

Customer value in this context is defined as the extent to which companies meet customer needs with their products or services, and how companies maintain and expand relationships with customers for the long term (Juanamasta et al., 2019). A successful and sustainable company always pays attention to customer value and strives to improve the customer experience so that they keep coming back as loyal customers and recommending the company's products or services to others. (Payne et al., 2017) states that customer value is a combination of quality, service, and price of a product offering. The value delivered to the customer is the difference between the total value to the customer and the total cost from the customer, and the total value to the customer is the group of benefits that the customer expects from a particular good or service. Several studies show the dimensions of customer value, but in general the dimensions of customer value refer to the concept of (Boakye et al., 2016). The dimensions of customer value consist of 4, namely:

1. Emotional value, utility derived from feelings or affective/positive emotions arising from consuming the product. Emotional value has indicators, such as Aesthetics, Self-expressive Value, and Brand Personality.
2. Social value, the utility derived from the product's ability to enhance the consumer's social self-concept. Social value has an indicator, namely recognition of the product purchased and a sense of pride in the product purchased.
3. Quality/performance value, the utility derived from the product due to short and long terms cost reductions. The performance value has indicators, namely the benefits that consumers get after consuming the product and the consistency of the services provided.
4. Price/value of money, utility obtained from the perception of the expected performance of the product or service. Social value has indicators, namely the nominal value of the product and the amount of money that must be paid by the customer.

Small and Medium Enterprises, or abbreviated SMEs are types of businesses that play an important role in boosting the country's economic growth. In Indonesia, SMEs have a major contribution to the economy. This type of business is run by individuals or business entities that are not subsidiaries or branches of large companies. Small and Medium Enterprises engaged in the craft industry sector are developing in many big cities in Indonesia. This is due to the economic center in the city. As divided by the Ministry of Tourism and Creative Economy of Indonesia, the craft industry is differentiated based on materials such as stone, wood and rattan crafts, ceramics, plastic, metal, fiber, paper, and others (Sari et al., 2020).

2.2. The Conceptual Framework of The Proposed Model

Based on the material discussion and previous research, the conceptual model framework in this research proposal can be described. The conceptual model framework can be explained as Figure 1.

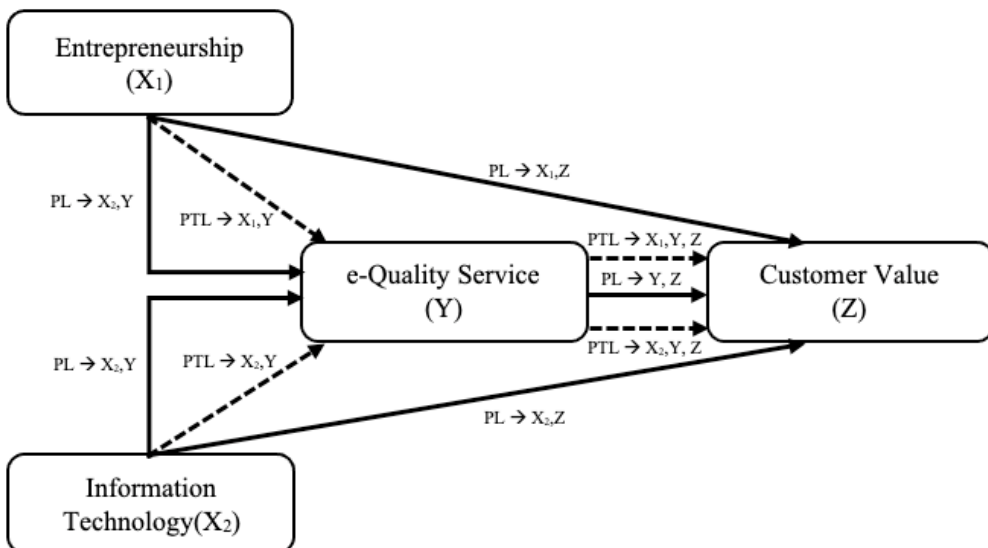


Fig. 1. Conceptual Framework in Path Diagram Model

The model in Figure 1 is used to determine direct and indirect entrepreneurial and information technology variables through online service quality on customer value in the craft business.

This conceptual framework uses a path analysis approach. Path analysis can help researchers to determine whether the relationship between the variables occurs directly or through intermediate variables and can also compare the size of the influence, both direct and indirect. According to (Landon et al., 2019), path analysis is a method for studying the direct effects and indirect effects of the variables studied. Path analysis can help to determine whether the relationship between the variables occurs directly or through intermediate variables and can also compare the size of the influence, both direct and indirect. Based on this, the hypothesis in this study can be determined as shown in Table 1.

Tab. 1. Research Hypothesis

1	H ₁	Entrepreneurship variable influences e-Quality Service
2	H ₂	Information Technology Variables Affect e-Quality Service
3	H ₃	Entrepreneurship variables through e-Services quality affect Customer Value
4	H ₄	Information Technology Variables through e-Services quality affect Customer Value

2.3. Research Method

According to (Sekaran & Bougie, 2003), research method is defined as a scientific way to obtain data with a specific purpose and use. The research method used in this research is a quantitative descriptive method. The design in this study is a path analysis model that can help to determine whether the relationship between the variables occurs directly or through intermediate variables and can also compare the size of the influence, both direct and indirect, path analysis is a method for studying the direct effect and indirect effect of the variables studied (Stage et al., 2004). The sample in this study are craft entrepreneurship who sell their products through online services. The sample data used in this study for each variable were obtained from 213 samples taken at random and from representatives of 25 provinces in Indonesia. The research methodology carried out in this study is shown in Figure 2.

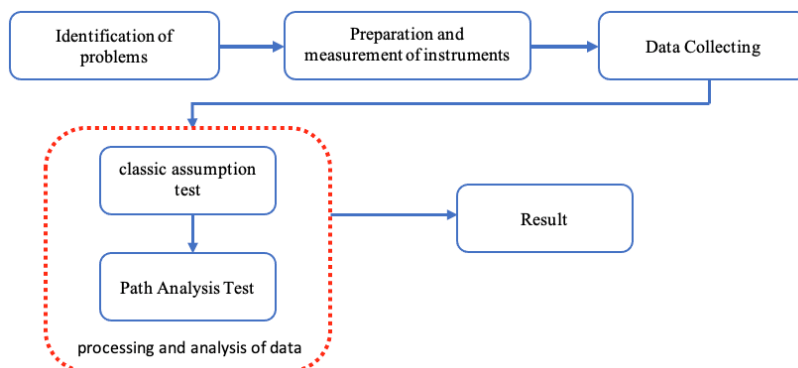


Fig. 2. Research Flow

Figure 2 shows the research flow and is explained in detail below. Table 2 shows the proportion of respondents.

Tab. 2. The proportion of research respondents

Province	Respondent	Gender		Craft Type						
		FM	M	Cloth	Wood/Rattan	Ceramics	Paper	Metal	Plastic	Others
Bali	1	1	0		1					
Banten	7	5	2			3	3		1	
Daerah Istimewa Yogyakarta	26	18	8	12	1	3	6		2	2
DKI Jakarta	10	9	1	2			6		2	
Gorontalo	1	1	0							1
Jambi	2	2	0				2			
Jawa Barat	51	46	5	22	2	2	18		5	2
Jawa Tengah	17	14	3	6	2	4	5			
Jawa Timur	45	41	4	14	8	1	15	1	4	2
Kalimantan Barat	2	2	0			1	1			
Kalimantan Tengah	1	1	0						1	
Kalimantan Timur	3	3	0				2		1	
Lampung	2	2	0	2						
Maluku Utara	1	0	1						1	
Nanggroe Aceh Darussalam	5	3	2	2	2		1			
Nusa Tenggara Barat	3	3	0	1			1		1	
Papua	1	1	0		1					
Papua Barat	1	1	0		1					
Riau	6	6	0	1			2		2	1
Sulawesi Selatan	1	1	0				1			
Sulawesi Tengah	2	2	0	1					1	
Sulawesi Tenggara	1	1	0	1						
Sumatera Barat	8	6	2	5					3	
Sumatera Selatan	10	9	1	5	1		1		1	2
Sumatera Utara	6	6	0	1			2		1	2
Grand Total	213	184	29	68	19	13	64	1	25	12

2.3.1. Data Collecting

Data collection techniques for the purposes of this study were carried out using survey methods. The survey method is a way to collect data from respondents through the use of survey instruments such as questionnaires or interviews. The aim of the survey method is to

gather information about the opinions, perceptions, behaviours, or demographic characteristics of a particular population or sample (Roberts, 1999). The data collection process was carried out in the period from December 2022 to February 2023 using online surveys and socialization mechanisms through activities at the Indonesian national level business community Tangan Di Atas (TDA), as well as distributing surveys to business sub communities digitally using social media communications. The number of respondents were craft entrepreneurs who were officially registered with the Indonesian national level business community TDA. This is also why in the table for certain provinces (especially provinces outside Java) there are several craft entrepreneurs, even only 1 in number.

2.3.2. Instrument Reliability Test

At this stage, instrument testing is carried out to see the reliability of the instrument so that the instrument is valid as a data collection tool. The instrument reliability test used the Cronbach's Alpha technique.

1. The dimensions used in the instrument includes Entrepreneurship, Information Technology, E-Quality Service, and Customers Value with the following detail:
2. Information Technology with coverage, such as information systems, use of information technology, information technology facilities, and information resources
3. Entrepreneurship with coverage, such as creativity, innovation, business opportunities, risk taking, and entrepreneurship governance
4. E-Quality Service with coverage, such as ability to provide online services, reliability of online-based services, credibility of online-based services, ease of access to online services, communication capabilities in online services, online service portfolio, content in online services, security of online services, aesthetics in services online, system reliability in online services, system flexibility in online services,
5. Customer Value with coverage, such as customer feelings, customer social self-concept, sales business performance in the eyes of customers, and the price paid by customer regarding products

2.3.3. The Classical Assumption Test

The classical assumption test was carried out to test the validity of the parameter values generated by the model used in the study (Dewi et al., 2019). This research was tested using the path analysis method. Path analysis is a statistical analysis technique developed from multiple regression models. Before carrying out path analysis, it is necessary to test the classical assumptions to ascertain whether the model is free from normality, multicollinearity, autocorrelation and heteroscedasticity problems. The most important thing is the data normality test. It aims to ensure that the residuals to be regressed are normally distributed. The data is said to be normally distributed if the significance value is greater than 5% alpha. Apart from the normality test, other prerequisite tests are multicollinearity and heteroscedasticity (Allison, 1999). However, if you only have one independent variable, then the multicollinearity test does not need to be used. Multicollinearity occurs when "there are strong linear dependencies among the explanatory variables" (Valdés-Souto & Naranjo-Albarrán, 2021). In general, the classic assumption test for the needs of the path analysis model includes:

- Normality test,
- Multicollinearity test (if using Lisrel and if the independent variable is more than one),
- Heteroscedasticity test,
- Autocorrelation test (can be ignored if the data is cross section).

2.3.4. Data Processing and Analysis

The data processing and analysis technique used to test the hypothesis in this study uses path analysis techniques (path analysis) is a method for studying the direct effects and indirect effects of the variables studied. The application used for data processing and analysis needs in this research is SPSS version 25. SPSS is one of the most widely used application programs for statistical analysis in the social sciences. Applications are widely used by market researchers, survey companies, health researchers, governments, education researchers, marketing organizations and others.

2.3.5. Interpretation of Results

In this section, interpretation of the results is carried out as material for research discussion.

3. RESULTS AND DISCUSSION

3.1. Result

3.1.1. Instrument Reliability Test

In this study, the results of the instrument validation test used Cronbach's Alpha analysis. The results of the instrument test showed that the Cronbach's Alpha value was 0.71 which means > 0.6 . Based on these test scores, the questionnaire or instrument is declared reliable or consistent.

3.1.2. The Classical Assumption Test

The results of the classical assumption test were carried out on the collected data. The results were shown in the order of the tests, namely the normality test, multicollinearity test and heteroscedasticity test. The Autocorrelation test was not carried out because the data is in the form of a cross section.

1. Normality Test

The data normality test is important because with normally distributed data, the data is considered to represent the population. First, test the normality of the data using the One Sample Kolmogorov-Smirnov test using a significance level of 0.05. Testing using SPSS v.25 as shown in Table 3.

Table 3 shows that the Asymp. Sig. (2-tailed) namely $0.1 > 0.05$. This shows that the data used in path analysis is normally distributed data.

Tab. 3. Normality test results with Kolmogorov Smirnov

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N	213	
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.25386193
Most Extreme Differences	Absolute	.133
	Positive	.065
	Negative	-.133
Test Statistic		.133
Asymp. Sig. (2-tailed)		.100c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: Primary Data, processed with SPSS v.25

2. Multicollinearity Test

By using SPSS v.25, the output is as shown in Table 4. According to the testing criteria for the Multicollinearity test, if the Tolerance value is > 0.1 and $VIF < 10$, it is concluded that there are no symptoms of Multicollinearity. Table 4 shows that for variables X_1 , X_2 and Y have tolerance values > 0.1 and VIF values for all variables < 10 which means that it can be concluded that there is no multicollinearity disorder or in other words the path analysis model tested is free from multicollinearity symptoms so that in this section the assumptions fulfilled.

Tab. 4. Coefficients for measuring Multicollinearity

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	X_1	.993	1.007
	X_2	.979	1.022
	Y	.984	1.017

a. Dependent Variable: Z

3. Heteroscedasticity test

By using SPSS v.25 the following output is obtained. Based on the calculation in Table 5, it can be shown that the p-value or sig of all independent variables, namely X_1 , X_2 , and $Y > 0.05$, which means that there is no heteroscedasticity problem in the regression model.

Tab. 5. Heteroscedasticity Testing Coefficient

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.862	.394		2.189	.030
X_1	-.009	.038	-.017	-.241	.810
X_2	-.072	.053	-.094	-1.356	.177
Y	-.088	.085	-.071	-1.028	.305

a. Dependent Variable: ABS_RES

In this section the assumptions of the heteroscedasticity test are fulfilled. Based on testing on the data that has been collected, the classical assumption test has been fulfilled, so that the Path Analysis Model can be used as a valid analytical tool in this study.

3.1.3. Path Analysis

Path analysis is a technique for analyzing causal relationships that occur if the independent variable affects the dependent variable directly or indirectly. The test results use SPSS v.25 as shown in Table 6.

Tab. 6. Direct effects and indirect effects of the variables studied

Variable Influence	Direct effects	Indirect Influence Through Services quality (Y)	E-Total Impact
$X_1 \rightarrow Y$	0,0310		0,0310
$X_2 \rightarrow Y$	0,0420		0,0420
$X_1 \rightarrow Z$	0,0600	$0,031 \times 0,038 = 0,0012$	0,0612
$X_2 \rightarrow Z$	0,0670	$0,042 \times 0,038 = 0,0016$	0,0690
$Y \rightarrow Z$	0,0380		0,0380

Source: Primary data processed by SPSS v.25 program

When shown in the path analysis model as shown in Figure 3

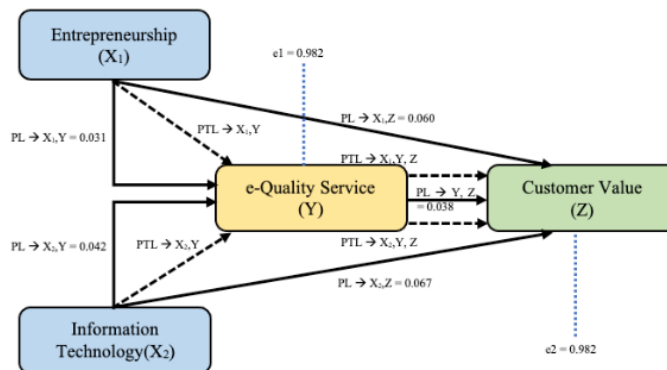


Fig. 3. Chart Analysis Path of direct and indirect influence

Where:

PL = Direct influence with full line

TL = Indirect influence with dotted

PT = Total Effect

Figure 3 shows the direct and indirect effects of the path analysis of the research model. The explanation is as follows.

3.1.3.1. The Direct Effects

In the sub-structural equation and from the results of path analysis it can be seen that entrepreneurship has a smaller direct influence (0.060) than Information Technology (0.067), on the e-Services Quality in online-based craft companies.

3.1.3.2. Structural Direct Effects

In the sub-structural equation and from the results of the path analysis it can be seen that the Information Technology variable has a greater direct influence (0.067) than the entrepreneurship variable (0.060) and the e-Services Quality variable (0.038) in online-based craft companies.

3.1.3.3. Indirect Effect and Total Effect

Indirect influence is a situation where the independent variable affects the dependent variable through other variables called intervening (intermediary) variables. In the conceptual model, the intervening variable in this study is the e-Services Quality variable.

3.1.3.4. The influence of entrepreneurship on customer value through online service quality.

With an indirect effect value, the total effect of the entrepreneurship on customer value (0.060) and the entrepreneurship on customer value through e-Services Quality is 0.069, that the total influence of the entrepreneurship on customer value through e-Services Quality is greater than the direct influence of the total entrepreneurship to Customer Value ($0.061 > 0.060$). From these findings it can be concluded that e-Services Quality are an intervening or mediating variable from entrepreneurs on customer value in online-based craft companies.

3.1.3.5. The influence of information technology on customer value through online service quality

With an indirect effect, the total effect of information technology on customer value (0.067) and information technology on customer value through e-Services Quality is 0.069. From the calculation results above it is found that the total effect of information technology on customer value through e-Services Quality is greater than the direct effect of information technology on customer value ($0.690 > 0.067$). From these findings it can be concluded that e-Services Quality are an intervening or mediating variable from information technology to customer value in online-based craft companies.

3.1.3.6. Significance value of research variables

To see how much influence between variables requires measurement based on significance value. To see the significance value, one can view the SPSS v.25 output results in the regression coefficient table in the analysis path, as shown in Tables 7 and 8.

Tab. 7. Path analysis coefficients part 1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.619	.197		18.363	.000
	X1	.012	.031	.026	.386	.700
	X2	.076	.042	.123	1.799	.043

a. Dependent Variable: Y

Tab. 8. Path analysis coefficients part 2

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.094	.622		4.972	.000
	X1	.086	.060	.097	1.429	.154
	X2	.187	.084	.153	2.233	.027
	Y	-.052	.135	-.026	-.384	.017

a. Dependent Variable: Z

4. DISCUSSION

1. Path analysis is a technique for analyzing causal relationships that occur if the independent variable affects the dependent variable directly or indirectly. Based on the results of the path coefficients on the research hypothesis, a causal relationship can be explained between entrepreneurship variables (X_1), Information Technology (X_2), e-Services Quality (Y), and Customer Value (Z) namely
2. Analysis of the influence of the entrepreneurship (X_1) on the quality of online services (Y): from the analysis above, the significance value of the entrepreneurship (X_1) is $0.7 > 0.05$. Thus, it can be concluded that there is no direct significant influence of the entrepreneurship (X_1) on the e-Services Quality (Y). These results answer that the first research hypothesis (H_1) is not fulfilled (see Tab. 1).
3. Analysis of the effect of information technology (X_2) on the e-Services Quality (Y): from the analysis above, it is obtained that the significance value of information technology (X_2) is $0.043 < 0.05$. Thus, it can be concluded that there is a direct significant influence of information technology (X_2) on the e-Services Quality (Y). These results answer that the second research hypothesis (H_2) is fulfilled (see Tab. 1).
4. Analysis of the influence of the entrepreneurship (X_1) on customer value (Z): from the analysis, it is obtained that the significance value of the entrepreneurship (X_1) is $0.154 > 0.05$. Thus, it can be concluded that there is no direct significant influence of entrepreneur (X_1) on customer value (Z).
5. Analysis of the effect of information technology (X_2) on customer value (Z): from the analysis it is obtained that the significance value of information technology (X_2) is

0.027 < 0.05. Thus, it can be concluded that there is a direct significant influence of information technology (X_2) on customer value (Z).

6. Analysis of the effect of the e-Services Quality (Y) on customer value (Z): from the analysis it is found that the significance value of Y is 0.02 < 0.05. Thus, it can be concluded that there is a direct significant influence of the e-Services Quality (Y) on customer value (Z).

Analysis on points 1-5 is based on the output of Table 7-8. Meanwhile, the analysis of points 6-7 is based on Table 6.

1. Analysis of the influence of entrepreneurship (X_1) through the e-Services Quality (Y) on customer value (Z): it is known that the direct influence exerted by entrepreneurs (X_1) on customer value (Z) is 0.060. While the indirect effect of entrepreneurship (X_1) through the e-Services Quality (Y) on customer value (Z) is the multiplication of the entrepreneurship beta value (X_1) on the e-Services Quality (Y) with the beta value of the e-Services Quality (Y) on customer value (Z) which is equal to 0.0012. Then the total influence given by the entrepreneurship (X_1) on customer value (Z) is a direct effect plus an indirect effect that is equal to 0.0612. Based on the calculation results above, it is known that the direct influence value is 0.060 and the indirect effect is 0.0012, which means that the indirect effect value is greater than the direct influence value. These results indicate that indirectly the entrepreneurship (X_1) through the e-Services Quality (Y) has a significant influence on customer value (Z). These results answer that the third research hypothesis (H_3) is fulfilled (see Tab. 1).
2. Analysis of the influence of information technology (X_2) through the e-Services Quality (Y) on customer value (Z): it is known that the direct influence of information technology (X_2) on customer value (Z) is 0.067. While the indirect effect of information technology (X_2) through the e-Services Quality (Y) on customer value (Z) is the multiplication of the beta value of information technology (X_2) on the e-Services Quality (Y) with the beta value of the e-Services Quality (Y) on Value customers (Z) that is equal to 0.0016. Then the total effect given by information technology (X_2) on customer value (Z) is a direct effect plus an indirect effect that is equal to 0.069. Based on the calculation results above, the direct effect value is 0.067 and the indirect effect is 0.002, which means that the indirect effect value is greater than the direct effect value. These results indicate that indirectly information technology (X_2) through the e-Services Quality (Y) has a significant influence on customer value (Z). These results answer that the fourth research hypothesis (H_4) is fulfilled (see Tab. 1).

From a series of discussions on the results above, it can be concluded that the hypothesis which reads there is the influence of entrepreneurship (X_1) and information technology (X_2) on the e-Services Quality (Y) and the impact on customer value (Z) in general can be accepted. This research comprehensively complements research conducted by (Raza et al., 2012) and (Singh & Kumar, 2023), both studies are more broadly inclined to look at the relationship between 2 important dimensions, namely online E-Quality Service and Customer Value.

This is in line with the concept that the entrepreneurial spirit is very important for business people to have, because this will help them manage their work and business very well. The basic nature of an entrepreneurship is to have a spirit of innovation, dare to make decisions and be proactive. This is very much needed to be able to follow consumer desires,

both in terms of products, services, marketing strategies and always follow the latest trends. The entrepreneurial spirit is produced from a process of activities of business people that are based on concepts and theories, not just on the nature of a person's personality or based on intuition alone so that he is able to create added value from the limitations faced from each activity by seizing business opportunities and managing them. owned resources. Based on the results of the research in this paper, the entrepreneurial spirit will be useless if it does not have a direct impact on business to improve e-Services Quality. This customer satisfaction is obtained from customers who have experience in obtaining information related to products, how to get these products, product evaluation media, as well as all the determinants of customer decision making in buying a product obtained through e-service quality. When customers feel satisfied in each the experiences has in getting the product, this will affect the customer value of the business.

Customer value is the standard of assessment given by customers to businesses, both in terms of service quality, product or service quality and also in terms of the ease of obtaining these products or services. If the customer value of a business is high, this will affect the customer's decision making in buying the product and have an impact on long-term relationships. To increase customer value in the current era, support is needed to improve e-service quality and convenience. The support in question is information technology that is able to assist business people in obtaining information on customer needs in terms of products and services. In addition, information technology also assists business people in delivering product knowledge, customer service in the form of ordering, shipping, returning goods and other services. This will help businesses balance supply and demand and also in making strategic decisions on the needs of each process in the business. This information technology support is urgently needed to improve the quality of online services, for example to convey product knowledge through content posted on social media, which can be in the form of pictures or videos that explain product details, testimonials, product value, and how to get it. You can also use messenger media which is used to communicate directly with customer service which is responsive and informative. This explanation is briefly shown in Figure 4.



Fig. 4. How the research aspect becomes a cycle in the E-Commerce industry

4.1. Limitations and applied value of research

The limitation of the research is that the number of respondents collected is limited, where the respondents are craft entrepreneurs, the majority of whom use online features and services in running their business. By expanding the measurement scale, namely online

MSME entrepreneurs who are more general, you will of course obtain more precise research results.

The research results themselves can be implemented through preparing an action plan, disseminating the research results then consulting with related parties, in this case craft entrepreneurs who use online services, convey that the research results show that E-Service Quality is an important variable in running an online business and influencing customers Value. Entrepreneurs' understanding of entrepreneurship and improvements in information technology can influence E-Service Quality. After doing this, give the relevant entrepreneurs time to improve the things that are the results of the research. Then in the coming period, carry out continuous evaluation and monitoring to see changes in results through further measurements

5. CONCLUSION

Based on the results and discussion it can be concluded that

1. There is an influence of entrepreneurship (X_1) and information technology (X_2) on e-Services Quality (Y) and the impact on customer value (Z)
2. In this study it was found that the concept of entrepreneurship has no direct effect on e-Services Quality and customer value. However, the entrepreneurship variable has a significant effect on customer value through the e-Services Quality variable.
3. e-Services Quality is the intervening variable in this study, which shows that e-Services Quality are an important factor in the success of craft businesses in increasing customer value.

In focusing research so that the problem under study has a clear scope and direction, the researcher provides problem boundaries. The research variables are limited by entrepreneurship variables according to the dimensions that are a factor in the concept of entrepreneurship and information technology with the dimensions of information technology resources. Online e-service quality, or uniform and high quality service online, is important because it plays a crucial role in establishing a good customer experience and building trust in digital interactions. By prioritizing transactions via online E-Service Quality, it will provide a good customer experience, trust and security, able to increase company capacity in line with growing demand and customer loyalty. Then, by improving information technology and entrepreneurial capabilities which are an important part of online e-service quality services, companies can guarantee sustainable growth, high customer satisfaction and a strong reputation in an increasingly competitive digital market.

Conflict of Interest

The authors declare that they have no conflicts of interest.

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