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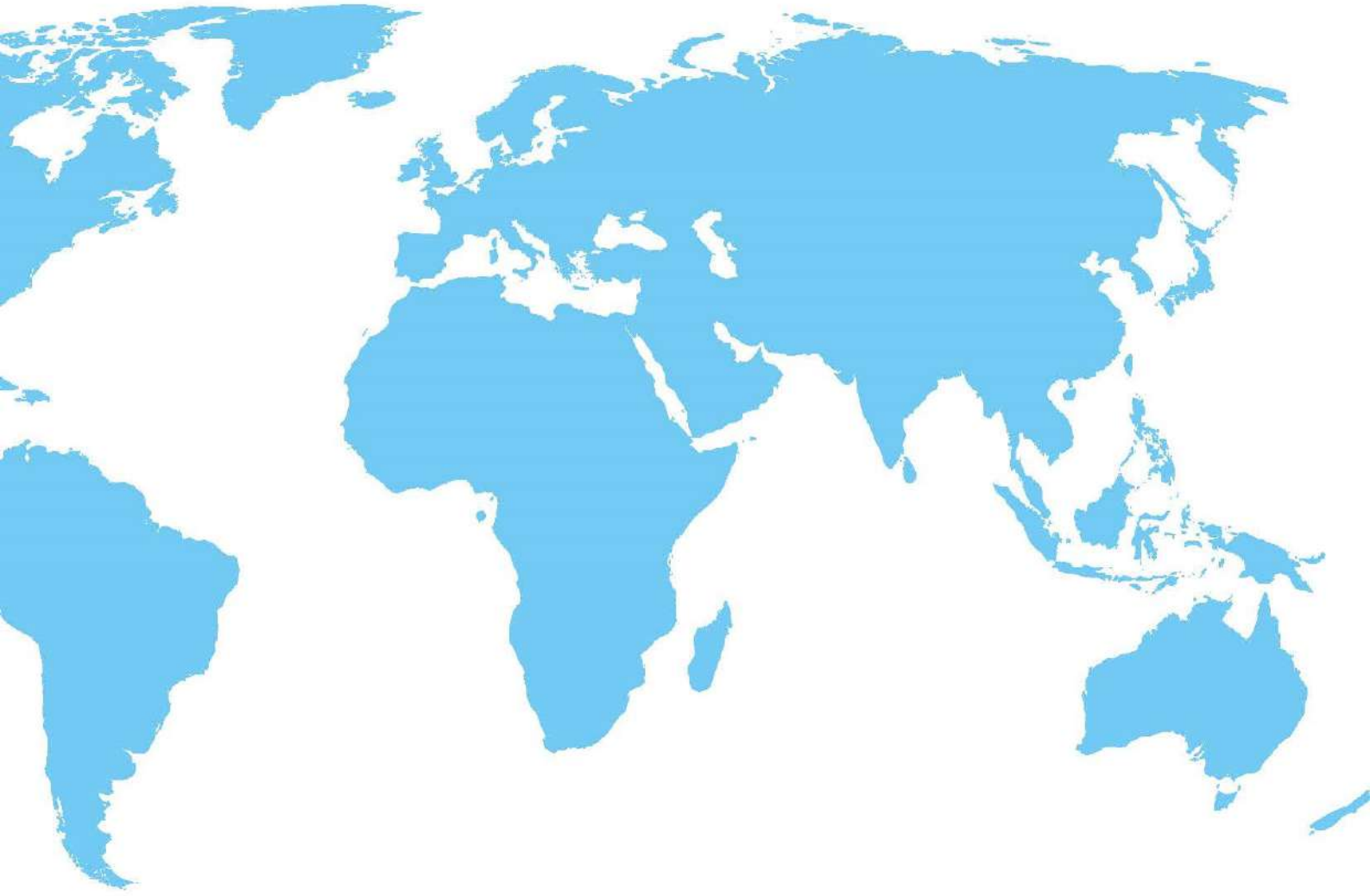

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Analysis of Technology Adoption by SMEs Using Technology Organization Environment Model

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Abstract. The increasing existence of Micro, Small and Medium Enterprises (MSMEs) in the era of disruption or global change with intense competition between contestants, makes it imperative for MSMEs to be able to find solutions to these constraints or challenges such as looking for new opportunities, innovating a product, and technological prowess as well as seeking markets with a very wide range of coverage. MSMEs as a support for the Indonesian economy still show a low export contribution so scientific studies are needed to produce a policy for MSME management in managing their business to increase competitiveness, especially exports by taking into account the factors resulting from the theoretical analysis of digital technology adoption. This research intends to identify the contribution of digital technology, based on factors in the Technology, Organization, and Environment (TOE) framework, to increase the competitiveness of export-oriented SMEs in Indonesia. The method used is to analyze the variabels in the TOE framework employing SEM-PLS analysis (Structural Equation Model-Partial Least Square). The outcomes of the TOE model are that the environmental, organizational, technology dimension has a direct positive and significant effect on technology adoption. The technology dimension is supported by relative advantage, trialability with a high significant value and complexity, compatibility, and observability indicators with a lower significance value. The organizational dimension is supported by the variable information processing needs, knowledge competence with a high significant value, and company size having a lower significance value. Lastly, the environmental dimension is supported by government support, uncertain environment, and competitive pressure variables which have a high significant value. The practical implications derived from these results, especially the indicators of complexity, suitability, observability and rigor, are to recommend a policy especially for MSME owners and managers as well as regulatory stakeholders in Indonesia so that they continue to support increased development in the areas of human resource knowledge, capital and digital technology infrastructure to achieve quality and technological maturity used by MSMEs

Keywords: Adoption; Digital Technology; MSMEs, TOE.

1. Introduction

Increasing the Existence of Micro, Small and Medium Enterprises (MSMEs) in this era of disruption or change globally with a very high level of competition among competitors, makes it a must for MSMEs to be able to find solutions to these obstacles or challenges such as looking for new innovations for a product, upgrading human resources and technology capabilities as well as looking for markets with a very broad scope of reach (Fernanda Putri et al., 2020). These actions need to be implemented to increase the competitiveness or fighting power of SMEs in the face of the onslaught of foreign products and many have entered the Indonesian market. The MSME sector should not be stepchildren because it is a foundation that is able to open up great job opportunities(Widiyati & Hasanah, 2013).

Since MSMEs only account for 14% of the non-oil sector's overall export value, they sustain the Indonesian economy but have a minimal impact on exports. According to information gathered by the Ministry of Cooperatives and SMEs in 2019, the number of MSMEs in Indonesia is actually extremely high since it exceeds 99.99%, while the number of Large Enterprises only reaches 0.01%. The government encourages the improvement of the economic structure by continuing to increase the amount MSMEs, due to the lack of strong economic fundamentals. With the presence of a consistent MSME, it has been proven to be a driving force for the economy that has survived in the face of the storm of the global economic crisis. Although some MSMEs still have obstacles and problems in their bodies such as the lack of mastery of science and technology, the ability of workers is still low and the need for operating capital injections.

Electronic commerce is Activities to buy, sell and distribute goods and services as well as exchange information using the internet network. Some of the benefits of e-commerce are realizing marketing with a broad reach without being constrained by distance, cost efficiency; enhanced efficiency of marketing; better customer service; and higher sales. E-Commerce provides benefits and uses for various levels of organizations, especially small and medium businesses (Triandini et al., 2013).

Several scholars have also conducted studies on how digital technology might improve the competitiveness of MSMEs. Foroudi et al. (2017) identified two major elements of digital technology in terms of quality and convenience of information. Beyond that, the company's development also becomes an intermediary or facilitator on the interplay between digital technology, marketing capabilities, and corporate assets. In their investigation, Malesev & Cherry (2021) affirm The MSME community has widely adopted and recognized a digital marketing strategy, but the adoption and usage of this strategy still faces challenges because of a lack of external environment analysis, funding, and socialization of the most modern and successful marketing mix, techniques, and goals..

The current state of information technology (IT) is that it is widely regarded as a key tool for boosting an economy's competitiveness. The impact of IT on business productivity is well acknowledged. Only if IT has a broad range of empowerment will this effect manifest. Understanding the factors influencing IT adoption is crucial. There are several reviews in the literature about comparing models of IT technology adoption on a small or individual scale and on a large scale or company. According to Oliveira & Martins (2010), The TOE framework presents three factors of context associated to organizations that impact the acceptance or adoption and deployment of a new technical breakthrough, namely the dimensions or dimensions of technology, part of the organization, and part of the environment. (Ali et al., 2018) in his qualitative research uses the context in the TOE to determine the main driving forces behind cloud computing adoption in Australian municipal government with the result that technological, environmental and organizational contexts are very important to be used for the factors used to make decisions to adopt cloud computing systems. According to Setiyani & Yeny Rostiani (2021), the intention to develop and use e-commerce is not significantly impacted by the technical or technological component. All variables or indicators from the technology dimension have a significant impact with technology for the intention to adopt e-commerce.

From previous studies, there is still a research gap, namely there are still obstacles in adopting digital technology, especially in the technological dimension, which does not have a significant effect on digital technology adoption. So that it still requires a quantitative study in depth again for the influence of factors on digital technology adoption, when compared from the theory of this TOE adoption model. The goal of this study, which builds on The Technology, Organization, and Environment (TOE) Framework, is to

identify the factors of digital technology role in boosting the competitiveness of SMEs in Indonesia that are focused on exporting.

2. Literature Review

2.1 Information and Technology Adoption Model

The study of information systems, and particularly the adoption of technology, is based on a variety of ideas. Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT), Diffusion of Innovation (DOI), and Technology, Organization, and Environment (TOE) Framework are among the theories that are most frequently used. The suitable developing theory for company level is DOI and TOE framework, meanwhile TAM, TPB, and UTAUT is for individual (Setiyani & Yeny Rostiani, 2021).

2.2 Technology, Organization, and Environment Framework

By 1990, Tornatzky and Fleischer had created the TOE structure. The structure indentifies three company contexts influencing the adoption process and technology innovation implementation; They are the contexts of technology, organizations, and environments.

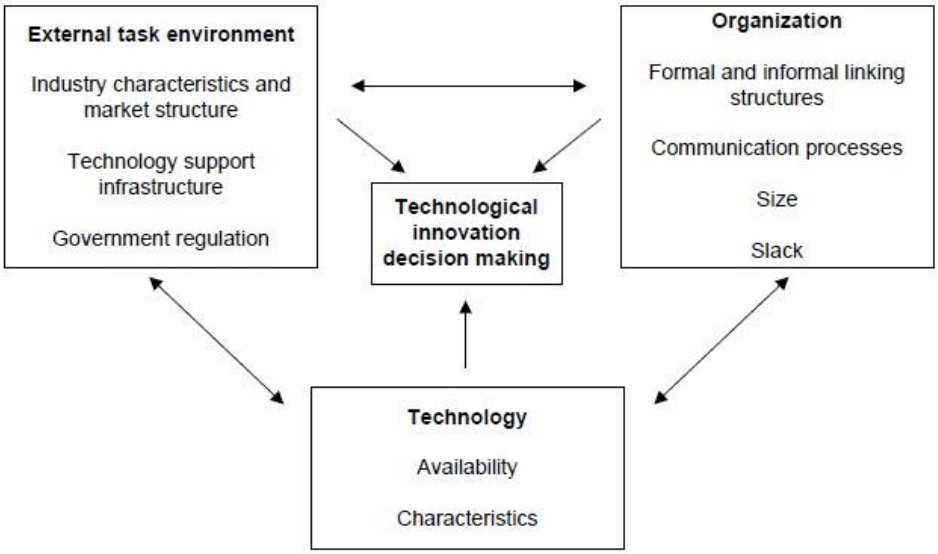

Fig. 1: TOE Structure

The important internal and external technologies for the firm are described in the technical context. This comprises a variety of technologies that are accessible outside the firm as well as existing internal processes and tools. Measures of the organization's scope, size, and managerial structure are examples of organizational context. The environment a firm operates in, including its sector, its rivals, and its connection with the government, is known as the environmental context. The TOE framework, as initially established and modified in the study of IT adoption, offers an advantageous analytic framework to research the uptake and integration of various forms of IT innovation. Although the precise elements discovered in the three contexts may differ among research, the TOE paradigm has a strong theoretical foundation, consistent empirical support, and potential applicability to the IS innovation area.(Sastararuji et al., 2021).

2.3 The Research Model of The Study

Based on the previous research gaps, the model was modified to become a framework for research as shown in figure 1 below.

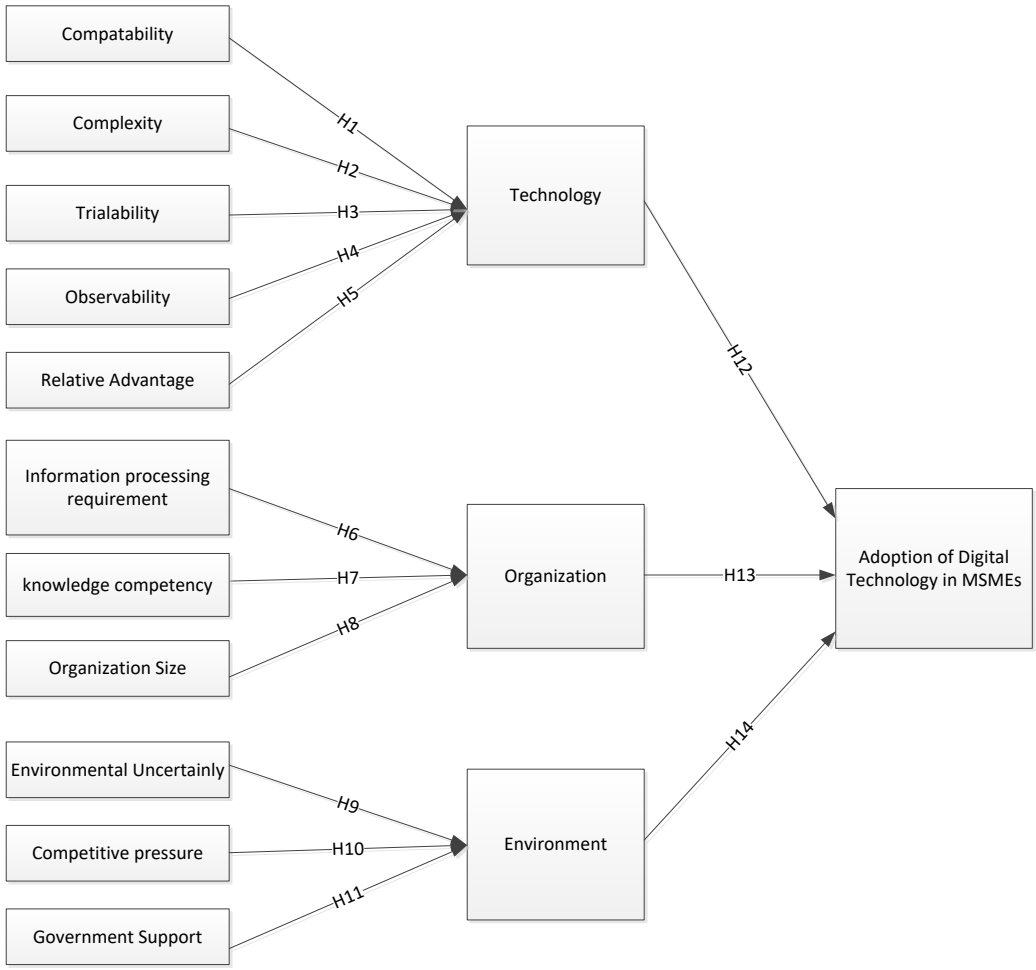

Fig. 2: Framework of thinking

From Figure 2, the framework for thinking will be compiled and carried out with research on the topic, namely to identify by examining the adoption theory of digital technology, the function of digital technology in improving the competitiveness of export-oriented SMEs.

2.4 Research Hypotheses

From the study model in Figure 1, the study hypothesis can be arranged as follows:

H1: Compatibility is significantly impact on Technology
H2: Complexity is significantly influenced on Technology
H3: Triability is significantly influenced on technology
H4: Observability is significantly related on Technology
H5: Relative Advantage is significantly influenced on Technology
H6: Information Processing Needs is significantly influenced on the Organization
H7: Knowledge Competence is significantly influenced on the Organization
H8: Firm size is significantly influenced on the organization
H9: Uncertain environment is significantly influenced on the environment
H10: Competitive pressure is significantly influenced on the environment
H11: Government support is significantly influenced on the environment
H12: Technology is significantly influenced on the adoption of digital technology in MSMEs
H13: Organizations is significantly influenced on the adoption of digital technology in MSMEs
H14: The environment is significantly influenced on the adoption of digital technology in MSMEs

3. Research Method

3.1 Data Collection Techniques

In this study, distributing questionnaires served as the main method of data collecting. The study team assisted in distributing the questionnaire offline to MSME management respondents in the Blitar district, East Java Province, Buleleng and Denpasar Municipalities of Bali Province where the establishment of respondents was carried out using a purposive sampling methode. In determining the sample using things that underlie certain considerations. The conditions used are as follows: management of MSMEs in Blitar Regency, East Java Province, Regency, Buleleng Regency and Denpasar Municipality, Bali Province, aged 17 years and over, MSMEs have carried out business processes with the help of digital technology, and have products for export.

3.2 Operational Definition of Variables

Explanatory research with another name, namely research according to the level of explanation used by the research framework above. The level of explanation has the meaning of explaining the position of the variable being tested and the influence between variables on other variables. This study uses research variables:

Complexity prevents invention in digital technology knowledge and application, which necessitates greater work in discovering answers via adopting innovation. (Setiyani & Yeny Rostiani, 2021).

Digital technology compatibility is the extent to which it is acceptable with respect to the infrastructure, culture, values, and working procedures that MSMEs choose (Ghobakhloo & Ching, 2019).

Trialability is the degree to which an invention can be tested on a small scale, or the more ideas that are tested, the quicker they get adopted (Christiansen et al., 2021), (Alias et al., 2018).

The term "observability" refers to the extent to which the innovation's results may be seen and seen by others (Alias et al., 2018).

Relative advantage implies how far an innovation or newness is considered superior to the idea that is substituted for the old one (Gui et al., 2020), (Stjepić et al., 2021), (Malik et al., 2021).

Information processing needs are described as the discrepancy between the information that an organization needs and that which is made available via the use of digital technology (Ghobakhloo & Ching, 2019).

Knowledge competencies are HR competences with expertise in the realm of digital technology, requiring MSMEs to also have knowledge competencies in this area (Ghobakhloo & Ching, 2019) .

Company size implies that larger organizations/companies tend to accept and adopt innovations or information technology updates that are greater in terms of risk and flexibility or dynamics, and vice versa (Setiyani & Yeny Rostiani, 2021).

An uncertain environment is an environment that can destroy the use of the latest technology, environmental fragility occurs when changes occur that are complex and high-speed. A company in a condition of high uncertainty is not allowed to adopt a renewable technology without supporting infrastructure and clear operational standards (Ghobakhloo & Ching, 2019).

Competitive pressure implies how far a company reacts to pressure from other companies that become competitors, causing the company to adopt the latest technology. One might infer from competitive pressure that an organization's strength or resilience is determined by how it responds to such challenges and how well it complies with industry standards (Ghobakhloo & Ching, 2019), (Setiyani & Yeny Rostiani, 2021).

Government support implies the government's opportunity as an initiation or pioneer to promote and nudge people into using digital technology in companies (Setiyani & Yeny Rostiani, 2021).

Latent variables or constructs were employed as the variables in this study, namely variables that cannot be directly measured. Therefore, the presence of the latent variable is measured by a statement indicator in the form of a five-level Likert scale.

3.3 Analysis Method

Partial Least Square (PLS) is an approach or method that has a partial basis for SEM and as a pioneer was made by (Wold, 1985). Contrary to the SEM approach or method which has a covariance basis which tries to produce a covariance matrix, PLS tries to achieve maximum results in the number of observed variances in the independent variables which are explained by the independent variables. In addition to measuring with the estimation of the measurement model and the structural model at the same time, PLS operates by estimating block variables and the effects of the measurement model, then estimating the structural model. (Tenenhaus, 2008) and (Malak et al., 2022).

PLS is an analytical technique or method that has high power because it does not have the assumption that data must follow a certain distribution flow and has a relatively small sample size. With PLS it is assumed that all variant sizes are variants that have uses to be explained. Because it is an approach or way to predict latent variables associated as a combination or linear mixture of indicators, this is to avoid encountering obstacles in something that is not certain and gives a definite understanding of the elements of the score. (Jöreskog & Wold, 1982).

The three relationship settings in the type or path analysis model of all latent variables in PLS are the inner model, which seeks out relationships between latent variables (structural model), the outer model, which seeks out connections between latent variables and indicators or variables below or manifest (measurement model and the weight relationship with the predictable value of the latent variable), and the third relationship setting, which is the manifest relationship. Without loss of generalization, it can be analogized that the latent variable and indicator or manifest variable have an average value of zero and a variance of one, so that the location parameter (constant parameter) can be eliminated in the model.

4. Results

4.1 Respondent Profile

Temporary data collection has been carried out in three regencies, namely kab. Blitar (East Java), Denpasar municipality and Buleleng district, recruited 92 respondents. The following is a description of the respondent's profile which is explained by age, gender, position, year of establishment of the company, business scale, number of workers, and business commodities as shown in table 1 below.

Table 1: Respondent Profile

Characteristics	Category	Quantity
Age	20-30 years	13
	31-40 years	22
	41-50 years	32
	51-60 years	22
	>60 years	3
Gender	Man	37
	Woman	55
Position	Owner	77
	Chairman	6
	Employee	9
Long time the company has existed	1-10 years	67
	11-20 years	18
	21-30 years	6
	>30 years	1
Scale enterprises	Micro Enterprises: Maximum Assets IDR 50 Million	74
	Small Business: Asset > IDR 50 Million - IDR 500 Million	17
	Medium Enterprises: Assets > IDR 500 million - IDR 10 billion	1
Total manpower	Small business (5-19 people)	90
	Medium Business (20-99 people)	2

Commodity	Food	48
	Clothes	19
	Herbal medicine	5
	Cosmetics	1
	Handicraft	19

4.2 Instrument Testing

Before taking data directly to the original respondents, the initial step taken was to test the instrument in the form of distributing questionnaires to several respondents who were experts in the field of digital technology with the aim of validating the questionnaire instruments used. Testing the measuring instrument for all variables in this study used a questionnaire, delivered to respondents to be able to provide statements according to what they felt and experienced. Questionnaire as an instrument must meet the main requirements, namely valid and reliable. The following are the outcomes of testing the validity and reliability of the study questionnaire.

Validitity Test: Validity test with a sample of 68, so the value of r table (68 – 2; 0.05) = 0.226 which will be compared with the value of r count. If r count is greater than r table, it can be said that the measuring instrument used is valid. The outcome of the validation test can be showed in table 2 below:

Table 2. Outcome of Validity Test

Question	r calculate	r table	Description
P01	.535**	0.226	Valid
P02	.300**	0.226	Valid
P03	.336**	0.226	Valid
P04	.578**	0.226	Valid
P05	.313**	0.226	Valid
P06	.591**	0.226	Valid
P07	.481**	0.226	Valid
P08	.543**	0.226	Valid
P09	.423**	0.226	Valid
P10	.539**	0.226	Valid
P11	.384**	0.226	Valid
P12	.554**	0.226	Valid
P13	.620**	0.226	Valid
P14	.443**	0.226	Valid
P15	.578**	0.226	Valid
P16	.747**	0.226	Valid
P17	.533**	0.226	Valid
P18	.643**	0.226	Valid
P19	.499**	0.226	Valid
P20	.530**	0.226	Valid
P21	.608**	0.226	Valid
P22	.692**	0.226	Valid
P23	.678**	0.226	Valid
P24	.609**	0.226	Valid
P25	.658**	0.226	Valid

P26	.494**	0.226	Valid
P27	.520**	0.226	Valid
P28	.471**	0.226	Valid
P29	.529**	0.226	Valid
P30	.582**	0.226	Valid
P31	.670**	0.226	Valid
P32	.578**	0.226	Valid
P33	.502**	0.226	Valid
P34	.552**	0.226	Valid
P35	.650**	0.226	Valid
P36	.511**	0.226	Valid
P37	.406**	0.226	Valid
P38	.527**	0.226	Valid
P39	.479**	0.226	Valid
P40	.545**	0.226	Valid
P41	.496**	0.226	Valid
P42	.339**	0.226	Valid
P43	.680**	0.226	Valid
P44	.617**	0.226	Valid
P45	.502**	0.226	Valid
P46	.762**	0.226	Valid

Reliability Test: The outcome of the Cronbach's Alpha reliability test (rcount) can be observed in the Cronbach's Alpha column which is a number of 0.941 with N of Items which explains that the number of items or the number of questions entered in the variable display is 46. So, it can be said that the results of Cronbach's Alpha for 46 data from items or 46 questions, which is 0.941:

Table 3: Outcome Of Reliability Test

Cronbach's Alpha	**N of Items**
.941	46

Then, to find out whether the data can be trusted or not, then if the calculation of r count > r table is 5%, where the r count seen from table 3 the calculation results are 0.941 while the r table is 5% which is 0.226. From this value it can be concluded that r count > r table 5%, namely 0.941 > 0.226 so that the data is reliable or can be trusted and consistent.

4.3 Measurement Evaluation (Outer Model) of the TOE Stage Model 1

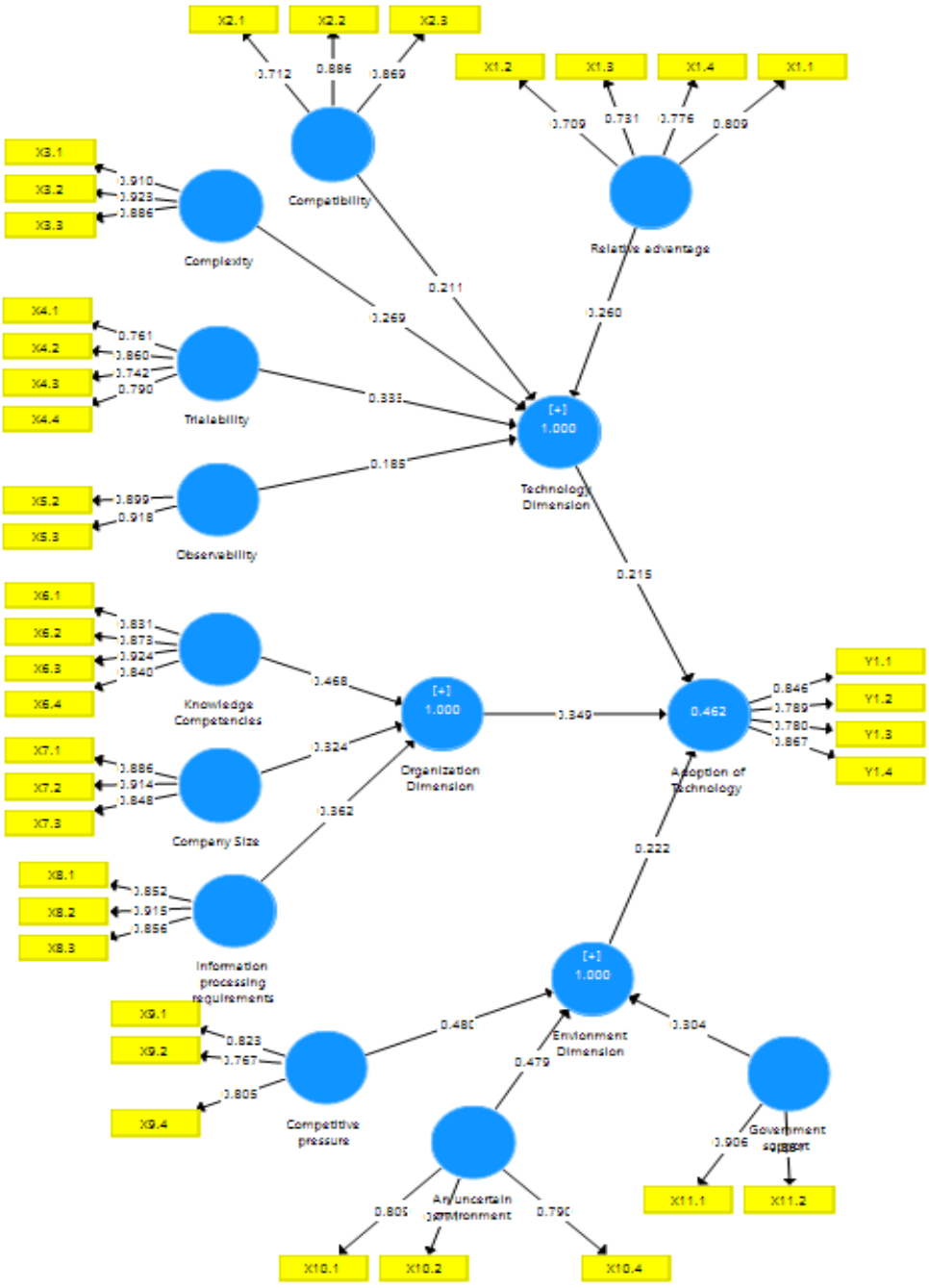

Fig. 3: Model TOE stage 1

Before starting to discuss the results of the research, the TOE model in Figure 3 is a model which is a type of Higher-order constructs (reflective-formative higher-order construct) where the higher dimensions have abstract properties and the lower sub-dimensions have a more real construct in the modeling of the SEM-PLS application. In this study using high-level constructs using extended iterative indicators and embedded two-stage approach. So that the evaluation of the outer model will go through two stages of analysis with two models, namely the stage 1 model and the stage 2 model (Sarstedt et al., 2019).

For the SmartPLS 3 analysis technique, there are requirements used to provide an outer model assessment in figure 3, namely convergent validity as represented by the loading factor and AVE values, discriminant validity can be found in the cross-loading between the indicators and their constructs, for reliability testing it can be observed from the composite reliability and Cronbach's values. alpha.

Table 4: Loading Factor, Average Variance Extracted (Ave), Cronbach's Alpha, And Composite Reliability for Toe Stage 1 Test

		Factor Loading	**Cronbach's Alpha**	**Composite Reliability**	**AVE**
Relative advantage	X1.1	0.809	0.751	0.843	0.574
	X1.2	0.709			
	X1.3	0.731			
	X1.4	0.776			
Compatibility	X2.1	0.712	0.763	0.865	0.683
	X2.2	0.886			
	X2.3	0.869			
Complexity	X3.1	0.91	0.891	0.932	0.822
	X3.2	0.923			
	X3.3	0.886			
Trialability	X4.1	0.761	0.798	0.869	0.624
	X4.2	0.86			
	X4.3	0.742			
	X4.4	0.79			
Observability	X5.2	0.899	0.751	0.843	0.574
	X5.3	0.918			
Knowledge Competencies	X6.1	0.831	0.89	0.924	0.753
	X6.2	0.873			
	X6.3	0.924			
	X6.4	0.84			
Company Size	X7.1	0.886	0.859	0.914	0.78
	X7.2	0.914			
	X7.3	0.848			
Information processing requirements	X8.1	0.852	0.846	0.907	0.766
	X8.2	0.915			
	X8.3	0.856			
Competitive pressure	X9.1	0.823	0.717	0.841	0.638
	X9.2	0.767			
	X9.4	0.805			
An uncertain environment	X10.1	0.809	0.7	0.833	0.625
	X10.2	0.771			
	X10.4	0.79			
Government support	X11.1	0.906	0.721	0.877	0.78
	X11.2	0.861			
Adoption of Technology	Y1.1	0.846	0.844	0.892	0.675
	Y1.2	0.789			
	Y1.3	0.78			
	Y1.4	0.867			

The loading factor value for each indication for each variable in the stage 1 test, based on table 4 and the TOE model depicted in figure 2, has a value that is higher than the required value (> 0.70). Each variable's average variance extracted (AVE) value is greater than the general value of 0.50. According to Cronbach's alpha values and the results of reliability tests for composite reliability, they were able to achieve values that were more than the value suggested by the rule of thumb (> 0.70)..

The Fornell-Larcker Criterion approach was used to assess the discriminant validity of the indicators in the TOE stage 1 model test. You may use the Fornell-Larcker Criterion technique by contrasting the AVE's square roots with the correlation of latent particles. If the square root of the AVE value along the diagonal line is higher than the correlation between one construct and another, the variable is said to fulfill the assumption of discriminant validity. The outcomes of the measuring activities show that an identically

valued variable's AVE root value is higher than that of an alternative variable. This indicates that the requirements for the discriminant validity test have surpassed the desired outcome.

4.4 Measurement Evaluation (Outer Model) of the TOE Stage 2

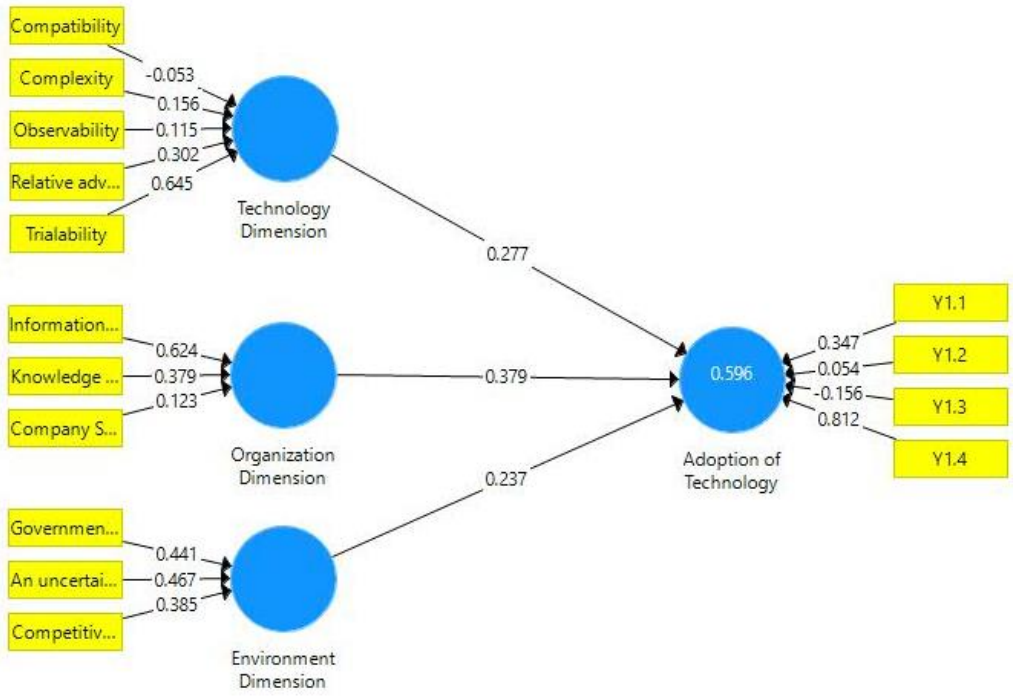

Fig. 4: Model TOE stage 2

The Outer Model represents the relationship between indicators and constructs (latent). This outer model or measurement model is carried out by connecting indicators with their constructs. In this study, as shown in Figure 4, the indicators of the technology adoption construct are reflective, while the indicators of the technological, organizational and environmental constructs are formative. Changing indicators are formative because for the stage 2 process in the continuation of the first order dimension analysis and stage 2 is an analysis of this outer model.

The formative outer model test is related to the three constructs in the model, namely the dimensions of technology, organization, and environment. The formative outer model test is seen from the multicollinear test score or Variance Inflated Factor (VIF), the weight score (significance) in the outer weight table from the bootstrapping process. The Variance Inflated Factor (VIF) value must be less than 5 because what is expected is a low multicollinear value and indicates that there is no interrelationship between indicators. In the outer weight, pay attention to indicators that have a minimum weight value of 0.2 which is interpreted as significant indicating the size of an indicator affects the construct, the greater the value, the more the indicator affects the construct.

Table 5: Outcome of Variance Inflated Factor (VIF), Weight, and Factor Loading Test

	Weight	**Factor Loading**	**T Statistics (|O/STDEV|)**	**P Values**	**VIF**
Compatibility <- Technology Dimension	-0.053	0.601	0.297	0.766	1.761
Complexity <- Technology Dimension	0.156	0.694	0.895	0.371	1.72
Government support -> Environmental Dimension	0.441	0.699	3.044	0.002	1.131
Information processing requirements -> Organizational Dimensions	0.624	0.942	4.238	0	2.041

Knowledge Competency -> Organizational Dimensions	0.379	0.846	2.194	0.028	1.849
Uncertain environment -> Environment Dimensions	0.467	0.836	2.663	0.008	1.605
Observability <- Technology Dimension	0.115	0.729	0.569	0.569	1.837
Relative advantage <- Technology Dimension	0.302	0.758	1.701	0.089	1.753
Competitive pressure -> Environmental Dimension	0.385	0.785	2.303	0.021	1.563
Trialability <- Technology Dimension	0.645	0.946	3.156	0.002	2.202
Company size -> Organizational Dimensions	0.123	0.747	0.716	0.474	1.881

There is a need for an examination related to multicollinear measuring items or indicators and it is hoped that the Variance Inflated Factor (VIF) value must be less than 5. In Table 5 the VIF values of all indicators are below 5. So the value is considered good because the multicollinearity is stated to be low in indicators that make up technology, organization, and environment.

Next, look at the outcomes of the significance test for the weight values in table 5. Estimates for formative measurements must be significant, determined by looking at the scores in table 5. Outer weight through the bootstrapping procedure. The next evaluation of the formative outer model test of technology, organization, and environment is weight. The minimum weight value is 0.2. In table 5 for indicators, Government support -> Environmental Dimensions, Information processing needs -> Organizational Dimensions, Knowledge Competence -> Organizational Dimensions, Uncertain Environment -> Environmental Dimensions, Relative advantage -> Technology Dimensions, Competitive pressures -> Environmental Dimensions, Trialability -> Technology Dimension, the weight value shows above 0.2. There are four indicators that have a weight value below 0.2, namely Compatibility -> Technology Dimension, Complexity -> Technology Dimension, Observability -> Technology Dimension, Company Size -> Organizational Dimension. These four indicators are still used in the model because they have a loading factor value above 0.5. This refers to (Yamin, 2021) that if the weight is not significant but the loading factor value is more than equal to 0.5 then it is still included in the model, even though basically the loading factor value is not a formative indicator test criterion.

4.5 R Square

Table 6: R Square

	R Square	R Square Adjusted
Adoption of Technology	0.596	0.582

The structural model or inner model is monitored by paying attention to the percentage of variance that is described, namely by looking at the R Square value for the dependent latent construct. The rule of thumb value for R Square is 0.75 which is included in the strong category; 0.50 is categorized as medium, and 0.25 is categorized as low or weak.

From the results of the analysis in table 6 for testing the TOE model, the R Square value for the technology adoption construct is 0.596, meaning that the variability of technology adoption that can be explained by the technological dimensions, organizational dimensions, and environmental dimensions in the model is 59.6% and is included in the category moderate models.

4.6 Hypothesis Test

Hypothesis testing is done by observing the path coefficient value from the test outcomes with Partial Least Square (PLS).

Table 7: Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	P Values
Environmental Dimension -> Technology Adoption	0.237	0.229	2.129	0.033
Organizational Dimensions -> Technology Adoption	0.379	0.388	3.265	0.001
Technology Dimension -> Technology Adoption	0.277	0.298	2.327	0.02

From table 7 the results of the path coefficient for testing the TOE model can be seen that for the impact of the environmental context on technology adoption, namely the environmental dimension has a direct straight and significant impact on technology adoption, with a significance value of 0.033 < 5% alpha level. For the influence of organizational dimensions on technology adoption, namely organizational dimensions have a direct straight and significant impact on technology adoption, with a significance value of 0.001 < 5% alpha level. For the impact of the technological dimension on technology adoption, namely the technological dimension has a direct straight and significant impact on technology adoption, with a significance value of 0.02 < 5% alpha level.

5. Discussion

From the results of testing the TOE model, it can be seen that the environmental dimension has a direct positive and significant effect on technology adoption, the organizational dimension has a direct positive and significant effect on technology adoption, the technology dimension has a direct positive and significant effect on technology adoption according to the results of the study Setiyani & Yeny Rostiani (2021). The technology dimension is supported by relative advantage, trialability with a high significant value and complexity, compatibility, and observability indicators with a lower significance value. The organizational dimension is supported by the variable information processing needs, knowledge competence with a high significant value, and company size having a lower significance value. Lastly, the environmental dimension is supported by government support, uncertain environment, and competitive pressure variables which have a high significant value.

As a note, for the technological dimension, there are still variables that have a low significance value in supporting technology, namely the variables complexity, compatibility and observability. In accordance with the results of the study (Gui et al., 2020), (Hsu & Lin, 2016), dan (Low et al., 2011). This is probably caused by the respondents' lack of knowledge or understanding of technological innovation and the immaturity of digital technology systems used by MSME respondents, especially regarding the level of complexity or complexity of digital technology, compatible with digital technology that can replace old business methods with methods using innovation, and the level of visual observation of a digital technology. Although as a whole the technological dimension is very significant in influencing digital technology. These results can be used as input for stake holders because it can be a barrier in adopting digital technology for MSMEs in Indonesia.

For the organizational dimension, there is still a variable that has a low significance value in supporting the organization, namely firm size. These results are in accordance with the results of the study (Borgman et al., 2013). These results indicate that the digital technology used at all levels of MSME company size still shows the same level of quality and the same level of maturity of the digital technology system, thus showing less significant results. Therefore, it is necessary to pay attention to MSME stakeholders to pay more attention to the level of maturity / maturity of the technology used.

The practical implications obtained from the results of the research above, especially on the indicators of complexity, compatibility, observability, and firmize, are to recommend a policy that ends with interested stakeholders in the MSME sector, especially for MSME owners and management and regulatory stakeholders in Indonesia, namely the government. MSME owners and management must start boosting their human resources to increase knowledge in implementing digital technology in their business units so that digital technology adoption runs more effectively and efficiently. Efforts made can be in the form of

updating knowledge to take part in trainings, workshops on the latest digital technology to improve the capabilities and capacities of these human resources. Second, MSME owners and management have started to focus on investing their capital to build digital technology in their business environment. Although as is known, the MSME sector in Indonesia still encounters many obstacles, especially in the field of business capital and still requires support from external parties, both from private companies and the government. Next, from the side of government regulators in Indonesia, it is necessary to consider three important things for the development of digital technology in the MSME sector, namely education, business capital and the development of infrastructure that supports this digital technology. The government needs to continue development in the field of digital technology and MSMEs as long-term development and not stop midway in order to face the changing era towards an era of global disruption. In the field of Education, always support the creation of human resources who have expertise in digital technology by continuing to support IT-based schools and universities. In the field of business capital, the government continues to run programs to provide business capital assistance for both small and medium-sized MSMEs that are ready to carry out export trade and most importantly this program does not stop in the middle of the road. Third, in the field of IT infrastructure, as we know recently, the government has continuously boosted the development of internet infrastructure facilities in Indonesia which are considered quite heavy and require massive investment because of Indonesia's geography which consists of tens of thousands of islands that are part of Indonesia's territory. It should also be noted that apart from the development of internet telecommunication facilities in Indonesia, it is also necessary to improve other digital tools and the most important thing is to continue the equitable distribution of digital technology development programs between the western, central and eastern regions, not being Java centric.

6. Conclusion

The results indicate that the environmental, organizational, and technology dimension has a direct positive and significant effect on technology adoption. The technology dimension is supported by relative advantage, trialability with a high significant value and complexity, compatibility, and observability indicators with a lower significance value. The organizational dimension is supported by the variable information processing needs, knowledge competence with a high significant value, and company size having a lower significance value. Lastly, the environmental dimension is supported by government support, uncertain environment, and competitive pressure variables which have a high significant value

These results indicate that the digital technology used at all levels of MSME company size still shows the same level of quality and the same level of maturity of the digital technology system, thus showing less significant results. Therefore, it is necessary to pay attention to MSME stakeholders to pay more attention to the level of maturity / maturity of the technology used.

The limitation of this study is that this study only took samples and populations for the Indonesian region. So that the results of the recommendations are only in the form of research results with social, cultural, economic and geopolitical characteristics that are unique to the country of Indonesia. However, this research also has a value that is no less important. As is well known, Indonesia is a very large global market share with the fifth largest population in the world, so the results of this study can be used as recommendations for global stakeholders who have adapted to the social, cultural, economic and geopolitical characteristics of Indonesia itself.

For future research, it is hoped that research will be carried out based on this research, but can take samples and populations from various countries with the characteristics of each country and use a framework for adopting technology that is more updated and developing according to the needs of the times. From this hope, it will be able to make a scientific contribution, especially in the theory of digital technology adoption which observes globally and can be implemented practically.

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