

## Selection and Consideration of Marketing Strategy through E-Commerce in Medium Small Businesses in the City Of Malang

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**Abstract:** The results of the implementation of model development that have been carried out in the second year of research are used as the basis for the research in the third year. The third year research begins with an evaluation of the second year implementation model and recommendations on the form of marketing through e-commerce that are used by SMEs in order to implement marketing activities through e-commerce by SMEs in Malang City. The objectives of this study are: (1) to evaluate the implementation results model in the development research activities of the Theory of Planned Behavior in marketing through e-commerce by SMEs in Malang City; (2) to analyze strategic policies of marketing implementation through e-commerce by SMEs in Malang City based on the process of selecting alternative solutions using the Exponential Comparison Method (ECM) and Correspondence analysis. The research area is Malang City, with the reason that this area is the second largest city in East Java, a city of education and a city of tourism. The sample size in this study used the formula for the number of indicators multiplied  $(5-10) = 18 \times 7 = 126$ . While the sampling technique was simple random sampling. The data analysis technique uses SEM, namely analyzing the causal relationship (direct and indirect) on the observed variables or constructs that can be detected and the components that contribute to the construct itself can be determined. The next analysis technique is to use the Exponential Comparison Method (ECM) and Correspondence Analysis. The results of the evaluation of the implementation model in this research activity are attitudes, subjective norms, behavioral control, and spiritual intelligence have an effect on intention. Behavioral control, spiritual intelligence, and intentions influence behavior. Behavioral control and spiritual intelligence affect the behavior of SMEs in marketing through e-commerce by SMEs in Malang City and intention as a mediation. So based on the results of the evaluation of the implementation model in this research activity, it can be said that the model is acceptable and can be used as the basis for further activities. The next activity is to determine strategic policies in marketing selection through e-commerce by SMEs in Malang City based on the results of model evaluation. Based on the results of the ECM analysis, this study recommends SMEs strategic policies in the selection of e-commerce marketing related to attitudes, subjective norms, behavior control, and spiritual intelligence. The result of the analysis is buying and selling online in the marketplace with each attribute. The results of the correspondence analysis further explain the presence of special characteristics in each choice. In particular, the first option is buying and selling online in a marketplace with the characteristics of consideration: where to sell products, family members, availability of software, and availability of human resources. The second option is internet banking and sms banking with the characteristics of consideration: how to receive orders, delivery methods, availability of hardware, and being aware of the non-spiritual life that is within. And the third option is cable TV and internet provider with the characteristics of consideration: payment methods, friends, products.

**Keywords:** e-commerce, intention, behavior, strategy, SMEs.

Date of Submission: 10-10-2020

Date of Acceptance: 26-10-2020

### I. Introduction

#### 1.1 Background

The results of research by Darsono et al. (2018) regarding the development of the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City, it is stated that the behavior of SMEs in Malang City is influenced by attitudes, subjective norms, behavioral control, spiritual intelligence, and behavioral intentions. Meanwhile, intention to mediate is the influence of behavioral control and spiritual intelligence on behavior. Then the implementation of marketing strategies through e-commerce by SMEs in Malang City (Darsono et al., 2019). Evaluation of the marketing model through e-commerce by SMEs in Malang City after implementation needs to be done in order to get a model that suits the behavior of SMEs players. The results of the evaluation are used as the basis for determining marketing strategies through e-commerce by SMEs in Malang City. Determining the marketing strategy requires carefulness, for that we need a decision support system, so that the decisions obtained can be more accurate (Turban at al., 2007).

The decision support system is a system that is intended to support managerial decision makers in certain situations (Turban at al., 2007). Decision support systems can also be interpreted as interactive information systems that provide information, modeling and manipulation of data (Kusrini, 2007). Decision making can be influenced by several aspects, because in decision making, the problems that are resolved are complex and the criteria used are compound (Susana at al., 2020). One of the decision-making methods used for multiple criteria is the Exponential Comparison Method (ECM). The Exponential Comparison Method (ECM) is a method used to determine the priority order of alternative decisions with multiple criteria (Wibowo et al., 2014). ECM can reduce the bias that may occur in the analysis, because the resulting score represents a large order of priority so that the alternative priority order of decisions becomes more real (Rangkuti, 2011). This research will apply MPE in assisting decision makers to determine marketing strategies with the following options: (1) e-commerce, namely buying and selling online in the marketplace; (2) internet banking and sms banking; (3) cable TV and internet provider.

## **1.2 Formulation of the problem**

Based on the background description of the problem above, the research problem is formulated as follows:

1. How is the evaluation of the implementation results model in the development research activities of the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City?
2. How is the strategic policy of implementing marketing through e-commerce by SMEs in Malang City based on the process of selecting alternative solutions and profiling of marketing policies through e-commerce using the Exponential Comparison Method (ECM) and Correspondence analysis?

## **1.3 Research purposes**

The main purpose of conducting a study is to understand phenomena. Phenomena are symptoms that occur in the surrounding environment that need to be comprehensively recognized. Based on the formulation of the problem above, the objectives of this study are as follows:

1. Evaluating the implementation results model in the development research activities of the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City.
2. Analyzing strategic policies for the implementation of marketing through e-commerce by SMEs in Malang City based on the process of selecting alternative solutions and profiling the types of marketing policies through e-commerce using the Exponential Comparison Method (ECM) and Correspondence analysis.

## **II. Literature Review**

### **2.1 Theory of Planned Behavior (TPB)**

The main concern in Theory of Planned Behavior (Ajzen, 1991) is on a person's intention to carry out a behavior because intention is an intermediate variable that causes the behavior of an attitude or other variables. Several things that need to be considered in this intention variable are: (1) Intention is considered as a "catch" or intermediary for motivational factors that have an impact on a behavior; (2) Intention shows how hard someone dares to try; (3) Intention also shows how much effort a person plans to put in; and (4) Intention is most closely related to subsequent behavior.

Specifically, the theory of planned behavior states that there are three determinants of intention that are conceptually independent, namely: (1) Attitudes toward behavior which indicate the degree to which a person has a good or poor evaluation of certain behaviors; (2) Subjective norms as social factors indicate the social pressure that is felt to take or not take action / behavior; (3) Perceived behavioral control shows how easy or difficult it is to take action and is considered a reflection of past experiences in addition to the anticipated obstacles or obstacles.

In general, it can be said that the better the attitude and subjective norms towards a buying behavior, and the greater the behavioral control he feels, the stronger the consumer's intention to carry out the intended purchase. Conversely, intention is seen as a determining variable for actual behavior, meaning that the stronger the consumer's intention to make a purchase or achieve his purchase goal, the greater the success of predicting the behavior or purpose of the behavior to occur. However, the level of success will depend not only on intention, but also on non-motivational factors such as opportunities and resources (eg: time, money, skills, cooperation from others, etc.). This can be studied further based on the observations of Ajzen (1985). Taken together, these factors show a person's real control over behavior. In the event that a person has the necessary opportunities and resources, and tends to carry out the behavior, in that condition he succeeds in doing. The behavior in question must be specific, not behavior that is general in nature.

Behavioral control problems can only occur within the limits of certain actions, and other actions occur due to the influence of factors beyond one's control (Ajzen at al., 2016). Simple behaviors such as driving to the supermarket can be hampered by engine problems. Thus, control over behavior can be viewed as a continuum. One extreme is behavior that is less conflicting when there is a control problem. An example is the choice in a

hair salon. After the consumer enters the salon, the choice of the haircutter (people are sure) can be made on a whim.

Measurements in Theory of planned behavior are attitudes, subjective norms, and perceived behavioral control (Leeuw et al., 2015). These three components interact and become a determinant of intention / intention which in turn will determine whether the behavior in question will be carried out or not. Attitudes towards a behavior are influenced by the belief that the behavior will bring desired or undesirable results. Normative beliefs (expected by others) and motivation to act in accordance with these normative expectations form subjective norms in individuals. Perceived behavioral control is determined by past experiences and individual estimates of how difficult or easy it is to perform behavior. This behavioral control is very important, meaning that a person's self-confidence is in a weak condition. The relationship between the three components in the theory of planned behavior can be explained as follows: behavior is influenced by behavior intention, while intention is influenced by variables: attitude, subjective norms, and behavioral control.

## **2.2 Spiritual intelligence**

Zohar et al. (2002) explain spiritual intelligence as intelligence to deal with and solve problems of meaning and value, namely intelligence to place our life behavior in a broader and richer meaning, intelligence to judge that one's actions or way of life will be more meaningful than others. Zohar et al. (2002) give different meanings regarding spirituality and religiosity, that spirituality is not related to religiosity. Religiosity is related to religion (religion) which is the basis of life that makes individual life orderly, while spirituality is an individual effort to reach a certain mental level where in that condition humans try hard to be one with their God, one with the universe and one with energy around it.

The capacity of spiritual intelligence that develops in humans according to Zohar et al. (2002) can be seen from the following observations: (1) Ability to be flexible, (2) High level of awareness, (3) Ability to face and take advantage of suffering, (4) Ability to face and transcend pain, (5) ) A quality of life inspired by vision and values, (6) Reluctance to cause unnecessary harm, (7) An apparent tendency to ask "Why" or "What if" in search of basic answers.

Pekerti et al. (2010) stated that spiritual intelligence forms personal, moral character and behavior. Spiritual intelligence must be possessed by every individual, including leaders. Leaders are individuals who have strong influence in the organization to shape the performance of the people they lead. Spiritual intelligence affects the intention to behave (Hage et al., 2015). Spiritual intelligence is a form of intelligence that is used to achieve success in work and life. Someone who has high spiritual intelligence will influence behavior in every decision making (Sina et al., 2012).

## **2.3 Marketing**

Marketing is a social and managerial process in which individuals and groups get what they need and want by creating, offering, and exchanging products of value with other parties. According to Kotler (2003) marketing is a social and managerial process in which individuals and groups get their needs and desires by creating, offering and exchanging something of value to one another. This definition is based on core concepts: need, want and demand, product value, value and satisfaction, exchange, transactions and relationships, markets and marketing and marketers. Meanwhile, according to Assauri (2011) marketing is a human activity that is directed to meet and satisfy needs and wants through an exchange process.

## **2.4 E-Commerce**

Electronic Commerce (electronic commerce) is part of electronic business (business conducted using electronic transmission). The global definition of e-commerce is all forms of trade transactions for goods or services that are carried out electronically. A formal definition of e-commerce is given by Baum (2001), namely: a dynamic set of technologies, applications and business processes that connect companies, consumers and communities through electronic transactions and trade in goods, services and information conducted electronically.

The development of this media is the fastest compared to other media in supporting e-commerce. There are two supporting factors that cause the internet to develop faster in mediating e-commerce, namely (1) the internet has a very wide reach, is cheap, fast, and easily accessible to the public; (2) the internet uses electronic data as a medium for delivering messages / data so that sending and receiving information can be done easily and concisely, both in the form of analog and digital electronic data (Teo, 2006). According to (Teo, 2006) traditional trade is basically the act of companies selling goods and / or services to generate income in the form of money, which in turn generates a net profit from the difference in income less market prices plus operating costs.

Electronic commerce does the same thing as traditional trading, but has advantages that can directly benefit a company's revenue and profits. With its flexibility, electronic commerce can cut marketing costs with

its ease and sophistication in conveying information about goods and services directly to consumers wherever they are. Companies that do business electronically can also cut store operating costs because they don't need to display their items in large stores with many employees.

### **2.5 Small and Medium Enterprises (SMEs)**

Small and medium enterprises (SMEs) have a very big role in the national economy. The functions and roles of SMEs include: provision of goods and services, absorbing labor, equitable distribution of income, added value to regional products, improving living standards. The absorption power of UKM to workforce is very large and close to the small people (Supardi, 2009).

The main problem faced by SMEs is marketing (Supardi, 2009). Marketing with conventional methods requires high costs, for example opening new branches, participating in exhibitions, making and distributing brochures and so on. The development of the internet has become an efficient means of opening new marketing channels for SMEs products. Besides the relatively low cost, by utilizing the internet, the dissemination of information will be faster and have a wider reach, develop e-commerce marketing and sales models to overcome these problems (Supardi, 2009).

To increase the competitiveness of SMEs and to get export and other business opportunities, it can be done by taking advantage of the development of Information and Communication Technology (ICT), especially e-commerce (Jauhari, 2010). It is necessary to develop a website and e-commerce as a means of promotion and marketing of business products, so that it will increase sales volume and increase revenue. This increase in income will eventually develop these small and medium enterprises (Jauhari, 2010).

## **III. Research Method**

### **3.1 Population, Sample, and Sampling Technique**

The research area is Malang City, with the reason that this area is the second largest city in East Java, a city of education and a city of tourism. The population in this research is the manager of SMEs who live in Malang City. Based on data from the Malang City Cooperatives and SMEs Office, a total of 2,764 assisted SMEs. However, only 880 units were certified, or about 32 percent. The sample size in this study used the formula for the number of indicators multiplied  $(5-10) = 18 \times 7 = 126$ . While the sampling technique was simple random sampling.

### **3.2 Analysis of Structural Equation Modeling (SEM)**

Research modeling through SEM (Solimun, 2002) allows a researcher to answer research questions that are indicator (ie measuring what are the indicators of a concept) and regression (measuring the influence or degree of relationship between the factors that the indicators have identified). The use of the SEM program as an analysis tool in this study states that the structural equation model, the causality relationship between exogenous and endogenous variables can be determined more fully. By using SEM which is operated through the AMOS version 19 program, not only the causality relationship (direct and indirect) on the observed variables or constructs can be detected, but the components that contribute to the construct formation itself can be determined. Thus, the causality relationship between the variables or constructs being studied becomes more informative, complete, and accurate.

SEM modeling steps according to Hair et al. (1998), there are seven steps that must be taken when using the Structural Equation Model (SEM), namely: (1) Developing a theory-based model; (2) Develop a path diagram to show the causality relationship; (3) Converting the path diagram into a series of structural equations and specification measurement models; (4) Selection of input matrices and estimation techniques for the built model; (5) Assessing identification problems; (6) Model evaluation, and (7) Model interpretation and modification. The SEM analysis model consists of: (1) Measurement Model (Factor loading) / Measurement Model Equation; (2) Structural Model (Regression Weight) / equation structural model; (3) Model Suitability Test; and (4) Reliability Test and Variance Extract. While the last step is hypothesis testing.

### **3.3 Exponential Comparative Method Analysis**

The results of modeling in research activities in the first year are used as a reference in designing research activities in the second year. Trial or implementation of the results of the development of the Theory of Planned Behavior model in e-commerce marketing by SMEs in Malang City. The implementation of the model development compiled in the first year will be refined based on the results of the model trials in the second year. Besides that, a full depth analysis was also carried out.

Alternative solutions to these factors have begun to be explored to study the suitability of the causes and their solutions. Weaknesses and strengths of each alternative solution are identified carefully and in-depth for further verification. At this stage, various opinions and ideas from various parties, both government and society who have high attention to this issue, will be explored.

The next step is to select the various alternatives to choose the best solution. Various alternative solutions are prioritized and simulated to obtain maximum results. The process of selecting alternative solutions will use the Exponential Comparison Method (ECM). The Exponential Comparison method is one of the methods of the Decision Support System (DSS) which is used to determine the priority order of alternative decisions with multiple criteria (Marimin, 2007). With exponential calculation, the difference between the criteria can be distinguished depending on the ability of the assessor. In addition, MPE is a decision making method that quantifies a person's opinion or more on a certain scale (Yulianti at al., 2016).

With a hierarchy, a complex and unstructured problem is broken down into groups and then the groups are organized into a hierarchical form. From this method, it is obtained in the form of strategic steps in an effort to increase teamwork on work efficiency in SMEs. So, the output at this stage is in the form of recommendations that will be used by SMEs in order to take technical policies.

In using the Exponential Comparison Method, there are several steps that must be taken, namely: (1) Formulating alternative decisions to be selected; (2) Determining criteria or comparison of decisions that are important to be evaluated; (3) Determine the level of importance of each decision criterion; (4) Assessing all alternatives on each criterion; and (5) Calculating the score or total value of each alternative.

Determining the order of priority decisions based on the score or total value of each alternative. The score calculation formulation for each alternative in the exponential comparison method is:

$$\text{Total value (TN}_i\text{)} = \sum_{j=1}^m (\text{RK}_{ij})\text{TKK}_j$$

Dimana:

TN <sub>i</sub>	=	The total value of the alternative to -i
RK <sub>ij</sub>	=	degree of relative importance of criterion j to the choice of decision i
TKK <sub>j</sub>	=	degree of importance of decision-j criteria; TKK <sub>j</sub> > 0; round
n	=	number of decision choices
m	=	number of decision criteria

Determination of the level of importance of the criteria is done by means of interviews with experts or through a brainstorming agreement. The determination of alternative scores on certain criteria is done by giving each alternative a value based on the value of the criteria.

### 3.4 Correspondence Analysis

Correspondence Analysis is part of a multivariate analysis that studies the relationship between two or more variables by demonstrating rows and columns together from a two-way contingency table in a low-dimensional vector space (Greenacre, 2007). The results of correspondence analysis usually show the best dimensions for presenting data, which are the coordinates of the point and a measure of the amount of information present in each dimension called inertia (Johnson, 2002).

The stages in the correspondence analysis are as follows: (1) From the contingency table the original data is arranged into a matrix and the singular value is decomposed to determine the variability of the original data described by each of the resulting dimensions; (2) Perform correspondence analysis on the contingency table; and (3) Observing the coordinate value and visualization of the row and column vector profile plots in each point closest to each consideration to describe marketing options through e-commers.

## IV. Results Achieved

### 4.1 Evaluation of the implementation results model in the development research activities of the Theory of Planned Behavior model in e-commerce marketing by SMEs in Malang City using SEM analysis.

Evaluation of the model implementation results in this research activity using Structural Equation Modeling analysis (Solimun, 2002). Use of SEM analysis to test various relationships in a model. In order to analyze, evaluate the validity and causality between variables of this model, AMOS 19 software is used. Furthermore, SEM analysis is carried out with the following results:

#### 4.1.1 Evaluation of Structural Equation Models

##### 4.1.1.1 Evaluation of Univariate and Multivariate Normality

The complete results show that both univariate (per indicator) and multivariate the critical ratio value is in the interval  $-2.58 < CR < 2.58$ . Thus, all data, both univariate and multivariate, are normally distributed.

##### 4.1.1.2 Evaluation of Univariate and Multivariate Outliers

Based on the results of the calculation, it is known that the Z score of all indicators is in the interval  $-4.00$  to  $4.00$ , meaning that all data on all indicators are not affected by outliers.

**4.1.2 Confirmatory Factor Analysis**

Confirmatory factor analysis is carried out with the aim of confirming any indicators that have been made based on previous research and existing theories that can be used to explain the constructs of attitudes, subjective norms, behavioral control, spiritual intelligence, intention and behavior.

**4.1.2.1 Attitude**

The magnitude of the factor loading on the two indicators, namely: trust in the attributes of the product and evaluation of the importance of the product attributes is above 0.5, then the two indicators can be used to measure the attitude construct. Based on the calculation, the attitude construct reliability value was 0.816, which means that the attitude construct reliability was 81.6%.

**4.1.2.2 Subjective Norms**

The magnitude of the factor loading on the two indicators, namely: the normative belief of the reference group to perform certain behaviors and the motivation in line with the reference group is above 0.5, so both indicators can be used to measure subjective norm constructs. Based on the calculation, the subjective norm construct reliability value was 0.863, meaning that the attitude construct reliability was 86.3%.

**4.1.2.3 Behavioral Control**

The amount of factor loading on the two indicators, namely: the belief that the factors that encourage or hinder behavior and the strength of the factors that encourage or hinder behavior are above 0.5, then these two indicators can be used to measure the behavioral control construct. Based on the calculation, the behavioral control construct reliability value is 0.705, meaning that the attitude construct reliability is 70.5%.

**4.1.2.4 Spiritual Intelligence**

The amount of factor loading on the five indicators, namely: divine principles, firm belief, leadership spirit, learner spirit, and future-oriented are above 0.5, then these five indicators can be used to measure the construct of spiritual intelligence. Based on the calculation, the spiritual intelligence construct reliability value was 0.835, meaning that the attitude construct reliability was 83.5%.

**4.1.2.5 Intention**

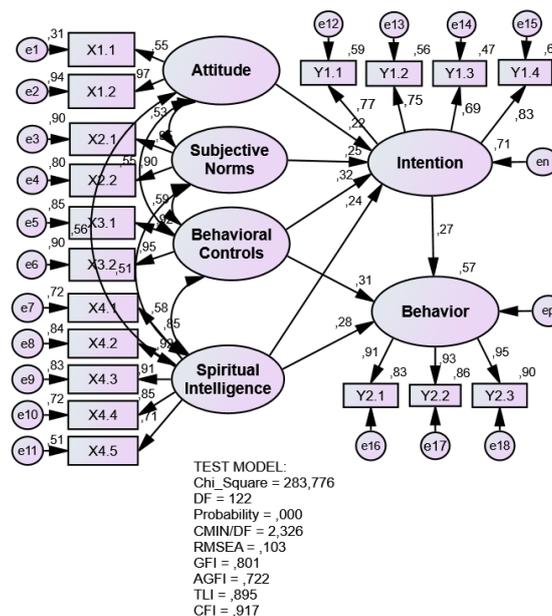
The magnitude of the factor loading on the four indicators, namely: traditional intentions, referential intentions, preferential intentions, and explorative intentions are above 0.5, so these four indicators can be used to measure the construct of intention. Based on the calculation, the reliability value of the intention construct was 0.829, meaning that the reliability of the attitude construct was 82.9%.

**4.1.2.6 Behavior**

The amount of factor loading on the three indicators, namely: time, choosing, and utilizing is above 0.5, then the three indicators can be used to measure behavioral constructs. Based on the calculation, the intention construct reliability value is 0.709, which means that the behavior construct reliability is 70.9%.

**4.1.3 Evaluation of Model Eligibility Criteria (Goodness of Fit Model)**

Structural Equation Modeling (SEM) is used to test various relationships in a model. Besides, it is also used to analyze, evaluate the validity and causality between variables of the model (see Figure 1).



**Figure 1: Structural Model Results**

The results of the feasibility test of the model in the evaluation model show the results of the feasibility test of the model in the evaluation model show a summary of the results obtained in the analysis and the recommended values to measure the feasibility of the model. Almost all of the criteria met the recommended recommendations, except for the results of the chi square test and probability values. Hair et al. (2010) specifically made an exception to the results of the chi square test that in a sample below 250 samples and a number of indicators 12-30 significant statistical test results still support the fit of the model provided that the CFI and TLI values are more than 0.90 and RMSEA is less than 0,08. The values of GFI, AGFI, CMIN / DF, RMSEA, CFI and TLI also show the results obtained in the analysis and the recommended values to measure the feasibility of the model, so that the evaluation results of this model can be accepted, and become the final model for interpretation and hypothesis testing.

**4.1.4 Structural Equations**

The causality relationship developed in the hypothesis in this model is tested with the null hypothesis which states that the regression coefficient between the relationship of two constructs is not different from zero through the t-test as in the regression analysis. Hypothesis testing on the structural model is related to the results of the regression coefficient test on each resulting path which is described in table 1.

**Table 1: Results of the Inter-Variable Effect Regression Coefficient Test**

Effect			Standard Coefficient	C.R.	p-Value	Description
From		To				
Intention	←	Attitude	0,119	2,129	0,033	Significant
Intention	←	Subjective Norms	0,157	2,624	0,009	Significant
Intention	←	Behavioral control	0,131	3,041	0,002	Significant
Intention	←	Kecerdasan Spiritual	0,213	2,560	0,010	Significant
Behavior	←	Intention	0,298	2,105	0,035	Significant
Behavior	←	Behavioral control	0,137	2,810	0,005	Significant
Behavior	←	Spiritual Intelligence	0,271	2,759	0,006	Significant

Source: Primary data, processed in 2020

The results of the structural model (structural model) for each research variable are as follows:

$$Y1 = 0.119 X1 + 0.157 X2 + 0.131 X3 + 0.213 X4$$

$$Y2 = 0.137 X3 + 0.271 X4 + 0.298 Y1$$

The first equation (1), there are four determining factors for intention, namely attitude, subjective norms, behavioral control, and spiritual intelligence. These four determinants are positive, meaning that attitudes, subjective norms, behavioral control, and spiritual intelligence will encourage the intention of SMEs in marketing through e-commerce.

The second equation (2), there are three determinants of behavior, namely behavioral control, spiritual intelligence, and intention. These three determinants are positive, meaning that behavioral control, spiritual intelligence, and intention will encourage the behavior of SMEs in marketing through e-commerce.

**4.1.4 Hypothesis Testing**

**4.1.5.1 Hypothesis Testing 1.**

Hypothesis: Attitudes, subjective norms, behavioral control, and spiritual intelligence have a significant effect on intentions in marketing through e-commerce by SMEs in Malang City.

The regression coefficient of the effect of attitude on intention is 0.119 with C.R. amounting to 2.129 and p-value = 0.033 (probability value less than 0.05) gives a decision that there is a positive and significant influence of attitude towards intention. The regression coefficient of the effect of subjective norms on intention is 0.157 with C.R. of 2.624 and p-value = 0.009 (probability value less than 0.05) gives a decision that there is a positive and significant influence of subjective norms on intention. The regression coefficient of behavioral control towards intention is 0.131 with C.R. amounting to 3.041 and p-value = 0.002 (probability value less than 0.05) gives a decision that there is a positive and significant effect of behavioral control on intention. The regression coefficient of the influence of spiritual intelligence on intention is 0.213 with C.R. amounting to 2.759 and p-value = 0.010 (probability value less than 0.05) gives a decision that there is a positive and significant influence of spiritual intelligence on intention.

Based on the results of statistical tests, evidence has been obtained that attitudes, subjective norms, behavioral control, and spiritual intelligence have a significant effect on intentions in marketing through e-commerce by SMEs in Malang.

#### **4.1.5.2 Hypothesis Testing 2.**

Hypothesis: Behavioral control, spiritual intelligence, and intention have a significant effect on behavior in marketing through e-commerce by SMEs in Malang.

The regression coefficient of the effect of behavioral control on behavior is 0.137 with C.R. amounting to 2.810 and p-value = 0.016 (probability value less than 0.005) gives a decision that there is a positive and significant effect of behavioral control on behavior. The regression coefficient of the influence of spiritual intelligence on behavior is 0.271 with C.R. amounting to 2.759 and p-value = 0.006 (probability value less than 0.05) gives a decision that there is a positive and significant influence of spiritual intelligence on behavior. The regression coefficient of the effect of intention on behavior is 0.298 with C.R. amounting to 2.105 and p-value = 0.035 (probability value less than 0.05) gives a decision that there is a positive and significant effect of intention on behavior.

Based on the results of statistical tests, evidence has been obtained that behavioral control, spiritual intelligence, and intention have a significant effect on behavior in marketing through e-commerce by SMEs in Malang City.

#### **4.1.5.3 Hypothesis Testing 3.**

Hypothesis: Behavioral control and spiritual intelligence have a significant effect on behavior and intention as mediators in marketing through e-commerce by SMEs in Malang City.

The regression coefficient of the effect of behavioral control on behavior is 0.137 with C.R. amounting to 2.810 and p-value = 0.016 (probability value less than 0.005) gives a decision that there is a positive and significant effect of behavioral control on behavior. The regression coefficient of the influence of spiritual intelligence on behavior is 0.271 with C.R. amounting to 2.759 and p-value = 0.006 (probability value less than 0.05) gives a decision that there is a positive and significant influence of spiritual intelligence on behavior.

The indirect effect of behavioral control on behavior through intention is 0.039, the indirect effect of spiritual intelligence on behavior through intention is 0.063. To determine whether or not intention is able to mediate behavioral control and spiritual intelligence on behavior is to compare the total effect with the direct effect for each variable. The effect of total behavioral control on behavior is greater than the direct effect ( $0.176 > 0.131$ ), so intention is proven as a variable that mediates the effect of behavioral control on behavior. The total effect of spiritual intelligence on behavior is greater than the direct effect ( $0.335 > 0.213$ ), so intention is proven to be a variable that mediates the influence of spiritual intelligence on behavior.

Based on the results of statistical tests, evidence has been obtained that behavioral control and spiritual intelligence have a significant effect on behavior and intentions as mediators in marketing through e-commerce by SMEs in Malang City.

Overall, based on the statistical test results of the evaluation of the implementation results model in the development research activities of the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City using SEM analysis is acceptable.

### **4.1 The results of the analysis of marketing policies through e-commerce by SMEs in Malang City based on the process of selecting alternative solutions and profiling of marketing policies through e-commerce using the Exponential Comparison Method (ECM) and Correspondence analysis.**

#### **4.1.1 Analysis Results of the Exponential Comparison Method (ECM).**

Several considerations of marketing decisions through e-commerce by Small and Medium Enterprises (SMEs) in Malang City are related to attitudes, subjective norms, behavior control, spiritual intelligence, and intentions. Each factor will be analyzed the amount of consideration given in marketing decisions through e-commerce so that the weight of the decision to make choices will be generated. The choice of decisions will be divided into 3 based on the power of choice, namely: low, medium and high. At the beginning, consumers will be asked to fill in the degree of importance of the consideration factors in order to produce weights (Yulianti et al., 2016). Furthermore, the decision to choose the form of marketing through e-commerce, namely buying and selling online in the marketplace, internet banking and sms banking, cable TV and internet providers will be calculated using the exponential comparison method which will be the basis for marketing decisions through e-commerce (Marimin, 2007).

##### **4.1.1.1 Attitude**

Considerations related to attitude are 5 items. The results of the weight calculation show that there is no one or more items with a weight that is very prominent from the considerations in question. The calculated weight ranges from 19.6% to 20.7%. How to receive orders and delivery methods have the lowest weight, namely 19.6%, while products have the highest weight, namely 20.7%. Two considerations of attitude, among others: the method of payment (20.4%) and the place to sell the product (19.7%).

Furthermore, for each consideration, the respondent will give a rating with a score of 1-5 for the three choices, so that the ranking of marketing options through e-commerce can be seen after being corrected by weight and other considerations. The rating score analyzed in calculating the weight of the choice of marketing through e-commerce is the mode value.

The results of calculations using attitude-based ECM for marketing options through e-commerce with online buying and selling in the marketplace are the highest choice, followed by internet banking and SMS banking, as well as with cable TV and internet providers. Specifically, the consideration of options for marketing through e-commerce by buying and selling online in the marketplace are, respectively, products, payment methods, where to sell products, how to receive orders, and shipping methods.

#### **4.1.1.2 Subjective Norms**

Considerations related to subjective norms are 2 items. The results of the weight calculation show that there is no one or more items with a weight that is very prominent from the considerations being asked. The calculated weight ranges from 49.3% to 50.7%. The consideration of friends has the lowest weight, namely 49.3%, while family members have the highest weight, namely 50.7%. Overall the consideration of members is that friends are stronger when compared to family members.

Furthermore, for each consideration, the respondent will give a rating with a score of 1-5 for both options, so that the marketing ranking through e-commerce can be seen after being corrected by the weights and other considerations. The rating score analyzed in calculating the weight of the choice of marketing through e-commerce is the mode value.

The results of calculations with ECM based on subjective norms of marketing options through e-commerce with online buying and selling in the marketplace being the highest choice, followed by internet banking and SMS banking, as well as with cable TV and internet providers. In particular, the consideration of options for marketing through e-commerce by buying and selling online in the marketplace is friends.

#### **4.1.1.3 Behavioral Control**

There are 3 items of consideration related to behavioral control. The results of the weight calculation show that there is no one or more items with a weight that is very prominent from the considerations being asked. The calculated weight ranges from 31.6% to 34.4%. The consideration of hardware availability has the lowest weight, namely 31.6%, while software has the highest weight, namely 34.4%. And the weight of the consideration of the availability of human resources is 34.1%.

Furthermore, for each consideration, the respondent will give a rating with a score of 1-5 for the three choices, so that the ranking of marketing options through e-commerce can be seen after being corrected by weight and other considerations. The rating score analyzed in calculating the weight of the choice of marketing through e-commerce is the mode value.

The results of calculations using ECM based on behavioral control of marketing choices through e-commerce with online buying and selling in the marketplace are the highest choice, followed by internet banking and SMS banking, as well as with cable TV and internet providers. Specifically, the consideration of options for buying and selling online in the marketplace is software availability, human resource availability, and hardware availability, respectively.

#### **4.1.1.1 Spiritual Intelligence**

There are 4 items for consideration related to behavioral control. The results of the weight calculation show that there is no one or more items with a weight that is very prominent from the considerations being asked. The calculated weight ranges from 23.9% to 26.2%. Diving into my own spiritual awareness has the lowest weight at 23.9%, while accepting changes for the better has the highest weight at 26.2%. Overall, the weight of consideration in order is contemplating what will happen after death (25.7%) and being aware of the non-material or spiritual aspects of life that are within (24.2%).

Furthermore, for each consideration, the respondent will give a rating with a score of 1-5 for the ten choices, so that the marketing ranking through e-commerce can be seen after being corrected by weight and other considerations. The rating score analyzed in calculating the weight of the choice of marketing through e-commerce is the mode value.

The results of calculations using ECM based on spiritual intelligence, marketing options through e-commerce with online buying and selling in the marketplace being the highest choice, followed by internet banking and SMS banking, as well as with cable TV and internet providers. Specifically, the consideration of options for buying and selling online on the marketplace in a row is accepting changes for the better, contemplating what will happen after death, realizing the nonmaterial or spiritual aspects of life that exist within myself, and exploring my own spiritual awareness.

**4.2.1 Correspondence Analysis Results**

A policy profile that describes marketing options through e-commerce will be illustrated in the relationship between marketing considerations through e-commerce and marketing options through e-commerce using correspondent analysis. This technique aims to explore the results of the mapping of the relationship between two categorical variables (attributes). Correspondence analysis is an advanced technique that is based on the results of the distribution of the frequency distribution in cross tabulation (Greenacre, 2007).

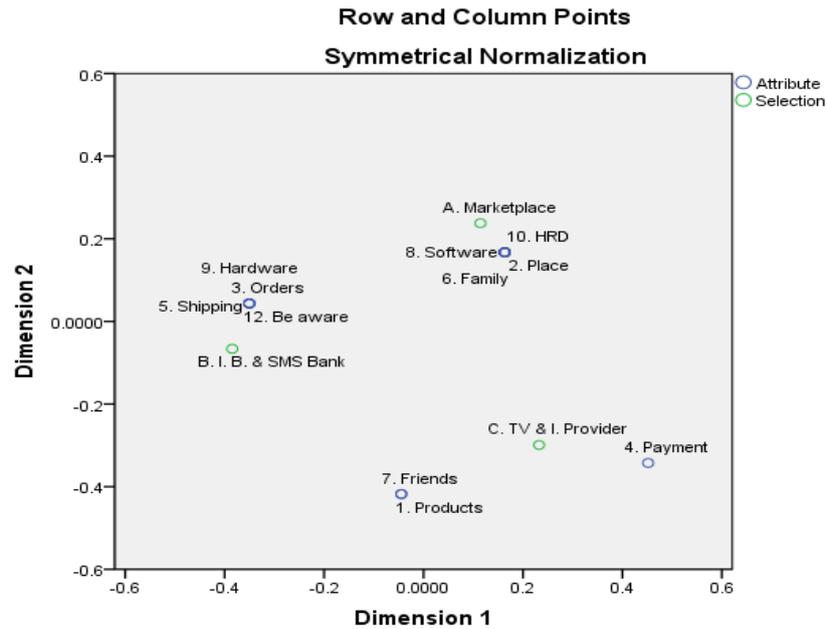
Based on its utility, correspondence analysis is used to reduce data dimensions to smaller and simpler dimensions and is appropriate for categorical data. The input data is a contingency table which indicates a qualitative association between rows and columns. Correspondence analysis scales rows-rows and columns in corresponding units, so that each can be displayed graphically in the same low-dimensional space (Johnson, 2002). These spatial maps provide an overview of: (1) Similarities and differences in rows for a particular column category; (2) Similarities and differences in certain column categories; (3) The relationship between rows and columns.

The interpretation of the results in the correspondence analysis is the same as that in the principal component analysis for a specific algorithmic similarity. The results of the correspondence analysis in category grouping are found in the contingency table, only because principal component analysis involves grouping the variables. These results are interpreted according to the proximity between the rows to the contingency table columns. The adjacent categories are more similar in terms of their basic structure (Malhotra 2010). The results of the correspondence analysis in the form of coordinates for the first and second dimensions are described in Table 2 and Figure 2 below.

**Table 2: Correspondent Analysis Results**

Attribute	Proportion	Dimension1	Dimension2
<b>E-Commerce Marketing Options</b>			
A. Buying and selling online at the Marketplace	.429	.114	.238
B. Internet Banking and SMS Banking	.294	-.385	-.066
C. Cable TV and Internet Provider	.276	.232	-.299
<b>Marketing Considerations Through E-Commerce</b>			
1. Products	.080	-.045	-.418
2. Where to sell products	.067	.163	.167
3. How to accept orders	.074	-.351	.043
4. Methods of payment	.074	.452	-.343
5. Shipping methods	.074	-.351	.043
6. Family members	.067	.163	.167
7. Friends	.080	-.045	-.418
8. Availability of software	.067	.163	.167
9. Availability of hardware	.074	-.351	.043
10. Availability of human resources	.067	.163	.167
11. Meditate on what will happen after death	.067	.163	.167
12. Be aware of the spiritual immaterial life that is within	.074	-.351	.043
13. Dive into my own spiritual awareness	.067	.163	.167
Accept change for the better	.067	.163	.167

The results of the calculation of the correspondence analysis show that there are two attributes that are highly considered, namely product (A1) and friends (A7). Then in the next sequence is how to receive orders (A3), payment method (A4), delivery method (A5), availability of hardware (A9), realizing the non-spiritual life that exists within (A12), family members (A6), software availability (8), the availability of human resources (A10), contemplating what will happen after death (A11), delving into my own spiritual consciousness (A13), and accepting changes for the better (A14) and finally will become a general consideration of the 3 options marketing through e-commerce. The strongest choice is in Online Buying and Selling on the Marketplace, followed by Internet Banking and SMS Banking as well as Cable TV and Internet Providers, so the data composition is 42.9%: 29.4%: 27.6%.



**Figure 2: Biplot Graph Between E-Commerce Marketing Options and Considerations**

Biplot graph between marketing options through e-commerce and shows the special characteristics of each choice. Online Buying and Selling Options on the Marketplace is 42.9% with the characteristics of consideration: where to sell products, family members, software availability, and availability of human resources. Internet Banking and SMS Banking options are 29.4% with the characteristics of considerations: how to receive orders, delivery methods, availability of hardware, and realizing the non-spiritual life that exists within oneself. Choice of Cable TV and Internet Provider at 27.6% with the characteristics of consideration: payment methods, friends, products. E-commerce marketing considerations exist in all options (in the resulting image, coordinate the remote product position with all marketing options).

### 4.3 Discussion

#### 4.3.1 Evaluation of the implementation model in the development research activities of the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City using SEM analysis.

Evaluation of the implementation model in the development research activities of the Theory of Planned Behavior (Ajzen, 1991) in marketing through e-commerce by SMEs in Malang City stated that the model is acceptable. This is evidenced by the results of the hypothesis testing that has been done.

The results of the first hypothesis test obtained evidence that attitudes, subjective norms, behavioral control, and spiritual intelligence have a significant effect on intentions in marketing through e-commerce by SMEs in Malang City. In line with the results of their research, Hage et al. (2015) which states that spiritual intelligence affects the intention to behave. The result of the second hypothesis test shows that behavioral control, spiritual intelligence, and intention have a significant effect on behavior in marketing through e-commerce by SMEs in Malang. While the third hypothesis test results obtained evidence that behavioral control and spiritual intelligence have a significant effect on behavior and intentions as mediators in marketing through e-commerce by SMEs in Malang City. In line with his opinion Ajzen et al. (2016) which states that behavioral control problems can only occur within the limits of certain actions, and other actions occur due to the influence of factors outside a person's control.

So based on the results of the evaluation of the implementation model in the development research activities of the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City, it can be said that the model can be accepted and can be used as the basis for further activities. The next activity is implementing the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City based on the results of the model evaluation. The results of this study are in line with the results of research by Darsono et al. (2018).

#### 4.3.2 Analysis of marketing strategy policies through e-commerce by SMEs in Malang City based on the process of selecting alternative solutions and profiling of marketing strategy policies through e-commerce using the Exponential Comparison Method (ECM) and correspondence analysis.

Before implementing the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City based on the results of the evaluation of the model, first an analysis of marketing policies through e-commerce by SMEs in Malang City was carried out based on the process of selecting alternative solutions and profiling of marketing type policies through e-commerce using the Exponential Comparison Method (MPE) and Correspondence analysis.

The results of the MPE analysis on the policy of choosing a marketing strategy through e-commerce that are related to attitudes, subjective norms, behavioral control, and spiritual intelligence on marketing through e-commerce, the first is buying and selling online in the marketplace, the second is internet banking and sms banking and third is a cable TV and internet provider. The results of the correspondence analysis of the first choice are buying and selling online in a marketplace with the characteristics of the following considerations: a place to sell products, family members, software availability, and human resource availability. The second option is internet banking and sms banking with the characteristics of consideration: how to receive orders, delivery methods, availability of hardware, and being aware of the non-spiritual life that is within. And the third option is cable TV and internet provider with the characteristics of consideration: payment methods, friends, products. The results of this study are in line with the results of research by Darsono at al. (2019).

The recommendations of this study (output results) are the marketing strategy policies through e-commerce by SMEs in Malang City, respectively, are (1) through online buying and selling in the marketplace; (2) via internet banking and sms banking, (3) via cable TV and internet providers.

### V. Conclusion

5.1 Evaluation of the implementation model in this research activity states that the model is acceptable and can be used as the basis for further activities. The next activity is implementing the Theory of Planned Behavior model in marketing through e-commerce by SMEs in Malang City.

5.2 The results of the ECM analysis and correspondence analysis state that the first consecutive e-commerce marketing strategy is through online buying and selling in the marketplace with the characteristics of consideration: a place to sell products, family members, software availability, and availability of human resources. The second option is through internet banking and sms banking with the characteristics of consideration: how to receive orders, delivery methods, availability of hardware, and being aware of the non-spiritual life that exists within oneself. And the third option is via cable TV and an internet provider with the characteristics of consideration: payment method, friends, products.

5.3 The recommendations of this research are the marketing strategy policies through e-commerce by SMEs in Malang, respectively, are (1) through online buying and selling in the marketplace; (2) via internet banking and sms banking, (3) via cable TV and internet providers.

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