Factors Determining the use of POS (Point of Sales) Systems in Small and Medium Sized Enterprises

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Abstract: The use of Point of Sales (POS) information system technology is an important part of small and medium enterprises in Indonesia because in business competition in the digital area encourages business owner to adapt to this era of digitalization. In this study, the data collected as many as 390 respondents spread using google forms to the POS system user and business owner. From the data that has been collected then processed using Smart PLS which is used to test the hypothesis of this study. The model with a combination of technology acceptance model (TAM) and the theory of planned behavior (TPB) is to analyze the factors that affect the intention to use the POS system and external variables such as anxiety can affect the usefulness of technology. The study's results indicate that almost all of the variables affect the intention to use the POS system, only the usability of the use does not affect the intention to use the POS system.

Keywords: *Point of Sales, Small and Medium-Sized Enterprise (SMEs), Technology Acceptance Model, Technology Anxiety, Theory of Planned Behaviour)*

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1. Introduction

The current economic impact makes all small and Medium-Sized Enterprises (SMEs) in all industries compete to survive in this digital era. This happens not only around the world but also in Indonesia. SMEs are required to improve their performance and creativity to survive the competition compared to before, because in this digital era the challenges are heavier. The biggest challenge is how to increase the accessibility of SMEs to go-digital and increase the capabilities of SMEs so as to produce products that are able to compete with foreign products that have flooded the Indonesian marketplace. This is important considering that most of the SMEs are located in rural areas with very limited internet access and many are not digital yet. It is time for SMEs businessmen to work together to overcome this problem. In the era of digital transformation, the low ability of human resources to face the way of doing business from conventional to online business. Therefore, quality human resources are the key to facing the digital economy era.

Only 8 million SMEs in Indonesia are affiliated with e-commerce in Indonesia. The use of e-commerce and marketplaces can support the efficiency and costs of SMEs in running their business, but because many do not understand how e-commerce works and do not believe in technology, this is also a challenge in implementing e-business on SMEs. On table 1 the development of SMEs in Indonesia, shows that the percentage of SME development every year is not high but quite stable.

According to data of the Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia, the development of SMEs in Indonesia from the year 2016, 2017, 2018 experienced a steady increase but not significant, which was approximately 2.06 for the comparison of 2016 with 2017, and 2.02 for the comparison of 2017 with 2018, for each segment SME.

Table.1. Growth SMEs in Indonesia

Indicator	Unit	2016	2017	Growth 2016-2017	2018	Growth 2017-2018
		Total	Total	(%)	Total	(%)
SMEs	Unit	61.651.177	62.922.617	2,06	64.194.057	2,02

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Micro	Unit	60.863.578	62.106.900	2,04	63.350.222	2
Small	Unit	731.047	757.09	3,56	783.132	3.44
Medium	Unit	56.551	58.627	3,67	60.702	3.54

The POS system is the problem solvers for the activities of SMEs for improving efficiency, safety in running a business and managing finances and stock products. There are many businesses that fail because of improper financial issues or sales transactions that do not keep up with the records. Therefore, regarding the factors that determine the use of point of sales in SMEs companies will be carried out.

2.Literature Review

2.1Small and Medium-Sized Enterprise (SMEs)

SMEs are productive business units that are independent, carried out by individuals or business entities in all sectors of the economy. In principle, the distinction between Micro, Small, Medium and Large Enterprises is generally based on the initial asset value (excluding land and buildings), average turnover per year, or the number of permanent workers. However, the definition of SMEs is based on these three parameters vary by country. Therefore, it is difficult to compare the importance or role of SMEs across countries (Tambunan.T, 2012).

In the Act, the criteria used to define SMEs as stated in Article 6 is the value of net wealth or the value of assets excluding land and premises, or annual sales revenue (Law 2018, Chapter IV article 6). With the following criteria:

a. A micro business is a business unit that has a maximum asset of Rp.50.000.000 assets, excluding land and buildings with the greatest annual sales Rp.300.000.000.
b. Small businesses with asset values of more than Rp.50.000.000 up to a maximum of Rp.500.000.000 excluding land and buildings where the business has annual sales of more than Rp.300.000.000 up to a maximum of Rp.2.500.000.000.
c. Medium-sized enterprises are companies with a net worth of more than Rp.500.000.000 to a maximum of Rp.100.000.000.000 from annual sales of over Rp.2.500.000.000 billion to a maximum of Rp.50.000.000.000.

2.2Point Of Sales (POS)

According to the journal Gilang, Herman (2017), POS is a system that allows transactions, which includes the use of a cash register. Within the scope of the POS, a cashier machine does not stand alone but already includes supporting software and other devices. The POS system does more than just buying and selling transactions, it can also integrate accounting calculations, goods and stock management, employee payroll modules, accounts payable accounts, and various other functions.

Point of Sales (POS) refers to the definition of a cashier (check-out counter) with a cash register (Cash Register). As the name implies, the POS is a point of sale (check-out) where the transaction is completed. This is the point at which the customer makes a payment in exchange for goods or services. At the Point of Sales sellers counts all the price bought by consumers and provide an option for customers to make payments and will issue a receipt for the purchase transaction.

When compared to conventional cash registers that only function to record sales transactions, Point of Sale with more complex functions also has its own advantages. Are as follows:

1. Features complete with maximum functionality
2. Work efficiency
3. Reducing human error
4. Improve company image
5. Track Every Transaction
6. Tracing the Mark-down correctly
7. Automate All Functions

2.3Point Of Sales (POS)

The Technology Acceptance Model (TAM) developed by Davis (1989) is a successful and highly accepted model for predicting the acceptance of newly applied technology. The TAM model is actually adopted from the Theory of Reasoned Action (TRA) model, which is a theory of reasoned action with the premise that a person's reaction and perception of something will determine that person's attitude and behavior. The reactions and perceptions of Information Technology (IT) users will influence their attitudes towards their acceptance of

technology. In TAM, Davis (1986) found that perceptions of IT benefits also influence perceptions of IT ease of use, but not vice versa. So, as long as the individual feels that IT is useful in his job, will that individual use it regardless of whether IT is easy or difficult to use. To reveal more about the relationship between perceived benefits and perceived convenience, Davis (1989) conducted research by presenting 6 items each, in the following table 2:

Table.2. Factor that affected intention use on Point of Sales

No	Usefulness	Ease of use
1	Work faster	Easy to learn
2	Performance	Can be controlled
3	Productivity increases	Clear and easy to understand
4	Effective	Flexible
5	Simplify the task	Easily skilled
7	Ease of usability	Ease of use

2.3 Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB), which is the extension model of the Theory of Reasoned Action. Intention to do something affect an individual's decision to perform a behaviour. Theory of Planned Behaviour is purposely used to predict or explain the behaviour patterns of human beings under certain circumstances. In the model, actual behaviour is determined by the behavioural intention and the behavioural intention is affected by three determinants: attitude toward the behaviour, subjective norm, and perceived behavioural control (Ajzen 1991). The theoretical model of theory of planned behaviour can be seen in figure 1.

Figure.1. Theory of Planned Behavior
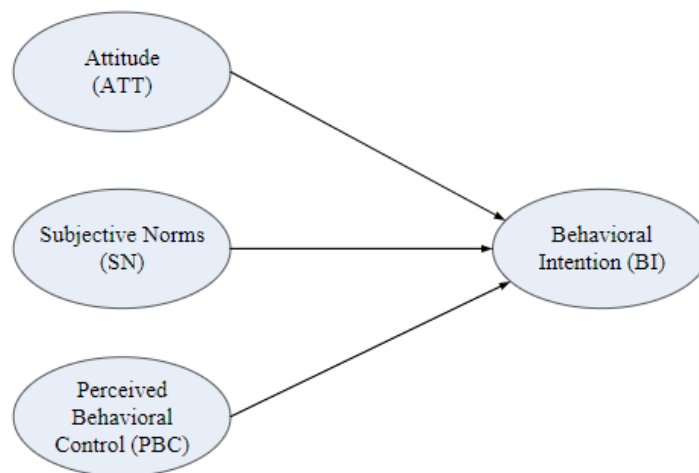
3. Methodology

3.1 Research Stages

To answer the problems that have been formulated in chapter one, the author will conduct research planning starting from observing the problem, conducting literature studies, collecting and testing the data that has been collected from respondents via google form, distributing questionnaires to the field which are directly given and filled out by respondents through colleagues and potential user relations or who have used the Point of Sales system or cash register. The stages are carried out to complete this study can be seen in Figure 2.

Figure.2. Research Stages
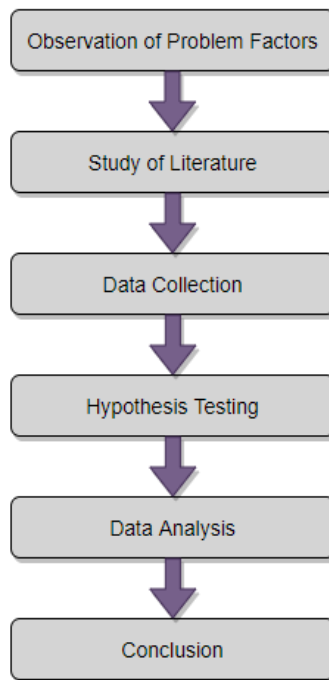
3.2 Research Method

Based on this research will use the Technology Acceptance Model (TAM), Theory of Behavioral Planner (TBP) and anxiety technology with the variable research framework that will be used are perceived intention of use, perceived ease of use, perceived usefulness, attitude toward the behavior, subjective norm, and technology anxiety. For further explanation, see Figure 3.

Figure.3. Research Model
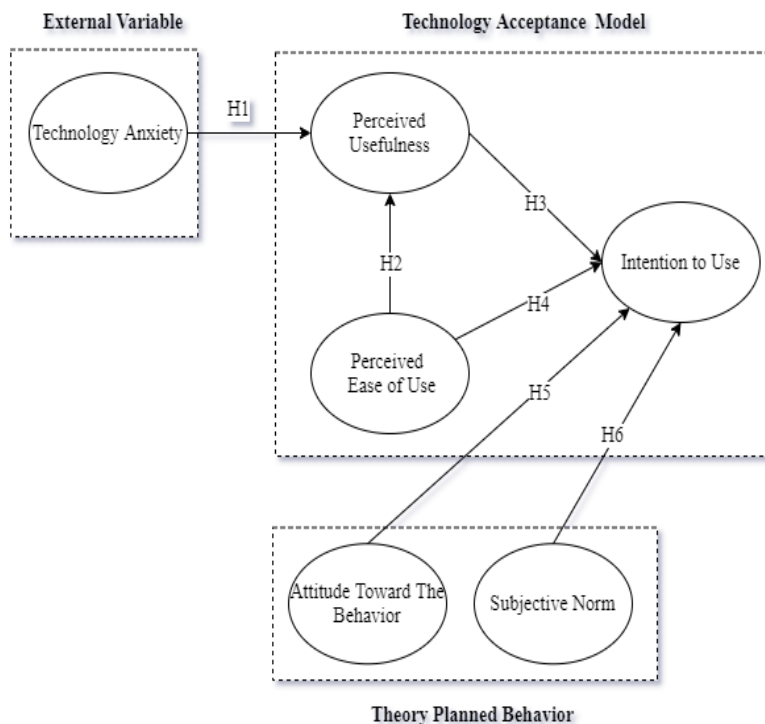
Based on the explanation above, then the hypothesis is formed in this study are as follows:

1. H1: Technology anxiety has an effect on perceived usefulness
2. H2: Perceived ease to use has an effect on perceived usefulness
3. H3: Perceived usefulness has an effect on intention to use
4. H4: Perceived ease of use has an effect on intention to use
5. H5: Attitude toward the behavior has an effect on intention to use
6. H6: Subjective norms have an effect on intention to use

3.3Data Collection Method

The population in this study are all businessmen or owners of SMEs who are in Indonesia. The data collection technique was carried out using a survey method in the form of a questionnaire as the medium. The questionnaire filling instructions were made simple and clear to make it easier for respondents to fill in answers. The questionnaire will be given in person or interview and given online using a google docs survey to respondents to be able to reach more respondents in Indonesia and the number of samples to be used in this study is 293 respondents. Respondents will be targeted to owners and users of POS applications. Using the Slovin formula with an error rate of 5% and confidence level 95%. Translated into the following formula:

$$n = [N/ (1+N.e^2)]$$
$$n = [1100 / 1 + (1000 \times 0.05^2)] = 1000 / 3.75$$
$$n = 293$$

4. Result and Discussion

From the population sample collected from SMEs business owners for approximately 90 days, 293 samples were obtained. In this research, the method of analysis to be used is partial least square (PLS) with the help of SmartPLS application version 3.2.9. From the results of this questionnaire using a Likert scale of 1-5, where 1 as the lowest value and 5 as the highest value.

Table.3. Result From Outer Loading

Variable	Indicator	Code	Outer Loading
Technology Anxiety (TA)	Disappoint	TA1	0.881
	Unpleasant	TA2	0.799
	Failure	TA3	0.772
	Uncomfortable	TA4	0.867
	Unwilling	TA5	0.832
	Strange	TA6	0.828
Perceived Ease of Use (PEOU)	Unsupervised use	PEOU1	0.650
	Usability	PEOU2	0.786
	Expect ability	PEOU3	0.744
	Learnability	PEOU4	0.763
	Effort required	PEOU5	0.563
	Interactivity	PEOU6	0.786
	Flexibility	PEOU7	0.787
Perceived Usefulness (PU)	Quality Improvement	PU1	0.723
	Performance improvement	PU2	0.770
	Completion of work improvement	PU3	0.756
	Productivity Improvement	PU4	0.663

	Benefit Improvement	PU5	0.756
	Information Improvement	PU6	0.639
	Access of latest information Improvement	PU7	0.699
	Access of Quality information improvement	PU8	0.748
Intention to Use (IU)	Measured usage	IU1	0.846
	Depth usage	IU2	0.868
	User influence	IU3	0.836
Subjective Norm (SN)	Associate influence	SN1	0.826
	Environmental Influence	SN2	0.843
	Competitor influence	SN3	0.816
Attitude Toward the Behavior (ATB)	Use of usability	ATB1	0.757
	Benefit of usability	ATB2	0.812
	Trust of usability	ATB3	0.812
	Right Action	ATB4	0.687

Based on the outer model value above, it has met the convergent validation, and the average value of this outer model is above 0.70. Another method for assessing discriminant validation is by comparing the square root of the average variance extracted for each construct with the correlation between the constant and other constructs in the model. In this study, there are 31 indicators, and all the indicators used for the construct produce an outer value greater than 0.50, therefore no indicators are excluded from the model.

Of these variables that have been tested using SmartPLS, the results of using composite reliability, average variance extracted and Cronbach alpha are all related and meet reliability testing because the average CR results exceed 0.7, the average AVE exceeds 0.5 and finally in Cronbach. The average alpha exceed 0.7.

Table.4. PLS Algorithm – Composite Reliability, Average Variance Extracted and Cronbach's Alpha

Variable	CR	AVE	Cronbach's Alpha
Technology Anxiety (TA)	0.930	0.690	0.910
Perceived Ease of Use (PEOU)	0.882	0.589	0.832
Perceived Usefulness (PU)	0.873	0.580	0.819
Intention to Use (IU)	0.886	0.722	0.808
Subjective Norm (SN)	0.868	0.687	0.772
Attitude Toward the Behaviour (ATB)	0.836	0.630	0.707

Based on the coefficient of determination from table 5.A value of 0.672 was obtained from intention to use, which means that this value indicates that the intention to use variable can be influenced by perceived ease of use, perceived usefulness, subjective norm, attitude toward the behaviour of 67.2% and the remaining 32.8% is not included in this model. And value of 0.481 was obtained from perceived usefulness of 48.1% and the remaining 51.9% is not included in this model.

Table.5. Output from R-Square

	R Square	*R Square Adjusted*
Perceived Intention of Use	0.672	0.667
Perceived Usefulness	0.481	0.477

5. Conclusion

The results of this study prove that as follows:

1. Perceive ease of use, perceived usefulness and attitude toward the behavior has an affect the intention to use point of sales system.
2. Technology anxiety has an effect on perceived usefulness on point of sales system
3. Perceived ease to use has effect on perceived usefulness point of sales system
4. Perceived usefulness has no effect on intention to use point of sales system
5. Perceived ease of use has an effect on intention to use point of sales system
6. Attitude toward the behavior has an effect on intention to use point of sales system
7. Subjective norms has an effect on intention to use point of sales system

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