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ACCEPTANCE ANALYSIS OF USING JD.ID ECOMMERCE APPLICATION WITH TAM METHOD

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Abstract: Technological developments, especially in the field of e-commerce such as JD.ID provide convenience and benefits for users. The presence of this application is interesting because it strengthens the brand with guaranteed original products. This study aims to examine the effect of the perceived ease of use variable, whether perceived usefulness has an effect on the use of the JD.ID application with the basic theory of Technology Acceptance Model (TAM). This research is a type of quantitative research conducted by survey. The data collection technique used in this study was a questionnaire (questionnaire) which was distributed online. The sample of this research is the application users. The population in this study amounted to 100 respondents. The sampling technique used was an online questionnaire, the method used was purpose sampling. Data processing method with Smart PLS 3 application. From the test results, it can be seen that perceived ease of use, perceived usefulness have a positive and significant effect on application use. From these results, it means that the higher the perceived ease and usefulness of consumers, the higher the use of the application. The results of this study are in line with the Technology Acceptance Model (TAM) theory.

Keywords: *1st Ease, 2nd Usability, 3rd Use,4th TAM, 5th Smart PLS*

1. Introduction

The development of e-commerce technology with all its innovations and policies makes it easier for users to get the information and goods they need, one of which is in the field of online sales with the presence of several marketplaces, one of which is JD.ID (Adiwihardja et al., 2016). The JD.ID Marketplace, which has only been present in Indonesia for about 5 years, has been competing with several marketplaces that have been present in the country first. Based on Figure 1, it can be seen that the top marketplaces in Indonesia are JD.ID.

Figure 1. Landscape Assessment of the Top 6 E-Commerce And Online Marketplaces in Indonesia

	blibli.com	Bukalapak	JD.ID	LAZADA Effortless Shopping	Shopee	tokopedia
Good reputation	14.8%	13.0%	12.9%	13.7%	10.9%	14.3%
Cheaper product price	6.5%	15.1%	11.0%	13.5%	18.0%	13.3%
More product selection	6.5%	14.6%	5.2%	11.3%	13.0%	16.8%
Authentic products	13.9%	3.9%	19.5%	7.2%	4.2%	4.3%
Good customer service	12.0%	8.9%	5.2%	6.5%	7.7%	8.8%
Fast delivery	7.4%	6.0%	8.6%	10.0%	7.6%	5.8%
Free delivery	13.0%	6.8%	14.8%	10.6%	18.4%	3.2%
Easy return policy	6.5%	5.7%	2.9%	5.4%	4.5%	5.3%
Easy navigation on site	4.6%	7.0%	3.3%	3.8%	3.5%	9.3%
More payment options	9.3%	8.9%	11.0%	13.4%	5.3%	8.4%
Better mobile app	4.6%	9.6%	5.7%	4.4%	6.8%	9.4%
Loyalty program	0.0%	0.3%	0.0%	0.0%	0.1%	0.0%
More promo	0.9%	0.0%	0.0%	0.0%	0.2%	0.9%
More secure	0.0%	0.3%	0.0%	0.1%	0.0%	0.2%

Source : Ecommerce Statitsc (Cassidy, 2019)

From the reputation assessment, each has a fairly balanced number, Blibli and Tokopedia get the highest number. The assessment of reputation is generally based on consumer trust which is formed from several factors, including product guarantees, service quality, to the effectiveness of the system presented, but JD.ID has a different way to blend in with the existing top players where JD.ID strengthens brand with a guarantee that the product is genuine. Associated with the JD.ID application which is very easy and the benefits of its use are an attraction for users. Acceptance of the use and rejection of the technology can be predicted using the Technology Acceptance Model (TAM)(Sukma et al., 2019). TAM was first developed by (Davis, 1989) to propose a behavioral theory of computer use. TAM is adopted from popular theory, namely Theory of Reason Actioned (TRA) (Ajzen, 2015) from the field of social psychology which explains a person's behavior through their intentions. According to (Kurniawan, 2019) TAM has a strong behavioral element, assuming that when someone forms an intention to act, they will be free to act without restrictions.

The main purpose of TAM is to predict and explain user behavior or attitudes in accepting and using technology based on perceived usefulness and perceived ease of use. This study will use these two factors to prove perceived ease of use, perceived usefulness has a positive effect on intentions to use the JD.ID application. According to (Setiawan, 2017) perceived ease of use is defined as the extent to which potential users expect the target system to be easy to implement, in other words, potential users do not expect high difficulties to learn and apply the use of the

technology. Perceived ease of use refers to a person's level of belief that the use of a particular system will reduce or relieve physical and mental effort (Kurniawan, 2019). According to Adam et al in (Nyssa & Rahmidani, 2019), systems that are often used are characterized by how easily the system is known, easier to operate, and easy to use. Based on the description above, it can be concluded that ease of use is a person's belief in the decision-making process. If someone believes that a system does not require so much effort in its operation then that person will use it. The indicators of perceived ease of use in this study based on reference journals (Sianadewi et al., 2017) are: easy to learn to use, easy to get what you are looking for, clear and easy to understand interactions, flexible in interacting, easy to use.

2. Research Method

This research is a quantitative study that aims to examine the effect of perceived ease of use, perceived usefulness, whether it affects the use of the JD.ID application. This research is a quantitative research with survey method. The sample is part of the population in this study are JD.ID e-commerce users totaling 100 respondents. The type of data used in this research is quantitative data. Sources of data taken from primary data using online questionnaires were distributed to JD.ID e-commerce users. The questionnaire used is an optional type to make it easier for respondents to provide answers, because alternative answers have been provided and only require a shorter time to answer. To measure the results of respondents' responses, the Likert scale is used. With a Likert scale, the variables to be measured are translated into variable indicators. Then the indicator is used as a benchmark for compiling instrument items which can be in the form of statements. According to the Likert scale is used to measure attitudes, opinions and perceptions of a person or group of people about social phenomena. Data processing in this study using the SmartPLS 3.0 program. This is done to make it easier to process statistical data more quickly and precisely.

The TAM model (technology acceptance model) is a model of acceptance of an information technology that will be used by users (Jogiyanto, 2008). The TAM model adds two variables or constructs to the TRA model. For the two variables or constructs, namely perceived usefulness and perceived ease of use

Seen from the image below:

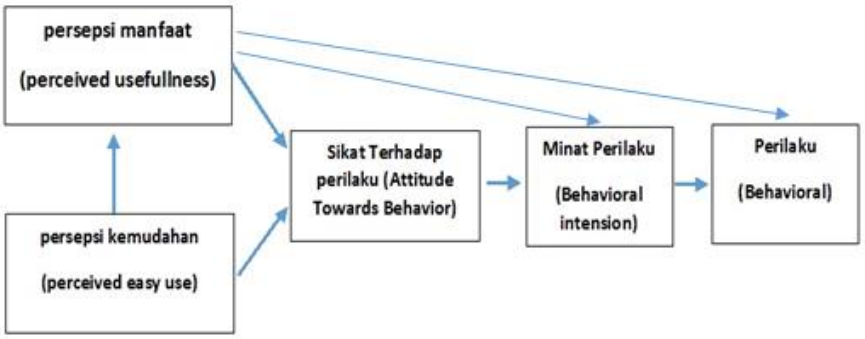

Figure 2 : Theory of Technology Acceptance Model (TAM).

The intensity of the use of the system can be replaced by the acceptance of IT variables (Acceptance of IT) . So that the Technology Acceptance model is as shown in the following figure:

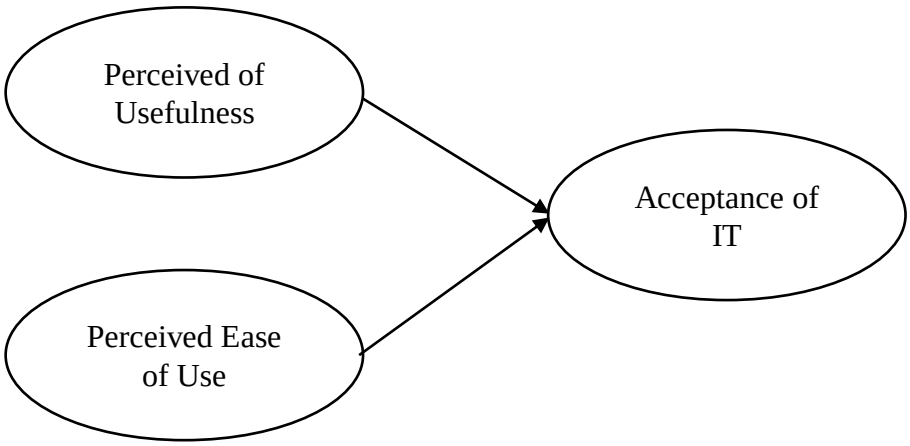

Figure 3 : Theory of Technology Acceptance Model (TAM).

Technology Acceptance Model (TAM) is a model developed by (Davis, 1989) to explain the acceptance of technology to be used by technology users. In formulating TAM, (Davis, 1989) used TRA (Theory of Reasoned Action) as his grand theory but did not accommodate all components of TRA theory. (Davis & Davis, 1989) only uses the "Belief" and "Attitude" components, while Normative Belief and Subjective Norms are not used. According to (Davis, 1989), the behavior of using information technology begins with a perception of usefulness and a perception of the ease of use of information technology. These two components when associated with TRA are part of Belief. TAM is currently the most widely used model in predicting the acceptance of information technology. The purpose of this model is to explain the main factors of the behavior of users of information technology on the acceptance of the use of information technology itself. The TAM model in more detail describes the acceptance of information

technology with certain dimensions that can affect the easy acceptance of information technology by users. The Technology Acceptance Model (TAM) defines two perceptions of technology users that have an impact on their acceptance, namely perceived ease of use and perceived usefulness (Chuttur, 2009).Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989). That is, perceived usefulness is the degree to which a person believes that the use of a particular system will be able to improve that person's work performance. Based on this definition, it can be interpreted that the benefits of using information technology can improve the performance and work performance of the people who use it. (Davis , 1989) defines perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort". That is, the degree to which a person believes that using a particular system will be effort-free. (Davis, 2014) further said that the effort according to each person is different but in general to avoid rejection from system users on the system being developed, the system must be easily applied by users without spending effort that is considered burdensome.

3. Results and Discussion

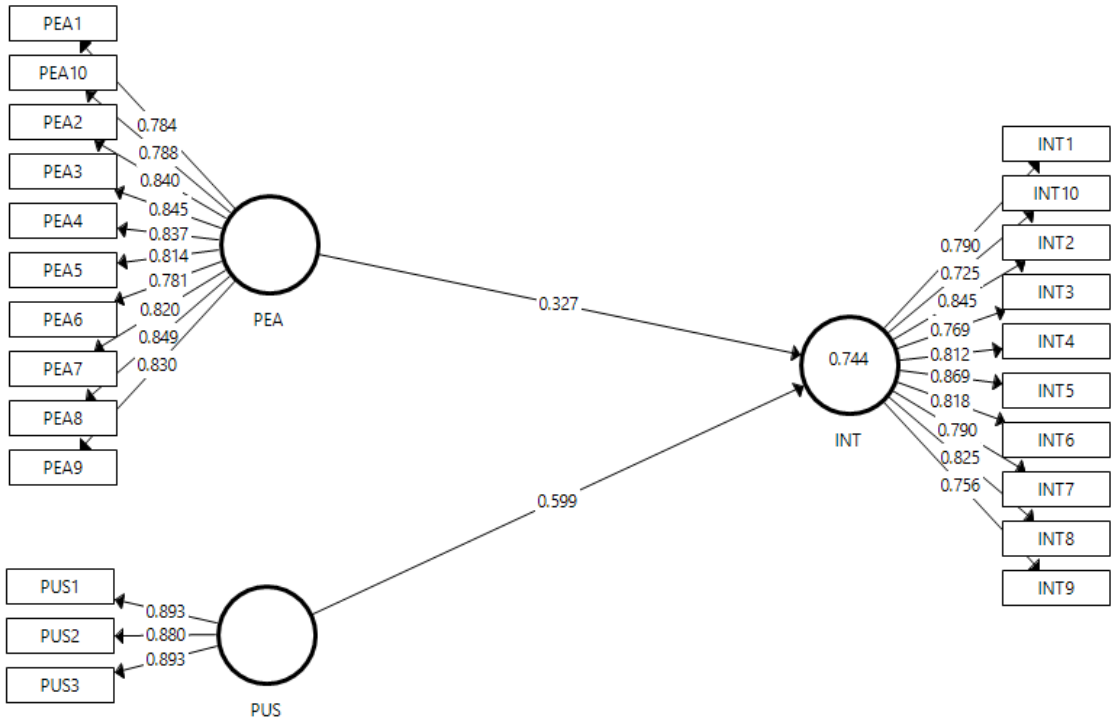

Figure 4. Loading Factor Value.

Measurement Model Evaluation (Outer Model)

If the loading factor value of an indicator > 0.70 then the indicator is said to be valid. All indicators in this study have a loading factor value > 0.70; then all indicators are declared valid. The following is the evaluation of the measurement model on the validity of the indicator:

Table 1. *loading factor*

Contruct	Item	Loading Factor
Acceptance of IT (INT)	INT1	0.790
	INT10	0.725
	INT2	0.845
	INT3	0.769
	INT4	0.812
	INT5	0.869
	INT6	0.818
	INT7	0.790
	INT8	0.825
	INT9	0.756
Perceived Ease of Use (PEA)	PEA1	0.784
	PEA10	0.788
	PEA2	0.840
	PEA3	0.845
	PEA4	0.837
	PEA5	0.814
	PEA6	0.781
	PEA7	0.820
	PEA8	0.849
	PEA9	0.830
Perceived of Usefulness (PUS)	PUS1	0.893
	PUS2	0.880
	PUS3	0.893

Source: The results of the analysis using SmartPLS 3.0. (2021)

Table 2. AVE Value

Contruct	AVE	Requirement AVE	Result
Acceptance of IT (INT)	0.641	> 0.5	Reliabel
Perceived Ease of Use (PEA)	0.671	> 0.5	Reliabel
Perceived of Usefulness (PUS)	0.790	> 0.5	Reliabel

Source: The results of the analysis using SmartPLS 3.0. (2021)

The next evaluation is by looking at the AVE (Average Variance Extracted) value. The AVE value is good if it has a value greater than 0.50 (Ghozali, 2005).

Convergent Validity Test

Based on table 1 and table 2 above, it can be seen that the loading factor indicator value > 0.70, the AVE value > 0.5 then the indicators are said to be all valid.

Table 3. ***Cross loading Factor***

ITEM	INT	PEA	PUS
INT1	0.790	0.575	0.584
INT10	0.725	0.439	0.533
INT2	0.845	0.719	0.778
INT3	0.769	0.556	0.646
INT4	0.812	0.608	0.737
INT5	0.869	0.675	0.767
INT6	0.818	0.661	0.681
INT7	0.790	0.543	0.593
INT8	0.825	0.653	0.716
INT9	0.756	0.534	0.549
PEA1	0.590	0.784	0.545
PEA10	0.527	0.788	0.563
PEA2	0.585	0.840	0.541
PEA3	0.682	0.845	0.689
PEA4	0.700	0.837	0.635
PEA5	0.632	0.814	0.577
PEA6	0.535	0.781	0.437
PEA7	0.609	0.820	0.652
PEA8	0.665	0.849	0.605
PEA9	0.607	0.830	0.555
PUS1	0.727	0.661	0.893
PUS2	0.676	0.639	0.880
PUS3	0.804	0.603	0.893

The discriminant validity test can be seen in table 3 on the cross loading parameter, it can be seen that the loading indicator score is higher in the construct compared to loading in the other constructs.

Table 4. ***Composite Reliability*** **and** ***Cronbach's Alpha***

Contruct	Cronbach's Alpha	Requirement Cronbach's Alfa	CR	Requirement CR	Result
Acceptance of IT (INT)	0.938	> 0.60	0.947	> 0.7	Reliabel
Perceived Ease of Use (PEA)	0.945	> 0.60	0.953	> 0.7	Reliabel
Perceived of Usefulness (PUS)	0.867	> 0.60	0.918	> 0.7	Reliabel

Source: The results of the analysis using SmartPLS 3.0. (2021)

Structural Model Analysis (*Inner Model*)

The first evaluation of the inner model is done by looking at the Coefficient of Determination (R^2). Chin (2003) explains the criteria for limiting the value of R^2 in three classifications, namely the value of R^2 = 0.67, 0.33, and 0.19 as substantial, moderate, and weak.

Table 5. R Square Table

Item	R Square	R Square Adjusted
Acceptance of IT (INT)	0.744	0.739

Source: The results of the analysis using SmartPLS 3.0. (2021)

The relationship between constructs based on the Adjusted R-square value can be explained that the use variable (Y) is 0.739, this shows that 74% can be accepted while the remaining 26% is influenced by other variables outside of the study.

Table 6. T Test

Item	Original Sample (O)	T Statistics	P Values	Result
PEA -> INT	0.327	2.434	0.015	Significant
PUS -> INT	0.599	5.005	0.000	Significant

The data generated from the test states that the T-Statistic value is 2.434 > 1.96 with a P Value of 0.015 < 0.05 so that the hypothesis is accepted. This shows that the perception of the ease of the JD.ID application has an influence on the use of the JD.ID application. While the data generated from the test which states that the T-Statistic value is 5.005 > 1.96 with a P Value of 0.000 < 0.05 so that the hypothesis is accepted. This shows that the perception of the usefulness of the JD.ID application has an influence on the use of the JD.ID application.

4. Conclusion

The results of the test analysis show that the ease of use of perceptions has a direct positive effect on the intention to use the JD.ID application, while the ease of use has a positive effect on the usefulness of perceptions and the usefulness of perceptions has a direct positive effect on the intention to use the JD.ID application. This shows that the perception of the use of the JD.ID application has an influence on the use of the JD.ID application.

Reference

Adiwihardja, C., Studi, P., & Informatika, M. (2016). *Ecommerce Sebagai Model Inovasi Teknologi Strategi Enterpreneur Menurut Preferensi Pengguna Pada*. *3*(1), 154–163.

Ajzen, I. (2015). *Belief , attitude , intention and behaviour : An introduction to theory and research*. *May 1975*.

Cassidy, T. (2019). *Ecommerce Statistics*. Digital Commerce 360.

Chuttur, M. (2009). *Working Papers on Information Systems Overview of the Technology Acceptance Model : Origins , Developments and Future Directions*. *9*(2009).

Davis, F. D. (2014). *User Acceptance of Computer Technology : A Comparison of Two Theoretical Models User Acceptance of Computer Technology : A Comparison of Two Theoretical Models*. *August 1989*. https://doi.org/10.1287/mnsc.35.8.982

Davis, F. D., & Davis, F. (1989). *Perceived Usefulness , Perceived Ease of Use , and User Acceptance of Information Technology*. *September*. https://doi.org/10.2307/249008

Ghozali, I. and F. (2005). *Structural Equation Modeling: Teori, Konsep, dan Aplikasi*. Badan Penerbit Universitas Diponegoro.

Jogiyanto, H. (2008). *Metodologi penelitian sistem informasi*. Andi Offset.

Kurniawan, T. A. (2019). *Faktor yang Mempengaruhi Tingkat Kepercayaan Penggunaan FinTech pada UMKM Dengan Menggunakan Technology Acceptance Model (TAM)*. *16*(1).

Nyssa, N., & Rahmidani, R. (2019). Pengaruh Perceived Trustworthiness, Perceived Risk Dan Perceived Ease of Use Terhadap Minat Beli Konsumen Pada Toko Online Jd.Id Di Kota Padang. *Jurnal Ecogen*, *2*(3), 249. https://doi.org/10.24036/jmpe.v2i3.7331

Setiawan, A. (2017). *PENERAPAN MODIFIKASI TECHNOLOGY ACCEPTANCE MODEL (TAM) DALAM E-BUSINESS*. *10*(2), 171–186.

Sianadewi, J. H., Widyarini, L. A., & Wibowo, W. (2017). *PENGARUH PERCEIVED SOCIAL PRESENCE , PERCEIVED EASE OF USE , PERCEIVED USEFULNESS , DAN ATTITUDE TOWARDS ONLINE SHOPPING TERHADAP NIAT BELI PADA JAKARTA NOTEBOOK . COM*. *6*(2).

Sukma, E. A., Hadi, M., & Nikmah, F. (2019). Pengaruh Technology Acceptance Model (Tam) Dan Trust Terhadap Intensi Pengguna Instagram. *Jurnal Riset Ekonomi Dan Bisnis*, *12*(2), 112. https://doi.org/10.26623/jreb.v12i2.1659