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MARKETING TRANSFORMATION OF AGROCHEMICAL PRODUCTS IN POTENTIAL EXPLOITATION E-COMMERCE

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This study examines the transformation of agricultural chemical product marketing in exploring e-commerce potential. Rapid technological advancements provide new opportunities in product marketing, including agricultural chemicals. A significant number of farmers still do not use the internet, leading to uncertainty among chemical companies about whether digitalization can sustain their business. The purpose of this study is to determine the influence of Perceived Ease of Use, Perceived Behavioral Control, Perceived Usefulness, Subjective Norms, and Digital Literacy on purchase intention. The research employs a quantitative method with data collection conducted through questionnaires distributed to 100 respondents who work as farmers and have made online purchases of agricultural chemicals. The research data is analyzed using SmartPLS. The results indicate that Perceived Ease of Use and Digital Literacy have a positive influence on purchase intention, while Perceived Behavioral Control, Perceived Usefulness, and Subjective Norms do not have an impact on purchase intention.

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1. Introduction

In the era of the Covid-19 pandemic, every individual is indirectly forced to make a leap towards digitalization by using new media. According to Nazzal, et al. (2022), currently, this technological advancement encourages shopping through the internet and is more integrated into individual lives. According to Firmansyah & Helmy (2023), digitalization in Indonesia has been widely implemented by several companies that are currently running. However, the digitalization that has been carried out cannot be compared to developed countries. The current digital revolution can provide various conveniences in many aspects, one of which is in the economic field. Along with digital developments that have changed a lot of people's behavior, one of them is in the process of purchasing an item.

E-commerce is an internet-based technology, one of which functions to accelerate the business management process in general, where a new trade model includes the purchase, sale, exchange of goods and services using computer devices and the internet (Nurhati, 2021). Based on data from the Indonesian Internet Service Providers Association (APJII) in February 2024, internet users in Indonesia in 2024 will reach 221,563,479 or around 79.8%. This is in line with the growth rate of e-commerce in Indonesia in 2024 of 30.5% (databoks, 2024). This development also applies to the agricultural sector, conventional systems such as barter are starting to disappear and shift to digital systems. The development of community behavior needs to be addressed quickly by business people (Pertanian Indonesia, 2022).

According to the Central Statistics Agency in August 2022, the number of people working in the agricultural sector reached 38 million people, thus occupying the first position in providing the largest jobs (Kusnadar, 2023). This is in line with the agricultural sector which occupies the third largest position in Gross Domestic Product (GDP) in Indonesia. The Ministry of Agriculture in 2020 targets food production to increase from previous years. According to coverage 6, the agricultural sector contributes the largest 11.8% to GDP in Indonesia (Nasution, 2023).

Uraian	Jumlah
(1)	(2)
1. Petani Milenial Umur 19-39 Tahun	6.183.009
- Menggunakan Teknologi Digital	2.603.609
- Tidak Menggunakan Teknologi Digital	3.579.400
2. Petani Umur lebih dari 39 Tahun dan Menggunakan Teknologi Digital	10.595.434
3. Petani Umur kurang dari 19 Tahun dan Menggunakan Teknologi Digital	5.612

Figure 1. Number of Farmers by Age or Not Using Digital Technology Source : Central Statistics Agency (2023)

Based on figure 1.1 above, it explains data from the Central Statistics Agency in 2023, there are 20,240,000 residents aged 15 years and above with a livelihood as farmers. This job is quite a lot because 1 in 10 people in Indonesia work as farmers. And in 2023, the number of farmers has increased to 28,192,693 people. In 2023, the number of farmers aged 39 years and older who use digital technology is 10,595,434 people or as much as 37.58%, millennial farmers aged 19-39 years who use digital technology or not are 6,183,009 people or as much as 21.93%, and finally farmers who are 19 years old and under and use digital technology are 5,612 people or as much as 0.02%.

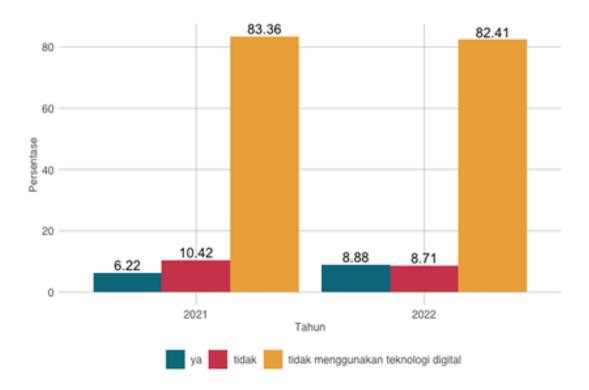


figure 2. Comparative Graph of Farmers' Internet Usage in Indonesia in 2021 and 2022 Source : Sakernas (2022)

Figure 1.2 above shows the data processed by Sakernas (2022) in August 2021 and 2022 in the form of a comparison graph of farmers' internet users in Indonesia has increased. Farmers who use the internet in Indonesia in 2021 were 6.22% of farmers and in 2022 there was an increase, 8.88%. Not only that, farmers who do not use the internet have decreased. In 2021 the number of farmers who do not use the internet is 10.42% and in 2022 the number of farmers who do not use the internet is 8.71%.

Based on data from Sakernas (2022) in figure 1.3 below explains the percentage of internet use by farmers. The farmers who use the internet the most are on the island of Kalimantan

and followed by the island of Java and the last on the island of Sumatra. Despite the increase, there are still many farmers who do not use digital technology. In August 2022, farmers who used the internet the most to communicate with a percentage of 98.28%, followed by the use of the internet to promote products from agricultural products as much as 19.15%, and finally farmers used the internet to sell on e-commerce as much as 1.94%.

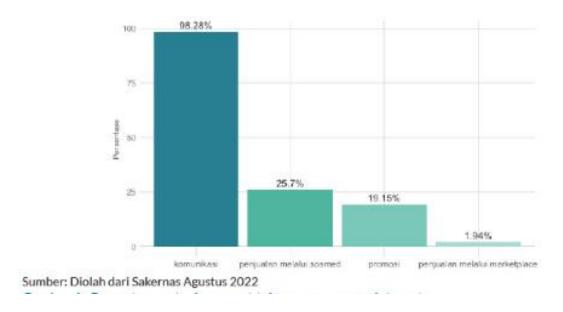


Figure 3. Percentage of farmers' internet usage Source: Sakernas (2022)

In 2017, pesticides held the largest market share and are expected to continue. Global agricultural pesticides increased by almost 5% during the period 2018 to 2022 (Technavio, 2018). And from 2022 to 2023, it is estimated that the global agricultural pesticides market will grow by 3.75%. In Indonesia, pesticide users in 2021 were recorded as many as 283 kilotons. And making Indonesia one of the three countries that use the largest pesticides in the world (The Conversation, 2023). And according to Anugrah, M (2022) 96% of farmers in Indonesia use pesticides in controlling pests. It is considered efficient, easy, and economically profitable.

Food production targets, which have been initially optimized, are often hampered due to several factors. The main factor driving this growth is the increasing use of pesticides among farmers to reduce crop damage due to Plant Pest Organisms (OPT) attacks leading to a decline in agricultural production. Pest attacks tend to increase from year to year. There are many causes of the development of pests and plant diseases, ranging from El Nino, La-Nina, extreme climates and so on. Therefore, farmers often use pest control with pesticides (Soleh, 2020). Not only that, the reduction of arable land in many countries is also one of the factors of the

increasing demand for pesticides. Innovation of new herbicides that are effective and environmentally friendly. In recent years, herbicide segmentation has shown significant growth and is expected to continue to dominate the global market (Technavio, 2022).

Seeing the importance of pesticides for farmers and digitalization, several chemical companies have begun to digitize with the aim of reaching farmers in areas that have not been reached by pesticide stores (Republika, 2022). According to machine vision (2021), chemical companies are currently in the process of digitalization. As many as 30% of chemical companies are in the trial period, and 35% of chemical companies have started to implement it. In this digitalization process, chemical companies have obstacles in implementing it. The biggest obstacle experienced by companies globally is that 40% of resources do not match the needs of these chemical companies to carry out transformation and another 30% of chemical companies are not confident that this digitalization can help their business continuity.

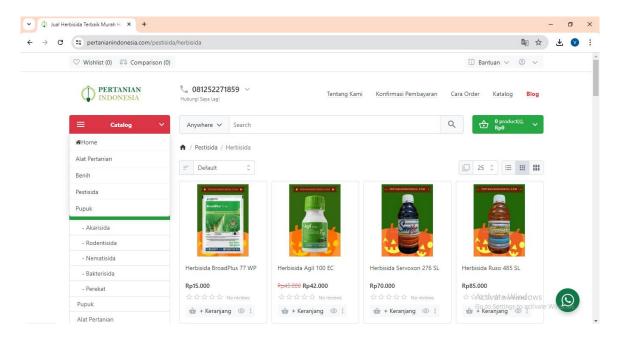


Figure 4. Indonesian Agriculture Website Source: Indonesian Agriculture (2024)

In Figure 1.4 above is one of the websites from Agriculture Indonesia that sells various types of pesticides such as: fungicides, insecticides, herbicides, adhesives, and so on. It also sells seeds, fertilizers, and other agricultural tools. And in each product sold, a complete explanation such as active ingredients, functions, and others is given as shown in figure 1.5



Figure 5. Product Description on the Indonesian Agriculture Website Source : Indonesian Agriculture (2024)

The Indonesian Agriculture website is just one of them, there are still several websites that also sell agricultural products such as: AsianaChemicalindoLestari.com, Syngenta.com, and so on. Although there have been many technological advances and digitalization, the biggest challenge for chemical product manufacturers is fake or illegal pesticides. According to Sanjeev (2022) quoted in the convertation.com as many as 10% - 12% of pesticides circulating in the Indonesian market are illegal or fake. This makes the income of agrochemical companies decrease, so there is a need for action to increase product awareness to farmers.

Based on the explanation above, there are factors that affect purchase intentions. The first factor that influences purchase intent is Perceived Ease of Use. Davis (1989) defines perceived ease of use as individuals who believe that the effort they spend is not too big when using a certain system (Melianda, 2022). According to Ha (2019) Perceived Ease of Use has a positive impact on consumer attitudes in using e-commerce so that the intention to buy appears. seller Online need to design a site that user friendly and use languages that suit various target customers.

The second factor that affects purchase intention is Perceived Behavior Control. According to Noor, et al (2020) Perceived Behaviour Control It happens to individuals, groups, and organizations involved in a service or product and people will always consider when to make a purchase and what impression they have of the product. Behavioral control is perceived in the individual's abilities and efforts that affect the ability to use technology (Patricia, 2020). Based on research conducted by Fuadi, et al. (2022) on halal products shows that behavioral

control has a significant influence on the purchase intention of Muslim consumers. Perceived Behavior Control can directly affect a person's intention in influencing consumer behavior either through the store offline or store Online.

The third factor that affects purchase intention is Perceived Usefulness. Ajzen, 1991 quoted in Restianto., et al, 2024 perceived Usefulness is related to the belief that the use of information technology can generate significant value for users. According to research conducted by Gracia (2020), if Perceived Usefulness has a positive effect on Purchase Intention , if online stores can improve the shopping experience, then consumers evaluate e-commerce positively as well.

The fourth factor that affects purchase intention is Subjective Norms. Subjective norms are based on a person's or individual's perception of what should and should not be done in accordance with the applicable law of the behavior (Garcia, et al., 2020). According to Fuadi, et al. (2022), where subjective norms have a positive and significant influence on a Muslim's interest in buying halal-labeled food.

The fifth factor that affects purchase intention is Digital Literacy. According to Nazzal, et al. (2022) Digital literacy refers to the ability of individuals to discover, evaluate, manage, and adopt new technologies that require cognitive and technical skills to be able to use media to communicate, market, and shop online for goods and services. According to research conducted by Nezamova (2022) in Krasnoyarsk, Russia, there are many positive impacts on every stage of agricultural activities starting from the production of agricultural products to the promotion of agricultural products to consumers.

Based on the background that has been explained previously, the research entitled Marketing Transformation of Agricultural Chemical Products in the Exploitation of E-Commerce Potential is important to be carried out. The primary aim of this research is to delve into the intricate factors that influence purchase intention in the digital age. Specifically, this study seeks to unravel how various perceptions and abilities affect consumers' decisions to make purchases. First and foremost, this research intends to uncover and analyze the positive impact that Perceived Ease of Use has on Purchase Intention. By examining how the simplicity and user-friendliness of a digital platform or service can encourage consumers to engage in purchasing behavior, we aim to highlight the significance of intuitive design and accessibility.

In addition to ease of use, the study aims to explore the influence of Perceived Behavior Control on Purchase Intention. This involves understanding how consumers' perceived control over their purchasing actions and decisions affects their willingness to complete a transaction. By analyzing this factor, we hope to provide insights into how empowering consumers with a sense of control can lead to higher purchase intentions.

Another crucial objective is to examine the role of Perceived Usefulness in shaping Purchase Intention. This research will analyze how the perceived benefits and effectiveness of a product or service influence consumers' decisions to purchase. Understanding this relationship is vital for businesses aiming to emphasize the practical advantages of their offerings.

Furthermore, the study seeks to investigate the impact of Subjective Norms on Purchase Intention. This involves exploring how the influence of peers, family, and societal expectations can affect an individual's purchasing decisions. By analyzing subjective norms, we aim to provide a comprehensive understanding of the social factors that drive consumer behavior.

Lastly, this research will delve into the positive influence of Digital Literacy on Purchase Intention. In an increasingly digital world, understanding how consumers' ability to effectively use digital tools and technologies impacts their purchasing decisions is essential. By examining digital literacy, this study aims to highlight the importance of educating consumers and enhancing their digital skills to boost purchase intentions.

In summary, this research aspires to provide a detailed and nuanced analysis of how Perceived Ease of Use, Perceived Behavior Control, Perceived Usefulness, Subjective Norms, and Digital Literacy collectively and individually influence consumers' Purchase Intention. Through this comprehensive exploration, we aim to offer valuable insights for businesses and marketers seeking to optimize their strategies in the digital marketplace.

2. Method

The objects in this study will be separated into independent variables and bound variables which are described into:

- Independent Variables: Perceived Ease of Use (X1), Perceived Behaviour Control (X2), Perceived Usefulness (X3), Subjective Norms (X4), Digital Literacy (X5)
- Bound Variable: Purchase Intention (Y)

The subject of this study is farmers who have purchased agricultural chemical products in ecommerce. This research was carried out by distributing questionnaires online through Google Forms which were distributed to research subjects via Whatsapp.

Data Collection Techniques

Primary data was obtained directly from respondents using questionnaires as primary data collection instruments. According to Sugiyono (2015, p. 199), a questionnaire is a data collection technique that is carried out by providing a set of written statements or questions to respondents to be answered. Questionnaires can be in the form of closed questions or statements (questions that have been provided) and open statements or questions (questions whose answers are submitted to respondents). The questionnaire in this study is made with closed questions or statements.

Then in this questionnaire using a Likert scale. According to Neuman (p.155), the likert scale usually asks respondents to show agreement or disagreement with the question. According to Sugiyono (2015, p. 135) The likert scale is used to measure the opinions, attitudes, and perceptions of a group or a person regarding social phenomena. By using the Likert scale, the variables to be measured are described into variable indicators, then the indicator becomes the starting point for compiling instrument items in the form of questions or statements that can be scored as follows.

Table 1. Likert Scale

Scale	Score
Strongly disagree	1
D'	2
Disagree	2
Agree	3
Agree	3
Strongly Agree	4
2 2 6 - 7 6 - 6 - 6 - 6 - 6 - 6 - 6	=
Strongly Agree	4

Secondary data in this study were obtained through literature studies. This literature study is obtained through reading books, e-books, research reports, online articles, online journals, and other sources relevant to this research.

3. Result and Discussion

The results of the analysis of the measurement model (outer model) were carried out by processing respondent data collected using SmartPLS 4.0. The outer model test was carried out by conducting convergent validity, discriminant validity, and reliability tests. This test was carried out to determine the relationship between the indicator and its latent variables (Hair et al., 2019)

Convergent Validity

In the convergent validity test, it is carried out by looking at the value of the Outer Loadings and the Average Variance Extracted (AVE) value of each indicator

Table 2. Results of Convergent Validity measurement

Variable	Variable Variable Code Outer Loading >		AVE > 0.50	
Perceived	PBC1	0.554	0.428	
Behavior Control	PBC2	0.674	•	
	PBC3	0.582	•	
	PBC4	0.781	•	
Subjective Norms	SN1	0.900	0.646	
	SN2	0.689		
Perceived	PU1	0.765	0.528	
Usefullnes	PU2	0.634	_	
	PU3	0.789	_	
	PU4	0.632		
	PU5	0.796		
Perceived Ease of	PEU1	0.787	0.548	
Use	PEU2	0.629	_	
	PEU3	0.809		
	PEU4	0.649	_	
	PEU5	0.806		
Digital Literacy	DL1	0.725	0.716	
	DL2	0.638	_	
	DL3	0.766	_	
	DL4	0.630	_	
	DL5	0.654		
Purchase Intention	PI1	0.855	0.632	
	PI2	0.613	_	
	PI3	0.888		

An indicator can be said to have high convergent validity if it has an Outer loading and AVE value of each variable more than 0.5 (Hair et al., 2019). In table 4.5, it can be seen that the Outer Loading value on all indicators has a value above 0.50. However, for AVE in the Perceived Behavior Control variable, the AVE value is below 0.50

Discriminant Validity

In the discriminant validity test, it is carried out by looking at the value of cross loading and the results of the Fornell-Larcker Criterion measurement to measure

Indicators	DL	PBC	PEU	PI	PU	SN
PBC1	0.725	0.340	0.503	0.542	0.480	0.465
PBC2	0.638	0.259	0.563	0.523	0.304	0.299
PBC3	0.766	0.266	0.418	0.471	0.406	0.355
PBC4	0.630	0.495	0.486	0.521	0.376	0.240
SN1	0.654	0.395	0.323	0.369	0.508	0.269
SN2	0.310	0.554	0.268	0.159	0.424	0.265
PU1	0.227	0.674	0.278	0.241	0.393	0.171
PU2	0.442	0.582	0.355	0.224	0.392	0.339
PU3	0.366	0.781	0.258	0.233	0.343	0.182
PU4	0.453	0.263	0.787	0.604	0.404	0.346
PU5	0.524	0.338	0.629	0.478	0.473	0.363
PEU1	0.504	0.294	0.809	0.530	0.472	0.383
PEU2	0.513	0.353	0.649	0.375	0.479	0.240
PEU3	0.574	0.422	0.806	0.494	0.444	0.268
PEU4	0.604	0.290	0.612	0.855	0.387	0.243
PEU5	0.577	0.298	0.378	0.613	0.399	0.391
DL1	0.542	0.212	0.609	0.888	0.403	0.411
Indicators	DL	PBC	PEU	PI	PU	SN
DL2	0.534	0.457	0.462	0.350	0.765	0.446
DL3	0.302	0.359	0.434	0.369	0.634	0.447
DL4	0.457	0.511	0.386	0.311	0.789	0.331
DL5	0.319	0.377	0.425	0.339	0.632	0.311
PI1	0.544	0.428	0.474	0.418	0.796	0.385
PI2	0.457	0.233	0.391	0.422	0.461	0.904
PI3	0.297	0.401	0.309	0.249	0.404	0.689

Table 3. Results of Cross Loading Value Measurement

An indicator in a study can be said to have good discriminant validity if it has a higher cross loading value for its variable compared to other variables and must have a > value of 0.70 (Ghozali & Latan, 2015)

Table 4. Results of Fornell-Larcker Criterion Value Measurement

Variable	DL	PBC	PEU	PI	PU	SN
DL	0.685					
PBC	0.512	0.654				
PEU	0.686	0.442	0.740			
PI	0.723	0.334	0.682	0.795		
PU	0.600	0.586	0.606	0.499	0.727	
SN	0.483	0.358	0.437	0.434	0.534	0.804

Discriminant validity testing is carried out by conducting a Fornell-Larcker Criterion test to determine whether AVE is greater than the quadratic correlation with other constructions (Hair et al., 2017). In the results of the measurement above, it is seen that not all variables have a good level of discriminant validity. The variables Digital literacy and Perceived Behaviour Control had a value below < of 0.70. And other variables such as Purchase Intention, Perceived Ease of Use, Perceived Usefulness, and Subjective Norms have a good level of discriminant validity

Analysis Results Inner Model

After measuring the outer model to show that all the indicators used in this study are valid and reliable, the next step is to test the design of the structural model (Inner Model) to find out the relationship between variables and the hypothesis in the study. In the analysis of the inner model, it can be done by testing the determination coefficient (R2), the effect size test (f2) and the Path Coefficients test

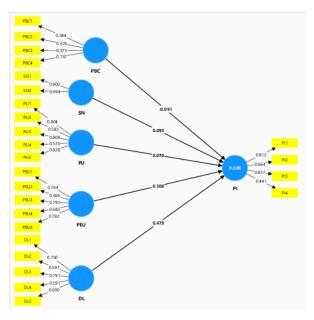


Figure 6. Results of Structural Model Design Analysis

Coefficient of Determination (R2)

Testing the determination coefficient needs to be carried out to find out how strong the influence of exogenous variables is on the endogenous variable (Ghozali & Latan, 2015). In the determination coefficient test, a value of 0.75 is considered to have a strong influence, a value of 0.50 is considered to have a moderate influence and a value of 0.25 is considered to have a weak influence.

Variable	R-square	R-square adjusted
Purchase Intention	0.598	0.577

Table 7. Determination Coefficient Test Results

In the results of the determination coefficient test above, it can be seen that the research model has a strength classification of 0.598 or can be concluded if it has a moderate influence.

Coefficient of Determination (f2)

The Effect Size test was carried out to determine the influence of an exogenous variable on the endogenous variable through the resulting f2 value (Hair et al., 2017). In the effect size test, a value of 0.35 is considered to have a large influence, a value of 0.15 has a moderate influence and a value of 0.02 has a small effect

Table 8. Effect size Test Results

Indicators	DL	РВС	PEU	PI	PU	SN
DL				0.268		
PBC				0.018		
PEU				0.143		
PI						
PU				0.000		
SN				0.009		

In the results of the above test, Digital Literacy have a moderate influence and other variables have little influence.

Path Coefficients Testing

Path Coefficients testing can be done by performing a bootstrap procedure to measure the influence of exogenous variables on endogenes by testing the hypothesis that has been formulated (Hair et al., 2019). In this study, a t-value of 1 will be used. 456 for a critical value with a significance level of 5% and a p-value must be less than 0.05 (Hair et al., 2017)

Table 9. Path Coefficients Test Results

Variable	Relationshi p Direction	T statistics	P values
DL -> PI	Positive	3.782	0.000
PBC -> PI	Negative	1.287	0.198
PEU -> PI	Positive	3.235	0.001
PU -> PI	Negative	0.144	0.886
SN -> PI	Negative	0.830	0.406

Based on the results of the data processing above, the direction of the relationship between Digital Literacy and Perceived Ease of Use has a positive relationship direction. While other variables have a negative relationship direction.

Effect of Perceived Ease of Use on Purchase Intention

Based on data processing through path coefficient testing on the first hypothesis, it produces a positive value. Based on the results of this study, it shows that the first hypothesis accepted with the statement Perceived Ease of Use has a positive and significant influence on Purchase Intention.

As a result of research from Gracia (2020), Perceived Ease of Use has a positive impact on consumer attitudes towards e-commerce so that purchase intentions emerge. According to Ha (2019), online sellers need to design a site that is user friendly and uses language that suits various target customers. Although it was found that there was an influence of the Perceived Ease of Use variable, this variable could prove its influence on Purchase Intention or it could be said that the influence of this variable was strong. Reflecting on Indonesian agricultural sites that use Indonesian in product naming and product descriptions. So that buyers can more easily understand the usefulness and how to use the product. This convenience can have a positive impact on purchase intentions in e-commerce.

Effect of Perceived Behavior Control on Purchase Intention

Based on data processing through path coefficient testing on the first hypothesis, it produces a negative value. Based on the results of this study, it shows that the second hypothesis is rejected with the statement that Perceived Behavior Control has a negative and insignificant influence on Purchase Intention.

Based on research conducted by Fuadi, et al. (2022) on halal products shows that behavioral control has a significant influence on the purchase intention of Muslim consumers. Perceived

Behavior Control can directly affect a person's intention in influencing consumer behavior both through offline stores and online stores. Although it was found that there was an influence of the Perceived Behavior Control variable, this variable could not prove its influence on Purchase Intention or it can be said that the influence of this variable was weak.

The Effect of Perceived Usefulness on Purchase Intention

Based on data processing through path coefficient testing on the first hypothesis, it produces a negative value. Based on the results of this study, it shows that the third hypothesis rejected by the statement of Perceived Usefulness has a negative and insignificant influence on Purchase Intention.

According to research conducted by Gracia (2020), if Perceived Usefulness has a positive effect on Purchase Intention, if online stores can improve the shopping experience, then consumers evaluate e-commerce positively as well. Research conducted by Ventre. I & Kolbe. D (2020) in the Mexican community also said that the main driver of purchase intention is perceived usefulness. This is due to individual interaction on social platforms and the online purchase process. Therefore, it can be suggested to be able to add places to be able to interact with individuals on social platforms. Although it was found that there was an influence of the Perceived Usefulness variable, this variable could not prove its influence on Purchase Intention or it can be said that the influence of this variable is weak.

Effect of Subjective Norms on Purchase Intention

Based on data processing through path coefficient testing on the first hypothesis, it produces a negative value. Based on the results of this study, it shows that the fourth hypothesis rejected by the statement of Subjective Norms has a negative and insignificant influence on Purchase Intention.

According to Gracia (2020), there is social pressure and personal evaluation of buying interest between the two countries that are the object of the study, even though subjective norms have a positive influence on buying interest. Friends, family, and important figures in one's life also influence a person in decision-making. Such as research conducted by Fuadi, et al. (2022), where subjective norms have a positive and significant influence on a Muslim's interest in buying halal-labeled foods. Although it was found that there was an influence of the Subjective Norms variable, this variable could not prove its influence on Purchase Intention or it could be said that the influence of this variable was weak.

The Effect of Digital Literacy on Purchase Intention

Based on data processing through path coefficient testing on the first hypothesis, it produces a positive value. Based on the results of this study, it shows that the fifth hypothesis accepted with the statement Digital Literacy has a positive and significant influence on Purchase Intention.

According to research conducted by Nazzal (2022) on residents in Palestine, it is important to increase the level of digital literacy for Palestinians by providing free training to increase digital literacy and make it easier for Palestinians to be able to use and transact using digital technology such as e-commerce. From a managerial point of view, when individuals have a high level of digital literacy, they will be more encouraged and have a higher intention to shop online. Although it was found that there was an influence of the Digital Literacy variable, this variable could prove its influence on Purchase Intention or it can be said that the influence of this variable is strong. According to research conducted by Nezamova (2022) in Krasnoyarsk, Russia, there are many positive impacts on every stage of agricultural activities starting from the production of agricultural products to the promotion of agricultural products to consumers. Therefore, digitalization is needed so that problems can be overcome effectively by using digital technology.

The Indonesian Ministry of Agriculture considers that the understanding of digital technology in the agricultural sector needs to be well addressed not only to farmers but also to business actors. Therefore, the Indonesian Ministry of Agriculture held the Tani on Stage (ToS) program, which is a form of collaboration and commitment in building agriculture by utilizing digital technology. Director General of Plantations, Andi Nur said that if the agricultural sector continues to develop, there is a need for innovation and the use of digitalization (Ministry of Agriculture, Directorate General of Plantations, 2023)

4. Conclusion

The study explored the impact of five key variables—Perceived Ease of Use, Perceived Behavior Control, Perceived Usefulness, Subjective Norms, and Digital Literacy—on Purchase Intention. A survey was conducted using a questionnaire distributed to 100 respondents who had made online purchases of agricultural chemicals. Out of the five hypotheses tested in this research, two were accepted with significant positive results, while three were rejected due to insignificant results.

Firstly, the findings indicated that Perceived Ease of Use has a significant influence on Purchase Intention. This underscores the importance of a user-friendly interface and straightforward processes in encouraging online purchases. Users are more likely to make a purchase if they find the system easy to navigate and use.

However, Perceived Behavior Control did not show a positive influence on Purchase Intention. This suggests that merely having a sense of control over the purchasing process does not necessarily translate into a higher likelihood of purchase among the respondents.

Similarly, Perceived Usefulness did not positively influence Purchase Intention. Despite the anticipated practical benefits of the products, these perceived advantages were not sufficient to significantly impact the purchasing decisions of the respondents. Subjective Norms also did not have a positive influence on Purchase Intention. The influence of peers, family, and societal expectations was not a determining factor in the respondents' decisions to purchase agricultural chemicals online.

On the other hand, Digital Literacy demonstrated a positive and significant influence on Purchase Intention. This highlights the crucial role of digital skills and familiarity with online platforms in facilitating online purchases. Respondents who were more adept at using digital tools were more inclined to make purchases online. Based on the research findings, several recommendations can be made for future research and practical applications. These suggestions are divided into academic and managerial advice.

Increasing the sample size would enhance the confidence level and accuracy of the research findings. Refining the sample scope to focus on a more specific region or a particular category of farmers would yield more targeted insights. Incorporating more representative indicators would achieve more accurate measurement results. Reevaluating variables, such as replacing Perceived Behavior Control with other relevant factors, would provide a more comprehensive explanation of the factors influencing Purchase Intention.

Companies in the agricultural chemical industry should consider adding new online marketing channels. This would allow farmers to purchase chemicals through e-commerce platforms, thus meeting their needs more conveniently. Encouraging farmers to make purchases through e-commerce can simplify their shopping process. This eliminates the need for direct contact with chemical companies for small purchases, making the process more efficient.

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