The Influence of Knowledge Management and Product Innovation on Sales in E-Commerce With Price as A Moderator

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Article Info	Abstract
	The aim of this research is to find out whether knowledge management and product innovation have an impact on e-commerce sales which is moderated by price. As a result of this research, we can gain a better understanding of how individuals with managerial skills can manage all e-commerce activities. We can also learn how they can innovate products by considering customer needs and wants, as well as how much they are willing to pay for the products they sell. The sample used in this research consisted of 100 respondents who came from various educational and community backgrounds. This research is quantitative research using the structural equation model analysis method. The aim of this research is to use high-quality data to show that knowledge management has a positive impact on e-commerce sales and product innovation.

Abstrak

Tujuan Penelitian ini bertujuan untuk mengetahui apakah manajemen pengetahuan dan inovasi produk berdampak pada penjualan e-commerce yang dimoderasi oleh harga. Sebagai hasil dari penelitian ini, kita dapat memperoleh pemahaman yang lebih baik tentang bagaimana individu dengan keterampilan manajerial dapat mengelola semua aktivitas e-commerce. Kita juga bisa belajar bagaimana mereka bisa melakukan inovasi produk dengan mempertimbangkan kebutuhan dan keinginan pelanggan, serta seberapa besar mereka bersedia membayar untuk produk yang mereka jual. Sampel yang digunakan dalam penelitian ini terdiri dari 100 responden yang berasal dari berbagai latar belakang pendidikan dan masyarakat. Penelitian ini merupakan penelitian kuantitatif dengan menggunakan metode analisis model persamaan struktural. Tujuan dari penelitian ini adalah menggunakan data berkualitas tinggi untuk menunjukkan bahwa manajemen pengetahuan memiliki dampak positif terhadap penjualan e-commerce dan inovasi produk

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INTRODUCTION

Technological advances are very rapid, all lives have changed drastically with technology. Technological advances also make the market competition very fierce, sellers or even large companies have to work hard to gain market share and attract buyers. In this era, if a person who owns a company makes products to sell but they do not take advantage of the technology that is increasingly advanced today, then their company will be defeated by companies that have taken advantage of technological advancements. It can be seen from the online news circulating about the statement (APJII) of the Indonesian Internet Service Providers Association, they announced that there will be 221 million internet users in Indonesia in 2024. This can be an encouragement for all of us to make the best use of technology. At 221 million internet users, they are workers, entrepreneurs, and even buyers who are commonly referred to as consumers. Consumers at this time no longer need to bother themselves just to buy daily necessities or even buy something they want. With technological advances that facilitate the use of the internet, it has led to a progress in digitalization. From digitalization, a system was created that could make it easier for all people to sell and buy. This system is called e-commerce, A marketing platform that facilitates buying and selling activities between consumers and manufacturers. Published in the Journal Nurdiansyah et al. (2022) said that e-commerce is defined as the purchase, sale, and trade of goods and services using electronic devices such as televisions, telephones, and other computer networks. Traditional marketing is considered outdated due to the existence of the internet which facilitates all daily activities, including buying and selling, and turns a market into an electronic market (Rahmawati, 2021). E-commerce Electronic commerce or e-commerce is a dissemination, purchase, marketing of goods and services through the internet or computer network (Hermiati et al., 2021).

In the explanation above, the researcher can conclude that with the rapid development of technology, it can affect all community activities around the world. Traditional marketing is very outdated due to technological advances and the internet can turn the market into a e-commerce thus facilitating buying and selling transactions between consumers and producers. E-commerce itself has the meaning of electronic commerce through a computer network or the internet. All components contained in the e-commerce Almost the same as the traditional market, namely there is customer service, product services, payment methods and promotional methods. Therefore, the development of the internet is one of the factors for the advancement of the online market or e-commerce (Hermiati et al., 2021). Previous research said that an influencer has a positive influence on buyer decisions so that it can increase sales in e-commerce (Rahmawati, 2021). The implementation of customer knowladge management (CKM) can have a positive effect on improving service quality and establishing relationships with customers to be better which will cause sales and marketing in Gendis Boutique to increase through e-commerce (Chasanah, 2021). In research Subianto & Basuki (2024) said that influencers and innovation have a significant positive effect on purchasing decisions in e-commerce.

Based on the research gap above, new variables were formed, namely Knowladge Management, Product Innovation, Product Sales in E-commerce, and Price as moderation. There has been no research that places price as a moderating variable between the variables of Knowladge Management and Product Innovation to Product Sales in E-commerce. So in this study, the author tries to form a research model that places Price as a moderating variable that will be tested for its position as a moderating variable to moderate or not the influence of Knowladge Management and Product Innovation variables on Product Sales in E-commerce. This study aims to prove whether there is an influence of Knowladge Management and Product Innovation on Product Sales in E-commerce which is moderated by Price. This research can provide a deeper understanding of how a person has management knowledge and knowledge about product innovation to determine prices in order to increase sales in e-commerce.

LITERATURE REVIEW

Theori Perfomance Marketing

This research concerns the elements of the Perfomance Marketing theory, the Perfomance Marketing theory is measured from various metrics ranging from sales, customer retention, customer satisfaction level, and customer lifetime value. Thus, the entire digital marketing ecosystem, including e-commerce, performance marketing, and marketing, is closely related and influencing each other. According to this grand theory, the implementation of effective digital marketing and e-commerce strategies will increase overall productivity, create a positive impact, and strengthen relationships with customers (Praditya, 2024). The theory of Marketing Performance is related to this research which relates to Sales in E-commerce, sales through e-commerce require advertisers through social media. The use of the internet is also very important for marketing in e-commerce. Perfomance Marketing combines the principles of brand marketing and paid advertising. This strategy can be carried out on various platforms, such

as search engines and social media.

Knowledge Management

Knowledge Management is one of the key components of business success. The factors used to evaluate knowledge management are experience, consideration, value, and credibility. Knowledge management is a process that can help businesses to be able to recruit, identify, mutate, and evaluate employees as well as transfer information and skills that are fundamental in business operations. The goal is to equip everyone with knowledge of management systems. (Primawanti & Ali, 2022).

Product Innovation

Product Innovation is a type of innovation used in all aspects of a company's operations, where a new product is developed and based on it. Product innovation is a strategy that can help businesses grow. Because a product is very vulnerable to changes that follow the wants and needs of consumers, technological changes, and increased domestic and foreign competition(Wahono & Masykuroh, 2022).

Sales in E-commerce

Salesmanship, also called the "science of selling", is the ability of a person to sell any product, whether in the form of a product or a service. Salesmanship is the link between abilities, skills, experience, business, and art (Anam et al., 2021). E-commerce is a term used to describe the sale of goods and services over the internet. E-commerce companies today offer online stores where customers can access thousands of products, place orders, choose their preferred shipping method, and pay using ATMs, mobile banking, or credit cards (Nurhalijah et al., 2024).

Pricing

Price is the value of a good or service that is determined by a certain amount of money with the availability of a buyer in exchange for a certain number of goods or services that they want (Zuwardi et al., 2023). According to the marketing concept, price is the value of a product that may have an impact on the profitability of the manufacturer. Price also serves as a motivator for consumers to make purchases, so it is necessary for manufacturers to specify the specific price of the product or service in question. (Sumarsid & Paryanti, 2022).

METHOD

The research method used is a quantitative method with structural equation modelling (SEM). Models SEM is relevant because the variable being studied has variable measurement indicators and has moderating effect (Hair & Alamer, 2022). The research model is composed of three variables. The first independent variable is knowledge management. One way for someone to use e-commerce as a business tool is to have knowledge of management, which is also known as knowledge management. Knowledge management is a set of activities used by businesses or organizations to identify, develop, clarify, and disseminate knowledge that may be used again and understood inside the organization (Pinasti & Nurdin, 2022). The variables of knowledge management are measured by four main indicators, consisting of knowledge use, knowledge sharing, knowledge reflection, identification of Davidson and Vos' knowledge in the journal (Pinasti & Nurdin, 2022). Second, the independent variable, namely Product Innovation, basically someone who wants to build a company or even a business or business that is contained in e-commerce, they must understand how product innovation develops, to adjust the needs and desires of customers to the products made. Andi and Deasy in the journal Juli et al (2021) Stating that product innovation is an innovation that is used in all aspects of business operations when a new product is developed and implemented, including innovations that are applied through functional or operational processes. The three main indicators of product innovation are design change, technical innovation, and product development. (Juli et al., 2021). Third, the dependent variable, namely, sales in e-commerce, an entrepreneur should understand how to transact through e-commerce. With very rapid technological advancements, entrepreneurs must also evolve to keep up with technological advancements. If an entrepreneur is behind the times or does not keep up with technological advancements, then their company will lose competition with other companies. Alfayed et al (2023) According to the journal, e-commerce is defined as a website that offers or conducts online transactions by utilizing internet resources through websites that offer "get and delivery" services. E-commerce has the potential to increase marketing efforts and also reduce business operational costs. In a journal, the three main indicators of e-commerce sales are communication, e-commerce business processes, and Yadewani services (Rif'an et al., 2022). Fourth, the moderating variable is price, a product must have a price as the value of the product, price can provide information

to consumers about a good or service. An owner of a product or service must be able to determine the price well, by adjusting the quality and value of the product. Wijaya et al (2023) states that price is the value of goods and suits expressed with a certain amount of money. These goods and services have a price if the goods and services have value and use. In addition, these valuable and useful services and goods are deprived of their existence (rare). The price of the item will go up because it is more useful and durable. Three main indicators are used to determine price variables: price elasticity, price in relation to product quality, capacity price, or price per day (Aprileny et al., 2021).

The analysis carried out consists of several steps. First, a description of the demographic data of the respondents, so that the picture of the research respondents can be seen. In addition, it provides descriptive statistical information regarding respondents' answers to the research team. Descriptive statistics provide research findings based on mean, minimum, maximum, and deviation standards. Descriptive statistics are useful for describing the degree of field implications of each variable being studied (Hair Jr et al., 2021). Third, the validity test to test whether the research questionnaire used, is valid or does not represent the variables being studied. Validity is measured by the score of the loading factor. If the score > 0.5, then the questionnaire is valid and if the score > 0.7, then the model is considered fit (Tambun & Sitorus, 2024). Fourth, a reliability test to test the reliability of the research data, as well as test the consistency of respondents' answers. The data is said to be reliable and reliable if the scores from rho, cronbach alpha, and composite reliability are > 0.7 respectively (Sitorus & Tambun, 2023). Fifth, test the hypothesis and provide a conclusion whether the hypothesis is accepted or the hypothesis is rejected. The hypothesis of this study uses one tailed, so the hypothesis will be accepted if the statistical t-value > 1.65 and the p-value < 0.05 (Tambun et al., 2022). Sixth, presenting the resulting regression equations and their interpretation. Interpretation will be elaborated regarding the value of the influence coefficient and the implications of the strategy. Seventh, explain the value of the determination coefficient resulting from the research model.

RESULTS AND DISCUSSION

This study used a sample of 100 respondents from various groups, with 61 (61%) female respondents and 39 (39%) male respondents. The age of the respondents in this study was divided into 4 groups, namely < 20 years old as much as 26 (26%), 20 – 25 years old as 72 (72%), 26 – 30 years old as many as 2 (2%), and > 30 years old as many as 0 (0%). The level of respondents was also divided into 5 groups, namely high school as many as 23 (23%), students as many as 68 (68%), Diploma 3 as many as 1 (1%), Strata 1 as many as 8 (8%), and Strata 2 as many as 0 (0%). Testing the quality of the data in this study uses analysis *Partial Least Square* (PLS), which is a component-based structural equation model. The software used is SmartPLS.

SmartPLS Descriptive Statistical Test

The term "descriptive statistics," also known as "deductive statistics," refers to a set of methods that describe how to collect data, process or transform data, manipulate data, analyze data, and more (Zicof et al., 2023). The techniques used in this study are minimum, maximum, mean, and standard deviation of each of the following variables, knowledge management, product innovation, e-commerce, and price.

Table 1. Descriptive Statistical Test

Variabel	N	Minimum	Maximum	Mean	Standard Deviation	Presentase
Knowledge Management	100	1	5	4,36	0,579	87,2%
Product Innovation	100	1	5	4,34	0,614	86,8%
Pricing	100	1	5	4,45	0,512	89%
Sales in E-Commerce	100	1	5	4,42	0,55	88,4%

Based on the results of the descriptive statistical test, it can be concluded as follows:

The results of the descriptive statistical analysis of the knowledge management variable described that the minimum value of 1 while the maximum value of 5 had an average of 4.36 and a standard deviation of 0.579 or equivalent to 87.3%. The results of the descriptive statistical analysis of the product innovation variable described that the minimum value of 1 while the maximum value of 5 had an average of 4.34 and a standard deviation of

0.614 or equivalent to 86.8%. The results of the descriptive statistical analysis of the price variables are described as the minimum value of 1 while the maximum is 5, has an average of 4.45 and a standard deviation of 0.512 or equivalent to 89%. The results of the descriptive statistical analysis of sales variables in e-commerce were described as the minimum value of 1 while the maximum was 5, having an average of 4.42 and a standard deviation of 0.55 or equivalent to 88.4%.

Figure 1. Loading Factor Results
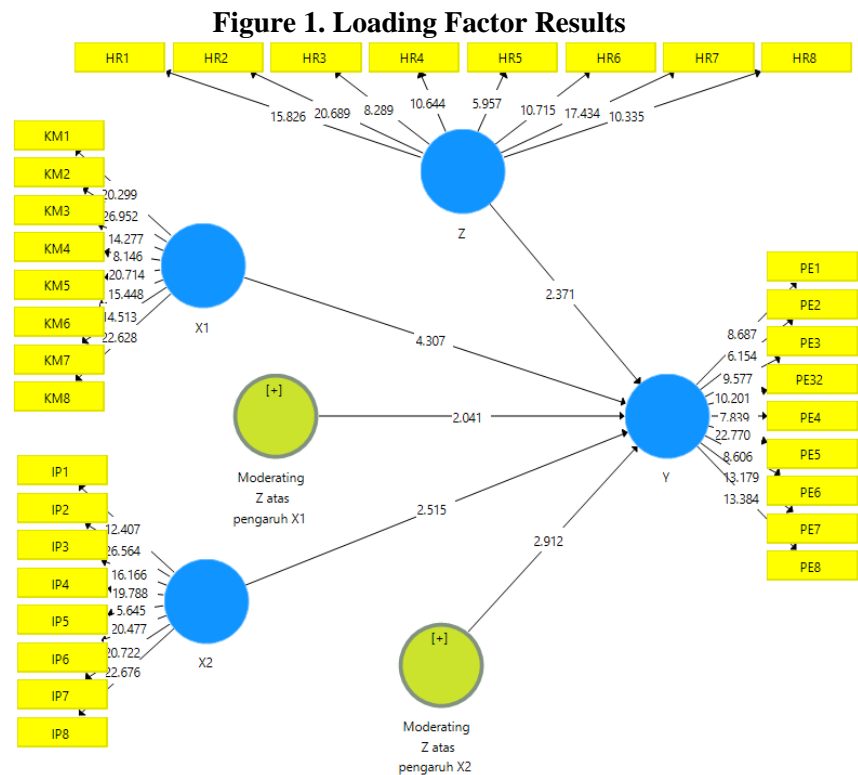
Based on the image of the loading factor results above, it shows that all numbers are above 0.5, this proves that all indicators are valid. Thus, it can be concluded that all variable indicators in this study are valid.

Validity and Reliability Test

Validity Test is a test that functions to see whether a measuring instrument is valid (valid) or invalid (Janna & Herianto, 2021). Meanwhile, the reliability test is a test to confirm the extent to which the instrument provides stable and consistent results (Amalia & Dianingati, 2022). A study will be considered reliable if a person's answers to the given questions are consistent or stable all the time. Validity and Reliability tests can be carried out by various methods such as:

- *Cronch's Alpha* : used to look at the consistency of a questionnaire used in a study. The value or number received is if it is > 0.7.
- Composite Reliability: used to measure the consistency of a questionnaire used in a research. Acceptable value or number if it is > 0.7
- *Avarage Variance Extraceted* (AVE): used to describe the constraints of a research. Acceptable value or number if it is > 0.5

Table 2. Validity and Reliability Test

Variabel	Cronbanch's Alpha	Rho_A	Composite Realibility	Average Extracted (EVE)
X1	0,909	0,913	0,926	0,612
X2	0,906	0,913	0,925	0,607
And	0,885	0,890	0,908	0,523

Z	0,864	0,873	0,894	0,515
Z*X1	1,000	1,000	1,000	1,000
Z*X2	1,000	1,000	1,000	1,000

Description : Knowledge Management, Product Innovation, Sales in E-Commerce, Pricing

The results of the above validity and reliability test show the value of *Average Variance Extracated* (EVE), *Composite Realibility*, and *Cronbach's Alpha* In the table above, it can be concluded that. The results of the EVE value show that the variables Knowledge Management, Product Innovation, Price, Sales in E-Commerce obtained a value of > 0.5, thus indicating that the variable is valid and adequate or it can also be said that the variable has a *discriminat validity* good. Value *Composite Reability* and *Croncbach's Alpa* obtained > 0.7 so that the accuracy of this test can be trusted and accepted. This is in line with the research conducted, where all existing variables, namely Knowledge Management, Product Innovation, Price, and Sales in E-Commerce, obtained a number of >0.7 so that it can be concluded that all variables have a high level of realism.

R-Square is used to measure how well linear regression models explain data variations. The R-Square value is between 0 and 1, where the higher the R-Square value, the better. Based on the existing data, it can be seen that the R-Square value for the Sales in E-Commerce variable is 0.867, this acquisition explains that the large percentage of Price is influenced by Knowledge Management, Product Innovation, and Sales in E-commerce by 86.7% and judging from R-Adjust of 0.860 or 86% this value or figure is classified as good because the R-Adjust value obtained is above 50%.

The value contained in the F-Square also has an influence between the variable and the effect size, the F-Square value is 0.02 (small), 0.15 (medium), and the value of 0.35 (large) if the value compared is less than 0.02, it can be ignored or not accepted. Based on the existing F-Square value, it can be said that the variable that has a big effect with the criterion of > 0.35 lies in the Price variable which has a value of 0.126 > 0.35.

Based on data in *moderating effect* can obtain two hypotheses, namely: (1) Price Moderation on the influence of Knowledge Management on Sales in E-commerce has a significant influence. (2) Price Moderation on the influence of Product Innovation on Sales in E-Commerce has a significant influence.

HYPOTHESIS TEST

The purpose of the inner model analysis is to ensure that the structural model is reliable and robust. Deep model analysis can be considered significant if the T-statistic is greater than 1.65, and another method is to look at a P value that is less than 0.05. The following are the results of the research that were evaluated using PLS so that significant and insignificant data can be seen.

Table 3. Hypothesis Test

Hypothesis		Coefficient Value	T Statistich	P Values	Verdict
H1	Knowledge Management > Sales in E-Commerce	0.424	4.307	0.000	Accepted
H2	Product Innovation > Sales in E-Commerce	0.246	2.515	0.012	Accepted
H3	Pricing > Sales in E-Commerce	0.234	2.371	0.018	Accepted
H4	Pricing > Knowledge Management > Sales in E-Commerce	0.141	2.041	0.042	Accepted
H5	Price > Product Innovation > Sales in E-Commerce	-0.237	2.912	0.004	Accepted

Source : SmartPLS data processing, 2025

DISCUSSION

Based on the information above, it can be concluded that the hypothesis formed is one of the five hypotheses considered in this study; All rejected or unrejected hypotheses are included.

Proof of the First Hypothesis of the Influence of Knowledge Management on Sales in E-Commerce

The first hypothesis test on the results listed in the table above shows that the Statistical T value of the relationship between Knowledge Management and Sales in E-Commerce is 4,307 > 1.65 and P Value 0.000 > 0.05. This indicates that the first hypothesis is accepted or has a significant effect on the first hypothesis. The results of this proof show that knowledge management has an effect on sales in e-commerce. If a person has in-depth knowledge related to management, then it is likely that an individual can sell the products they have in e-commerce. Individuals who have the intention to do business they will be more in-depth in management and other business sciences, so they are trained to build their own business and in the end with technological advances they will also learn how to do business through the internet network by marketing products or services into e-commerce.

Proof of the Second Hypothesis of the Influence of Product Innovation on Sales in E-Commerce

The second hypothesis test on the results listed in the table above shows that the Statistical T value of the relationship between Product Innovation to Sellers in E-Commerce is 2,515 > 1.65 and P Value is 0.012 < 0.05. This indicates that the second hypothesis is accepted or has a significant effect on the second hypothesis. The results of this proof show that Product Innovation has an effect on Sales in E-Commerce. A person who owns a business or produces a product, they must have innovation about the product. This is very influential if selling products in e-commerce. The innovation of a product must follow the needs and desires of customers about the product, then the product that is marketed will have many enthusiasts.

Proof of the Third Hypothesis of the Influence of Price on Sales in E-Commerce

The second hypothesis test on the results listed in the table above shows that the Statistical T value of the relationship between Price to Sales in E-Commerce is 2,371 > 1.65 and P Value 0.018 > 0.05. This indicates that the third hypothesis is accepted or has a significant effect on the third hypothesis. The results of this proof show that Price has an effect on Sales in E-Commerce. Each product must have a price to be used as a product exchange rate or as a value of the quality of the product given. In sales in e-commerce, consumers prefer to see the price that is marketed first. Therefore, price has a great influence on sales in e-commerce so that it can reach more consumers.

Proof of the Fourth Hypothesis of Price Moderation on Knowledge Management on Sales in E-Commerce

The fourth hypothesis test on the test results listed in the table above shows that the Statistical T value of the relationship between Price on the influence of Knowledge Management on Sales in E-Commerce is 2.41 > 1.65 and P Value 0.042 < 0.05. This indicates that the fourth hypothesis is accepted or has a significant effect on the fourth hypothesis. The results of this proof show that Price can strengthen the significant influence of Knowledge Management on Sales in E-Commerce. If a person already has management knowledge, then an individual will understand how price can have a big effect on sales in e-commerce.

Testing the Fifth Hypothesis of Price Moderation of Product Innovation Against Sales in E-Commerce

The fifth hypothesis test in the test results listed in the table above shows that the T Statistic value of the relationship between Price on the influence of Product Innovation on Sales in E-Commerce is 2,912 > 1.65 and P Value 0.004 < 0.05. This indicates that the fifth hypothesis is accepted or has a significant effect on the fifth hypothesis. The results of this proof show that Price can strengthen the significant influence of Product Innovation on Sales in E-Commerce. Consumers will be more interested if they see the innovation of a product that is marketed according to their needs and desires. And also in addition to product innovation which is a high support for sales value in e-commerce, namely through harg. Lower prices coupled with corresponding product innovations will have many enthusiasts and buyers through e-commerce.

CONCLUSIONS AND SUGGESTION

Based on the results of data analysis through the proof of the five hypotheses proposed in this study, the conclusion of this study is, Knowledge Management has an influence on Sales in E-Commerce, which means that a person who has management knowledge will find it easier to market their products into e-commerce. Product Innovation has an influence on Sales in E-Commerce, by selling their products in e-commerce, they must make products according to the wants and needs of customers. Price has an influence on sales in E-Commerce, in addition

to product innovation, the price must also be adjusted to consumers who want products at a suitable price in e-commerce. Price can have the effect of moderating Knowledge Management to Sales in E-Commerce, meaning that someone who understands sales management will better understand how to determine a price for products marketed in e-commerce in order to bring in many enthusiasts and buyers. Pricing can also moderate Product Innovation to Sales in E-Commerce.

The limitations of this study occur in filling out questionnaires, it is very difficult to find a person who can help fill out the researcher's questionnaire so that this research is slow and less than optimal. And during the data collection process, the information provided by the respondents in the questionnaire may be some that do not reflect their true opinions. This is because different respondents may have different beliefs, assumptions, and understandings than the statements in the questionnaire.

Based on the research that has been carried out, there are several suggestions that can be made. First, it is recommended to conduct further research, by looking at the results of the current research, advanced research on the influence of Knowledge Management and Product Innovation on Sales in E-Commerce with Price as a moderator. Second, the author suggests educational institutes to build a curriculum that can provide management knowledge in sales in e-commerce. Third, it is recommended to entrepreneurs who have successfully established their companies both offline and online to provide teaching in the form of opening classes to beginners who want to build a business to be successful as well.

REFERENCES

Alfayed, E., Ramadeli, L., Agnestasia, R., Amalina, V., Swid, Z. H. O., & Riofita, H. (2023). Analyze e-commerce marketing and sales strategies on TikTok Shop. Journal of Management and Business Economics (JEMB), 1(2), 195–201. https://doi.org/https://doi.org/10.62017/jemb.v1i2.595

Amalia, R. N., & Dianingati, R. S. (2022). The effect of the number of respondents on the validity and reliability test results of self-medication knowledge and behavior questionnaires. Generics: Journal of Research in Pharmacy, 2(1), 9–15.https://doi.org/https://doi.org/10.14710/genres.v2i1.12271

Anam, C., Survival, S., & Iswari, H. R. (2021). Entrepreneurs' Abilities from the Perspective of Entrepreneurial Orientation and Sales Concepts in the New Normal Era. Journal of Management Science, 10(2), 93–100. https://doi.org/https://doi.org/10.32502/jimn.v10i2.2889

Aprileny, I., Imalia, I., & Emarawati, J. A. (2021). The Influence of Price, Facilities and Location on Purchase Decisions (Case study of buying a house in GRAND NUSA INDAH block j, cileungsi at PT. KENTANIX SUPRA INTERNATIONAL). IKRAITH-ECONOMICS, 4(3), 243–252.

Chasanah, N. (2021). Application of Customer Knowledge Management in e-commerce of Gendis Fashion Muslim Boutique. Indonesian Journal of Education and Technology, 1(3), 131–140. https://doi.org/https://doi.org/10.52436/1.jpti.30

Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. Research Methods in Applied Linguistics, 1(3), 100027. https://doi.org/https://doi.org/10.1016/j.rmal.2022.100027

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook. Springer Nature. https://library.oapen.org/handle/20.500.12657/51463

Hermiati, R., Asnawati, A., & Kanedi, I. (2021). Creating e-commerce on the king of computers using the php programming language and Mysql database. Journal of Infotama Media, 17(1). https://doi.org/https://doi.org/10.37676/jmi.v17i1.1317

Janna, N. M., & Herianto, H. (2021). The concept of validity and reliability test using SPSS. https://doi.org/https://doi.org/10.31219/osf.io/v9j52

Juli, P. R., Suardhika, I. N., & Hendrawan, G. Y. (2021). The Influence of Product Quality, Product Innovation and Digital Marketing on Purchase Decisions at Angelo Store Ubud Bali. VALUES, 2(2).

Nurdiansyah, A., Pratiwi, A. S., & Kaunaini, N. (2022). Literature Review The Influence of Trust, Convenience and Satisfaction on E-Commerce. Journal of Multidisciplinary Sciences, 1(1), 297–303. https://doi.org/https://doi.org/10.38035/jim.v1i1

Nurhalijah, I. S., Suarna, I. F., & Marhamah, M. (2024). The Role of Entrepreneurship in Encouraging the Growth of MSMEs Through E-Commerce in Bojong Kalapa Village. Journal of Management and Business Economics (JEMB), 1(3), 177–184. https://doi.org/https://doi.org/10.62017/jemb.v1i3.818

Pinasti, P., & Nurdin, H. (2022). The Influence of Knowledge Management on Employee Performance at PT. Telekomunikasi Indonesia (Persero) Tbk Bima. MOTIVATION, 7(2), 122–129.

https://doi.org/https://doi.org/10.32502/mti.v7i2.4750

Praditya, R. A. (2024). Linking The Role of Digital Marketing and E-Commerce on Performance Marketing. UJoST-Universal Journal of Science and Technology, 3(2), 7–12. https://doi.org/https://doi.org/10.11111/ujost.v3i2.149

Primawanti, E. P., & Ali, H. (2022). The Influence of Information Technology, Web-Based Information Systems and Knowledge Management on Employee Performance (Literature Review Executive Support System (ESS) for Business). Journal of Information Systems Management Economics, 3(3), 267–285. https://doi.org/https://doi.org/10.31933/jemsi.v3i3.818

Rahmawati, S. D. (2021). The influence of an influencer's social media in increasing sales through e-commerce. NCOINS: National Conference Of Islamic Natural Science, 1(1), 281–294. http://proceeding.iainkudus.ac.id/index.php/NCOINS/index

Rif'an, M., Sylviana, F., & Ronaldo, D. (2022). Design and Build E-Learning Productive Multimedia and Marketing Lessons at Smk Karsa Mulya, Palangka Raya City. Journal of Information Technology and Computer Science, 2(1), 11–18. https://doi.org/https://doi.org/10.47111/jointecoms.v2i1.8830

Sitorus, R. R., & Tambun, S. (2023). Smart PLS Application Training for Accounting Research for the Indonesian Institute of Accountants (IAI) North Sumatra Region. Journal of UNDIKMA Service, 4(1), 18–26. https://doi.org/https://doi.org/10.33394/jpu.v3i2.5519

Subianto, D., & Basuki, K. (2024). The Influence of Influencers and Product Innovation on Kahf's Purchase Decision with E-Commerce as Moderating. Economics: Journal of Economics and Business, 8(1), 826–831. https://doi.org/http://dx.doi.org/10.33087/ekonomis.v8i1.1322

Sumarsid, S., & Paryanti, A. B. (2022). The Effect of Service Quality and Price on Customer Satisfaction in Grabfood (Setiabudi District Regional Study). M-Progress Scientific Journal, 12(1). https://doi.org/https://doi.org/10.35968/m-pu.v12i1.867

Tambun, S., Heryanto, H., Mulyadi, M., Sitorus, R. R., & Putra, R. R. (2022). SmartPLS data processing application training to improve research skills for Batam Theologia High School lecturers. Journal of Undikma Service, 3(2), 233–240. https://doi.org/https://doi.org/10.33394/jpu.v3i2.5519

Tambun, S., & Sitorus, R. R. (2024). Accounting Research Training with Smart PLS for Accounting Doctoral Students at Trisakti University. Joong-Ki: Journal of Community Service, 3(2), 303–310. https://doi.org/https://doi.org/10.56799/joongki.v3i2.2918

Wahono, R. M., & Masykuroh, E. (2022). The Influence of Product Innovation and Service Quality on Competitiveness with Brand Image as an Intervening Variable at Bank Syariah Indonesia Nganjuk Yos Sudarso Branch Office. Falahiya: Journal of Islamic Banking and Finance, 1(2), 156–172. https://doi.org/https://doi.org/10.21154/falahiya.v1i2.952

Wijaya, W. R. B., Widayati, C. C., & Perkasa, D. H. (2023). The Influence of Price, Product Quality and Service Quality on Consumer Satisfaction (Case Study on ABC Restaurant in Pantai Indah Kapuk). Journal of Entrepreneurship and Multi-Talent, 1(3), 82–91. https://doi.org/https://doi.org/10.38035/jkmt.v1i3.70

Zicof, E., Hidayanti, R., Darwel, D., Erika, E., & Idriani, E. (2023). Health Trust Model on Covid-19 Transmission Prevention Behavior in Padang City. Journal of Independent Health, 18(1), 168–180. https://doi.org/https://doi.org/10.33761/jsm.v18i1.983

Zuwardi, Z., Syahrin, A., Rayana, M. I., Mainaki, H., & Bilal, M. (2023). Analysis of the theory of demand, supply, and price according to the view of Ibn Khaldun. Innovative: Journal Of Social Science Research, 3(2), 13204–13215. https://j-innovative.org/index.php/Innovative/article/view/1754.