Consumer Transformation in Realizing the Society 5.0 Concept Through Purchase Decisions in the Indonesian E-Commerce Industry

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Abstract. Purchase decisions refer to consumer behavior toward the final purchase decision. Several aspects influence purchase decisions, including direct marketing, price, and advertising. This research was conducted to examine the influence of direct marketing, price, and advertising on purchase decisions on Tokopedia in Society 5.0. The type of research used is quantitative descriptive research with primary data obtained by distributing questionnaires to the general public who are users of Tokopedia. The sample was used using a purposive sampling technique. The survey involved 102 people who had made purchases on Tokopedia. Meanwhile, data analysis used multiple linear regression with SPSS 25 application. The results of this study indicate that direct marketing, price, and advertising have a positive and significant simultaneous effect on purchase decisions on Tokopedia in Society 5.0. While partially, the price variable does not significantly influence purchase decisions. However, direct marketing and advertising variables have a positive and significant partial effect on Tokopedia's purchase decisions.

Keywords: Advertising, Direct Marketing, Price, Purchase Decisions, Tokopedia.

1   Introduction

The industrial sector's creation of the IoT, AI, and robotics significantly changes society [1]. These technologies enable humans to solve social problems and replace physical work [2]. This phenomenon creates an idea of humans and technology living together, potentially creating a more valuable life [3]. Based on this concept, Japan has designed the 5th Science and Technology Basic Plan, known as Society 5.0, to build a human-centric society amidst economic development and provide solutions to problems, ensuring a high quality of life [1]. E-commerce is an online channel accessible to individuals and used by businesses to conduct business activities. It is also used by consumers to obtain information, starting with providing information to consumers to determine their choices [4]. According to ECDB, Indonesia is projected to have the highest e-commerce growth rate in the world in 2024, at around 30.5%, nearly three times the

account for market behavior, per capita GDP, per capita consumer spending, internet penetration, and the country's population [5].

Tokopedia, an e-commerce, envisions creating an ecosystem where everyone can start and find anything, with a mission of digital economic equalization. In purchase decisions, it is necessary to consider factors that can influence them. Firstly, direct marketing is a marketing method that utilizes one or more influential advertising media to elicit responses or transactions [6]. Secondly, price includes affordability, price adequacy concerning product quality, benefits appropriateness, and competitiveness [7]. Thirdly, advertising, which encompasses objectives, conveyed messages, and media used [8].

Their study [9] demonstrated that direct marketing influences consumers' purchase decisions. Direct marketing is considered one of the marketing strategies crucial for attracting customers [10]. Meanwhile, [11] stated that price does not affect the purchase decision of iPhone on Fineapple.id. Generally, consumers choose products based on what they see and hear [12]. According to [13] and [14], advertising influences consumers in making purchase decisions. This indicates that consumers in the current era are becoming more intelligent and have various preferences when determining purchases. This study utilizes the same variables, namely purchase decisions. The difference between this study and previous research lies in the methodology, theories, and research objects. Research on purchase decisions is still limited, especially concerning e-commerce in Society 5.0. Therefore, this study examines the influence of direct marketing, price, and advertising on purchase decisions in Society 5.0 through Tokopedia.

2   Methods

This study uses a descriptive quantitative method to determine the influence of direct marketing, price and advertising on purchase decisions through Tokopedia in Society 5.0. The population consists of Tokopedia e-commerce users. The researcher used purposive sampling to select respondents based on criteria such as having the Tokopedia app, purchasing products on Tokopedia, and having a fixed monthly income. Statistical analysis was used to test the hypotheses using multiple linear regression analysis to see if more than two independent variables influence and measure the strength of relationships [15] with SPSS 25. The independent variables are direct marketing, price, and advertising, while the dependent variable is the purchase decision on Tokopedia.

The primary data source for this research is data obtained through an online questionnaire distributed to Tokopedia users with a fixed monthly income. The questionnaire uses a Likert scale to measure individuals' attitudes, perceptions, and views towards specific events. The Likert scale weights are: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree. After collecting data, the researcher conducted several tests and concluded the hypothesis.

3   Results and Discussion

In this study, the researcher distributed questionnaires to Tokopedia users, which 120 people filled out. However, 18 respondents did not meet the research criteria, so the data used is 102. This data shows that the respondents consist of 36 males (35.29%) and 66 females (64.70%). Ninety-two respondents (90.19%) were aged 21-30 years, 72 respondents (70.58%) had a bachelor's degree as their highest education level. 21 respondents (20.58%) work as private employees, and 58 respondents (56.86%) have a monthly income of <Rp3.000.000.

3.1   Classic Assumption Test

Normality Test.
The normality test uses a Probability Plot with the decision that the regression model is normally distributed if the plotted data (dots) depict the actual data following the diagonal line.
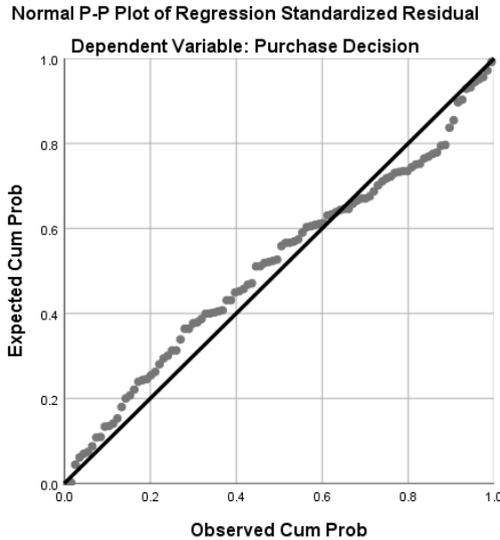

Fig. 1. Normality test analysis results.
Source: Data processed by researchers, 2024.

Figure 1 shows that the points follow a diagonal line. Therefore, the residuals are normally distributed and suitable for analyzing the influence of the independent variables.

Multicollinearity Test.
The multicollinearity test is conducted by looking at the Tolerance and VIF values. If the Tolerance Value is >0.100 and VIF <10.00, then there are no symptoms of multicollinearity.

Table 1 shows that the Tolerance values are >0.100 and the VIF values are <10.00 for each independent variable. Direct Marketing has a Tolerance value of 0.553 and a VIF value of 1.089, Price has a Tolerance value of 0.610 and a VIF value of 1.641, and Advertising has a Tolerance value of 0.628 and a VIF value of 1.594. Therefore, it can be stated that there are no multicollinearity issues among the independent variables.

Table 1. Multicollinearity test analysis result.

	Coefficients[a]						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.517	2.975		.174	.862		
Direct Marketing	.276	.108	.209	2.546	.012	.553	1.809
Price	.085	.091	.074	.943	.348	.610	1.641
Advertising	.596	.075	.614	7.992	.000	.628	1.594
a. Dependent Variable: Purchase Decision							

Source: Data processed by researchers, 2024.

Autocorrelation Test (Durbin-Watson).

The autocorrelation test is conducted using the Durbin-Watson test. It is known that the significance level (α) is 0.05, and the formula for finding DL and DU (α /2; n-k-1), DL and DU (0.05/2; 102-3-1), DL and DU (0.025; 98), then the value of DL = 1.6174 and DU = 1.7383.

Table 2. Autocorrelation.

	Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.798[a]	.637	.626	3.18260	2.229
a. Predictors: (Constant), Advertising, Price, Direct Marketing					
b. Dependent Variable: Purchase Decision					

Source: Data processed by researchers, 2024.

Table 2 shows that the Durbin-Watson value is 2.229. Meanwhile 4-DL = 2.3826 and 4-DU = 2.2617. So that DU<D<4-DU 1.7383 < 2.229 < 2.2617, then there is no autocorrelation.

Heteroscedasticity Test.

The heteroscedasticity test is conducted using a Scatterplot. If there is no clear pattern, such as wavy, widening, or narrowing in the scatterplot, there are scattered dots around the zero value on the Purchase Decision-axis. If this is observed, it indicates that there is no heteroscedasticity.
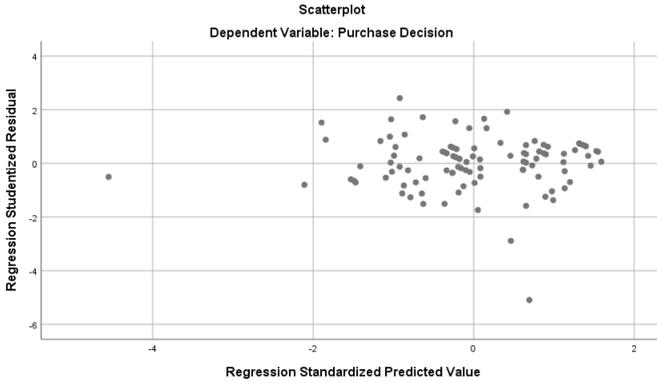
Fig. 2. Heteroscedasticity test analysis result.
Source: Data processed by researchers, 2024.

Figure 2 shows that the data points are spread between the number 0 and do not form a regular pattern, so the regression model used does not show symptoms of heteroscedasticity.

3.2   Hypothesis Testing

Coefficient of Determination (R Square).
The coefficient of determination test is conducted by looking at the R Square value.

Table 3. Coefficient of determination test analysis result.

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.798[a]	.637	.626	3.18260	2.229

a. Predictors: (Constant), Advertising, Price, Direct Marketing
b. Dependent Variable: Purchase Decision
Source: Data processed by researchers, 2024.

Table 3 shows that the R Square value is 0.637, which means that Direct Marketing, Price, and Advertising contribute a simultaneous influence of 63.7% to the Purchase Decision and the remaining 36.3% influenced by other variables outside this research.

Simultaneous Significance Test (F Test).
The simultaneous significance test is conducted by looking at the Anova table. If the significance value is <0.05, then the independent variable has a significant effect simultaneously on the dependent variable.

Table 4. Simultaneous significance test analysis result.

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1740.042	3	580.014	57.263	.000[b]
Residual	992.634	98	10.129		
Total	2732.676	101			

a. Dependent Variable: Purchase Decision
b. Predictors: (Constant), Advertising, Price, Direct Marketing

Source: Data processed by researchers, 2024.

Table 4 shows that if the Signification value is 0.000, Direct Marketing, Price, and Advertising simultaneously have a significant effect on Purchase Decision.

Partial Significance Test (T-Test).

The partial significance test is conducted by looking at the Coefficients table. If the value of t-count > t-table and the significance value is <0.05, then the independent variable has a partially significant effect on the dependent variable. It is known that the significance level (α) is 0.05, and the Ttable formula is as follows ($\alpha/2$; n-k-1), t-table = (0.05/2; 102-3-1), Ttable = (0.025; 98), then the t-table value is 1.984.

Table 5. Partial significance test analysis result.

Coefficients[a]							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.517	2.975		.174	.862		
Direct Marketing	.276	.108	.209	2.546	.012	.553	1.809
Price	.085	.091	.074	.943	.348	.610	1.641
Advertising	.596	.075	.614	7.992	.000	.628	1.594

a. Dependent Variable: Purchase Decision

Source: Data processed by researchers, 2024.

Table 5 shows that:

- Direct Marketing has a t-count of 2.546 and a significance value of 0.012, so Direct Marketing has a partially positive and significant effect on Purchase Decision.
- Price has a t-count of 0.943 and a significance value of 0.348, so Price does not have a partially significant effect on Purchase Decision.
- Advertising has a t-count of 7.992 and a significance value of 0.000, so Advertising has a partially positive and significant effect on Purchase Decision.

Based on the testing and analysis, direct marketing, price, and advertising simultaneously influence Tokopedia's purchasing decisions. Direct marketing has a significant positive effect on purchase decisions. The marketing conducted can attract the attention of Tokopedia visitors and be easy to understand. These results align with the research

findings of [16-19]. Tokopedia conducts marketing using digital technology that can access and interact with consumers without distance and time limitations so that consumers can compare available products and do not have to make direct physical contact to obtain product information.

Furthermore, price does not influence consumers' purchasing decisions on Tokopedia. This finding is contrary to the research results of [20-24] but in line with the findings of [25-30]. Price is no longer the main focus of purchasing decisions because consumers have planned their finances well before purchasing. Consumers can purchase products so that they feel comfortable with their current financial condition and are not worried about shopping impulsively. In contrast, the shop is live streaming or claiming discounts and free shipping vouchers for cheaper prices.

The advertising conducted by Tokopedia significantly influences purchasing decisions. This is consistent with research by [31-38]. Tokopedia has a unique way of delivering its advertisements by sharing personalized messages to its users regularly, which can stimulate the desire to purchase products. The information provided by Tokopedia is continually updated according to the conditions in Society 5.0, and attractive advertisements are displayed through various platforms ranging from social media to banners. Moreover, Tokopedia has memorable ringtones. The final results of this study indicate that direct marketing and advertising can influence consumers in making purchase decisions through Tokopedia, while price does not have a significant influence. This occurs because of increasingly advanced technology that is easy for people to use to find solutions to social problems. Because Society 5.0 promises convenience in meeting life's needs.

4   Conclusions

Based on the analysis and discussion, the findings indicate that direct marketing and advertising significantly and positively impact purchase decisions, both individually and collectively. However, price does not considerably influence purchasing behavior, suggesting that consumers prioritize other factors over cost. Tokopedia's digital marketing strategies effectively engage consumers, and its advertising approach plays a crucial role in influencing purchasing decisions. These results highlight how technology and innovative marketing approaches align with the principles of Society 5.0, where digital advancements facilitate seamless decision-making.

5   Acknowledgments

References

1. Fukuyama, M. Society 5.0: Aiming for a New Human-Centered Society, vol. 27 (Japan Economic Foundation (JEF), 2018).
2. Potočan, Z., Mulej, V. & Nedelko, M. Society 5.0: Balancing of Industry 4.0, Economic Advancement and Social Problems. Kybernetes 50, 27 (2021).
3. Ellitan, L. Competing in the Era of Industrial Revolution 4.0 and Society 5. Maksipreneur 10, 1–12 (2020).
4. Amstrong, G., Kotler, P. Dasar-Dasar Pemasaran, 1st edn (Prenhalindo, 2012).
5. Santika, E. F. ECDB: Proyeksi Pertumbuhan e-Commerce Indonesia Tertinggi Sedunia pada 2024. Katadata (2024).
6. Kotler, P., Keller, K. L. Manajemen Pemasaran, 13th edn (Erlangga, 2009).
7. Kotler, P., Armstrong, G. Prinsip-prinsip Pemasaran, 13th edn (Erlangga, 2016).
8. Amstrong, G., Kotler, P.. Manajemen Pemasaran (Erlangga, 2013).
9. Ningsih, D. N. C. et al. The Effect of Direct Marketing on Purchase Decision with Purchase Intention as Intervening Variable (Atlantis Press SARL, 2023).
10. Bala, M., Verma, D. A Critical Review of Digital Marketing Paper Type: - Review and Viewpoint. Int. J. Manag. IT Eng. 8, 321–339 (2018).
11. Ramadhan, T. S. The Purchase Decisions Are Influenced By Price, Brand Image and Quality Of Iphone Products In Malang City. IJEBD 6, (2023).
12. Putra, Z. A., Arimbawa, I. G. The Effect of Advertising, Sales Promotion, Personal Selling and Brand Image on the Purchase Decision of Honda PCX Motorcycle in Surabaya. IJEBD 6, 156–162 (2023).
13. Lestari, A. F. M., Purwanto, K. & Putri, D. E. The Effect of Advertising Disclosure Language & Celebrity Endorsement on Tiktok on Purchasing Decisions for Fashion Outfit Products. Int. J. Adv. Multidiscip. 2, (2023).
14. Chong, D. Effect of Advertising, Buyer Reviews and Product Quality on Purchase Decisions. Dinasti Int. J. Econ. Financ. Account. 2, 669–683 (2022).
15. Suharyadi & Purwanto. Statistika untuk Ekonomi dan Keuangan Modern (Salemba Empat, 2004).
16. Fuadi, F. et al. Pengaruh Direct Marketing terhadap Keputusan Pembelian pada Live Streaming Tiktok dengan Kepercayaan sebagai Variabel Moderasi dalam Perspektif Bisnis Islam. J. Islam. Econ. Financ. 2, (2024).
17. Setyawan, S. A., Hudayah, S. & Zainurossalamia, S. The Influence of Direct Marketing, Digital Marketing and Instagram Celebrity Support on Purchase Decisions in Samarinda City, Indonesia. J. Madani Soc. 2, 26–33 (2023).
18. Ervandi, M. Z. & Nainggolan, R. Pengaruh Personal Selling Dan Direct Marketing Terhadap Keputusan Pembelian Pada Konsumen Thai Tea Di Surabaya. J. Manaj. Start-Up Bisnis 6, (2021).
19. Yalanda, R. R., Sadeli, A. H. Pengaruh Direct Marketing Terhadap Keputusan Pembelian Kopi Arabika Malabar Mountain Coffee. Performance 26, 27 (2019).
20. Muntama, B., Syaiful, B. & Susi, S. Purchase Decision Factors From Product Quality, Design Packaging and Price (Study on Dodol Pineapple Consumers in East Lampung). Int. J. Econ. Bus. Account. Res. 2023, 1–13 (2023).
21. Liana, Kaihatu, T. S. Analysis of the Influence of Product Quality, Service Quality, Price, Customer Confidence on the Decision To Purchase Natural Stone At Cv Rainbow Pelangi. Bus. Account. Res. Peer Rev. J. 7, 1217–1227 (2023).
22. Ningsih, S., Pradanawati, L. The Influence of Brand Image, Price and Promotion on Purchase Decision. Bus. Account. Res. Peer Rev. J. 5, 1–12 (2021).

23. Dyatmika, S. W., Firdaus, L. M. The Effect of Price Service Quality, and Company Image on Purchase Decisions on Jalanjalan.ID Gresik. Int. J. Econ. Bus. Account. Res. 5, 304–317 (2021).
24. Yusuf, R. et al. The Influence Of Price, Promotion and Marketing Event On Customers' Repurchasing Decision Of Flashy Products. JBMP 7, 141–153 (2021).
25. Bramanti, P. M., Sutanto, J. E. The Effect of Service Quality, Brand Image, and Price on Purchase Decision of Proyek Iseng Mural in Surabaya City. Bus. Account. Res. Peer Rev. J. 6, (2022).
26. Yuliza, E. E. Study of Product Quality Aspects, Prices & Halal Labels on the Purchase Decision of Hpai Herbal Products. Bus. Account. Res. Peer Rev. J. 5, 426–434 (2021).
27. Widyastuti, A. N., Pujiharto, P., Tubastuvi, N. & Santoso, S. B. The Effect of Marketing Mix on Purchase Decisions. J. Manaj. Bisnis 11, (2020).
28. Prilano, K., Sudarso, A., Fajrillah, F. Pengaruh Harga, Keamanan dan Promosi Terhadap Keputusan Pembelian Toko Online Lazada. J. Bus. Econ. Res. 1, 1–10 (2020).
29. Nasution, H. F. Pengaruh Kemudahan Dan Harga Terhadap Keputusan Pembelian Produk Pakaian Secara Online. At-tijaroh J. Ilmu Manaj. dan Bisnis Islam 4, 26 (2018).
30. Montung, S. Analisis Persepsi Harga, Promosi, Kualitas Pelayanan, dan Kemudahan Penggunaan Terhadap Keputusan Pembelian Produk Secara Online. Ekon. dan Manajemen 5, 128–147 (2016).
31. Garg, D. Unethical advertising appeals that affect the purchase decision (2024).
32. Elmatiara, B., Mursito, B., Sudarwati, S. Advertisement, Lifestyle and Product Quality in Influencing Purchase Decision of Xiaomi Smartphone in Sukoharjo. Int. J. Econ. Bus. Account. Res. 5, 35–43 (2021).
33. Prasetya, A. Y., Astono, A. D., Ristianawati, Y. Analisa Startegi Pengaruh Influencer Marketing Di Social Media Dan Online Advertising Terhadap Keputusan Pembelian. Proc. Semin. UNIMUS 4, 355–365 (2021).
34. Tusanputri, Amron. Pengaruh Iklan dan Program Gratis Ongkir Terhadap Keputusan Pembelian Pada Platform E-Commerce Tiktok Shop. J. FEB UNMUL 23, 632–639 (2021).
35. Erdawati, E. Pengaruh Gaya Hidup, Iklan Dan Harga Terhadap Keputusan Pembelian Online Melalui Shopee. J. Apresiasi Ekon. 8, 365–371 (2020).
36. Nisrina, H. D. N., Hendrayati. Advances in Bussiness Management and Enterpreneurship, 1st edn (CRC Press, 2020).
37. Zhang, R. The Influence of Advertising on the Consumers' Purchasing Decision. Proc. 1st Int. Conf. Business, Econ. Manag. Sci. (BEMS 2019) 80, 142–146 (2019).
38. Enginkayaa, E. & Cinar, D. The Impact of Digital Advertising on Consumer Purchase Decisions. 2nd Int. Interdiscip. Business-Economics Adv. Conf.