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The Influence of After-Sales Service, Brand Trust, Social Media, and Sustainable Innovation on Purchase Decisions

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Abstract

This study examines the influence of after-sales service, brand trust, social media, and sustainable innovation on the purchase decisions of Samsung smartphones in Tangerang. The research addresses the increasingly competitive smartphone market, where consumers evaluate not only technical specifications but also service quality, psychological assurance, digital engagement, and innovation consistency before making purchasing decisions. Although prior studies have explored these variables independently, empirical evidence remains fragmented regarding their simultaneous effects and relative dominance within a unified structural model, particularly in urban Indonesian contexts. A quantitative approach with a causal survey design was employed. Data were collected from 250 Samsung smartphone users in Tangerang using purposive sampling. The instrument applied a six-point Likert scale to reduce neutral bias and increase response discrimination. Data analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) to assess both measurement and structural models. The findings reveal that after-sales service ($\beta = 0.243$; $p = 0.006$), brand trust ($\beta = 0.442$; $p < 0.001$), social media ($\beta = 0.179$; $p = 0.045$), and sustainable innovation ($\beta = 0.152$; $p = 0.001$) each exert positive and statistically significant effects on purchase decisions. Brand trust demonstrates the strongest influence, underscoring the importance of perceived reliability in high-involvement technology purchases. The model explains 66.9% of the variance in purchase decisions ($R^2 = 0.669$), indicating substantial explanatory power. Overall, purchase decisions are primarily driven by brand trust, followed by after-sales service, social media engagement, and sustainable innovation, offering strategic insights for strengthening competitive positioning in urban technology markets.

I. INTRODUCTION

The smartphone market in Indonesia is characterized by a very high level of competition among major brands such as Samsung, Xiaomi, Oppo, and Vivo. Based on Counterpoint

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research cited by Qoo Media, in the third quarter of 2025 Samsung controlled approximately 20% of the national smartphone market share, followed by Xiaomi at 17% and Oppo at 16%, indicating strong competitive dynamics in the domestic market (*Qoo Media, 2025)*. The increasing number of brands and product variations has led consumers to become more selective in making purchase decisions, thereby requiring companies to strengthen non-product factors such as service quality and brand trust in order to maintain competitiveness (Rijal Ar Rasyid et al., 2025). After-sales service has been recognized as one of the important factors influencing customer satisfaction and loyalty. Effective after-sales service is able to enhance consumer satisfaction and increase the likelihood of repeat purchases in the long term (Philip Kotler, Kevin Lane Keller, 2022).

Brand trust is also a crucial factor in influencing purchase decisions. Elements of brand reputation and predictability have been proven to exert a significant influence on consumer preferences in choosing specific products (Simangunsong & Sitanggang, 2023). n high-involvement products such as smartphones, trust functions to reduce perceived risk and increase confidence in product performance. In addition, social media has developed into a strategic medium for interaction and promotion, capable of shaping perceptions and influencing purchase decisions through reviews, testimonials, and digital promotional content (Dolaria et al., 2025).

Furthermore, sustainable innovation has become an important factor in the competition within the smartphone industry. Product innovation has been shown to have a positive and significant effect on smartphone purchase decisions, with the explanatory contribution of the variable reaching more than 70% (Rijal Ar Rasyid et al., 2025). This indicates that consumers tend to choose brands that consistently introduce technological updates and features relevant to their needs.

Based on this phenomenon, several research gaps need to be further examined. Although brand trust is considered a dominant factor, the most influential indicators among Samsung consumers in Tangerang still need to be confirmed (Simangunsong & Sitanggang, 2023). The growing influence of social media, along with high levels of digital engagement, also requires more in-depth analysis (Dolaria et al., 2025). Moreover, although sustainable innovation is believed to sustain purchase intention, its acceptance and impact in the Tangerang market still need to be empirically validated (Rijal Ar Rasyid et al., 2025).

Prior research on smartphone purchase decisions has largely examined after-sales service, brand trust, social media, and innovation separately, leading to fragmented findings. Few studies have integrated functional, psychological, social, and technological dimensions within a single structural model to assess their simultaneous effects and relative dominance, particularly in emerging urban markets such as Tangerang. This study addresses that gap by developing and empirically testing an integrated PLS-SEM framework to evaluate the comparative influence of these four determinants on Samsung smartphone purchase decisions, contributing both to consumer behavior theory and managerial strategy.

II. RELATED WORKS/LITERATURE REVIEW

This study is conceptually grounded in consumer behavior theory, which explains the purchase decision process as a series of stages beginning with need recognition, information search, evaluation of alternatives, and culminating in purchase action and

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post-purchase behavior (Widiyanto & Sugandha, 2019). Purchase decisions do not occur spontaneously; rather, they result from cognitive and emotional processes influenced by perceived value and the situational conditions faced by consumers (Avira et al., 2025; Supriyanto & Widiyanto, 2022). At the final stage, consumers form purchase intentions and select the brand considered most appropriate among the available alternatives (Yang & Widiyanto, 2023). This framework serves as the primary basis for explaining the purchase decision variable (Y) in this study.

To explain the after-sales service variable (X1), this study draws upon after-sales service theory as part of a strategy to enhance value and customer satisfaction. After-sales service is regarded as an essential element in marketing that can increase satisfaction, build trust, and encourage repeat purchases (Philip Kotler, Kevin Lane Keller, 2022). In the context of high-technology products such as smartphones, after-sales service functions as a risk-reduction mechanism and a means of building long-term relationships between companies and consumers (Ananta Ihza Mahendra, 2022). The operationalization of after-sales service in this study also refers to the service quality model with the dimensions of reliability, responsiveness, assurance, empathy, and tangibles, which constitute key differentiating factors among brands in the electronics industry (Teja & Henryanto, 2024).

Furthermore, the brand trust variable (X2) is explained through brand trust theory, which emphasizes that consumer trust is formed from perceptions of brand consistency, competence, and reputation (Simangunsong & Sitanggang, 2023). The dimensions of predictability, liking, competence, and brand reputation serve as important indicators in building consumer confidence in the quality and integrity of a brand. Brand trust also develops through credibility, competence, benevolence, and reputation, which operate simultaneously in influencing consumers' tendencies to purchase and recommend products (Wadi et al., 2021). In the smartphone industry, where purchase risk is relatively high, brand trust functions as a mechanism for reducing uncertainty and fostering consumer loyalty.

The social media variable (X3) is explained through digital marketing theory, which positions social media as a two-way interaction platform that shapes consumer perceptions and engagement (Dolaria et al., 2025). The dimensions of interaction, information, and engagement illustrate how digital communication, user reviews, testimonials, and promotional content influence attitudes and purchase decisions. Social media has become a primary medium for promotion and brand image formation through advertising features, interactive content, and performance analytics that support data-driven marketing strategies (Azzaakiyyah et al., 2024). In addition to serving as an information channel, social media also functions as a strategic instrument influencing the overall consumer decision-making process by shaping perceptions of quality and purchase intention (Amelia et al., 2025).

Meanwhile, the sustainable innovation variable (X4) is explained through innovation theory, which emphasizes the importance of renewing products, processes, and marketing strategies to maintain competitive advantage. Product innovation, including the development of new features and technologies, has been shown to have a positive effect on smartphone purchase decisions (Rijal Ar Rasyid et al., 2025). Innovation also encompasses improvements in operational efficiency and appropriate marketing communication strategies to build customer trust (Fadillah & Batu, 2024). These three forms of innovation operate simultaneously to create added value for consumers and enhance brand

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attractiveness in a competitive market. Thus, these five theoretical frameworks collectively support the analysis of the relationships among after-sales service, brand trust, social media, sustainable innovation, and Samsung smartphone purchase decisions in Tangerang.

III. METHODS

This study employs a quantitative approach using a survey method, as it aims to examine the relationships and influences among variables objectively through numerical data (Wibowo & Widiyanto, 2019). The quantitative approach is widely used in consumer behavior research to explain causal relationships among variables that can be measured statistically (Silaswara et al., 2021). The survey method combined with statistical analysis has been proven to explain the combined contribution of independent variables to the dependent variable in a measurable and systematic manner (Santosa & Prayoga, 2021). The selection of this approach is based on its ability to produce objective, valid, and relevant data to explain the relationships among after-sales service, brand trust, social media, sustainable innovation, and Samsung smartphone purchase decisions in Tangerang (Kosin et al., 2023). The independent variables in this study include after-sales service, brand trust, social media, and sustainable innovation, while the dependent variable is purchase decision.

The object of this study is consumers of Samsung smartphones residing in the Tangerang area in 2025. This area was selected because it possesses dynamic and competitive market characteristics, as well as a high level of technological penetration, making it representative of consumer behavior in technology products. The research was conducted from October to December 2025, with data collected through a survey to ensure representation of the population of active Samsung users. The data used consist of primary data obtained through questionnaires distributed to active Samsung users in Tangerang and secondary data derived from books, journals, previous studies, and relevant official publications to strengthen the theoretical foundation and hypothesis development.

The population in this study comprises all Samsung smartphone users in the Tangerang area, who exhibit diverse characteristics in terms of gender, age, and occupation (Widjaya et al., 2025). The sampling technique employed purposive sampling, as respondents were required to meet specific criteria relevant to the research objectives (Gunawan et al., 2020). The inclusion criteria included residing in Tangerang, using a Samsung smartphone for at least one year, being at least 17 years old, and being willing to complete the questionnaire in full. The sample size was determined based on PLS-SEM guidelines, which recommend a minimum of five to ten times the number of indicators (J. F. Hair & Brunsveld, 2019). With 50 indicators, the minimum required sample size was 250 respondents and the maximum was 500 respondents; therefore, the use of 250 respondents meets the recommended minimum threshold and is considered sufficient to produce stable parameter estimates (Setiawan & The, 2025). The sampling procedure was carried out through the online distribution of questionnaires to respondents who met the criteria, while adhering to research ethics principles and data confidentiality.

The use of purposive sampling is justified because the study requires respondents with specific characteristics relevant to the research objectives, namely Samsung smartphone users in Tangerang aged at least 17 years who have used the product for a minimum of one

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year. This criterion ensures that respondents possess sufficient experience to provide informed evaluations of after-sales service, brand trust, social media, and sustainable innovation. Nevertheless, purposive sampling may introduce selection bias, particularly the overrepresentation of certain demographic or digitally active groups. To mitigate this risk, the questionnaire was distributed across diverse online communities, screening questions were applied to enforce inclusion criteria, and incomplete or inconsistent responses were removed during data cleaning. The adequate sample size (n = 250), in line with PLS-SEM recommendations, further enhances parameter stability and strengthens the internal validity of the findings, although generalization beyond the Tangerang context should be interpreted cautiously.

Data collection was conducted using a closed-ended questionnaire with a six-point Likert scale, which is ordinal in nature (Ginny et al., 2022; Sudirjo et al., 2023). The six-point scale was chosen because it reduces respondents' tendency to select neutral answers and produces more decisive and consistent response distributions (Chomeya, 2010; Yuana et al., 2024). The use of Google Forms was considered effective for distributing questionnaires efficiently and minimizing data entry errors (Hadiyati et al., 2023), as well as being relevant to respondents' contemporary digital habits (Putranto et al., 2024). The six-point scale also supports SmartPLS analysis by generating sufficient data variation to form latent constructs with multiple indicators. All questionnaire items were developed based on the conceptual and operational definitions of the variables, reviewed by the academic supervisor as a form of content validation, and accompanied by informed consent to ensure that the data collection process complied with research ethics principles.

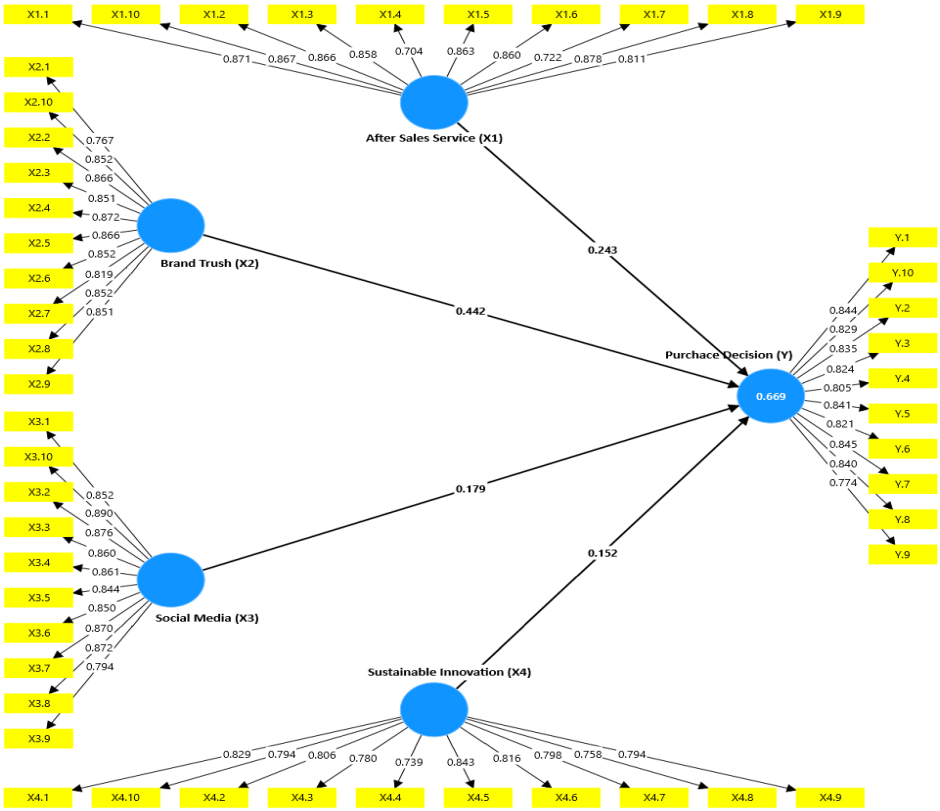

Figure 1 Model Penelitian

Source: Processed data using SmartPLS 4.0.

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The research model illustrated above depicts the structural relationships between four independent variables After-Sales Service (X1), Brand Trust (X2), Social Media (X3), and Sustainable Innovation (X4) and the dependent variable, Purchase Decision (Y). Each arrow in the model indicates the direction of direct influence to be empirically tested using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) approach. The model is constructed based on a theoretical foundation asserting that service-related, psychological, digital, and innovation factors simultaneously shape perceived value and drive consumers' decisions in selecting products. Therefore, this research model not only examines the partial effects of each variable but also assesses the combined contribution of all constructs in explaining the variation in Samsung smartphone purchase decisions in the Tangerang area.

Purchase decisions are influenced by various interrelated factors, including after-sales service, brand trust, social media, and sustainable innovation. After-sales service provides consumers with a sense of security following a purchase, thereby encouraging the formation of purchase decisions (Philip Kotler, Kevin Lane Keller, 2022). Brand trust reflects consumers' confidence in a brand's consistency, integrity, and ability to fulfill its value promise, which has been shown to significantly influence purchase decisions (Simangunsong & Sitanggang, 2023). Social media functions as both a source of information and a communication platform that shapes consumers' perceptions, attitudes, and preferences toward a product (Dolaria et al., 2025). Moreover, sustainable innovation enhances product attractiveness and added value, thereby stimulating consumers' interest and purchase decisions (Rijal Ar Rasyid et al., 2025). Based on this theoretical review and empirical evidence, these four variables are presumed to have a positive influence on Samsung smartphone purchase decisions in Tangerang.

Based on this conceptual framework, this study formulates the hypothesis that after-sales service (X1), brand trust (X2), social media (X3), and sustainable innovation (X4) each exert a positive influence on the purchase decision (Y) of Samsung smartphones in Tangerang, both partially and simultaneously. This hypothesis represents a tentative proposition developed from theoretical foundations and previous research findings, taking into account the cultural characteristics of consumers in Tangerang as well as the competitive and continuously evolving dynamics of the smartphone market.

IV. RESULTS AND DISCUSSION

Data collection in this study was conducted through the online distribution of a questionnaire using Google Forms, consisting of 50 items administered to Samsung smartphone users in the Tangerang area who met the research criteria. Of the total 281 respondents who completed the questionnaire, after a screening process and verification of data completeness, only 250 questionnaires were deemed valid and suitable for analysis, while 31 questionnaires were eliminated due to incomplete responses or failure to meet the predetermined criteria. Thus, the data analysis was conducted using 250 valid respondents. In general, the results of the descriptive analysis indicate that the majority of respondents tended to agree with statements related to after-sales service, brand trust, social media, sustainable innovation, and purchase decisions, suggesting that consumers'

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initial perceptions of all variables were positive prior to structural model testing using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) approach.

Based on demographic characteristics, the distribution of respondents shows a relatively balanced gender composition, with 52% female and 48% male respondents, indicating that perceptions of the research variables were not dominated by a particular gender group. In terms of age, the 21–30 age group dominated with 55.2%, followed by the 17–20 age group at 19.6%, the 31–40 age group at 20%, and those over 40 years old at 5.2%, reflecting the predominance of smartphone users in early productive age groups who are actively engaged in digital technology usage. Based on occupation, the majority of respondents were students (42.4%), followed by private/public sector employees (32.4%), entrepreneurs (23.2%), and homemakers (2%), indicating that respondents were predominantly individuals who are academically or professionally active and who have high levels of engagement with smartphone and digital media usage.

Table 1 Recapitulation of Respondents' Answer Distribution

Indicator	1 (N/%)	2 (N/%)	3 (N/%)	4 (N/%)	5 (N/%)	6 (N/%)	Value
X1.1	0/0	0/0	14/5.6	136/54.4	92/36.8	8/3.2	250
X1.2	0/0	0/0	29/11.6	122/48.8	91/36.4	8/3.2	250
X1.3	0/0	0/0	31/12.4	126/50.4	87/34.8	6/2.4	250
X1.4	0/0	0/0	16/6.4	127/50.8	95/38	12/4.8	250
X1.5	0/0	0/0	21/8.4	136/54.4	87/34.8	6/2.4	250
X1.6	0/0	0/0	33/13.2	120/48	90/36	7/2.8	250
X1.7	0/0	0/0	17/6.8	146/58.4	77/30.8	10/4	250
X1.8	0/0	1/0.4	27/10.8	126/50.4	86/34.4	10/4	250
X1.9	0/0	0/0	18/7.2	121/48.4	104/41.6	7/2.8	250
X1.10	0/0	0/0	30/12	120/48	93/37.2	7/2.8	250
X2.1	0/0	0/0	8/3.2	144/57.6	85/34	13/5.2	250
X2.2	0/0	0/0	14/5.6	148/59.2	83/33.2	5/2	250
X2.3	0/0	0/0	23/9.2	148/59.2	74/29.6	5/2	250
X2.4	1/0.4	0/0	14/5.6	145/58	85/34	5/2	250
X2.5	1/0.4	0/0	19/7.6	140/56	87/34.8	3/1.2	250
X2.6	0/0	0/0	21/8.4	138/55.2	86/34.4	5/2	250
X2.7	1/0.4	0/0	14/5.6	143/57.2	89/35.6	3/1.2	250
X2.8	1/0.4	1/0.4	12/4.8	137/54.8	92/36.8	7/2.8	250
X2.9	0/0	0/0	30/12	131/52.4	84/33.6	5/2	250
X2.10	0/0	0/0	18/7.2	139/55.6	89/35.6	4/1.6	250
X3.1	0/0	0/0	7/2.8	142/56.8	92/36.8	9/3.6	250
X3.2	0/0	0/0	17/6.8	131/52.4	94/37.6	8/3.2	250
X3.3	0/0	0/0	19/7.6	133/53.2	91/36.4	7/2.8	250
X3.4	0/0	0/0	19/7.6	135/54	87/34.8	9/3.6	250
X3.5	0/0	0/0	16/6.4	138/55.2	90/36	6/2.4	250
X3.6	0/0	0/0	24/9.6	127/50.8	90/36	9/3.6	250

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X3.7	0/0	0/0	13/5.2	139/55.6	92/36.8	6/2.4	250
X3.8	0/0	0/0	19/7.6	129/51.6	93/37.2	9/3.6	250
X3.9	0/0	0/0	27/10.8	103/41.2	112/44.8	8/3.2	250
X3.10	0/0	0/0	20/8	125/50	100/40	5/2	250
X4.1	0/0	0/0	14/5.6	159/63.6	77/30.8	0/0	250
X4.2	0/0	0/0	18/7.2	159/63.6	72/28.8	1/0.4	250
X4.3	0/0	0/0	20/8	165/66	65/26	0/0	250
X4.4	0/0	2/0.8	29/11.6	144/57.6	75/30	0/0	250
X4.5	0/0	0/0	16/6.4	167/66.8	67/26.8	0/0	250
X4.6	0/0	1/0.4	20/8	166/66.4	63/25.2	0/0	250
X4.7	0/0	0/0	20/8	171/68.4	59/23.6	0/0	250
X4.8	1/0.4	0/0	20/8	155/62	73/29.2	1/0.4	250
X4.9	0/0	0/0	20/8	144/57.6	86/34.4	0/0	250
X4.10	0/0	1/0.4	17/6.8	161/64.4	71/28.4	0/0	250
Y.1	0/0	0/0	11/4.4	123/49.2	108/43.2	8/3.2	250
Y.2	0/0	0/0	15/6	127/50.8	100/40	8/3.2	250
Y.3	0/0	0/0	13/5.2	125/50	106/42.4	6/2.4	250
Y.4	0/0	1/0.4	22/8.8	120/48	99/39.6	8/3.2	250
Y.5	0/0	1/0.4	13/5.2	132/52.8	98/39.2	6/2.4	250
Y.6	0/0	1/0.4	16/6.4	136/54.4	90/36	7/2.8	250
Y.7	0/0	0/0	9/3.6	133/53.2	102/40.8	6/2.4	250
Y.8	0/0	2/0.8	12/4.8	126/50.4	100/40	10/4	250
Y.9	0/0	0/0	17/6.8	99/39.6	128/51.2	6/2.4	250
Y.10	0/0	0/0	16/6.4	124/49.6	103/41.2	7/2.8	250

Note: The data were processed by the researcher.

Based on the summary table of the distribution of respondents' answers across all research variable indicators, it can be observed that the majority of respondents provided ratings on scales 4 and 5 for nearly all statement items related to after-sales service (X1), brand trust (X2), social media (X3), sustainable innovation (X4), and purchase decision (Y). Meanwhile, responses on scales 1 and 2 were almost nonexistent, and scale 3 accounted for only a small proportion.

For the after-sales service and brand trust variables, the dominance of responses on scale 4 indicates that respondents perceive the quality of service and the level of trust in Samsung as being in a good category. Similarly, for the social media and sustainable innovation variables, there is a strong concentration of responses on scale 4 with relatively high percentages, suggesting that consumers positively evaluate the role of social media as well as product and process updates.

The distribution for the purchase decision variable also shows a tendency toward agreement and strong agreement, indicating that respondents possess strong intentions and confidence in choosing and purchasing Samsung smartphones. Overall, the response pattern concentrated on the higher scales demonstrates that consumer perceptions of all research variables fall within the good to very good categories. Therefore, the data exhibit

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characteristics suitable for proceeding to the structural model analysis stage using PLS-SEM.

Table 2 Value Outer Loading

	Sustainable Innovation (X4)	Brand Trust (X2)	Purchase Decision (Y)	After-Sales Service (X1)	Social Media (X3)
X1.1				0.871	
X1.10				0.867	
X1.2				0.866	
X1.3				0.858	
X1.4				0.704	
X1.5				0.863	
X1.6				0.860	
X1.7				0.722	
X1.8				0.878	
X1.9				0.811	
X2.1		0.767			
X2.10		0.852			
X2.2		0.866			
X2.3		0.851			
X2.4		0.872			
X2.5		0.866			
X2.6		0.852			
X2.7		0.819			
X2.8		0.852			
X2.9		0.851			
X3.1					0.852
X3.10					0.890
X3.2					0.876
X3.3					0.860
X3.4					0.861
X3.5					0.844
X3.6					0.850
X3.7					0.870
X3.8					0.872
X3.9					0.794
X4.1	0.829				
X4.10	0.794				
X4.2	0.806				
X4.3	0.780				
X4.4	0.739				
X4.5	0.843				
X4.6	0.816				
X4.7	0.798				
X4.8	0.758				
X4.9	0.794				
Y.1			0.844		
Y.10			0.829		
Y.2			0.835		
Y.3			0.824		

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Y.4			0.805		
Y.5			0.841		
Y.6			0.821		
Y.7			0.845		
Y.8			0.840		
Y.9			0.774		

Note: The data were processed by the researcher.

Convergent validity testing was conducted to ensure that each indicator has a strong correlation with the construct it measures. The primary criterion applied was a minimum outer loading value of 0.708 and statistical significance ($p < 0.05$), although indicators with values between 0.40 and 0.70 may still be considered depending on their contribution to content validity (J. Hair & Alamer, 2022). The test results indicate that all indicators for variables X1, X2, X3, X4, and Y have outer loading values above 0.70, including two indicators for X1 (X1.4 = 0.704 and X1.7 = 0.722), which still meet the minimum acceptable threshold. The indicators for the other variables fall within the range of 0.76–0.89, demonstrating very strong relationships with their respective constructs. Therefore, all indicators are declared to meet the criteria for convergent validity and are deemed appropriate for use in the subsequent stage of PLS analysis.

Table 3 AVE

	Cronbach's alpha	***Composite reliability (rho_a)***	***Composite reliability (rho_c)***	***Average variance extracted (AVE)***
Sustainable Innovation (X4)	0.936	0.938	0.945	0.634
Brand Trust (X2)	0.955	0.956	0.962	0.714
Purchase Decision (Y)	0.948	0.949	0.955	0.682
After-Sales Service (X1)	0.950	0.950	0.957	0.693
Social Media (X3)	0.960	0.961	0.965	0.735

Note: The data were processed by the researcher.

An Average Variance Extracted (AVE) value of ≥ 0.50 indicates that a construct is capable of explaining more than half of the variance of its indicators. The test results show that all variables Sustainable Innovation (X4), Brand Trust (X2), Purchase Decision (Y), After-Sales Service (X1), and Social Media (X3) have Cronbach's Alpha and Composite Reliability values above 0.70, indicating good internal consistency. Furthermore, the AVE values for each variable range from 0.634 to 0.735, thereby meeting the criteria for convergent validity. Thus, all constructs are declared valid and reliable and are suitable for use in the subsequent stage of PLS-SEM structural analysis.

Table 4 Fornel Larceker

	Sustainable Innovation (X4)	**Brand Trust (X2)**	**Purchase Decision (Y)**	**After-Sales Service (X1)**	**Social Media (X3)**
Sustainable Innovation (X4)	0.796				
Brand Trust (X2)	0.523	0.845			
Purchase Decision (Y)	0.456	0.752	0.826		

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After-Sales Service (X1)	0.095	0.502	0.608	0.832	
Social Media (X3)	0.278	0.605	0.663	0.717	0.857

Note: Processed data using SmartPLS 4.0.

Discriminant validity aims to ensure that each construct in the model is unique and represents a distinct phenomenon from the other constructs. The assessment was conducted using the Fornell–Larcker criterion, in which the square root of the AVE (√AVE) for each construct must be greater than its highest correlation with any other construct (√AVE > highest inter-construct correlation).

The results indicate that all constructs meet this criterion, with square root AVE values of 0.796 for Sustainable Innovation, 0.845 for Brand Trust, 0.826 for Purchase Decision, 0.832 for After-Sales Service, and 0.857 for Social Media, all of which are higher than their respective correlations with other variables. These findings demonstrate that each construct is able to adequately distinguish itself without overlap among variables. Therefore, all variables are declared to have satisfactory discriminant validity within the PLS-SEM model.

Table 5 Cross Loading

Indicator	Sustainable Innovation (X4)	Brand Trust (X2)	Purchase Decision (Y)	After-Sales Service (X1)	Social Media (X3)
X1.1	0.058	0.401	0.526	0.871	0.604
X1.2	0.009	0.385	0.493	0.866	0.608
X1.3	0.082	0.414	0.497	0.858	0.628
X1.4	0.189	0.496	0.541	0.704	0.529
X1.5	0.032	0.390	0.481	0.863	0.590
X1.6	0.083	0.431	0.524	0.860	0.605
X1.7	0.166	0.509	0.480	0.722	0.520
X1.8	0.049	0.422	0.521	0.878	0.617
X1.9	0.048	0.325	0.498	0.811	0.626
X1.10	0.063	0.388	0.474	0.867	0.627
X2.1	0.446	0.767	0.680	0.505	0.540
X2.2	0.438	0.866	0.663	0.459	0.518
X2.3	0.429	0.851	0.626	0.428	0.480
X2.4	0.455	0.872	0.605	0.384	0.504
X2.5	0.434	0.866	0.585	0.404	0.496
X2.6	0.410	0.852	0.648	0.434	0.545
X2.7	0.440	0.819	0.618	0.378	0.472
X2.8	0.468	0.852	0.649	0.404	0.472
X2.9	0.400	0.851	0.631	0.393	0.517
X2.10	0.492	0.852	0.632	0.438	0.556
X3.1	0.281	0.539	0.599	0.638	0.852
X3.2	0.211	0.517	0.581	0.620	0.876
X3.3	0.266	0.541	0.566	0.620	0.860
X3.4	0.209	0.465	0.545	0.640	0.861
X3.5	0.212	0.513	0.540	0.553	0.844
X3.6	0.218	0.501	0.562	0.593	0.850
X3.7	0.234	0.497	0.590	0.630	0.870
X3.8	0.262	0.573	0.607	0.677	0.872
X3.9	0.189	0.479	0.509	0.538	0.794

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X3.10	0.296	0.552	0.577	0.627	0.890
X4.1	0.829	0.408	0.387	0.034	0.204
X4.2	0.806	0.413	0.349	0.054	0.215
X4.3	0.780	0.416	0.309	0.009	0.177
X4.4	0.739	0.342	0.350	0.148	0.282
X4.5	0.843	0.474	0.420	0.095	0.218
X4.6	0.816	0.401	0.404	0.139	0.234
X4.7	0.798	0.461	0.338	0.059	0.213
X4.8	0.758	0.425	0.333	0.080	0.198
X4.9	0.794	0.426	0.371	0.062	0.219
X4.10	0.794	0.395	0.347	0.060	0.257
Y.1	0.427	0.646	0.844	0.489	0.544
Y.2	0.307	0.614	0.835	0.489	0.532
Y.3	0.386	0.646	0.824	0.453	0.526
Y.4	0.364	0.529	0.805	0.523	0.546
Y.5	0.427	0.664	0.841	0.535	0.537
Y.6	0.323	0.570	0.821	0.522	0.544
Y.7	0.428	0.678	0.845	0.558	0.605
Y.8	0.328	0.623	0.840	0.480	0.528
Y.9	0.386	0.639	0.774	0.475	0.542
Y.10	0.375	0.586	0.829	0.493	0.570

Note: Processed data using SmartPLS 4.0.

The cross-loading test indicates that each indicator has a higher loading on its own construct than on other constructs, thereby satisfying the criterion for discriminant validity. This condition signifies that each statement item consistently reflects the variable it is intended to measure and does not exhibit a stronger correlation with other variables. Therefore, based on the results of the Fornell–Larcker criterion, the HTMT ratio, and the cross-loading values, all variables in this study are declared to meet the requirements for discriminant validity. These findings confirm that each construct is unique, conceptually distinct, and free from overlap with other variables within the PLS-SEM model.

Table 6 R Square

Variable	R-square	Adjusted R-square
Purchase Decision (Y)	0.669	0.663

Note: Processed data using SmartPLS 4.0.

An R^2 value of 0.75 is categorized as strong, 0.50 as moderate, and 0.25 as weak (J. F. Hair & Brunsveld, 2019), although in certain contexts a value of 0.10 or lower may still be acceptable. Based on the test results, the R-square value for the Purchase Decision variable (Y) is 0.669, with an adjusted R-square value of 0.663, which falls within the moderate to strong category. This indicates that After-Sales Service (X1), Brand Trust (X2), Social Media (X3), and Sustainable Innovation (X4) collectively explain 66.9% of the variance in Purchase Decision, while the remaining 33.1% is influenced by other factors outside the research model. Therefore, the structural model in this study demonstrates good explanatory power and is adequate for further analysis.

Subsequently, the hypothesis testing stage presents the results of the research hypotheses examined using the bootstrapping procedure in PLS-SEM. The testing was conducted to determine the significance of the relationships among latent variables using

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path coefficients, t-statistics, and p-values. A hypothesis is considered significant if it meets the criteria of t-statistic ≥ 1.96 or p-value ≤ 0.05.

Table 7 Bootstrapping (Path Coefficient)

Variable Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
Sustainable Innovation (X4) → Purchase Decision (Y)	0.152	0.155	0.045	3.343	0.001
Brand Trust (X2) → Purchase Decision (Y)	0.442	0.440	0.064	6.950	0.000
After-Sales Service (X1) → Purchase Decision (Y)	0.243	0.240	0.088	2.757	0.006
Social Media (X3) → Purchase Decision (Y)	0.179	0.182	0.089	2.006	0.045

Note: Processed data using SmartPLS 4.0.

The results of the hypothesis testing indicate that all independent variables have a positive and significant effect on Samsung smartphone Purchase Decisions in Tangerang. After-Sales Service has a positive effect with a path coefficient of 0.243, a t-statistic of 2.757, and a p-value of 0.006 (< 0.05), therefore H1 is accepted. Brand Trust shows the most dominant influence, with a coefficient of 0.442, a t-statistic of 6.950, and a p-value of 0.000 (< 0.05), confirming that an increase in consumer trust significantly drives purchase decisions; thus, H2 is accepted. Social Media is also proven to have a positive and significant effect, with a coefficient of 0.179, a t-statistic of 2.006, and a p-value of 0.045 (< 0.05). Although the magnitude of its effect is relatively smaller compared to the other variables, H3 is accepted. Sustainable Innovation has a coefficient of 0.152, a t-statistic of 3.343, and a p-value of 0.001 (< 0.05), indicating that product updates and innovative strategies significantly enhance purchase decisions; therefore, H4 is accepted. All results satisfy the rule of thumb for hypothesis testing, namely positive coefficients, t-statistics > 1.96, and p-values < 0.05.

Simultaneously, the four independent variables After-Sales Service, Brand Trust, Social Media, and Sustainable Innovation provide a strong contribution to Purchase Decision, as indicated by the R-square value of 0.669. This value suggests that 66.9% of the variance in Purchase Decision can be explained by the research model, while the remaining 33.1% is influenced by other factors outside the model. Thus, H5 is accepted, meaning that the four variables collectively exert a positive and significant influence on Purchase Decision and demonstrate that the structural model has good explanatory power in the context of Samsung smartphone consumer behavior in Tangerang.

The following section discusses the results of the structural model analysis and hypothesis testing based on the PLS-SEM output, with particular emphasis on path coefficients, significance levels, and their alignment with theory and previous studies. The results indicate that after-sales service has a positive and significant effect on Samsung smartphone purchase decisions, with a path coefficient of 0.243 and a p-value of 0.006. This finding suggests that the quality of repair services, ease of warranty claims, and responsiveness of post-purchase services enhance consumer confidence in making purchasing decisions. This result is consistent with the view of (Philip Kotler, Kevin Lane Keller, 2022) who emphasize the importance of after-sales service in building customer satisfaction and trust. Research (Ananta Ihza Mahendra, 2022) also supports the

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conclusion that after-sales service contributes to customer loyalty and repeat purchase decisions; therefore, in the context of Tangerang, this aspect serves as one of Samsung's competitive strengths.

Brand trust is proven to be the most dominant variable influencing purchase decisions, with a path coefficient of 0.442 and a p-value of 0.000. These results indicate that Samsung's reputation, consistency of quality, and perceived reliability are primary considerations for consumers. This finding supports the study by (Simangunsong & Sitanggang, 2023) which states that brand trust has a significant influence on smartphone purchase decisions. Furthermore, (Ananta Ihza Mahendra, 2022) asserts that trust provides a sense of security and reduces perceived risk in purchasing technology products. Thus, the higher the level of consumer trust in the Samsung brand, the stronger their tendency to make a purchase.

Social media also has a positive and significant effect on purchase decisions, with a coefficient of 0.179 and a p-value of 0.045. Although its contribution is smaller compared to the other variables, the role of social media remains relevant in shaping consumer perceptions through product information, user reviews, and digital promotions. This result is consistent with the findings of (Dolaria et al., 2025) and (Amelia et al., 2025) who state that exposure to digital content can increase purchase intention and decisions. In the context of the Tangerang market, which has high digital penetration, social media serves as an important reference source before consumers decide to purchase Samsung smartphones.

Sustainable innovation demonstrates a positive and significant effect, with a coefficient of 0.152 and a p-value of 0.001. Feature updates, technological development, design improvements, and energy efficiency enhancements strengthen the attractiveness of Samsung products in the eyes of consumers. This finding aligns with the research of (Rijal Ar Rasyid et al., 2025) which identifies innovation as a primary driver of smartphone purchase decisions. In addition, (Wadi et al., 2021) affirm that consumers tend to choose products that consistently demonstrate innovative capability. Therefore, sustainable innovation becomes a strategic factor in maintaining Samsung's relevance and competitiveness in a highly competitive market.

Simultaneously, the R-square value of 0.669 indicates that after-sales service, brand trust, social media, and sustainable innovation collectively explain 66.9% of the variance in Samsung smartphone purchase decisions in Tangerang. Brand trust emerges as the most dominant factor, followed by after-sales service, social media, and sustainable innovation. Theoretically, these results support consumer behavior theory, which posits that purchase decisions are influenced by a combination of functional, psychological, social, and technological factors. After-sales service represents the functional aspect, brand trust reflects the psychological aspect, social media embodies the social aspect, and sustainable innovation illustrates the technological aspect. Overall, these findings confirm that Samsung smartphone purchase decisions in Tangerang are shaped through a multidimensional interaction among these factors.

V. CONCLUSIONS

Based on the analysis of 250 Samsung smartphone users in Tangerang, this study concludes that all independent variables have a positive and significant effect on purchase

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decisions. After-sales service has been shown to enhance consumer confidence through ease of warranty claims, speed of repairs, and the quality of service provided. Brand trust emerges as the variable with the strongest influence, as Samsung's reputation, consistent product performance, and perceived reliability encourage consumers to choose the brand. Social media also plays a significant role through product information, user reviews, promotional content, and the influence of endorsers in shaping positive perceptions. In addition, sustainable innovation such as feature updates, the adoption of the latest technology, improved design, and environmentally friendly innovations constitutes an important consideration in purchase decisions.

The research model demonstrates good explanatory power, with an R^2 value of 0.669, indicating that after-sales service, brand trust, social media, and sustainable innovation collectively explain 66.9% of the variance in Samsung smartphone purchase decisions in Tangerang. Overall, purchase decisions are influenced by a combination of functional, psychological, social, and technological aspects that complement one another. These findings affirm that effective marketing strategies should not focus solely on product superiority but also on service quality, trust enhancement, digital interaction optimization, and continuous innovation.

Based on these findings, companies should maintain and improve the quality of after-sales service, strengthen brand trust through consistent quality and transparent communication, optimize digital marketing through informative content and collaborations with influencers, and continuously develop product innovations that align with consumer needs. Consumers are encouraged to be more discerning in evaluating features, innovations, and after-sales service before making a purchase, as well as to utilize social media information objectively. Future researchers are advised to incorporate additional variables such as price, brand image, product quality, or digital promotion, and to expand the research scope to different brands or regions in order to obtain a more comprehensive understanding.

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