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The Consumer Preferences for Apple and Samsung Flagship Smartphones in Surabaya Using Choice-Based Conjoint Analysis

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ABSTRACT

This study examines consumer preferences for Apple and Samsung flagship smartphones in Surabaya by applying choice-based conjoint analysis in a realistic multi-attribute choice setting. The research focuses on six attributes that are highly relevant in the premium smartphone market based on expert judgement justification. The study identifies the most preferred product configuration based on estimated utility value, the relative importance of each attribute, and market preference simulation using Lighthouse Studio by Sawtooth Software. The findings indicate that respondents tend to prefer an Apple brand smartphone offered at a lower price range, with larger internal memory, a higher-resolution main camera, a larger battery, and cashback promotion. The results also show that brand and price are the dominant determinants of preference. In addition, the market simulation suggests that a more balanced product concept can outperform the newer or premium alternatives when consumers evaluate trade-offs simultaneously.

INTRODUCTION

Smartphones are no longer used solely as communication devices. Today, they serve as essential tools for work, entertainment, social networking, digital payments, photography, and access to a wide range of online services. As smartphone adoption continues to grow, consumers face increasingly complex purchasing decisions because they are evaluating not only the device's technical specifications but also the functional benefits, user experience, and symbolic value associated with the product. This complexity is particularly evident in the flagship smartphone market, where premium prices, rapid technological advancements, and intense competition require consumers to carefully consider their choices to avoid making a costly purchasing mistake. (Kotler & Keller, 2016; Schiffman & Wisenblit, 2019; Bali et al., 2023).

In Indonesia, the digital environment reinforces the strategic importance of the smartphone category. DataReportal reported that Indonesia had 212 million internet users at the beginning of 2025, with internet penetration reaching 74.6% of the population, indicating

that smartphones operate within a broad and increasingly mature digital ecosystem (DataReportal, 2025). Market competition is also intense. Statcounter's data for March 2026 show that Samsung accounted for 16.00% of Indonesia's mobile vendor market share, while Apple reached 14.97%, placing both brands among the most visible competitors in the national smartphone landscape (Statcounter, 2026). These figures confirm that Apple and Samsung are commercially important reference brands in Indonesia, including in the premium segment.

Purchasing a smartphone is rarely an impulsive decision. Consumers generally spend time gathering information, comparing alternatives, and evaluating various product attributes before making a final choice. According to the Android Path to Purchase report by Google Indonesia (2019), Indonesian consumers typically take around 14 days to decide on a smartphone purchase, and many of them report feeling overwhelmed by the large number of options available in the market. This condition supports the view of Bettman et al. (1998), who argue that when faced with complex purchasing situations, consumers tend to simplify their decision-making process by making trade-offs among product attributes rather than evaluating every feature in a fully rational and comprehensive manner. Such behavior is particularly relevant in the flagship smartphone segment, where consumers must weigh multiple factors, including brand reputation, ecosystem compatibility, price, camera quality, memory capacity, battery performance, and promotional incentives. As a result, understanding how consumers balance these competing attributes becomes increasingly important.

Surabaya represents an appropriate context for this study due to its position as one of Indonesia's largest metropolitan cities and economic centers. According to the local statistics office, Surabaya had a population of approximately 3.02 million people in 2024, while its economy grew by 5.76% during the same year (BPS Kota Surabaya, 2024a, 2025). These figures indicate a large urban market with strong economic activity and purchasing power. Furthermore, consumers in Surabaya generally have greater exposure to modern retail environments, digital technologies, and premium consumer products, making the city particularly relevant for research on flagship smartphone preferences. Focusing on a specific metropolitan area also allows the study to generate insights that are more contextually relevant and actionable, while reducing the risk of overgeneralizing consumer behavior based solely on national-level data.

Previous research has shown that consumers consider a variety of factors when choosing a smartphone. Price value, compatibility with user needs, expected performance, product visibility, and the desire to adopt newer technology have all been identified as important determinants of smartphone adoption (Mehra et al., 2022). In addition, technical specifications such as storage capacity, camera quality, and overall device performance often play a significant role in shaping consumer evaluations (Ahmad et al., 2019; Bali et al., 2023). Studies conducted in Indonesia further suggest that smartphone preferences are influenced by

a combination of product features, price, brand image, and marketing activities (Tulipa et al., 2024). While these studies have provided valuable insights into the factors affecting smartphone purchase decisions, most have examined these variables individually through methods such as regression analysis, factor analysis, or descriptive rankings. In practice, however, consumers typically evaluate several attributes simultaneously and make trade-offs between competing alternatives. For example, they may accept a higher price for a preferred brand, sacrifice storage capacity for a better camera, or choose a product with fewer features because it offers greater perceived value. As a result, approaches that can capture these trade-offs are needed to better reflect how consumers actually make smartphone purchase decisions.

This limitation highlights an important research gap. When purchasing a smartphone, consumers do not evaluate attributes such as brand, camera quality, battery capacity, or price in isolation. Instead, they assess a complete product that combines multiple attributes and make decisions based on the overall package offered by each alternative. Therefore, understanding consumer preferences requires an approach that can capture the trade-offs consumers make when comparing different smartphone configurations. Choice-Based Conjoint (CBC) Analysis is well suited for this purpose because it derives preferences from repeated choices among competing product profiles, allowing researchers to observe decision-making patterns that more closely resemble actual market behavior than traditional rating-based methods (Green & Srinivasan, 1990; Louviere et al., 2000; Orme, 2019). By estimating the utility associated with each attribute level and its relative importance, CBC provides insights into the factors that drive consumer choice and offers practical guidance for product positioning, pricing strategies, and promotional planning.

Another research gap lies in the focus of previous studies. Most smartphone-related research in Indonesia has examined the market as a whole or concentrated on general consumer segments, with limited attention given to the flagship category. This study specifically focuses on flagship smartphones from Apple and Samsung because consumer decision-making in the premium segment tends to differ from that in the broader smartphone market. Consumers purchasing flagship devices are often willing to invest a substantial amount of money and therefore consider a wider range of factors beyond basic functionality. In addition to performance and price, they may evaluate ecosystem integration, brand prestige, long-term software support, storage capacity, camera capabilities, and the overall value received for a premium price. As a result, the way consumers make trade-offs in this segment is likely to be more complex, making it important to examine flagship smartphone preferences as a distinct area of investigation rather than treating them as part of the general smartphone market.

Based on the development of this study, flagship smartphone preferences are examined through six attributes: brand, price, internal memory, main camera, battery, and promotion. These attributes were selected because they represent the key factors consumers typically consider when evaluating premium smartphones. Brand reflects reputation and ecosystem

value, price represents the financial sacrifice involved, internal memory and main camera capture functional performance, battery indicates everyday usability, and promotion represents marketing incentives. Examining these attributes simultaneously allows this study to better understand how consumers make trade-offs when choosing among competing flagship smartphone alternatives.

This study offers three main contributions. First, it applies Choice-Based Conjoint (CBC) Analysis to the flagship smartphone market in Surabaya, a context that has received limited attention in Indonesian marketing research. Second, it examines consumer preferences through trade-offs among six key smartphone attributes, providing a more realistic representation of the purchase decision process. Third, it generates practical insights that can support product development, pricing, and promotional strategies in the premium smartphone market. Therefore, this study aims to analyze consumer preferences for Apple and Samsung flagship smartphones in Surabaya, identify the relative importance of each attribute, and determine the most preferred combination of attributes within the simulated choice scenarios.

METHOD

This study employed a quantitative research design using Choice-Based Conjoint (CBC) Analysis to examine consumer preferences for flagship smartphones. CBC was selected because it allows respondents to choose among competing product profiles, thereby reflecting actual purchase decisions more realistically than evaluating individual attributes separately (Louviere et al., 2000; Orme, 2019; Rao, 2014). The study focused on consumers residing in Surabaya, with respondents screened to ensure they had previously purchased or intended to purchase a smartphone priced above IDR 10 million and were current residents of the city. Data were collected through an online questionnaire presenting simulated purchase scenarios involving flagship smartphones from Apple and Samsung.

The conjoint design was developed through a literature review and expert judgment process. Six attributes were included in the final model: brand, price, internal memory, main camera, battery, and promotion. Each attribute was represented by market-relevant levels that reflected conditions commonly found in the flagship smartphone segment. To improve design efficiency while maintaining respondent engagement, the questionnaire was generated into 12 versions, each containing a series of choice tasks in which respondents selected one preferred smartphone profile from three alternatives.

Data were analyzed using Hierarchical Bayes estimation in Sawtooth Software to calculate part-worth utilities and attribute importance scores at the individual level (Orme, 2019). The analysis produced utility values for each attribute level, relative importance scores, and preference simulations for alternative smartphone configurations. Positive utility values indicate stronger consumer preference, whereas negative values indicate lower preference relative to other levels within the same attribute. Together, these results provide insights into the trade-offs consumers make when choosing flagship smartphones and help identify the most preferred product configuration among the alternatives evaluated.

Table 1. *Attributes and Levels Used in The Choice-based Conjoint Design*

Attribute	Level	Rationale
Brand	Apple; Samsung	Represents ecosystem, brand reputation, and symbolic value in flagship competition.
Price	IDR 12-15 mio; >15-20 mio; >20 mio	Captures monetary sacrifice and willingness to pay in the premium segment.
Internal memory	256 GB; 512 GB; ≥1 TB	Represents storage adequacy, long-term utility, and perceived technical value.
Main camera	48 MP; >48-50 MP; 200 MP	Reflects image quality expectations and content-creation relevance.
Battery	<4500 mAh; 4500-5000 mAh; >5000 mAh	Represents endurance, convenience, and perceived daily reliability.
Promotion	No promotion; Cashback; Gift	Captures short-term marketing incentives that may shift preference.

RESULTS AND DISCUSSION

The analysis was based on 188 valid respondents who met all screening criteria, namely willingness to participate, residence in Surabaya, and prior experience of purchasing or intention to purchase a smartphone priced above Rp10 million. The questionnaires were distributed in 12 CBC versions and then combined into a single analytical dataset. Demographically, the sample was dominated by respondents aged 20-30 years (72.87%), followed by those aged 31-40 years (19.68%). Female respondents accounted for 62.77% of the sample, while males accounted for 37.23%. Most respondents held a bachelor's degree or equivalent (68.08%), worked primarily as private employees (43.03%), and reported monthly income of Rp5-10 million (47.87%). This profile indicates that the study largely captured young adult, educated, and economically active urban consumers who are highly relevant to the target market for flagship smartphones.

Table 2. *Demographic Respondent Result*

	Category	Frequency	Percentage (%)
Age (y)	<20	2	1,06
	20-30	137	72,87
	31-40	37	19,68
	41-50	12	6,38
	>50	0	0
Gender	Male	70	37,23
	Female	118	62,77
Education	Elementary School	0	0
	Junior High School	0	0
	Senior High School	32	17,02
	Diploma 3	4	2,13
	Bachelor	128	68,09
	Master	24	12,77
	Doctor	0	0
Profesion	Student	33	17,55
	Private's Employee	81	43,09
	State's Employee	37	19,68
	Entrepreneur	15	7,98
	Others	22	11,7
Monthly Income (mio IDR)	<5	49	26,06
	5-10	90	47,87
	10-15	24	12,77
	15-20	13	6,91
	>20	12	6,38

Part-worth utility estimation showed a clear preference structure across the six product attributes. For brand, Apple generated a positive average utility of 74.27, whereas Samsung produced a negative utility of -74,27, indicating a stronger aggregate preference for Apple. For price, the range of Rp12-15 million yielded the highest utility (50.31), followed by >Rp15-20 million (15.33), while prices above Rp20 million produced the lowest utility (-65.63). For internal memory, the most preferred level was at least 1 TB (36,18), followed by 512 GB (-2,52) and 256 GB (-33,66). For main camera, 200 MP recorded the highest utility

(20.13), whereas >48-50 MP (-5.77) and 48 MP (-14.36) were less preferred. For battery capacity, >5000 mAh provided the highest utility (16.49), followed by 4500-5000 mAh (-0.66), while <4500 mAh was least preferred (-15.83). For promotion, cashback showed the strongest utility (19.79), compared with gifts (-2.09) and no promotion (-17.70). Taken together, these utilities indicate that the most preferred product bundle is an Apple flagship smartphone priced at Rp12-15 million, equipped with at least 1 TB internal memory, a 200 MP main camera, battery capacity above 5000 mAh, and cashback promotion.

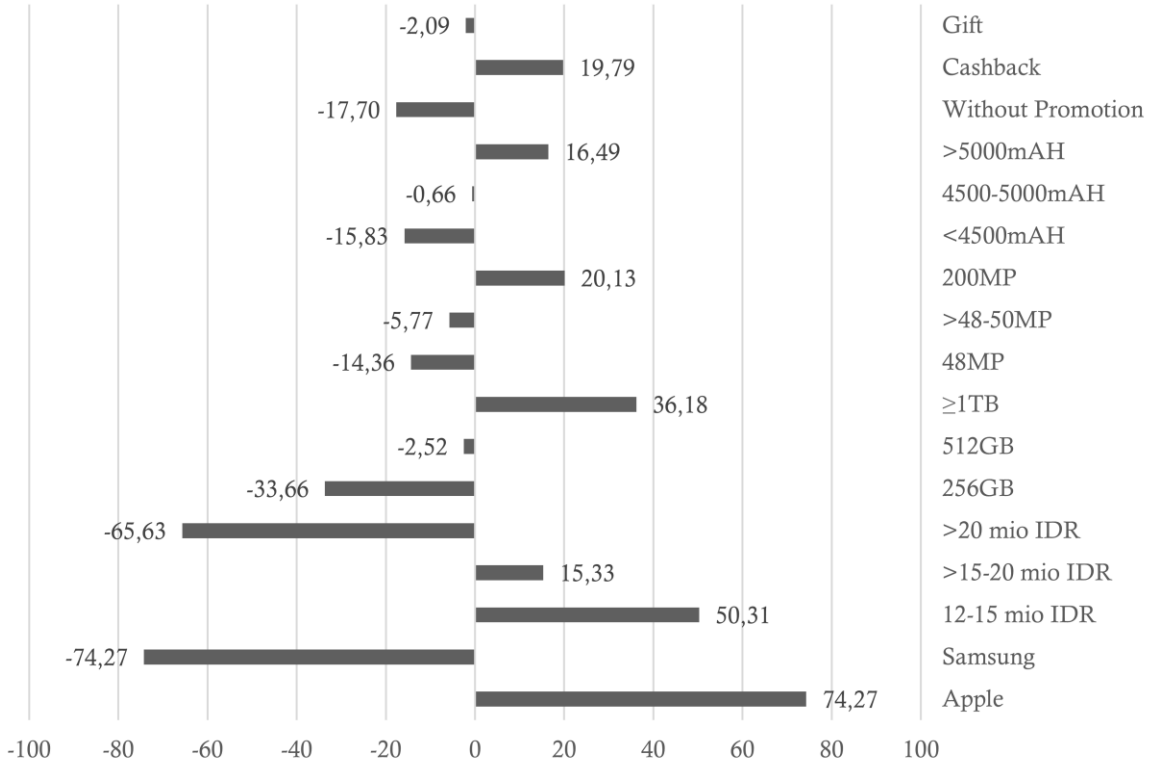

Figure 1. *Estimated Average Utility*

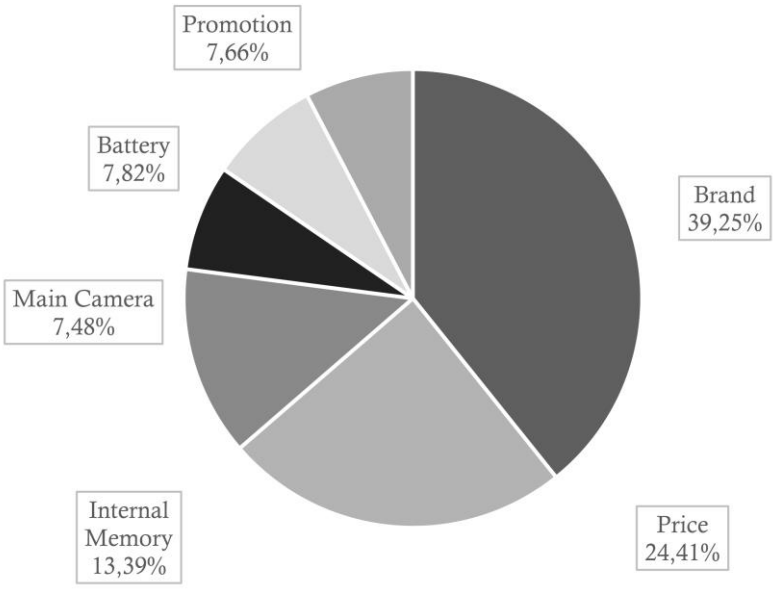

Figure 2. *Attribute Importance Value*

Attribute importance analysis further clarifies how consumers prioritize trade-offs. Brand was the most influential attribute with an average importance value of 39.25%, followed by price at 24.41%, internal memory at 13.39%, battery at 7.82%, promotion at 7.66%, and main camera at 7.48%. These findings imply that the flagship smartphone decision is driven first by symbolic-market considerations and economic sacrifice, and only afterward by functional specifications. In other words, respondents do not evaluate premium smartphones solely on the basis of technical superiority; they also interpret brand as a signal of prestige, ecosystem trust, and overall product assurance. The relatively high standard deviations for brand and price, as reported in the thesis, also suggest heterogeneity in the sample, meaning that not all consumers weight these attributes in exactly the same way.

Table 4. *Product Concepts Included in the Market Simulator*

Product	Brand	Price (mio IDR)	Internal memory (GB)	Main camera (MP)	Battery (mAh)	Promotion
iPhone 17 Pro Max	Apple	>20	256	48 MP	4500-5000	No Promotion
Samsung Galaxy S26 Ultra	Samsung	>20	256	200 MP	>5000	Gift
Samsung Galaxy S25	Samsung	12-15 mio	256	48-50 MP	<4500	Cashback
iPhone 16 Pro	Apple	>15-20	256	48 MP	<4500	Cashback
iPhone 16 Pro Max 512GB	Apple	>20	512	48 MP	4500-5000	Cashback

The latest thesis version also includes a market preference simulation using the Randomized First Choice market simulator. Across five flagship products, iPhone 16 Pro 256GB obtained the highest simulated share of preference at 43.5%, followed by Samsung Galaxy S25 256GB at 23.0%, Samsung Galaxy S26 Ultra 256GB at 14.9%, iPhone 16 Pro Max 512GB at 13.2%, and iPhone 17 Pro Max 256GB at 5.3%. This result is important because it shows that the market winner is not necessarily the newest or most premium concept, but the concept that offers the most acceptable overall trade-off between brand strength, price positioning, and functional adequacy.

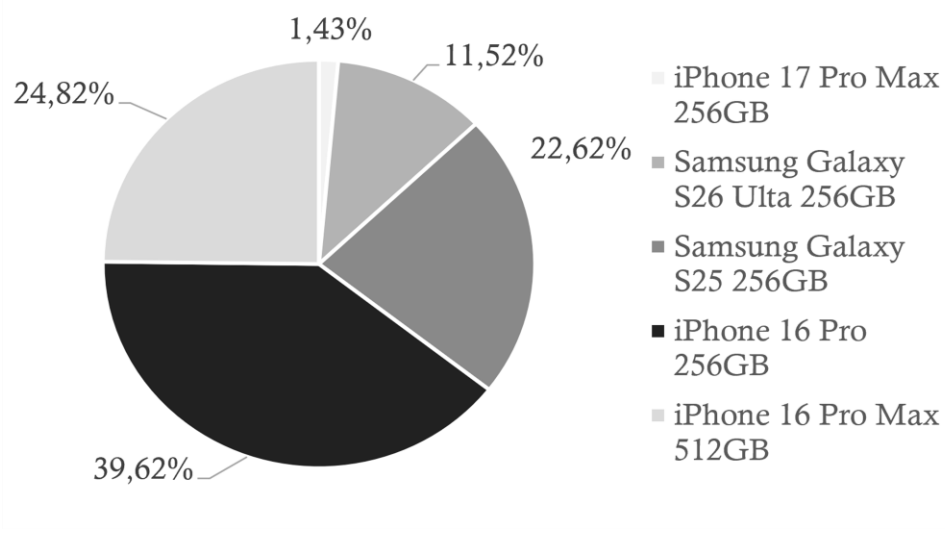

Figure 1. *Market Preference Simulation for Five Flagship Smartphone Concepts*

The findings indicate that brand is the most influential factor in consumers' preferences for flagship smartphones, accounting for 39.25% of total attribute importance. This result suggests that consumers in the premium smartphone segment place substantial value on brand-related benefits beyond technical specifications. The strong positive utility associated with Apple indicates that respondents perceive greater value in the Apple ecosystem, brand reputation, and overall user experience. This finding supports previous studies showing that brand image and perceived value play a significant role in shaping smartphone purchase decisions, particularly in higher-priced market segments where symbolic and experiential benefits become increasingly important (Tulipa et al., 2024; Mehra et al., 2022). The result also reinforces the argument that flagship smartphone purchases are not driven solely by functional performance but are closely associated with prestige, trust, and long-term ecosystem considerations.

Price emerged as the second most important attribute, indicating that although respondents were screened as consumers who had purchased or intended to purchase smartphones priced above Rp10 million, economic considerations remained highly relevant. The highest utility was observed for the Rp12–15 million price range, while smartphones priced above Rp20 million generated substantial negative utility. This finding suggests that consumers seek a balance between premium quality and perceived value rather than simply preferring the most expensive option. Such behavior is consistent with consumer decision-making theory, which argues that individuals evaluate products through trade-offs between expected benefits and monetary sacrifice (Bettman et al., 1998). In the flagship smartphone market, consumers appear willing to pay a premium, but only when the additional benefits are perceived as justifying the higher price.

Among the functional attributes, internal memory was the most influential, followed by battery capacity, promotion, and camera quality. The strong preference for storage capacity of at least 1 TB indicates that respondents increasingly view smartphones as multifunctional devices used for content creation, entertainment, productivity, and long-term data storage. This finding aligns with previous studies highlighting the importance of technical specifications in smartphone evaluation (Ahmad et al., 2019; Bali et al., 2023). Interestingly, although camera performance is frequently emphasized in smartphone marketing, its relative importance was lower than that of internal memory. This suggests that for potential flagship buyers in Surabaya, storage capacity may provide greater practical value than incremental improvements in camera specifications.

The preference for battery capacity above 5,000 mAh further reflects consumers' concern for device reliability and uninterrupted daily use. As smartphones increasingly serve as primary tools for communication, work, entertainment, navigation, and digital transactions, battery performance becomes a critical component of user experience. Likewise, the positive utility associated with cashback promotions indicates that financial incentives remain effective even in the premium segment. Consumers may perceive cashback as a direct economic benefit that reduces the overall purchase burden, making it more attractive than non-monetary promotional incentives such as gifts.

The market simulation results provide additional insight into how consumers evaluate complete product bundles rather than isolated attributes. Although the most preferred attribute combination theoretically consisted of an Apple smartphone priced at Rp12–15 million with 1 TB storage, a 200 MP camera, battery capacity above 5,000 mAh, and cashback promotion, the highest simulated market preference was obtained by the iPhone 16 Pro rather than the most premium or technologically advanced concept. This finding highlights a key contribution of conjoint analysis: consumer preferences are shaped by the overall balance of attributes rather than by maximizing individual features. The superior performance of the iPhone 16 Pro suggests that respondents perceived it as offering the most attractive combination of brand value, price acceptability, and functional adequacy. Conversely, concepts such as the iPhone 17 Pro Max and Samsung Galaxy S26 Ultra were penalized by their higher price positioning despite possessing stronger technical specifications.

These findings support the central premise of conjoint theory that consumers evaluate products as bundles of attributes and make decisions through a process of trade-offs among competing benefits and costs (Green & Srinivasan, 1990; Louviere et al., 2000; Orme, 2019). The results also address the research gap identified in previous smartphone studies, which have often examined product attributes individually through regression or descriptive approaches. By using Choice-Based Conjoint Analysis, this study demonstrates that consumer preferences in the flagship smartphone market cannot be fully understood by analyzing single attributes in isolation. Instead, purchase decisions emerge from the interaction between symbolic factors such as brand, economic considerations such as price, and functional

attributes such as storage, battery, camera, and promotion. This perspective provides a more realistic representation of how consumers evaluate flagship smartphones in actual market settings.

CONCLUSION

This study demonstrates that consumer preferences for flagship smartphones in Surabaya are shaped by a combination of symbolic, economic, and functional considerations. By applying Choice-Based Conjoint Analysis, the study provides a more realistic understanding of how consumers evaluate smartphone alternatives, as respondents were required to make trade-offs among multiple attributes rather than assess each attribute separately.

The findings reveal that brand plays the most important role in influencing consumer preferences, followed by price and internal memory. Apple was generally preferred over Samsung, while lower price levels, larger storage capacity, higher battery capacity, and cashback promotions generated more favorable evaluations. These results suggest that consumers in the flagship segment do not focus solely on technical specifications but also consider brand reputation, ecosystem value, and the overall benefits received relative to the price paid.

The study also shows that the most preferred product configuration does not automatically translate into the strongest market preference when evaluated as a complete product concept. The market simulation indicates that consumers tend to favor smartphone offerings that provide the most balanced combination of brand strength, price, and functional performance. This finding highlights the importance of understanding consumer decision-making as a trade-off process rather than assuming that superior specifications alone will drive market preference.

Overall, this research contributes to the growing literature on smartphone consumer behavior by providing evidence from the flagship smartphone market in Surabaya and demonstrating the usefulness of Choice-Based Conjoint Analysis in capturing consumer preferences. The findings offer practical insights for smartphone manufacturers and retailers in designing product, pricing, and promotional strategies that better align with consumer expectations in the premium smartphone segment.

REFERENCES

Ahmad, W., Ahmed, T., & Ahmad, B. (2019). Pricing of mobile phone attributes at the retail level in a developing country: Hedonic analysis. Telecommunications Policy, 43(4), 299-309. https://doi.org/10.1016/j.telpol.2018.10.002

Aja, U., Rahman, D., & Prasetyo, E. (2025). Decision Support System for Smartphone Selection for Consumers Using Conjoint Analysis. Journal of Information Technology, 12(1), 1-12.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. Journal of Consumer Research, 13(4), 411-454. https://doi.org/10.1086/209080

Statistics Indonesia (BPS) Surabaya City. (2024a). Surabaya City in Figures 2024. BPS Surabaya City.

Statistics Indonesia (BPS) Surabaya City. (2024b). Regional Statistics of Surabaya City 2024. BPS Surabaya City.

Statistics Indonesia (BPS) Surabaya City. (2025). The Economy of Surabaya City Grew by 5.76 Percent in 2024. BPS Surabaya City.

Baganzi, R., Shin, G. C., & Wu, S. (2017). Using choice-based conjoint analysis to determine smartphone choice: A student's perspective. Journal of Information Technology Applications and Management, 24(4), 93-115.

Bali, S., Sharma, P., & Singh, R. (2023). A framework to assess the smartphone buying behaviour using DEMATEL method in the Indian context. Global Business and Organizational Excellence, 42(5), 6-20.

Batra, R., & Ahtola, O. T. (1991). Measuring the hedonic and utilitarian sources of consumer attitudes. Marketing Letters, 2(2), 159-170. https://doi.org/10.1007/BF00436035

Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. Journal of Consumer Research, 25(3), 187-217. https://doi.org/10.1086/209535

Bisenebit, L., & Chankov, S. M. (2023). The value of product repairability: A choice-based conjoint analysis on smartphone preference. In 2023 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM) (pp. 1-6). IEEE. https://doi.org/10.1109/IEEM58616.2023.10406892

Boutaleb, B., El Khamlichi, A., & Tazi, M. A. (2024). Factors influencing smart phone buying behavior of consumers: Implications for building a marketing strategy. Business Ethics and Leadership, 8(3), 71-81. https://doi.org/10.61093/bel.8(3).71-81.2024

Cattin, P., & Wittink, D. R. (1982). Commercial use of conjoint analysis: A survey. Journal of Marketing, 46(3), 44-53. https://doi.org/10.1177/002224298204600307

Chandon, P., Wansink, B., & Laurent, G. (2000). A benefit congruency framework of sales promotion effectiveness. Journal of Marketing, 64(4), 65-81. https://doi.org/10.1509/jmkg.64.4.65.18071

DataReportal. (2024). Digital 2024: Indonesia. Kepios.

DataReportal. (2025). Digital 2025: Indonesia. Kepios.

Fernando, C., Horne, R., & Bocken, N. (2023). Integration of consumer preferences into dynamic life cycle assessment using conjoint analysis. The International Journal of Life Cycle Assessment, 28, 1045-1062.

Gao, J., Xu, Y., & Li, H. (2024). Exploring smartphone user interface experience-sharing behaviors for product design improvement. Sustainability, 16(15), Article 6670. https://doi.org/10.3390/su16156670

Good, M. C., & Hyman, M. R. (2020). Fear of missing out: Antecedents and influence on purchase likelihood. Journal of Marketing Theory and Practice, 28(3), 330-341. https://doi.org/10.1080/10696679.2020.1766359

Google Indonesia. (2019, May 8). It turns out that Indonesians need 14 days to decide on purchasing a smartphone. Google Indonesia Blog.

Green, P. E., & Rao, V. R. (1971). Conjoint measurement for quantifying judgmental data. Journal of Marketing Research, 8(3), 355-363. https://doi.org/10.1177/002224377100800314

Green, P. E., & Srinivasan, V. (1978). Conjoint analysis in consumer research: Issues and outlook. Journal of Consumer Research, 5(2), 103-123. https://doi.org/10.1086/208721

Green, P. E., & Srinivasan, V. (1990). Conjoint analysis in marketing: New developments with implications for research and practice. Journal of Marketing, 54(4), 3-19. https://doi.org/10.1177/002224299005400402

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Danks, N. P., & Ray, S. (2022). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook. Springer.

Hanemann, W. M. (1984). Discrete/continuous models of consumer demand. Econometrica, 52(3), 541-561. https://doi.org/10.2307/1913464

IDC. (2024). Worldwide quarterly mobile phone tracker. International Data Corporation.

Karim, A., Lubis, M., & Siregar, R. (2025). Uncovering smartphone brand strategies through specification-based clustering and explainable machine learning. Bulletin of Information Technology, 6(2), 1-8.

Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. Journal of Marketing, 57(1), 1-22. https://doi.org/10.1177/002224299305700101

Kotler, P., & Keller, K. L. (2016). Marketing management (15th ed.). Pearson.

Lancaster, K. J. (1966). A new approach to consumer theory. Journal of Political Economy, 74(2), 132-157. https://doi.org/10.1086/259131

Louviere, J. J., Hensher, D. A., & Swait, J. D. (2000). Stated choice methods: Analysis and applications. Cambridge University Press.

Malhotra, N. K. (2010). Marketing research: An applied orientation (6th ed.). Pearson.

Mazurek, J., Kaczmarek, J., & Wielgórska-Leszczyńska, J. (2025). Greening the telecommunications industry: Consumer preferences and surcharges for environmental attributes of mobile phone plans. Telecommunications Policy, 49(5), Article 102959.

McFadden, D. (1974). Conditional logit analysis of qualitative choice behavior. In P. Zarembka (Ed.), Frontiers in econometrics (pp. 105-142). Academic Press.

Mehra, A., Paul, J., & Sharma, P. (2022). Determinants of adoption of latest version smartphones: Theory and evidence. Technological Forecasting and Social Change, 175, Article 121393.

Monroe, K. B. (1990). Pricing: Making profitable decisions (2nd ed.). McGraw-Hill.

Netemeyer, R. G., Krishnan, B., Pullig, C., Wang, G., Yagci, M., Dean, D., Ricks, J., & Wirth, F. (2004). Developing and validating measures of facets of customer-based brand equity. Journal of Business Research, 57(2), 209-224. https://doi.org/10.1016/S0148-2963(01)00303-4

Orme, B. K. (2010). Getting started with conjoint analysis: Strategies for product design and pricing research (2nd ed.). Research Publishers.

Orme, B. K. (2019). Getting started with conjoint analysis: Strategies for product design and pricing research (4th ed.). Research Publishers.

Park, C. W., Jun, S. Y., & MacInnis, D. J. (2000). Choosing what I want versus rejecting what I do not want: An application of decision framing to product option choice decisions. Journal of Marketing Research, 37(2), 187-202. https://doi.org/10.1509/jmkr.37.2.187.18731

Peter, J. P., & Olson, J. C. (2010). Consumer behavior and marketing strategy (9th ed.). McGraw-Hill/Irwin.

Rao, V. R. (2014). Applied conjoint analysis. Springer.

Schiffman, L. G., & Wisenblit, J. (2019). Consumer behavior (12th ed.). Pearson.

Statcounter. (2026). Mobile vendor market share Indonesia - March 2026. Statcounter Global Stats.

Train, K. E. (2009). Discrete choice methods with simulation (2nd ed.). Cambridge University Press.

Tulipa, D., Kurniawan, H., & Sari, F. (2024). Analysis of millennial generation preferences towards brand switching decisions to smartphone OPPO brand in Jabodetabek. Dinasti International Journal of Education Management and Social Science, 5(5), 1-13.

Tversky, A. (1972). Elimination by aspects: A theory of choice. Psychological Review, 79(4), 281-299. https://doi.org/10.1037/h0032955

Vriens, M., Wedel, M., & Wilms, T. (1998). Metric conjoint segmentation methods: A Monte Carlo comparison. Journal of Marketing Research, 35(1), 73-85. https://doi.org/10.1177/002224379803500107

Wartaka, M., & Sumardjono, S. (2020). Pengaruh preferensi konsumen terhadap keputusan pembelian smartphone. Jurnal Ekonomi dan Bisnis, 8(2), 101-112.

We Are Social, & Meltwater. (2024). Digital 2024: Global overview report. We Are Social.

Wedel, M., & Kamakura, W. A. (2000). Market segmentation: Conceptual and methodological foundations (2nd ed.). Springer.

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. Journal of Marketing, 52(3), 2-22. https://doi.org/10.1177/002224298805200302

Zhao, L., Wang, X., & Chen, Y. (2025). Understanding the influence of personalized recommendations on consumer preferences in mobile commerce. Journal of Theoretical and Applied Electronic Commerce Research, 20(1), 32.

Zwicker, M. V., Chappin, E., & Bocken, N. (2023). Intentions to purchase a sustainable mobile phone by reducing perceived uncertainty. Cleaner and Responsible Consumption, 10, Article 100165. https://doi.org/10.1016/j.clrc.2023.100165