



Product Influence Matrix on Purchase Intentions: Unravelling the Dynamics of Consumer Perception Towards Smartphone

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ARTICLE INFO

Keywords: Brand, Compatibility, Consumer, Intentions, Perception, Product

Received : 27, February

Revised : 20, March

Accepted: 25, April

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ABSTRACT

This research study aims to examine consumer perceptions regarding the product influence matrix and its impact on purchase intentions among smartphone users in the Kathmandu Valley of Nepal. A descriptive and exploratory research design was employed, and data was collected through questionnaires distributed both in-person and online. The sample size of 412 respondents was determined using non-probability convenience sampling. The results showed that compatibility, brand, product features, and social influence were positively perceived by consumers, with compatibility and brand being the most influential factors. However, purchase intention received a slightly lower mean score, suggesting that there might be other factors influencing consumers' purchase decisions. The correlation analysis revealed significant correlations between all the product influence factors and purchase intention. The multiple regression analysis demonstrated that the combination of compatibility, brand, product features, and social influence significantly predicted purchase intention, explaining approximately 65.4% of its variance. The findings suggest that building strong brands, emphasizing attractive product features, and leveraging social influence can positively impact consumers' purchase intentions. The study provides valuable insights for smartphone marketers in understanding and influencing consumer behaviour in the Kathmandu Valley market context.

INTRODUCTION

While past studies provided useful insights, none have clearly examined the impact of all four key factors of the Product Influence Matrix - Compatibility, Brand, Product Features, and Social Influence - simultaneously in one model. Looking at these constructs together will provide a more holistic picture of their relative and combined effects on purchase intentions. Examining the variables as a unified framework, as this study aims to do, allows for a more rigorous test of how they interrelate to shape consumer decision making. Additionally, most prior work had fairly small sample sizes, limiting generalizability and statistical power to detect possible relationships. This study proposes collecting data from over 400 participants from the target population. A larger sample improves the ability to derive robust findings and confidently make inferences about the broader smartphone using population in Kathmandu Valley. It increases the study's methodological exactitude and trustworthiness of conclusions. Furthermore, conducting the research using up-to-date data from early 2024 ensures insights directly relevant to current market trends and conditions. Timely empirical evidence is especially important for the fast-paced smartphone industry and enables organizations to promptly act on marketing strategy recommendations. This study directly addresses gaps in comprehensively and rigorously examining the key purchase influencers together in the Nepali context with an enlarged, contemporary sample.

Objectives

1. To assess consumer perceptions regarding the product influence matrix and Purchase Intentions.
2. To examine the relationship between the product influence matrix factors (Compatibility, Brand, Product Features, Social Influence) and purchase intention.
3. To identify the impact of the product influence matrix factors on purchase intention.

Hypothesis

1. There is no significance relationship between brand and purchase intention
2. There is no significance relationship between social influence and purchase intention
3. There is no significance relationship between product features and purchase intention
4. There is no significance relationship between compatibility and purchase intention

LITERATURE REVIEW

Product influence factors encompass a variety of elements that exert an impact on the success and reception of a product in the market. These factors hold significant importance in shaping how consumers perceive a product, make purchase decisions, and experience satisfaction with their choices (Šostar & Ristanović, 2023). Key influence factors include Product Features, Compatibility,

Brand and Social Influence (Sthapit, Laohakosol, & Sharma, 2018; Kim & Park, 2011). The features and characteristics of a product are essential in shaping consumer perceptions and purchase decisions. Consumers evaluate products based on their functionality, performance, design, and unique attributes (Antonides & Hovestadt). Products that offer innovative features, solve specific problems, or provide enhanced convenience are more likely to attract consumer attention and generate interest. Compatibility influences ease of use, convenience, and the perceived value of a product. If a product is compatible with popular platforms or widely used technologies, it can increase its market appeal (Crespo, Sánchez, & Bosque, 2013). A strong and trusted brand can significantly influence consumer perceptions and purchase decisions. Consumers often rely on brand reputation as a signal of product quality, reliability, and customer support. A reputable brand with a history of delivering satisfactory products can enhance the acceptance and success of a new product (Hanaysha & Hilman, 2015). Consumers are often influenced by the opinions and behaviors of their friends, family, and social networks. Positive word-of-mouth, social media buzz, and endorsements from trusted individuals or groups can significantly shape consumer perceptions and drive product acceptance (Sijabat, Rantung, & Mandagi, 2022).

Purchase intentions refer to an individual's planned or anticipated behavior to make a purchase in the future. It represents the intention to engage in a specific buying action, which may or may not translate into an actual purchase (Li, Guo, Xu, & Yu, 2022). The primary driver of purchase intentions is the consumer's recognition of a need or desire for a particular product or service. If consumers perceive a gap between their current state and a desired state, they are more likely to develop a purchase intention to address that need or want. Consumers evaluate the value proposition of a product or service before forming a purchase intention. This involves assessing the perceived benefits, quality, and utility of the offering in relation to its price (Wang, et al., 2023). The reputation, image, and brand associations play a significant role in purchase intentions. Consumers may have positive or negative perceptions about a brand based on its reputation, previous experiences, recommendations, or marketing communications. A strong and trusted brand image can positively influence purchase intentions by building trust and credibility. Individual characteristics and preferences can also shape purchase intentions (Liu & Zheng, 2024). Factors such as personal values, lifestyle, income level, age, and gender may influence the likelihood of forming purchase intentions (Ali, Alam, & Ali, 2021).

Previous studies have extensively explored the factors influencing purchase intentions and their relationship to actual purchase behavior. An empirical study by Blanco-Encomienda et al. (2023) discovered that customer purchase intention is highly influenced by brand perception and attitude. Even in cases where the consumer's purchase intention is not directly influenced by the image of the country of origin, there is still an indirect effect. Another study found that among Malay women in Putrajaya, Malaysia, only product quality significantly influences their inclination to purchase foreign cosmetic items. It

was discovered that there was no significant correlation between purchase intention for foreign cosmetic items and packaging, brand name, or advertising (Izani, Omar, Sani, Thaheer, & Ahmad, 2023). Komalasari et al. (2021) highlight for e-commerce customers, purchasing intention positively influences purchase choice. It is significant to remember that powerful factors influencing buy intention, which in turn influences purchase choice, include perceived advantage, trust, and brand image. Ngo and Pham (2020) explore that Consumers' attitudes towards start-ups' products or services via social media are influenced by their perceptions of the advantages and the drawbacks, which in turn affects their inclination to buy. Similarly, consumers' perceptions about start-ups' goods or services on social media have a favorable impact on their propensity to make a purchase. Ali et al. (2020) indicate that social commerce, trust, and online behavioral advertising positively impact respondents' purchase intention. Social commerce boosts trust. Additionally, positive social commerce constructions reduce customer perception of online purchase hazards. Purchase intention is not significantly influenced by perceived risk, while trust negatively effects perceived risk. Bilal and Ali (2013) conduct regression analyze to test the responses. Based to research, customers' intentions to purchase private brands in Pakistan are primarily influenced by their perceptions of quality and price. Humagai (2022) conduct study in Consumer's Behaviour in Buying Smartphones in Kathmandu Valley identified variables like, promotional campaign, price, after sales service, mobile attributes, brand name & family and friend influence. Another study by Rai and Budhathok (2022) stated that brand personality does not have a major positive impact on the brand choice behavior of university students when it comes to purchasing laptops.

METHODOLOGY

The study employed a descriptive and exploratory research design with a cross-sectional time horizon to gain an understanding of consumer perceptions and purchase intentions. The population was defined as smartphone users living in the Kathmandu Valley region of Nepal. The following formula was implemented to determine the sample. A sample size of 412 respondents was determined to be adequate based on the population size. Non-probability convenience sampling was utilized due to time constraints. Questionnaires were distributed both in-person and online to reach a wider sample across the region. For in-person surveys, questionnaires were hand-delivered to known contacts including family, friends, coworkers and acquaintances located in various areas within the Kathmandu Valley. This helped obtain a representative sample from the local population. Online surveys were distributed via smartphone forums and social media platforms that are popular among Nepalese users. A screening question confirmed the respondents resided in Kathmandu Valley. This digital method helped supplement the in-person approach. After data collection, the Statistical Package for Social Sciences (SPSS) version 20 was employed to analyze the responses. Descriptive statistics characterized the sample and key variables. Inferential analyses including correlations and regression identified relationships and impact between consumer perception factors and purchase intention. Ethical practices were followed by obtaining respondents' consent for voluntary and

anonymous participation. This ensured privacy and guaranteed they faced no consequences from non-participation.

RESEARCH RESULT AND DISCUSSION

Descriptive Analysis

To better understand consumers' viewpoint on key influencing attributes, data was collected through a survey of smartphone users. Table 2 presents findings on perceptions of the Product Influence Matrix factors and purchase intention.

Table 2: Perception on Product influence matrix and purchase intention

S.N	Factors	N	Mean	Std. Deviation
1	Compatibility	412	2.7636	.50606
2	Brand	412	2.7555	.48620
3	Product Features	412	2.6222	.47927
4	Social Influence	412	2.6905	.48320
5	Purchase Intention	412	2.5558	.49571

Source: Field Survey, 2024

This table presents data on the factors that influence consumer perception and purchase intention towards a product. Compatibility emerges as the most positively perceived factor among consumers with a mean score of 2.7636 signifying that on average respondents agree that product compatibility significantly influences their purchasing decisions. Similarly, brand perception follows closely behind compatibility with a mean score of 2.7555 suggesting that consumers generally agree that brand reputation and trustworthiness play a significant role in their purchase considerations. Product features with a mean score of 2.6222 also hold considerable command over consumer perceptions, though slightly lower than compatibility and brand. Social influence, with a mean score of 2.6905, indicates that consumers tend to agree that the opinions and actions of others influence their purchase decisions to some extent. However, despite the generally positive perceptions towards these influencing factors, purchase intention receives a slightly lower mean score of 2.5558.

Correlation Test

To better understand the nature of the relationships between perceived Product Influence Matrix attributes and purchase intention, correlation analysis was conducted.

Table 3: Correlation Test between product influence matrix and purchase intentions

Correlations

		Compati bility	Bran d	Produ ct Featur es	Social Influen ce	Purcha se Intenti on
Compatibi lity	Pearson Correlati on	1				
	Sig. (2- tailed)					
	N	412				
Brand	Pearson Correlati on	.803**				
	Sig. (2- tailed)	.000				
	N	412	412			
Product Features	Pearson Correlati on	.782**	.808* *			
	Sig. (2- tailed)	.000	.000			
	N	412	412	412		
Social Influence	Pearson Correlati on	.804**	.817* *	.766**		
	Sig. (2- tailed)	.000	.000	.000		
	N	412	412	412	412	
Purchase Intention	Pearson Correlati on	.707**	.783* *	.728**	.731**	1
	Sig. (2- tailed)	.000	.000	.000	.000	
	N	412	412	412	412	412
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: Field survey, 2024

The correlations table shows the Pearson correlation coefficient (r) and significance values between each pair of factors. The Pearson r value indicates the strength and direction of association between two variables, ranging from -1 to 1. A value of 0 indicates no correlation. The significance values listed as "Sig. (2-tailed)" indicate whether each correlation is statistically significant. Since all

the correlations have a significance value of .000 which is less than the standard .01 level, reject the null hypothesis that there is no correlation. Therefore, based on the data in this table, can conclude that there are statistically significant correlations between all the factors compatibility, brand, product features, social influence and purchase intention.

Regression Analysis

Model summary provides valuable insights into the multiple regression model examining how Product Influence factors predict purchase intention.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.809 ^a	.654	.650	.29311
a. Predictors: (Constant), Social Influence, Product Features, Compatibility, Brand				
b. Dependent Variable: Purchase Intention				

It shows the R value of 0.809, which indicates a strong positive correlation between the predicted and actual values of the dependent variable. The R Square value of 0.654 means that approximately 65.4% of the variance in purchase intention is explained by the combination of compatibility, brand, product features and social influence as predictor variables. The Adjusted R Square of 0.650 accounts for the number of predictors in the model. Additionally, the Standard Error of the Estimate of 0.29311 measures the precision of the model's predictions. Altogether, this information validates that the model achieves a strong fit to the data with the predictor variables collectively forecasting purchase intention well.

ANOVA

The ANOVA table provides information about the significance and overall fit of the multiple regression model. It shows that the model consisting of the four predictor variables (Compatibility, Brand, Product Features, and Social Influence) is a statistically significant predictor of Purchase Intention.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66.030	4	16.508	192.149	.000 ^b
	Residual	34.966	407	.086		
	Total	100.996	411			
a. Dependent Variable: Purchase Intention						

b. Predictors: (Constant), Social Influence, Product Features, Compatibility, Brand

Since the p-value is less than the standard .05 level of significance. The ANOVA confirms that the overall multiple regression model fit is very strong and reliable in predicting Purchase Intention based on the consumer perception factors.

Coefficients

The Coefficients table presents valuable information about the individual predictor variables in the multiple regression model.

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	.154	.088		1.743	.082
	Compatibility	.071	.055	.072	1.275	.203
	Brand	.431	.061	.422	7.005	.000
	Product Features	.199	.056	.192	3.534	.000
	Social Influence	.186	.058	.181	3.175	.002
a. Dependent Variable: Purchase Intention						

Source: Field survey, 2024

The coefficient for Compatibility is 0.071. This means that for every one-unit increase in Compatibility, the Purchase Intention increases by 0.071 units, holding all other predictors constant. However, with a p-value of 0.203, the relationship is not statistically significant at the conventional level ($p < 0.05$). The coefficient for Brand is 0.431. This indicates that for every one-unit increase in Brand perception, the Purchase Intention increases by 0.431 units, holding other predictors constant. With a p-value of 0.000, the relationship is statistically significant. The coefficient for Product Features is 0.199. This means that for every one-unit increase in perceived Product Features, the Purchase Intention increases by 0.199 units, holding other predictors constant. The relationship is statistically significant with a p-value of 0.000. The coefficient for Social Influence is 0.186. This suggests that for every one-unit increase in perceived Social Influence, the Purchase Intention increases by 0.186 units, holding other predictors constant. The relationship is statistically significant with a p-value of 0.002. In summary, while Compatibility does not have a statistically significant relationship with Purchase Intention in this model, Brand, Product Features, and Social Influence

all show significant positive associations with Purchase Intention. This suggests that consumers' perceptions of Brand, Product Features, and Social Influence play crucial roles in shaping their intentions to purchase the product.

CONCLUSION

The study offers valuable views into consumer perceptions and purchase intentions regarding smartphones in the Kathmandu Valley of Nepal. It reveals that consumers consider compatibility, brand, product features, and social influence as significant factors influencing their purchasing decisions. While compatibility did not show a statistically significant relationship with purchase intention, brand, product features, and social influence were found to have strong positive associations with purchase intention. These findings underscore the importance of building strong brands, highlighting attractive product features, and leveraging social influence to enhance consumers' purchase intentions. Overall, the study provides actionable guidance for smartphone marketers seeking to understand and influence consumer behavior in this market. However, further research may be necessary to explore specific aspects of compatibility and to uncover additional factors that could impact consumer purchasing decisions in this context.

This section allows you to describe your research findings academically. You may not enter figures related to your statistical tests here; instead, you should explain those numbers here. You should structure your discussion with academic support for your studies and a good explanation according to the specific area you are investigating.

ADVANCED RESEARCH

In writing this article the researcher realizes that there are still many shortcomings in terms of language, writing, and form of presentation considering the limited knowledge and abilities of the researchers themselves. Therefore, for the perfection of the article, the researcher expects constructive criticism and suggestions from various parties.

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