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Factor Affecting Consumer Buying Behavior of Smart Phones in Petaling Jaya

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Abstract

Marketing research is increasingly focusing on how consumers behave with smart phones. Given the importance of consumer purchasing behavior in the current market environment, it makes perfect sense to investigate the factors affecting consumer buying behavior in Petaling Jaya's smart phone market. Smart phone companies and marketers face increased competition both in Malaysia and abroad. Smart phone marketers should be aware of the aspects that influence consumer buying behavior. There were five independent factors to analyze the significance of smart phone consumer buying behavior: price, brand awareness, after-sale service, features, and social factors. The primary data was acquired via a questionnaire, and the collected data was analyzed using the descriptive statistic approach in SPSS. To finish the data analysis, correlation regression between independent and dependent variables and crosstabulation analysis were utilized. The findings of the study showed that there is a significant relationship between price, after-sales service, features, and social factors with smart phone consumer buying behavior. The smart phone manufactures will have a clear picture of the factors influencing consumer behavior when purchasing a smart phone.

Keywords: Buying Decision, Price, Brand Awareness, After-Sale Service, Features, Social Factors.

Introduction

It was predicted that between 2024 and 2029, there will be 1.6 billion (4.85%) more smartphone users in Malaysia. The number of smartphone users is predicted to reach 34.58 million after growing for fifteen years in a row, marking a new peak in 2029. Particularly, during the past few years, the number of smartphone users has been steadily rising (Siddharta, 2024a). Mobile telephones have been rapidly deployed in some parts of the world, and they have achieved a high level of penetration in some places. Without a doubt, Malaysia is one of the countries that is riding the wave of the expansion of the telecommunications

industry. The usage of mobile phones in Malaysia has achieved the constantly rising pace that it has.

According to Siddharta (2024b), there was an estimated 87.61 percent of the population in Malaysia using a smart phone in the year 2020. It is projected that this number will increase even further in the years to come. As a result of the continued increase in the country's overall population, it is anticipated that the total number of people using smart phones in Malaysia would rise by an extra 1.74 million in 2025. Affordable devices and bundles, subsidies, fierce competition, and promotions among service providers were identified as driving reasons for growth. Growing use and reliance on smartphone-based applications may also have contributed to the rise (Ajayi et al., 2021). The demand for smart phones is mostly determined by individual customers, even though the market for smart phones has a macro impact. Therefore, it is essential to understand the smart phone market as well as the trends from the point of view of consumers (GSMA, 2024).

All of this has sparked our interest in doing research on the factors that influence the consumer purchasing behavior of smart phones. According to Rai et al. (2023), a consumer may take into consideration a variety of criteria before making a purchase of a smart phone, including but not limited to price, quality, brand, country of origin, marketing, sales, word of mouth, and other considerations. The study's goal is to determine what influence consumers to buy smart phones: are they driven by a need or a desire? For example, even though smart phones are expensive, they are nonetheless in high demand and continue to grow. There are other low-cost smart phones on the market today. However, why do individuals spend so much money on phones? People buy different things based on different aspects of social, psychological, and individual factors (Munusamy & Ghazali, 2023). An extra service, such as functional aspects of the product, brand characteristics, personal qualities, and social variables, could make people more likely to buy the product. Customers were more likely to buy a product if the price, the product feature, the brand name, the advertising, and the social effects were all good (Hoo et al., 2023).

In a nutshell, the mobile phone sector is experiencing a significant shift in the industry. To acquire a competitive edge, new smart phone models with varying features, price, quality, and style are introduced to the market (Mahat et al., 2023). The smart phone market has been impacted by a variety of factors affecting the purchasing choice, and there is a lack of understanding of consumer behavior when it comes to smart phone purchases, and the research conducted in different periods is still insufficient (Zaman et al., 2024). This study aims to find unknown factors that influence consumer purchasing decisions for smart phones in Petaling Jaya.

Theory of Reasoned Action (TRA) and Technology Acceptance Model (TAM)

Behavior can be predicted and explained using the Theory of Reasoned Action (TRA). It is broad in scope, aiming to describe practically any human activity (Azmee & Azami, 2024). This makes it a good fit for judging whether or not a user intends to use technology. When it comes to the study of human behavior and technology, TRA has been a popular theoretical paradigm for many years (Wiguna & Dellyana, 2023). TRA says that if people think the suggested behavior is good (attitude) and think other people want them to do the behavior (subjective norm), they will be more likely to do the behavior because they will be more motivated to do

it. As such, attitude and subjective norm were found to be the most important factors in technological intention (Farhi et al., 2023).

As a result of the TRA, the Technology Acceptance Model (TAM) was developed to explain how people use new technologies (Azmee & Azami, 2024). TRA is used by TAM to determine the fundamental link between two essential beliefs: the perceived usefulness and perceived ease-of-use, and consumers' attitudes, intentions and actual use of technology. TAM has a narrower scope than TRA when it comes to determining how people use technology (Mogaji et al., 2024). The TAM model is useful; but, in order to make it more all-encompassing, it needs to be combined into a model that also includes the innovation model and takes into account elements that are related to human and social development processes (Al-Adwan et al., 2023). This study makes a contribution by analyzing the factors affecting consumer purchasing decisions of smart phones in Petaling Jaya using TAM and TRA. As a direct consequence, this helps our research. Figure 1 provides a simplified illustration of a theoretical model for TRA and TAM.

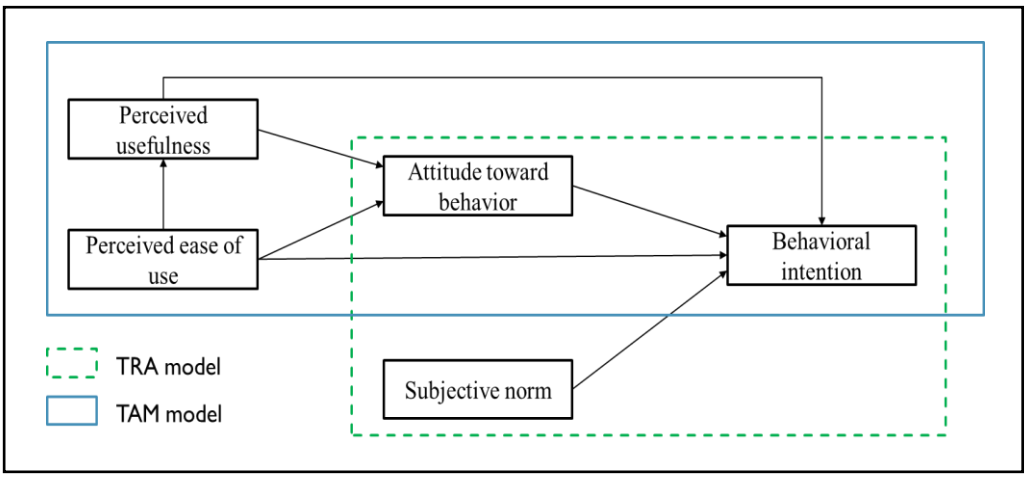

Figure 1: The theoretical model of TRA and TAM

Methodology

The research discusses the strategies and techniques used to gather data for the study, including data collection methods, sampling design, research instrument, origin and measure of the construct, and scale measurement using Cronbach's Alpha reliability test. The research design is descriptive, aiming to determine the relationship between the independent variables of price, brand awareness, after-sales service, product quality (features), and social factors and the dependent variable of consumer smart phone purchase decision in Petaling Jaya.

The sample size was 478. This is a sort of sampling in which the researchers pick 478 participants in Petaling Jaya, Selangor. On the contrary, this means that the survey will be given to whoever is easily accessible and available at the sample location chosen. Cronbach's Alpha test was used to evaluate the internal consistency of the questionnaire items. Pearson correlation analysis was used to measure the strength and causality of relationships between variables, and multiple regression analysis was applied to examine the relationship between the dependent variable and multiple independent variables.

Data Analysis

Demographic Analysis

The demographics of the 478 respondents who took part in this survey are summarized in Table 1.

Table 1
Demographic Profile (N=478)

Variable	Classification Variable	Frequency	Percentage (%)
Gender	Male	239	50.00%
	Female	239	50.00%
Age	15 – 25	80	16.74%
	26 – 35	147	30.75%
	36 – 45	229	47.91%
	Above 45	22	4.60%
Income (RM)	Below RM 2000	82	17.15%
	RM 2001 – RM 4000	122	25.52%
	RM 4001 – RM 6000	97	20.29%
	RM 6001 – RM 8000	147	30.75%
	Above RM 8000	30	6.28%
Current smart phone brand	Apple	140	29.29%
	Samsung	198	41.42%
	Xiaomi	28	5.86%
	Huawei	71	14.85%
	Oppo	16	3.35%
	Realme	6	1.26%
	Vivo	13	2.72%
	Other	6	1.26%
Next smart phone brand purchase	Apple	197	41.21%
	Samsung	201	42.05%
	Xiaomi	15	3.14%
	Huawei	26	5.44%
	Oppo	18	3.77%
	Realme	6	1.26%
	Vivo	5	1.05%
	Other	10	2.09%
Price range for next phone	RM 1000 – RM 2000	84	17.57%
	RM 2001 – RM 3000	103	21.55%
	RM 3001 – RM 4000	237	49.58%
	RM 4001 – RM 5000	36	7.53%
	Above RM 5000	18	3.77%

Reliability Analysis

Following performing a reliability test, the findings for both the independent variables and the dependent variable are provided in Table 2. The results of the reliability analysis indicate that every one of the variables has a Cronbach's alpha value that is more than 0.6. The values associated with the product's quality (and features), which come in at 0.884, have the greatest

Cronbach's alpha values, while the values associated with the price, which come in at 0.678, have the lowest values. This indicates that there is an internal consistency between the items, and variables can be created to the corresponding item in the questionnaire.

Table 2
Reliability (N=30)

Variables	Cronbach's Alpha	No. of items
Consumer buying decision	0.746	5
Price	0.678	5
Brand Awareness	0.827	5
After-sales service	0.878	5
Product quality (and features)	0.884	5
Social factors	0.789	5

Descriptive Analysis

This report provides an explanation of the descriptive statistics that were produced based on the factors that affect the consumer purchasing behavior of smart phone consumers in Petaling Jaya. Table 3 displays the findings for the measures of central tendency and dispersion that were collected from 478 samples of respondents of actual smartphone consumers by using a 5-point Likert scale.

Table 3
Mean and Standard Deviation (N=478)

Variables	Mean	Std. Deviation
Consumer buying decision	4.1464	0.58218
Price	3.8385	0.49146
Brand Awareness	4.1222	0.58690
After-sales service	4.2218	0.56154
Product quality (and features)	4.5770	0.57762
Social factors	3.5950	0.68807

The mean and standard deviation are presented in Table 3 for each variable, which enables us to conduct an analysis of the responses that were provided by those who took part in this study. All of the mean values are either close to or exactly the same as the Likert scale 4 in terms of their distribution. This indicates that the majority of respondents agree to the viewpoint expressed in the statement. The social factor, which has a standard deviation of 0.69, is the factor that has the largest standard deviation of all of the other factors. This demonstrates that the social factor has a greater degree of fluctuation compared to the other variables. The price that exhibits the lowest amount of variation is the one whose standard deviation is closest to 0.50.

Normality Analysis

The results of the test of normality for the variables included in this research are presented in Table 4. The test was based on skewness and kurtosis. The results show that each variable lies within the interval ranging from -1.0 to +1.0, the distribution of these variables falls within the parameters of a normal distribution and passes the normality test (Hussainbi et al., 2023), allowing us to move on to the next stage of analysis.

Table 4
Normality (N=478)

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Consumer buying decision	- 1.661	0.112	1.084	0.223
Price	0.124	0.112	0.454	0.223
Brand Awareness	- 0.99	0.112	0.015	0.223
After-sales service	- 0.495	0.112	1.048	0.223
Product quality (and features)	- 1.670	0.112	1.868	0.223
Social factors	- 0.201	0.112	0.806	0.223

Pearson Correlation Coefficient Analysis

According to Burgund et al. (2023), the interpretation of r value is as follows: a weak negative correlation (r - 0.20), a moderate negative correlation (-0.30 r -0.50), a strong negative correlation (-0.60 r -0.80), and a very strong negative correlation (-0.90 r -1.00). Weak positive correlation (r value less than 0.20), moderate positive correlation (r value between 0.30 and 0.50), strong positive correlation (r value between 0.60 and 0.80), and very strong positive correlation (r value between 0.90 and 1.00).

The study that is shown in Table 5 demonstrates that there is evidence of a positive relationship between all of the variables. This conclusion is reached on the basis of the fact that every correlation analysis result is greater than zero. The findings of the correlation analysis reveal that there is a highly significant association between the purchasing behavior of consumers and the independent factors. All of the probabilities point to this relationship. They are positively correlated with one another, as measured by the coefficient of correlation.

Table 5
Pearson r Correlation (N=478)

		Consumer buying decision	Price	Brand Awareness	After-sales service	Product quality (and features)	Social factors
Consumer buying decision	Pearson Correlation	1	.406**	.303**	.414**	.447**	.567**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
Price	Pearson Correlation	.406**	1	.608**	.517**	.170**	.378**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
Brand Awareness	Pearson Correlation	.303**	.608**	1	.526**	.296**	.335**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
After-sales service	Pearson Correlation	.414**	.517**	.526**	1	.245**	.476**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
Product quality (and features)	Pearson Correlation	.447**	.170**	.296**	.245**	1	.118**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.010
Social factors	Pearson Correlation	.567**	.378**	.335**	.476**	.118**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.010	

*** Correlation is significant at the 0.01 level (2-tailed).*

The social factor has the highest correlation value, which is 0.567, which suggests that there is a strong positive association between a social factor and the purchasing decisions made by

consumers. With a correlation coefficient of only 0.303, brand awareness has the lowest strength, showing that there is not a substantial relationship between brand awareness and consumer purchasing behavior.

Multiple Linear Regression Analysis

The Multiple Linear Regression Analysis generated a R of 0.698, indicating a strong combined connection between the individual factors and consumer purchasing behavior in as shown Table 6. R squared is 0.487. This means that the model has captured 48.70 percent of consumer purchasing behavior (dependent variable). The adjusted R-square also indicates that the model has covered 48.10 percent of the dependent variable. There is no first-order autocorrelation, and the Durbin-Watson test is 1.653, which is between 1.5 and 2.5. As a result, the residuals are independent, and the model is valid.

Table 6
Multiple Linear Regression (N=478)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.698[a]	.487	.481	.41927	1.653

Table 7 shows the ANOVA for regression. The degree freedom, termed df, of 89.537 with a p-value of 0.00 at a significant 0.5 alpha level represents the independent variables. The df of 472 is the total number of full responses for all variables in the equation. The regression sum of squares is 78.697 and the mean square is 15.739, whereas the residual sum of squares and mean square are 82.972 and 0.176, respectively.

Table 7
Anova (N=478)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	78.697	5	15.739	89.537	.000[b]
Residual	82.972	472	.176		
Total	161.669	477			

Coefficient Analysis

For each independent variable, the coefficient analysis offers a significant test with a p-value. It implies that if the p-value is more than 0.05, it is not significant, however p-values less than 0.05 are considered significant. Looking at the significant column in Table 8, all variables have p-values less than 0.05, with the exception of brand awareness, which has a p-value of 0.373. This means that brand awareness was deemed to have a non-significant association with consumer purchasing behavior, whereas price, product quality (and features), and social variables were deemed to have a substantial relationship with consumer purchase behavior. Multicollinearity is a statistical phenomenon that occurs when two or more independent variables in a multiple regression model are closely connected. A tolerance value of 0.10, which corresponds to a VIF of 10, is a common cutoff threshold. According to the multicollinearity test for our study, there is no multicollinearity among the independent variables as the VIF value produced is between 1 and 10 and the tolerance value is more than 0.1 (Shen & Gao, 2022).

Table 8
Coefficients (N=478)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Consumer buying decision	0.808	0.207		3.899	0.000		
Price	-0.166	0.052	-0.14	-3.194	0.001	0.5638	1.7737
Brand Awareness	0.039	0.044	0.04	0.891	0.373	0.5448	1.8356
After-sales service	0.144	0.045	0.139	3.22	0.001	0.5822	1.7177
Product quality (and features)	0.37	0.035	0.367	10.548	0.000	0.8991	1.1122
Social factors	0.421	0.032	0.497	13.049	0.000	0.7489	1.3353

Following the completion of a correlation analysis and the validation of all assumptions, hypothesis testing is carried out to determine if the hypotheses should be accepted or rejected. Table 9 is a summary table that summarizes the factors that consumers take into consideration before deciding to make a purchase, as well as the relationship between the variables. Because the p-value is lower than 0.05, we can conclude that the first, third, fourth, and fifth hypotheses are acceptable. However, due to the fact that the p-value of the variable is greater than 0.05, the second hypothesis is rejected.

Table 9
Summary of Hypothesis

No	Hypotheses	P-Value	Remark
H_1	There is a significant relationship between price and consumer buying decision of smart phone in Petaling Jaya	0.001	Supported
H_2	There is a relationship between brand awareness and the consumer buying decision of smart phone in Petaling Jaya	0.373	Not supported
H_3	There is a relationship between after-sales service and consumer buying decision of smart phone in Petaling Jaya	0.001	Supported
H_4	There is a relationship between product quality (and features) and consumer buying decision of smart phone in Petaling Jaya	0.000	Supported
H_5	There is a relationship between social factors and consumer buying decision of smart phone in Petaling Jaya	0.000	Supported

The study has found that there is a significant effect of price, after-sales service, product quality (and features), and social factors on consumer buying decision of smart phone in Petaling Jaya but brand awareness has no significant impact.

Conclusion

We began this study with the purpose of investigating the factors influencing consumer purchasing behavior when purchasing smart phones in Petaling Jaya. Based on our analysis of several publications on similar research areas, we found five independent variables: price, brand awareness, product quality (and features), after-sales service, and social factors that

are related to consumer purchasing behavior. Then, based on the relationship between the discovered independent variables and the dependent variable, we developed five hypotheses. A questionnaire with a sample size of 478 was used to collect the data.

According to the findings of this research, consumers believe that social factors are more significant than price when it comes to purchasing a smart phone. Price was not determined to be the most important component in this decision-making process. According to the findings of this survey, consumers view smartphones as long-lasting commodities that are less sensitive to prices. As a direct consequence of this, customers are prepared to shell out additional cash in exchange for better product qualities and features.

Manufacturers of smart phones need to ensure that their products are of the best quality and have the most up-to-date innovations in order to maintain their position at the forefront of the competitive smart phone market. This is reflected in the fact that it is now the norm for a brand's best-selling smartphone to be one of their high-end devices, which are outstanding in terms of both their quality and their specifications.

It is also interesting to note that the results of the survey indicate that socioeconomic factors have a higher influence on the decision to purchase a smart phone than does the requirement to fulfil a practical function. To put it another way, a smartphone is not just a product designed to meet the requirements of communication; rather, it is a symbol of one's status, prestige, and lifestyle choices. For instance, a sizeable portion of people who buy Samsung are motivated to do so not by the requirements they have for the applications, functions, and features of the device, but rather by the trend that is currently prominent, the influence that their friends and co-workers have over them, and the efforts that marketers make to persuade them to buy a certain product.

In the context of the market for smartphones, it is essential to place a strong emphasis on the significance of marketing strategy and the factors that influence the purchasing decisions of customers. In particular, it is essential to place a strong emphasis on the significance of the factors that influence customers' purchasing decisions. To enable more precise results, more study in this field should be conducted with a bigger sample size. The study was conducted in Petaling Jaya, Selangor only. In the future, more areas could be included to help generalize the findings.

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