

**SRIWIJAYA INTERNATIONAL JOURNAL OF DYNAMIC  
ECONOMICS AND BUSINESS**

<http://ejournal.unsri.ac.id/index.php/sijdeb>

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**Smartphone Purchase Intention by Nilai University  
Students Living in the City of Nilai Malaysia**

Lee En En<sup>1</sup>, Balakrishnan<sup>2\*</sup>

<sup>1,2</sup>Nilai University, Malaysia

<sup>2</sup>vostra12@gmail.com

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**Abstract:** Smartphone purchases during the Covid-19 pandemic increased for a niche purpose, online learning. The demand was critical for retailers to understand niche market's needs, wants, and preferences. Previous study shows that research was mainly focused on main cities. The study aims to investigate smartphone purchase intention from a small-niche market's perspective. Literature on purchase intentions was explored to review the purchase influence factors. A survey was conducted on Nilai University students living in Nilai about 50 kilometres from the city centre through an online survey method due to movement order control restrictions. A total of 184 sets of questionnaires were collected. The convenience sampling method was adopted to analyse the data in the SPSS software. The results show a positive relationship between the influence factors and purchase intention. The research can provide insights to firms, retailers, and new entrepreneurs venturing into the smartphone business and formulation of marketing strategies.

**Keywords:** Purchase Intention; Brand; Price; Social Influence; Relative Advantage

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## Introduction

The revolution in smartphone technologies has changed consumer behaviour, particularly in the university student market segment. The need for businesses to be kept informed about consumers' choices, preferences, and buying attitude are vital for business sustainability (Mckinsey, 2020). Smartphone demand has been overwhelming for university students and increased the smartphone purchase demand (Supramani, 2020). The online learning trend flourished with the usage of the smartphone as a specific tool to access online learning, learning materials, and communication for home-based learning (Hanani, 2021). The increase in smartphone sales from 3.6 billion in 2016 to 6.3 billion in 2021 has been forecasted to increase in the future. The online learning flexibility shows about 94.8 percent

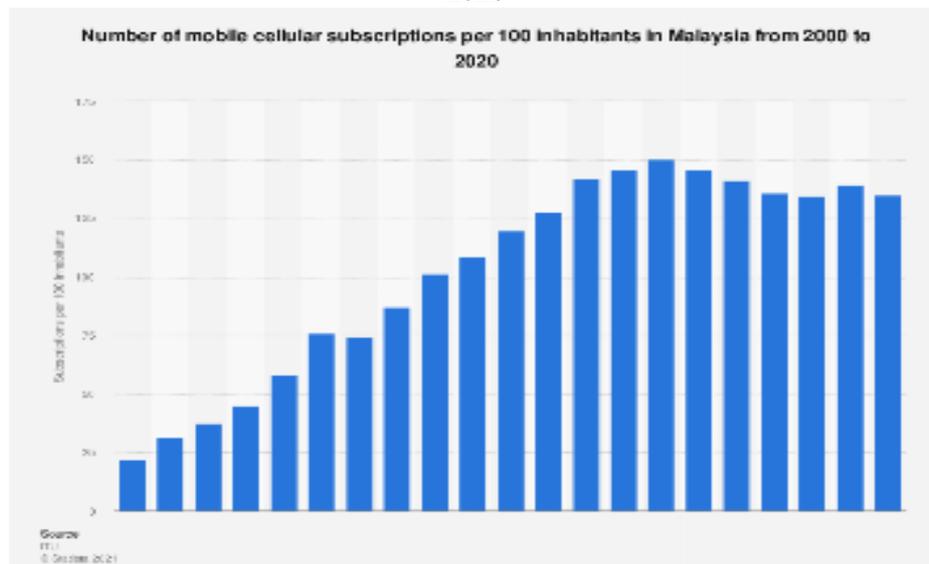
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\* Corresponding Author

of university students have their phones all the time while 92.6 percent check their smartphone messages in the morning (Alsayed, Bano, & Inajjar, 2020). The smartphone penetration rate in Malaysia increased from 65.14 percent in 2015 to 90.71 percent in 2019 (Hanani, 2021). Before the Covid-19 pandemic, a research study by Lu (2017) and Toh (2016), already expressed the increase in demand for the smartphone in Malaysia was due to the smartphone technology revolution.

The global economy faced a precarious effect due to the Covid-19 pandemic which has forced businesses to shift the traditional way of conducting business to online platforms and social media. The digital mode of advertisement and promotions raised a new norm and opportunity for businesses to reach out to the market segment and as well create new markets to capture the market and consumer's attention searching for products and services, and information. In Malaysia, the movement control order restrictions shifted smartphone retailers to online platforms and social media offering a variety of choices and benefits to attract consumers' attention. The demand for smartphones increased during the Covid-19 pandemic period when the lockdown measures were intensified to prevent the spreading of the Covid-19 pandemic, preventing university students from attending face-to-face classes. The statistic in Figure 1, depicts the number of mobile cellular subscriptions per 100 inhabitants in Malaysia between 2000 and 2020. There were 135.09 mobile subscriptions registered for every 100 people in 2020.

Figure 1. **Mobile Cellular Subscriptions per 100 Inhabitants in Malaysia from 2000 to 2020**

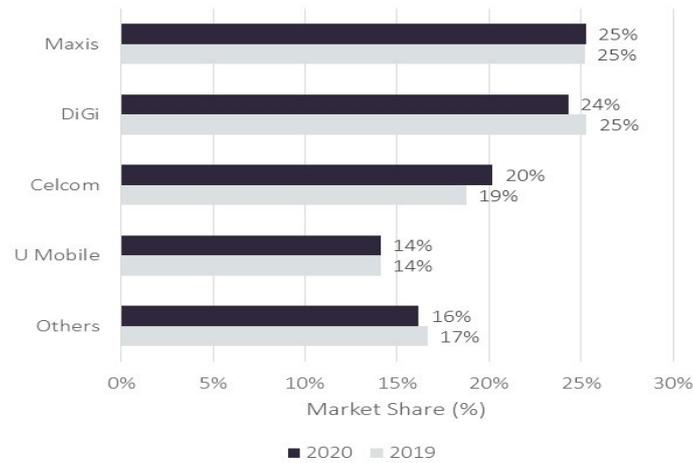


Source: <https://www.statista.com/statistics/509562/mobile-cellular-subscriptions-per-100-inhabitants-in-malaysia/>

Public and private education intuitions were forced to shift to technology-based learning methods and this has incited Nilai University students to search for alternative mobile phones and new smartphones comparable for online learning and tuning to online classes. The use of a smartphone to access online classes became integral to university students and has raised demand in this specific market segment. Smartphone has been considered an important learning tool for university students (Gautam, 2018; Alsayed, Bano, & Alnajjar, 2020). In Malaysia, marketers do not seem to understand well enough the perceptions of consumers according to mobile marketing, especially the mobile service users (Wui, Woo, &

Haizam, 2018). The statistic in Figure 2, illustrates the mobile phone subscribers' market share in 2019 and 2020.

Figure 2. **Making Educated Purchasing Decisions Easier: Malaysian Mobile Subscriber Market Share 2019 and 2020**



Source: **Error! Hyperlink reference not valid.**

The Covid-19 pandemic has created vast opportunities for smartphone producers and retailers because smartphones became a major tool when the universities shifted to online learning methods. Due to this reason, the demand for smartphones increased for online learning purposes (Tan, 2021 & Hanani, 2021). Various research aimed to determine why consumers are buying a smartphone and how smartphones became a daily part of society's life (Lay-Yee et al., 2013; Nagar Koti, 2014; Lazim & Sasitharan, 2015; & Rahim et al., 2016). Thus, there lack of specific target markets for university students to understand their purchase intention and buying behaviours. Previous research has identified consumer behaviour as the main for purchasing a smartphone, however, they are a lack of insights and marketing information. Consumers are often changing and buying a new smartphone and are willing to pay more to change their current smartphone devices (Lu, 2017). Thus, small-town smartphone retailers were faced with uncertainties to compete with established and new online retailers due to a lack of market and target markets' needs, wants, and preferences. This study aims to explore the influence factors to analyse the insights information on purchasing intention for small-town retailers' marketing strategy to compete with competitors. The study aims to determine the influence factors of smartphone purchase intention from university students and to identify the significant relationship. There are four independent variables: brand, price, social influence, and relative advantage and the dependent variable is purchase intention. The outcome of the results can provide researchers, firms, producers, retailers, and managers with an overview of the university students' smartphone purchase intentions and buying behaviours. The research objective is to determine the relationship between brand, price, social influence, and relative advantage with purchase intention. The research objective and question are:

1. Does the brand have a significant influence on smartphone purchase intention?
2. Does price have a significant influence on smartphone purchase intention?
3. Does social influence have a significant influence on smartphone purchase intention?
4. Does relative advantage have a significant influence on smartphone purchase intention.

## **Literature Review**

Various research has stated the positive relation to university students' purchase intention is determined how the brand name, price, social influence and relative advantage (Ling et al., 2014; Lim et al., 2012; Joep, Ruud, & Tammo, 2011; Yue and Stuart, 2011; & Juha, 2008). Similar topics also have elements that affect the smartphone purchase intention (Isibor, Okhawere, & Ogbonnaya, 2018; Panggabean, 2014; Anosh et al., 2014; Osman, 2012; & Lim et al., 2012), however, the research location and sample population are different and different in opinion. It is essential to improve organisation dynamics Sharimilah et al., (2008) for organisations to remain competitive and resilient, they must effectively and efficiently create, capture, organise, share and apply organisational knowledge and expertise (Balakrishnan & Chandramalar, 2019).

The statistics in Figure 2 illustrate the mobile subscribers' market share between 2019 to 2020. Among the telecommunication providers in Malaysia, Maxis regained the market leadership in total subscribers with a share of 25 percent, Celcom had the biggest gain with an increase of 306k subscribers' 3.7 percent in 2020 which drove its market share by 1.4 percent. Celcom's impressive performance were driven by the postpaid and prepaid segments. Digi took the biggest hit from the pandemic, losing 840,000 users' -7.4 percent with a drop of its market share by 1.0 percent, due to the decline of its prepaid subscribers. The statistics indicate, that since technology capability emerged as one of the important criteria for making dynamic decisions, a strategic move is key for the sector to move forward (Balakrishnan & Mohamad, 2018).

Previous studies typically scholars have focused on the main type of mobile marketing services, which are usually mobile internet, mobile advertising, mobile coupons, mobile payment and mobile banking, and location-based mobile services. However, little attention to the university students' market segment's smartphone purchase intention (Wui, Woo, & Haizam, 2018). Previous research shows that the focus of the research aimed to determine the factors that affected the consumer buying intention on smartphone products which shows that smartphones had become a daily part of our life to work, and learning, entertainment (Rahim et al., 2016; Lazim & Sasitharan, 2015; Nagar, 2014; & Lay al., 2013). The study further explores the brand, price, social advantage, and relative advantage influence on purchase intention to support the hypotheses development and the research model. Figure 3 shows the summary and examples of the previous literature.

The study further explores the influence factors to determine their effect and the development of the research hypotheses. The influence factors are important to understand because they are the basic units of the information studied and interpreted in research studies. Researchers carefully analyse and interpret the value of each variable and how it relates to understand the research work (Christine, 2020). Thus, this study intends to focus on university students living away from the city centre and how the relationship between the variables. The independent variables were adopted from previous research on university students' smartphone purchase intention.

**Figure 3. A Brief Review of Literature on the Factors that Influence Purchase Intention**

<b>Factors</b>	<b>Examples of Previous Studies</b>	<b>Description</b>
Brand	Agmeka, Wathoni, & Santoso (2019). Wong, (2019). Shahid, Hussain, & Zafar, (2017). Ling et al. (2014).	<ul style="list-style-type: none"> <li>• Brand images increase my status in society</li> <li>• Brand image is an attraction for me to purchase a smartphone</li> <li>• Brand image when buying a smartphone with a higher price.</li> <li>• Favourite smartphone brand, regardless of the price.</li> <li>• Smartphone’s brand name is my priority when making a purchase decision.</li> </ul>
Price	Ramadhan & Muthohar (2019). Bhatti, (2018). Mohammed, (2018). Lim et al. (2012).	<ul style="list-style-type: none"> <li>• Price is a crucial factor when purchasing a smartphone.</li> <li>• Comparing prices of smartphone brands and store brands before choosing to purchase.</li> <li>• Buying a smartphone because worth using between price &amp; usage quality.</li> <li>• Willing to buy a smartphone even though the price is higher</li> </ul>
Social Influence	Elammari & Cavus, (2019). Mohammed, (2018) Laohakosol & Sharma (2018). Ling et al. (2014).	<ul style="list-style-type: none"> <li>• Friends and family are extremely helpful to me in making decisions about buying a smartphone.</li> <li>• Asking friends and family member’s opinions when buying a smartphone.</li> <li>• Friends and family give valuable advice when buying a smartphone.</li> <li>• Trusting friends’ and family members’ opinions and advice on the smartphone.</li> </ul>
Relative Advantage	Abdur Rochman Setyawan (2020). Hsiao & Chen (2018). He, Zhan, & Hu (2018). Ling et al. (2014).	<ul style="list-style-type: none"> <li>• Smartphones are more convenient, reliable, and useful than normal mobile phones.</li> <li>• Smartphones are more fashionable, stylish, and trendy.</li> <li>• Smartphone has good integration of a wide range of functions and services.</li> <li>• Smartphone bigger screen and full keyboard make distinct functions easier to use.</li> </ul>
Purchase Intention	Agmeka, Wathoni, & Santoso (2019). Wong, (2019). Dachyar & Banjarnahor (2017). Lim et al. (2012).	<ul style="list-style-type: none"> <li>• Intend to buy a smartphone in near future.</li> <li>• Consider the brand of the smartphone before purchase.</li> <li>• Recommending friend to buy a smartphone</li> <li>• Searching for information about smartphones from time to time.</li> <li>• Always talk about smartphones with my friends.</li> </ul>

***Brand***

A brand is considered one of the main reasons to purchase smartphones (Anosh et al., 2014) and brand image is positively influenced by youth buyers’ willingness to purchase

smartphones (Shahzad & Sobia, 2013). A brand is significant to female adults' smartphone buying behaviours (Ling et al., 2014). The brand has been the mainstream for consumers to consider when buying products because the brand represents the product's quality and reputation (Ling et al., 2014). Brand may also represent in advertisements, labelling or packaging of the products (Solomon, 2013). The brand is also differentiated from the competitors in the market (Kotabe & Helsen, 2011). A brand is not just a name, image, or symbol that represents an organisation, it is an important asset that links the tangible and intangible products and services offered by the organisation to the consumers (Kotler & Armstrong, 2012). Brand or the memory of the brand can influence consumers' mindset (Aaker, 1991). The reputation of a brand is the individual beliefs about a product or service. A brand's perception reflects the brand's associations connected to consumers' perception (Kotler, 2011). Brand association influences consumers to have a positive perception of the product and helps consumers to identify the brand in the market (Aaker, 1991). Brand through its symbol, function and benefit is an important factor to influence consumers' demand (Ling et al., 2014), consumers choose a brand to compare to less popular products because the brand perception of a high-quality product is better than a lower quality product with a lower brand image (Ling et al., 2014), consumers willing to pay a high price for popular brands (Lee, Lee, & Wu, 2011). Study shows that a brand can affect a buyer's buying decisions and is considered one of the main factors to influence the purchase intention. The brand is significant to influence purchase intention. Therefore, the research hypothesis is developed:

H1: Brand is significant to smartphone purchase intention among Nilai University students.

### ***Price***

Price is essential to a buyer's willingness of buying the smartphone (Munnukka, 2008), smartphone buyers in the higher institution (Lim et al., 2012), and female smartphone buyers (Ling et al., 2014). The main factor that affects the purchase intention is the price (Monroe, 2003; & Chang & Albert, 1994). If a product's price is reasonable it may influence the purchase intentions. Price is considered one of the main elements that affect the consumers' willingness to purchase. Price also represents the value of the goods and services that are determined by the sellers (Ling et al., 2014), and the consumers. Kotler (2011) refers to the consumers' preference and the wiliness to pay for a product and service. Price plays an important role in the marketing mix to influence sales and revenue (Ling et al., 2014). High price products may affect consumers buying intention (Ling et al., 2014; Erickson and Johansson, 1985) because consumers' perception of high price products varies and can influence consumers purchasing intention. Price may also lead to negative effects and reduce consumers' demand and consumers may shift to alternative products ((Lim et al., 2012; Dickson & Sawyer, 1990; & Dodds, Monroe, & Grewal, 1991). Price is considered one of the main factors influencing purchase intention. Price is significant to influence purchase intention. Therefore, the research hypothesis is developed:

H2: Price is significant to smartphone purchase intention among Nilai university students.

### ***Social Influence***

Of a total of 1814 respondents in Malaysia, 35.6 percent have indicated the trend of the community is considered the main reason affecting their willingness of buying a smartphone (Osman, 2012). Social influence is considered an important factor in consumer buying behaviours study (Ibrahim et al., 2013). Social influence is often seen as an influencing factor

in smartphone consumers' buying behaviour (Auter, 2007). Social influence through family members, friends, and a social group can influence a consumer's purchase intention (Ling et al., 2014; & Lay-Yee et al., 2013). Consumers can be influenced by others such as their social group in the process of decision-making to decide which product or brand to purchase (Lay-Yee et al., 2013), family members also have a direct impact on consumer purchase intention (Kotler & Armstrong, 2010), consumers behaviour is mostly influenced by the family member when purchasing high involvement products, and young consumers purchasing smartphone can be influenced by friends and family members (Farzana, 2012). Social influence involves belief, behaviour, and feeling (Mason, Conrey, & Smith, 2007). Social influence is the second-highest effect on students' purchase intention (Suki & Suki, 2013). Social influence is considered one of the main factors influencing purchase intention. Social influence is significant to influence purchase intention. Therefore, the research hypothesis is developed:

H<sub>3</sub>: Social influence is significant to smartphone purchase intention among Nilai University students.

### ***Relative Advantage***

Relative advantage factors may influence consumers to adopt and purchase. The relative advantage of smartphones can be considered as the product's perceived better advantage over other smartphone products (Isibor, Okhawere, & Ogbonnaya, 2018). Relative advantage adopts technology and costs (Lim et al., 2012). Relative advantage determines how smartphones affect consumers' buying behaviours. Relative advantage is used to measure economic profitability. Relative advantage has a positive influence on the consumer buying behaviours in the higher institution in Indonesia Panggabean (2014). Relative advantage is perceived as the value that has a direct effect on consumer buying behaviours. Relative advantage has a significant effect on smartphone consumer buying behaviours (Lim et al., 2012). Relative advantage also refers to the degree to which consumers perceived a product's value and compare the products (Tidd, 2010). It helps to obtain important information for the organisation to meet the consumers' needs and wants of the market segmentation (Agarwal & Teas, 2002). The growing importance of innovation has a huge impact on consumers' buying behaviours (Mckinsey, 2020 & Rogers, 1995), innovation refers to the relative advantage that is specific and important for the consumers. Innovation refers to product improvement and user-friendly products that increase the value of the products (Kurtz et al., 2009). It also refers to the economic factors of convenience and lower-cost product whereby consumers believe this advantage provide better acceptability (Ho and Wu, 2011). Literature also has emphasised that social influence is significant towards purchase intention (Ling et al., 2014; Lay-Yee, Kok-Siew, Yin-Fah, 2013; Suki & Suki, 2013; Lim et al., 2012; Osman, 2012; Farzana, 2012; & Kotler & Armstrong, 2010). Relative advantage is the degree to which a product is superior to others in the market, a major element of the adoption rate. According to the diffusion of innovation theory developed by Rogers as one of the oldest social science theories, whereby the key to adoption is how a person perceives the idea, or behaviour of a product as new or innovative (Rogers, 1995). It also has emphasised that relative advantage is significant towards purchase intention (Isibor, Okawara & Ogbonnaya, 2018; Panggabean, 2014; Kurtz, MacKenzie, & Snow, 2009). Relative advantage is considered one of the main factors influencing purchase intention. Relative advantage is significant to influence purchase intention. Therefore, the research hypothesis is developed: H<sub>4</sub>: Relative advantage is significant to smartphone purchase intention among Nilai University students.

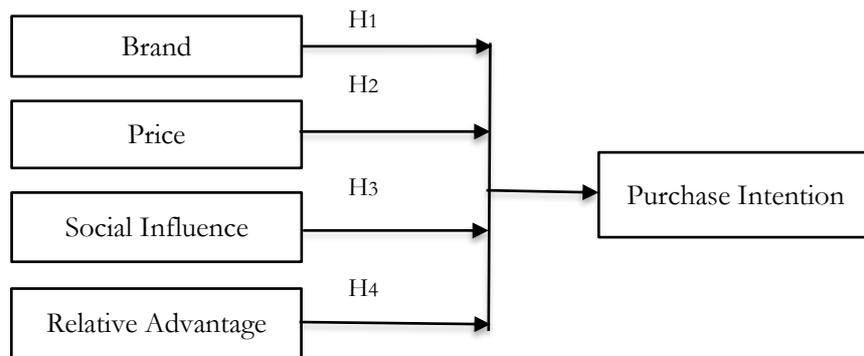
### **Purchase Intention**

Purchase intention explains the planning process or advances planning before a decision is made to purchase goods or services in the market. The decisions may not lead to purchasing activities (Warshaw & Davis, 1985). Purchase intention means an individual's intention to purchase which is already in the mind. The purchase intention turns to purchase action when the intention becomes stronger and the decision to purchase has a high possibility. Purchasing intention can be defined as the willingness of buying the goods and services in the market in the future (Chinomona, Okoumba, & Poee, 2013). Hence, the purchase intention may create consumers' purchase decisions or purchase intention (Schiffman & Kanuk, 2000). Purchase intention is also referring to the last step in the purchasing decision to determine the action on the purchasing (Agarwal & Teas, 2002). Purchase intention information may assist organisations to predict the market demand and new markets (Armstrong, Morwitz, & Kumar, 2000). Research in purchasing intention may provide insight to smartphone retailers and producers to improve their target market strategy and improve customer satisfaction. Purchase intention is considered one of the main factors to understand consumers' purchasing intentions and behaviour.

### **Research Model**

Figure 3 illustrates the research model's independent variables: brand, price, social influence, and relative advantage and the dependent variable is customer purchase intention. The framework shows the hypotheses and the relationship.

Figure 3. **Research model**



### **Methods**

A quantitative research method was adopted to determine the data and transform it into numerical information from the information collected from the online questionnaire (Creswell, 2013). The researchers adopted a convenience sampling technique (Black, 2011), convenience sampling is the least expensive and time-consuming (Lim et al., 2012). The SPSS software version 25 was used to analyse the data and to determine numerical data collected from the respondents. Due to the Covid-19 movement control order, an online survey method approach was adopted to distribute the questionnaire to students living in Nilai. A total of 350 questionnaires were distributed, 200 questionnaires were collected and only 2 were incomplete. A total of 184 samples were usable for data analysis. The survey questionnaire's structure was adapted from previous researchers' influence factors listed in

According to the Rule of Thumb by Roscoe (1975) determining the sample size for the research, the sample size between 30 to 500 is used in most of the research. Figure 3. The 5-point Likert scale was used, and an open-ended question method was used to enable respondents to choose one preferred answer (Quickmba, 2021). The survey questionnaire has three sections: Section A represent the survey respondents' demographic profile, Section B represents the brand, price, social influence, and relative advantage, and Section C represent the purchase intention. The main objective was to collect the numerical data, analyse it, and explain the phenomenon. Origin construct measurement was adapted from Figure 3. The SPSS 25 version was used to analyse the data.

## Findings

The reliability of the instrument refers to the stability and consistency of the instrument development (Cresswell, 2010). Alpha Croachbach (Cresswell, 2008) represents the reliability level of the instrument. Pallant (2001) states Alpha Croachbach's value above 0.6 consider high reliability and acceptable index (Nunnally & Bernstein, 1994) Whereas, the value of Alpha Croachbach is less than 0.6 considered low. Alpha Cronbach values in the range of 0.06-0.08 are considered moderate, but acceptable. While Alpha Cronbach in the ranges of 0.8 and up to 1.00 is considered exceptionally good. Therefore, in this research, the determination of Alpha Cronbach values on instruments was developed to determine the degree of reliability of the instruments. The reliability analysis in Table 1 shows the reliability value is above 0.7 considered good and acceptable: the brand is 0.9, price is 0.9, social influence is 0.7, the relative advantage is 0.9, and purchase intention is 0.9. The reliability analysis was important in determining the level of the stability and internal consistency of the research instrument.

Table 1. **Reliability of data**

<b>Variables</b>	<b>No of Item</b>	<b>Cronbach's Alpha</b>
Brand	5	0.946
Price	5	0.917
Social Influence	5	0.790
Relative Advantage	5	0.918
Purchase Intention	5	0.925

Descriptive results represent the survey population's data. There are many advantages to use descriptive results in both quantitative and qualitative research study (Javed, 2021). Table 2 illustrates the descriptive analysis results of the demographical profile of the respondent's gender, age, race, nationality, marital status, education level, employment, and monthly personal income. The gender, female represents 42.4 percent and male 57.6 percent. The results show that the difference between both the female and male respondents was 15.2 percent. Male respondents were higher than female respondents. The rise of mobile games using smartphones is on the rise and this is strategic information for the smartphone manufacturers and retailers to leverage on the factors that influence the purchase intention and demand creation. In the age group, the results show that the respondents between 18 to 25 years old 66.3 percent, attentive to smartphones flowed by 26-30 years old 29.35 percent, and 31-35 is 4.35 percent. The race represents the Indian 49.46 percent followed by Chinese 44.57 percent and Malay 5.98 percent. Nationality represents the respondents from Malaysia 95.65 percent and international 4.35 percent. Marital status represents 100 percent of single respondents. The educational level represents the undergraduate 95.65 percent and master's degree 4.35 percent. Employment represents not employed is 79.35 percent, receive financial

support from parents was 16.3 percent, and 4.35 percent have a part-time job income. Personal monthly income represents less than 2,500 is 95.65 percent and RM2,501 to 3,000 was 4.35 percent. The descriptive analysis representation provides insight information on the selective market segment's preferences on smartphone purchase intention. The female and male respondents' data are equally significant to consider the market dynamics and the technology implication. This segment is willing to adopt new technologies simply because they are new and tend to take risks more readily for self-esteem and satisfaction. Retailers need to focus on the segment's needs and consider the brand, price, social influence, and relative advantage. Smartphone technology can alter the relationship between competitive scope and competitive advantage. Smartphone technology can increase the retailer's ability to coordinate its activities and unlock the competitive opportunities and market dynamics. It is viable for retailers to understand the insights of this market segment's buying behaviours and factors that influence the buying decision-making process. Thus, the demographic profile information is important for smartphone manufacturers, smartphone retailers, smartphone entrepreneurs, and the smartphone supply chain to take a proactive approach toward this market segment's unique requirements and preferences.

**Table 2. Descriptive analysis**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	106	57.6
Female	78	42.4
Total	184	100.0
<b>Age</b>		
18-25 years old	122	66.3
26-30 years old	54	29.3
31-35 years old	8	4.3
Total	184	100.0
<b>Race</b>		
Malay	11	6.0
Chinese	82	44.6
Indian	91	49.5
Total	184	100.0
<b>Nationality</b>		
Malaysia	176	95.7
International	8	4.3
Total	184	100.0
<b>Marital Status</b>		
Single	184	100.0
<b>Education Level</b>		
Undergraduate	176	95.7
Master	8	4.3
Total	184	100.0
<b>Employment</b>		
Not working	146	79.3
Part-time jobs	8	4.3
Parents Support	30	16.3
Total	184	100.0
<b>Monthly Income</b>		
Less than RM 2,500	176	95.7
RM2,501 to RM3,000	8	4.3
Total	184	100.0

The multiple linear regression analysis in Table 3 illustrates the relationship between the independent and dependent variables and the results helps to research objective or aim.

**Table 3. Multiple Linear Regression**

<b>Model Summary</b>				
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.328 <sup>a</sup>	.108	.088	.49656

a. Predictors: (Constant), RA, BN, P, SI

The R is the correlation between the predicted values and the observed values of Y and the R-square is the square of the coefficient and indicates the percentage of variation explained by the regression line out of the total variation. The value tends to increase when additional predictors are in the model (Uyank & Guler, 2013). R-square is another measure which addresses the issue of overfitting the data and explains the prediction power of observation. The R-Square value from the model shows a .108% variance between the model and the dependent variable. The higher the values, the higher the relationship between the dependent and independent variables.

ANOVA analysis in Table 4 illustrates the significant level of the variable's relationship at 0.000. This study considers all the four independent variables as significant to the dependent variable. Subsequently, the ANOVA analysis results provide fundamental evidence for the study's objective. The four independent variables can be considered significant to smartphone purchase intention. The four variables are key influence factors on the specific market segment of university students buying decisions, particularly in rural areas and small towns. The ANOVA results are vital for smartphone retailers and marketing managers to understand the university students buying behaviours, a target market living in rural areas and small towns. The results also can provide smartphone retailers and marketing managers with fresh ideas in digital marketing strategies and online promotions combined with innovation in customer engagements.

**Table 4. ANOVA Analysis**

<b>ANOVA<sup>a</sup></b>						
<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	5.321	4	1.330	5.395	.000 <sup>b</sup>
	Residual	44.136	179	.247		
	Total	49.457	183			

a. Dependent Variable: Purchase intention  
 b. Predictors: (Constant), Brand, Price, Social Influence, Relative Advantage

The regression analysis in Table 5 illustrates the independent and variables' significance. The Brand (0.158), Price (0.144), Social Influence (0.147), and Relative Advantage (-0.172). The brand has the highest B value 0.158 and the significant level is 0.017 below 0.05. Both Price and Social Influence were also considered significant levels 0.031 and 0.048 Relative Advantage B value is -0.172 negative relationship to purchase intention, however, the significant level is below 0.05 and 0.011. The analysis shows that all the variables can be

considered significant and has a positive relationship with purchase intention. The results show that the independent variables are significant towards purchase intention. The analysis supports the four hypotheses in this study to determine the influence factors of smartphone purchase intention by rural and small-town university students' market segment. The significant level for Brand is 0.017 which is less than 0.05. Therefore, hypothesis (H1) brand is significant to purchase intention. Brand plays a key role in the purchase decision, and brand elements e.g., awareness, reputation, differentiation, relevance, loyalty, flexibility, quality, position, promises, personality, story, and associations are critical to smartphones' purchase intention. Literature has also emphasised that brand has a significant relationship with purchase intention (Anosh et al., 2014; Shahzad & Sobia, 2013; & Ling et al., 2014).

The significant level for Price is 0.031 which is less than 0.05. Therefore, hypothesis (H2) price is significant to purchase intention. Price plays a role in the purchase decision, and price strategies adoption to attract customers e.g., price skimming, market penetrating pricing, premium pricing, economy pricing, bundle pricing, value-based pricing, and dynamic pricing are critical to the smartphones' purchase intention. In the descriptive analysis, most of the respondents' monthly income is less than RM 2,500, thus, price plays a key role in a purchase decision. Literature has also emphasised that price is significant towards purchase intention (Munnukka, 2008; Lim et al., 2012; & Ling et al., 2014). The significant level for Social Influence is 0.048 which is less than 0.05. Therefore, hypothesis (H3) social influence is significant to purchase intention. Social influence plays a key role to purchase decisions, and it comprises how market segments change their behaviour to meet the demands of a social environment in many forms e.g., conformity, socialisation, peer pressure, obedience, persuasion, and sales and marketing programs which are critical to smartphones' purchase intention. The significant level for Relative Advantage is 0.011 which is less than 0.05 which means a 50 percent chance and 0.05 means a 5 percent chance. In most sciences, results yielding a p-value of .05 are considered on the borderline of statistical significance. If the p-value is under 0.01, the results are considered statistically significant and if it's below 0.005 they are considered highly statistically significant. Therefore, hypothesis (H4) relative advantage in this study is considered significant towards purchase intention.

Table 5. **Multiple Linear Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.045	.551		5.528	.000
	Brand	.158	.066	.170	2.408	.017
	Price	.144	.066	.155	2.179	.031
	Social Influence	.147	.074	.143	1.994	.048
	Relative Advantage	-.172	.067	-.182	-2.556	.011

a. Dependent Variable: Purchase Intention

## Conclusion

The research shows that the brand, price, social influence, and relative advantage variables are key factors in university students' purchase intention. Thus, the research indicates that the students consider price as the key influence factor as most of the students are not employed and don't have a stable income. The brand of the smartphone is another key factor

because of the brand and quality perception. Therefore, the brand name is also considered a key factor to influence purchase intention. The social influence shows that it has a considerable influence on the student's purchase intention because of family members' and friends' assurance and satisfaction. The relative advantage is also a key factor when students feel it is worth or can receive good value from the smartphone purchase. The research had shown that brand name, price, social influence, and relative advantage has considerable influence on the consumer purchase intention of smartphone among university students. Smartphone producers and retailers can benefit from the results and insights into small-town consumers' needs, wants, and preferences for smartphone purchases. University students may consider what kind of value the smartphone brings to their satisfaction and if they feel worth the purchase intention comes into action. The research had proved brand name, price, social influence, and relative advantage had considerable influence on the smartphone purchase intention among university students from a small-town perspective. These insights can assist a retailer with a better understanding of consumer needs, wants and preferences, and marketing strategy formulation. Retailers and marketing managers increase the customer engagement strategies to position smartphones to specific target markets of university students due to the online learning methods which require a suitable and capable smartphone. Producers may need to consider innovative features to attract the student market to their brand and competitive strategy from a broader perspective to capture the opportunities that arise in the market. Since the implementation of performance can easily be duplicated by competitors, the implementation of strategic competitive measures in small towns can lead to significant competitive capabilities, suggesting a need to understand and compare rural and urban marketing strategies. The study has implications due to the research period which was conducted during the Covid-19 pandemic and strict movement control restrictions by the Malaysian government. The survey questionnaire was distributed through online platforms and was unable to conduct face-to-face interviews. Despite the various potential benefits offered by technology, achieving such capabilities was not an easy task, especially during the restriction period. Future research may focus on Generation Z who are less attracted to brands and prefers to shop around for the best deal. The study provides insights on the influence factors of smartphone purchase intention from a specific market segment, university students living in small towns. The information can benefit smartphone retailers and marketing managers to understand the market segment's purchase intention and purchase decisions. The study can assist to create effective traditional and digital marketing strategies to attract and influence university students.

### ***Acknowledgement***

The authors would like to gratefully acknowledge and thank the survey participants and Nilai University Malaysia for their support.

### **References**

- Aaker, D.A. (1991). *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. The Free Press, New York.
- Agarwal, S., & Teas, R.K. (2002). Cross-national applicability of a perceived quality model. *Journal of Product & Brand Management*, 11(4), pp.213-236.
- Alsayed, S., Bano, N., & Alnajjar, H. (2020). Evaluating practice of smartphone use among university students in undergraduate nursing education. *Health Professions Education*, 6(2), pp.238-246.

- Anosh, M., Naqvi, H., & Ghulam, S. (2014). Impact of Brand Equity Drivers on Purchase Intention (A Quantitative Study of Smartphone Market). *International Journal of Innovative Research & Development*, 3(5), pp.388-394.
- Armstrong, J.S., Morwitz, V.G., & Kumar, V. (2000). Sales forecasts for existing consumer products and services: Do purchase intentions contribute to accuracy. *International Journal of Forecasting*, 16(3), pp.383-397.
- Auter, P.J. (2007). Portable social groups: willingness to communicate, interpersonal communication gratifications, and cell phone use among young adults, *International Journal Mobile Communications*, Vol. 5 No. 2, pp. pp.139-56.
- Balakrishnan V.N., & Chandramalar, M. (2019). Knowledge management practices: An exploratory study at the Malaysian higher education institution", *Journal of Research in Innovative Teaching & Learning*, Volume 13, Issue 2, ISSN, pp.2397-7604.
- Balakrishnan, V.N., & Khan, M. K. J., (2018). Influential factors of competitive advantage progression on third-party logistics in Selangor Malaysia. *Transport & Logistics: The International Journal*, 2018; Volume 18, Issue 45, November 2018, ISSN 2406-1069.
- Chang, T., & Albert, R. (1994). Price, product information, and purchase intention: An empirical study. *Journal of the Academy of Marketing Science*, 22(1), pp.16- 27.
- Chinomona, R., Okoumba, L., & Pooe, D. (2013). The impact of product quality on perceived value, trust and students' intention to purchase electronic gadgets. *Mediterranean Journal of Social Sciences*, 4(14), pp.463.
- Christine, S. (2020). Independent and Dependent Variable: Which is Which. <https://blog.prepscholar.com/independent-and-dependent-variables>
- Creswell, J.W. (2013). Research design: Qualitative, quantitative, and mixed methods approach. *Sage publications*.
- Creswell, J.W. (2008). Educational research - planning, conducting, and evaluating quantitative and qualitative research, 3<sup>rd</sup> ed, Upper Sandle River, HJ: Pearson Education. New Jersey.
- Dickson, P.R., & Sawyer, A.G. (1990). The price knowledge and search of supermarket shoppers. *Journal of Marketing*, 54(3), pp.42-53.
- Dodds, W.B., Monroe, K.B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, 28(3), pp.307-319.
- Erickson, G.M., & Johansson, J.K. (1985). The role of price in multi-attribute product evaluations. *Journal of consumer research*, 12(2), pp.195-199.
- Farzana, W. (2012). Consumers' psychological factors association with brand equity of high involvement product: Case of laptop. *World Journal of Social Sciences*, 2(5): pp.90-101.
- Gautam, P. (2018). What the Advantages and Disadvantages of Mobile Learning Are - eLearning Industry. <https://elearningindustry.com/advantages-and-disadvantages-of-mobile-learning>.
- Hanani Azman, N. (2021). High demand for cheap gadget. The Malaysian Reserve. <https://themalaysianreserve.com/2021/02/19/high-demand-for-cheap-gadgets/>.
- Ho, C.H., & Wu, W. (2011). Role of Innovativeness of Consumer in Relationship Between Perceived Attributes of New Products and Intention to Adopt. *International journal of electronic business management*, 9, pp.258-266.
- Ibrahim, I.I., Subari, K.A., Kassim, K.M., & Mohamood, S.K.B. (2013). Antecedent stirring purchase intention of Smartphone among adolescents in Perlis. *International Journal of Academic Research in Business and Social Sciences*, 3(12), p.84.

- Isibor, O.F., Okhawere, N.E., & Ogbonnaya, G.O. (2018). Smartphone purchase intention amongst Undergraduates in Edo State Nigeria. *University of Port Harcourt Journal of Management*, 3(2), pp.15-29.
- Javed, A. (2021). Advantages and disadvantages of descriptive research-EngloPedia. <https://englopedia.com/advantages-and-disadvantages-of-descriptive-research/>.
- Joep W, C.A., Ruud, T.F., & Tammo, H.A.B. (2011). Generalizations on consumer innovation adoption: A meta-analysis on drivers of intention and behaviour. *International Journal of Research in Marketing*, 28(2), pp.134-144.
- Juha, M. (2008). Customers' purchase intentions as a reflection of price perception. *Journal of Product & Brand Management*, 17 (3), pp.188 - 196.
- Kotabe, M., & Helsen, K., (2011). Global Marketing Management, 5th edition. *John Willey and Sons Inc, United States*.
- Kotler, P. (2011). Reinventing marketing to manage the environmental imperative. *Journal of Marketing*, 75(4), pp.132-135.
- Kotler, P., & Armstrong, G. (2010). Principle of marketing. 3th Ed., *Pearson Education*.
- Kotler, P., & Armstrong, G. (2012). Principle of Marketing-it's good and good for you. *New Jersey, Pearson, United States*.
- Kurtz, D., MacKenzie, H.F., & Snow, K. (2009). Rate of Adoption Determinants, Relative Advantage. In *Contemporary Marketing. Cengage Learning*.
- Lazim, H. M., & Sasitharan, D. (2015). What factor persuade Malaysian's consumer to purchase smartphone? *Journal of Technology and Operations Management*, 10(2), 38-50.
- Lay-Yee, K.L., Kok-Siew, H., & Yin-Fah, B.C. (2013). Factors affecting smartphone purchase decision among Malaysian generation Y. *International Journal of Asian Social Science*, 3(12), pp.2426-2440.
- Lee, H.M., Lee, C.C., & Wu, C.C. (2011). Brand image strategy affects brand equity after M&A. *European Journal of Marketing*, 45(7/8), pp.1091-1111.
- Ling, L.P., Lang, P.K., & Fong, T.C., Perinpajothi, T.S. (2014). Factors affecting purchase intention towards smartphone brand: a study of young female adult consumers.
- Lim, C.T., Chew, J.Q., Lee, J.H., Loke, W.W., & Wong, T.K. (2012). Exploring the factors affecting purchase intention of smartphone: a study of young adults in Universiti Tunku Abdul Rahman, Perak Campus, Malaysia.
- Lu, T. (2017). Smartphone Users Replace Their Device Every Twenty-One Months. <https://www.counterpointresearch.com/zh-hans/smartphone-users-replace-their-device-every-twenty-one-months/>.
- Mason, W.A., Conrey, F.D., & Smith, E.R. (2007). Situating social influence processes: dynamic, multidirectional flows of influence within social networks. *Personality and Social Psychology Review*, Vol. 11, pp.279-300.
- Monroe, K.B. (2003). Pricing-Making Profitable Decisions. 3rd Edition, *McGraw Hill/Irwin, New York*.
- Munnukka, J. (2008). Customers' purchase intentions as a reflection of price perception. *Journal of Product & Brand Management*.
- Nunnally, J.C. & Bernstein, I.R. (1994). Psychometric Theory. Ed ke-3, *McGraw-Hill, New York*.
- Osman, M. (2012). A study of the trend of Smartphone and its usage behaviour in Malaysia. *International Journal on New Computer Architectures and Their Applications* 2(1): pp.274-285.
- Pallant, J. (2001). SPSS survival manual – a step by step guide to data analysis using SPSS for windows (version 10), *Buckingham Open University Press*.
- Panggabean, H.M.E. (2014). Exploring the factors affecting purchase intention of smartphone: A Study of Young Adults in President University, Cikarang, Indonesia.

- Quickmba.com. (2021). Questionnaire Design.  
<http://www.quickmba.com/marketing/research/qdesign/>.
- Rahim, A., Safin, S.Z., Kheng, L.K., Abas, N., & Ali, S. (2016). Factors influencing purchasing intention of smartphone among university students. *Procedia Economics and Finance*, 37, 245-253.
- Rogers, E.M. (1995). Diffusion of innovations. 4th edition, New York: The Free Press.
- Roscoe, J. T. (1975). Fundamental Research Statistics for the Behavioural Sciences. (2nd ed.). New York: Holt Rinehart & Winston
- Schiffman, L.G., & Kanuk, L.L. (2000). Consumer Behaviour. 7th ed. Wisconsin: Prentice-Hall.
- Shahzad, K., & Sobia, R. (2013). Investigating the Factors Affecting Youth Brand Choice for Mobile Phones Purchase - A study of Private Universities Students of Peshawar. *Management & Marketing Challenges for the Knowledge Society*, p.372.
- Sharimilah Devi, R., Chong, S.C., & Lin, B. (2008), Perceived importance and effectiveness of KM performance outcomes: perspectives of institutions of higher learning, *International Journal of Innovation and Learning Vol. 5 No. 1*, pp.18-37.
- Solomon, M. R. (2013). Consumer Behaviour: Buying, Having, and Being. 10 editions. New Jersey, Pearson, United States.
- Suki, N.M., & Suki, N.M. (2013). Dependency on smartphone: An analysis of structural equation modelling. *Journal Technology* 62(1): pp.49-55.
- Wui C., Woo, K.Y., & Haizam M.S. (2018). Consumer Perceptions and Intentions Towards Malaysian Mobile Marketing. *Asian Journal of Innovation and Policy*, 7.2:338-363
- Supramani, S. (2020). Covid pandemic boosts sale of smart devices.  
<https://www.thesundaily.my/local/covid-pandemic-boosts-sale-of-smart-devices-FM4691531>
- Tidd, J. (2010). Factor Influencing Adoption, Relative Advantages. In Gaining Momentum. *World Scientific*.
- Toh, B. (2016). Demand for smartphones still big - Huawei. The Edge Markets.  
<https://www.theedgemarkets.com/article/demand-smartphones-still-big-%E2%80%94-huawei>.
- Mckinsey. (2020). Understanding and shaping consumer behaviour in the next normal.  
<https://www.mckinsey.com/businessfunctions/marketing-and-sales/our-insights/understanding-and-shaping-consumer-behavior-in-the-next-normal>.
- Uyanık, G.K., & Güler, N. (2013). A study on multiple linear regression analysis. *Procedia-Social and Behavioral Sciences*, 106, pp.234-240.
- Warshaw, P.R., & Davis, F.D. (1985). Disentangling behavioural intentions and behavioural expectations. *Journal of Experimental Social Psychology*, 21, pp.213-228.
- Yue, G., & Stuart, J.B. (2011). Explaining purchasing behaviour within World of Warcraft. *Journal of Computer Information Systems*, 52 (3), pp.18-30.