

“Factors affecting consumer behavior in Smartphone purchases in Nepal”

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FACTORS AFFECTING CONSUMER BEHAVIOR IN SMARTPHONE PURCHASES IN NEPAL

Abstract

The study aimed to determine why consumers purchase smartphones. The paper examined product attributes, social factors, pricing, and brand image factors to assess how individuals purchase smartphones. The study was conducted in the Kathmandu Valley, the capital city of Nepal. The respondents of the study were smartphone users in the Kathmandu Valley. The study utilized positivist epistemology with predetermined hypotheses and a deductive approach with a single ontological foundation. The study employed a quantitative method. A questionnaire-based survey was conducted on a six-point Likert scale to obtain the primary data. The population for this study was comprised of Smartphone users, and a sample size of 398 was used. This study applied a convenient sampling technique and a causal research design. The effect of independent variables on consumer behavior was determined using structural equation modeling. The path analysis utilizing structural equation modeling demonstrated that product pricing ($\beta = 0.21, p < 0.05$), social factors ($\beta = 0.37, p < 0.05$), and brand image ($\beta = 0.41, p < 0.05$) significantly influence consumer behavior. In contrast, the product attribute has no significant impact ($\beta = 0.05, p > 0.05$) on consumer behavior. The results provide future scholars and business executives with a road map to view the emerging context of market development.

Keywords

brand image, marketing, product attributes, product price, social factors

JEL Classification

L94, M31

INTRODUCTION

Consumer buying behavior describes how people choose, purchase, and use goods and services to fulfill their needs. Since everything in our lives revolves around buying things, consumer behavior can be thought of as the sum of all human behavior as it focuses on the complete consumption process, including factors that affect a consumer before, after, and during a purchase, the field of consumer behavior covers a broad range of topics. Purchasing as a consumer is a complex procedure. Consumer purchasing behavior is essential for assessing and evaluating a specific product (Rai et al., 2023). Purchase intentions can be altered due to price or perceived quality and value.

Kotler and Armstrong (2010) suggested six pre-purchase stages: awareness, information, interest, preference, persuasion, and purchase. Schiffman and Kanuk (2007) described consumer behavior as seeking, buying, using, assessing, and rejecting products and services. Consumers, according to them, expect acts to satisfy their desires. The behavioral outcome that causes the consumer to differentiate between varieties of options is the purchasing choice, which follows from their preferences (Dhar et al., 1999). They went on to say that the processes involved in customer decision-making and brand selection are more intricate. Consumers select various brands depending on their pref-

ferences, experiences, and information. Purchasing is a person's behavior when considering a specific product, what comes to mind first, and what they think or do when they buy the same product. In this situation, the person is more likely to report their habit than their purpose when responding to the intention (Warsaw & Davis, 1985).

Today, mobile phones are quickly evolving, serving not only as a means of long-distance communication but also as a source of entertainment, comfort, and convenience for users. Access to the internet, email, social networking, music, video, games, and other functions are all possible with it. Consumers of mobile phones today are frequently exposed to a broad range of goods. Each race develops novel goods using various types, models, and technologies and then customizes them to suit the requirements, way of life, and interests of the intended professions or hobbyists (Dahal, 2021). According to Uddin et al. (2014), various users use mobile phones in multiple ways depending on their needs. Since mobile phone usage has increased, people now consider multiple factors while buying a phone.

1. LITERATURE REVIEW

In investigating the factors influencing consumers' intentions to buy smartphones, Rai (2021) discovered that product attributes and price significantly impact those purchase intentions, but brand personality has no discernible impact on those intentions in Nepal. Lavuri et al. (2019) stated that a mobile device's features, cameras, design, and aesthetics significantly impact consumers' behavior. Rakib (2019) found that price, features, brand name, and social factors influence university students' purchase intentions. Rajan (2018) found that most male consumers are given importance to ram, brand, HDC, graphics card memory, and processors. Consumers are more knowledgeable about feature selection when buying a Smartphone. As a result, customers buy a smartphone that is more comfortable and highly configured in every way. Sujata et al. (2016) investigated five factors such as technology, hardware, primary, brand, and financial aspects that positively influence young students' decisions when buying a Smartphone.

Rahim et al. (2016) investigated many factors affecting Malaysian university students' intentions to buy a smartphone and found a substantial correlation between Smartphone purchase intention and product attributes, company image, social influence, and product sacrifice. According to Uddin et al. (2014), while purchasing a mobile phone, buyers are influenced by several factors, all of which affect their purchase choice. According to Lay-Yee et al. (2013), the physical attributes of the phone, such as its camera, Bluetooth, color, weight, and other features, influence the customers' buying process.

Almrafee (2023) found that family members' and friends' recommendations price of the product positively affects the consumers' purchase decision in buying OTC medicines in Jordan. Still, the experience of consumers and country of origin had no significant influence on consumers' purchasing decisions when buying OTC medicine. Natarajan and Kanagarathinam (2020) found that consumers' attitudes, past experiences, and recommendations of others, such as friends and family members, significantly impact purchasing behavior of OTC medicine. Chughtai and Awan (2020) found that the product price, friend's endorsement, perceived quality, and role of media awareness significantly influence the buying decision of eco-friendly products in Pakistan.

To determine the connection between the social factor and purchasing choices in Jordan, Al-Azzam and Fattah (2014) performed a study and found a strong correlation between suggestions of family, price, reference groups, quality, and hue and the choice of product. A study was conducted by Furajji et al. (2012) to identify the variables influencing consumer behavior and discovered that physical factors, social factors, and components of the marketing mix highly influence the market's customer buying behavior for electric appliances. The most important factor influencing students' dependence on a smartphone is social influence, which significantly impacts their decision-making (Suki & Suki, 2013). In addition, they discovered a significant connection between social factors and buying intent. Social factors that affect consumer behavior include the consumer's small social groups, family, and social

duties and status (Kotler & Armstrong, 2010). In addition, the basic structure of the initial reference group, such as a family member, significantly influences consumers purchasing decisions (Thomson et al., 2007).

Lu et al. (2023) stated that personal affordability, the content community travel brand attributes, information provision, creativity, and interaction influenced the purchase intention of travel products. Katt and Meixner (2020) discovered a negative relationship between price perception and purchase behavior for organic food. Also, it has been found that consumers are more likely to buy organic food if they know a lot about the environment, care about their health, and value buying things that make them happy. In a study on customer brand preferences for mobile phones, Fathima (2019) discovered that a phone's features, pricing, and designs significantly impact brand preference. Elammari and Cavus (2019) explored that product features, brand image, and social factors have a considerable effect on students' brand choice behavior, but the price has little impact on students' brand choice in Smartphone buying. Lavuri and Sreeramulu (2019) found that the brand name, product quality, product price, brand loyalty, recommendations of salespeople and family and friends, affordability, and previous user experiences significantly impact consumer buying behavior in personal care products. Mustafa and Al-Rifat (2019) found that the product's price, advertising, social factors, and brand significantly impact consumer satisfaction and mobile phone purchase decisions.

Shekhar et al. (2019) argued that trust, price, and brand names significantly influence consumers' buying behavior toward OTC medicines. Customers in the Indian market are strongly impacted by pharmacists' recommendations and pricing when they buy over-the-counter pharmaceuticals, according to research by Pujari et al. (2016). Their perception of the price influences the consumer's choice to buy a product. Understanding a product's price helps customers learn more about it and gives it a more profound meaning (Kotler & Keller, 2016). Price plays a significant role in customers' buying frequently used goods and influences their selection of the store, brand, and product (Faith & Agwu, 2014).

To identify the factors influencing consumers' purchase intentions for a smartphone during COVID-19, Rakib et al. (2022) discovered that company image, product features, and product price significantly influence purchase intention during COVID-19, but social factors have no such impact. A study was conducted by Haris and Mustaffa (2020) to identify the factors influencing consumers' decisions to acquire smartphones. They discovered that while the price and brand name do not significantly impact smartphone purchasing decisions, social factors and product features have a substantial impact.

According to Kumar and Fernandez (2020), brand image, dependency, and convenience have no appreciable impact on purchasing a smartphone, but price, features, and social factors influence buying decisions. Engidaw (2020) explored that product attributes, brand names, pricing, advertising, and social factors affect smartphone purchases. Rahim et al. (2016) discovered that brand recognition, societal influence, and product features are significantly correlated with purchase intentions but that product sacrifice is not significantly associated with purchase intentions when purchasing a Smartphone. Ayodele and Ifeanyichukwu (2016) found that product price and aesthetic value influence the smartphone buying decision of consumers, but brand name and social factors have no significant effect on the consumers' purchase decision towards smartphone buying. Sata (2013) found that price, durability, and product features significantly impact consumer buying behavior, whereas the social factor, brand name, and after-sale service have a not significant effect on consumer behavior in buying a smartphone. From the above literature review, it is concluded that product attributes, social factors, product price, and brand image significantly influence consumer buying behavior.

2. AIMS AND HYPOTHESES

A variety of factors influence consumer behavior. In the marketing environment, consumer tastes and preferences constantly change and consumers show diversified, unexpected, and surprising purchasing behavior. Changes have had to happen considerably more quickly due to the abrupt global

epidemic lasting more than a year. Consumer behavior is constantly changing and challenging to forecast; thus, it will be different from before the pandemic (Tyagi & Pabalkar, 2021). Most research has been conducted to identify consumer behavior factors and why customers prefer one brand over other brands in a particular product category. Several factors influence the choice of different product categories. Product quality, quantity style, brand, price, product features, social factors, color, and customer services might affect consumers' purchasing decisions (Lema & Wodaje, 2018). Various studies have been conducted to explore the factors influencing consumer behavior, but the findings have not shown similar results. Lavuri and Sreeramula (2019) found that price is essential in consumer behavior, whereas Elammari and Cavus (2019) found it has no significant role in purchasing decisions. Rakib et al. (2022) established a significant influence of brand image on consumer behavior, but Haris and Mustaffa (2020) did not find it. Almrafee (2023) investigated the considerable impact of social factors on consumers' purchasing decisions, but Rakib et al. (2022) found no significant influence on consumer behavior.

In these situations, it is becoming essential for firms to identify consumers' diversified needs, wants, desires, and preferences and produce products accordingly (Batra, 2015). So, researchers must identify the factors affecting consumer behavior in Smartphone buying among Nepalese students.

The study's objective was to identify factors influencing consumer behavior in buying a smartphone.

Study hypotheses are as follows:

H1: Product attributes positively influence consumer behavior.

H2: Social factors positively influence consumer behavior.

H3: Product price positively influences consumer behavior.

H4: Brand image positively influences consumer behavior.

3. METHODOLOGY

The study has examined the effect of product attributes, social factors, price of the product, and brand image factors on consumer behavior. It was based on positivist epistemology with a deductive approach and a single reality ontological foundation. The study has adopted quantitative research methods. Various factors influence consumer behavior in smartphone buying. Based on the literature review, product attributes, social factors, product price, and brand image factors are independent variables in measuring consumer behavior in Smartphone buying in the study. Therefore, the conceptual framework presented in Figure 1 was developed to undertake the analysis systematically.

Causal research design has been used in the study to recognize the effect of a product attribute, social factors, and product price and brand image factors on consumer behavior. The primary data from Smartphone users were gathered for this study using a six-point Likert-type scale questionnaire. Closed-ended questionnaires have been used to investigate the factors influencing consumer behavior among Smartphone users in the Nepalese market. Structured surveys looked at product quality, price, social factors, brand image factors, and customer behavior by scoring 1 for strongly disagreeing, 2 for disagreeing, 3 for dis-

Table 1. Questionnaire structure

Group and Area	Qs	Measurement Scale	Remarks
Group A: Demographic Information	4	Various Options	
Group B: Product price	3	6-point Likert Scale	1 = strongly disagree to 6 = strongly agree
Group C: Product attributes	3		
Group D: Social factors	3		
Group E: Brand image factors	3		
Group F: Consumer behavior	3		
Total	19		

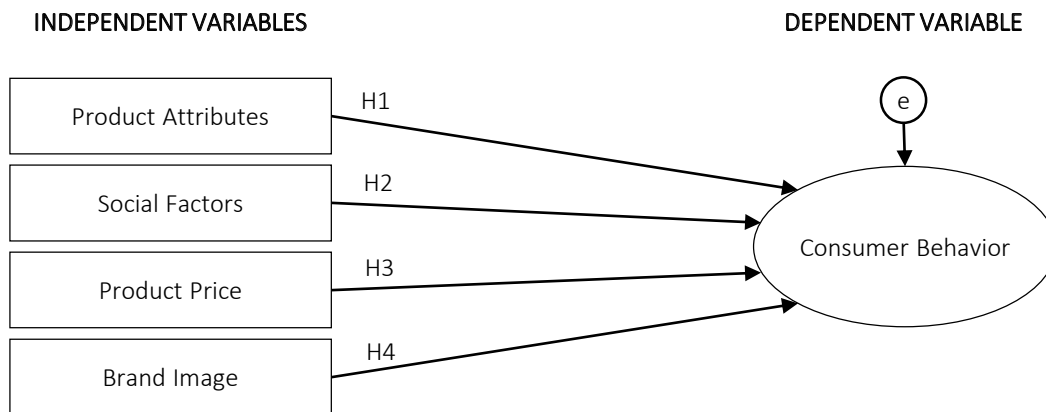


Figure 1. The hypothesized paths of the study model

greeing somewhat, 4 for agreeing somewhat, 5 for agreeing, and 6 for strongly agreeing. The structure of the questionnaire is as follows.

The study’s target population was Nepalese students who had just bought a smartphone in the Nepalese market. Nepalese people who have bought and are familiar with the smartphone were designated as the study’s targeted population. Based on the convenience sampling technique, the study gathered a response from 398 respondents, the study’s sample size. Table 2 shows the personal characteristics of the respondents. These variables were gender, age groups, faculty of students, and level of education.

Table 2. Profile of respondents

Variables	Categorization	Frequency	Percentage
Gender	Male	182	45.7
	Female	216	54.3
Age Groups	Below 20	26	6.5
	21-25	211	53.0
	26-30	126	31.7
Faculty	Above 30	35	8.8
	Science	71	17.8
	Management	209	52.5
	Humanity	79	19.8
Level of Education	Education	39	9.8
	Bachelor	158	39.7
	Master	195	49.0
	Above Master	45	11.3
Total of each section		398	100

Table 3. Reliability, validity, and CMB insights

Observed variables	Latent Variables	Reliability	Convergent Validity		Discriminant Validity				CMB		
		Cronbach’s alpha	CR	AVE	PP	PA	SF	BI			
Price comparison	Product Price (PP)	.786	.768	.545	0.738	0.777	0.733	0.713	36.92 %		
Least expensive											
Price important											
Physical characteristics	Product Attributes (PA)	.744	.821	.604	0.282	0.777	0.733	36.92 %			
Multimedia use											
Battery life											
Shopping with friends	Social Factors (SF)	.717	.777	.538	0.380	0.689	0.733			36.92 %	
With family members											
Suggestions of others											
Brand name	Brand Image (BI)	.747	.745	.508	0.502	0.327	0.529				0.713
Brand image											
Reputed brand											
Threshold value		> 0.70	> 0.70	> 0.50	AVE’s Square Root (in bold) > Inter-construct Correlations Hair et al. (2006)				< 50%		
Suggested by		Hair et al. (2006)			Cho and Lee (2012)						

Mean has been used to understand the intention of Smartphone users regarding consumer behavior. The standard deviation has been used to measure the dispersion of a set of data. The correlation between independent and dependent variables in smartphone purchases has been evaluated using Karl Pearson's Coefficient Correlation. Regression path analysis using structural equation modeling (SEM) has been used to identify the effect of independent variables on consumer behavior.

To confirm that the observed variables and latent constructs were appropriate to achieve the stated goals, the study performed reliability, validity, and CMB (common method bias) tests. The factors' internal consistency (reliability) was evaluated using Cronbach's alpha, convergent validity was assessed using AVE (average variance extracted) and CR (construct reliability), and the CMB was evaluated using Harman single-factor variance. Table 3 shows the test's results.

The test results reported in Table 3 indicate that the reliability, convergent validity, discriminant validity, and CMB criteria for the independent

latent variables were satisfied with the respective suggested threshold values. Such results allowed us to proceed with further analysis.

4. RESULTS

Table 4 indicates the descriptive and correlation analyses of all the study's variables. According to the research framework, the dependent variables include consumer behavior (CB), whereas the independent variables are product price (PP), product attributes (PAs), social factors (SFs), and brand image (BI).

Table 4. Descriptive statistics and correlation insights

Variables	Mean	S.D.	PP	PAs	SFs	BI	CB
PP	4.43	0.75	1				
PAs	3.96	1.04	.282**	1			
SFs	3.91	0.95	.380**	.689**	1		
BI	3.95	0.93	.502**	.327**	.529**	1	
CB	4.03	0.90	.419**	.456**	.543**	.524**	1

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

A 6-point Likert scale was used to evaluate each characteristic. Table 4 shows that the average

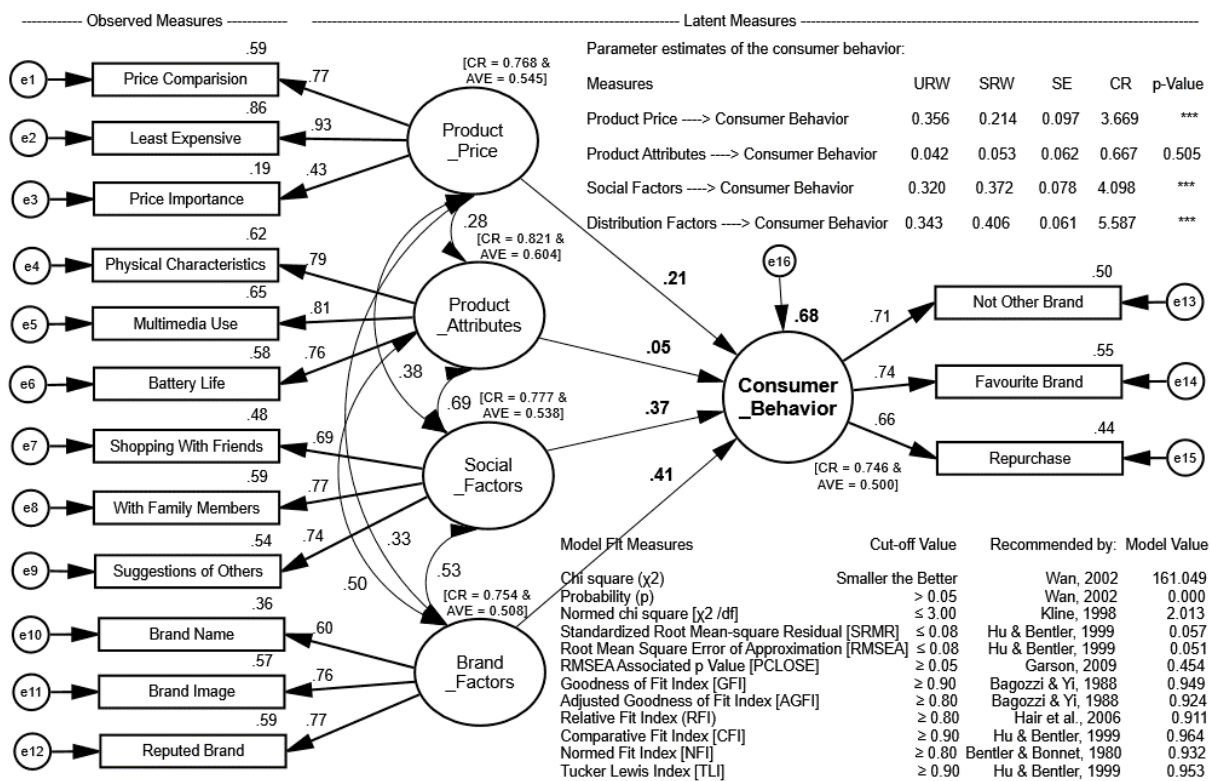


Figure 2. Study model

PP, PAs, SFs, BI, and CB scores was 4.43, 3.96, 3.91, 3.95, and 4.03, respectively. All the average scores of the independent latent variables were more than mid-point value 3 and indicated that most respondents were inclined to agree on CB. Therefore, the independent variables had a positive impact on CB. As a result, PP, PAs, SFs, and BI significantly affect consumer buying behavior toward smartphones in the Nepalese market. Additionally, the data were consistent with a minimum value of 1 to a maximum value of 6, as evidenced by the fact that the standard deviation of the PP, PAs, SFs, and BI factors ranges from 0.75 to 1.04, and the responses dispersion from the mean values are somewhat similar across the respondents.

The path diagram of the study model has shown in Figure 2. The model fit statistics, presented in Figure 2, satisfied the respective threshold values suggested by the researchers.

The percentage of variance in CB that can be explained by PP, PAs, SFs, and BI serves as a model's predictive power. The capacity of the model to predict events is higher when more variance is explained. In structural equation modeling research, the variance value is expressed in squared multiple correlations linked to dependent variables. The four independent variables have been explained 68 percent proportion of variance in CB for buying a smartphone in Nepal.

By evaluating the path estimates using the critical value t-value, hypotheses were put to the test. Critical values below the 0.05 significance level at t-value = 1.96 support the hypothesis. The many study-related parameters were examined against each of the separate hypotheses. The study's formulated hypotheses were put to the test using the calculated SEM regression coefficients. Table 5 presents the results of the hypotheses testing of dependent variables on CB.

Table 5. Status of study hypotheses

Hypotheses	Path	Estimate	S.E.	C.R.	P	Results
H1	Pas → CB	.05	.062	.666	.505	Rejected
H2	SFs → CB	.37	.078	4.098	.***	Accepted
H3	PP → CB	.21	.097	3.609	.***	Accepted
H4	BI → CB	.41	.061	5.587	.***	Accepted

5. DISCUSSION

Many factors influence CB. Customer tastes and preferences are ever-changing, and consumers' purchasing behavior is diverse, unexpected, and surprising (Dahal et al., 2023). In such circumstances, the study aimed to examine the effects of PAs, SFs, PP, and BI on the purchasing behavior of smartphones by Nepalese students in the Nepalese market. The latent variable PAs was evaluated from three observed variables: Physical Characteristics ($\beta = 0.786, p < 0.01$); Multimedia Use ($\beta = 0.808, p < 0.01$); and Battery Life ($\beta = 0.763, p < 0.01$). The study's findings revealed no discernible influence of PA on CB ($\beta = 0.053, p > 0.01$), rejecting the first hypothesis (H1). The finding was inconsistent with earlier research (like Lavuri et al., 2019; Rai, 2021; Rajan, 2018; Rakib, 2019) that PAs substantially influence CB. The previous findings were drawn from the different research done in different countries, products, situations, socioeconomic conditions, etc. Therefore, the study's findings may not be consistent with the previous findings.

The latent variable SFs was assessed from three observed variables: Shopping with Friends ($\beta = 0.693, p < 0.01$); With Family Members ($\beta = 0.771, p < 0.01$); and Suggestions of Others ($\beta = 0.736, p < 0.01$). Consistent with earlier studies (Almrafee, 2023; Chughtai & Awan, 2020; Natarajan & Kanagarathinam, 2020; etc.), the SFs ($\beta = 0.372, p < 0.01$) had a significant influence on CB. Therefore, the study accepted the hypothesis (H2). This finding was consistent with the previous findings because it is a universal truth that the consumer makes purchase decisions based on the suggestions and advice of others.

The latent variable PP was weighed from three observed variables: Price Comparison ($\beta = 0.768, p < 0.01$); Least Expensive ($\beta = 0.928, p < 0.01$); and Price Importance ($\beta = 0.434, p < 0.01$). In line with earlier studies (like Elammari & Cavus,

2019; Fathima, 2019; Lavuri & Sreeramulu, 2019; Mustafa & Al-Rifat, 2019; etc.), PP has a significant impact on CB ($\beta = 0.214$, $p < 0.01$). Hence, the third hypothesis (H3) was accepted and stated that PP greatly influenced CB in purchasing smartphones in the Nepalese market. This finding was consistent with previous findings because it is the universal truth that consumers consider the price factor in buying smartphones.

Finally, the latent variable BI was also evaluated from three observed variables: Brand Name ($\beta = 0.603$, $p < 0.01$); Brand Image ($\beta = 0.758$, $p < 0.01$); and Reputed Brand ($\beta = 0.765$, $p < 0.01$). As similar

with Engidaw's (2020) work, the study showed that the BI has a significant impact on CB ($\beta = 0.406$, $p < 0.01$), but it was at odds with earlier findings that the BI of the product has a significant influence on customer behavior (Haris & Mustafa, 2020; Kumar & Fernandez, 2020; Rakib et al., 2022). Therefore, the study accepted the fourth hypothesis (H4). This finding was not consistent with previous findings because previous findings were drawn from the situations in different countries. As well as consumer behavior is not constant, it is changeable, it might be changed over time and might differ based on individuals, society, external environment, etc.

CONCLUSION

The study aimed to identify the influence of product attributes on consumer behavior in smartphone buying. It was found that the attribute factors of smartphones do not influence consumer behavior. It means that Nepalese smartphone users do not think about the attribute factors of smartphones, and the attributes of smartphones may not lead to increased consumer behavior in Nepal. Similarly, the study's second objective was to investigate the effect of social factors on consumer behavior in the buying of smartphones. The result of the study found that social factors influence consumer behavior in buying smartphones, indicating that Nepalese consumers considered social factors in the selection of a smartphone brand, and Nepalese consumers purchase smartphones by taking the advice and suggestions of friends, family members and others.

The third objective of the study was to examine the impact of the smartphone's price on consumer behavior. It is found that the price of the smartphone influence on the buying behavior of consumers. It is concluded that the price of the smartphone is considered an essential factor in shaping consumer behavior when purchasing a smartphone. It shows that the price level of the smartphone may lead to an increase in consumer behavior regarding the choice of smartphones in Nepal. The universal truth is that the price factor influences consumers' purchase decisions. The final objective of the study was to examine the influence of brand image on consumer behavior in the buying of smartphones. The result of the regression coefficients was that the brand image influences consumer behavior. Therefore, it is concluded that Nepalese consumers considered the brand factors rather than the attributes of smartphones. They choose smartphones based on brand image. It shows that the brand image factor might increase consumer behavior toward smartphone purchases, and people purchase smartphones based on the brand's equity. Nepalese consumers consider a smartphone a prestigious product, and brand is an important factor for prestigious products.

The findings have many practical implications for practitioners. Marketing managers and companies must consider price, brand image, and societal aspects in marketing planning. These insights may assist the organization and marketers create a smartphone marketing strategy.

Based on the study's limitations, there are some suggestions for future research directions. First, this study can be conducted in other developed and underdeveloped countries where people have different socioeconomic backgrounds and have different perceptions, characteristics, cultures, customs, behaviors, purchasing power, attitudes, etc. Second, this model can be applied to other service sectors also. This model can also be applied to other products except for smartphones. Third, this model can be fur-

ther studied using demographic variables to measure consumer behavior. Fourth, it is also suggested that the additional independent variables not captured in the study can be used to identify consumer behavior toward smartphone buying. These findings will be pioneering empirical evidence and a foundation for future study in different contexts.

AUTHOR CONTRIBUTIONS

Conceptualization: Bharat Rai, Binod Ghimire.

Data curation: Bharat Rai, Binod Ghimire.

Formal analysis: Bharat Rai.

Investigation: Bharat Rai.

Methodology: Bharat Rai, Rewan Kumar Dahal.

Software: Bharat Rai, Rewan Kumar Dahal, Binod Ghimire.

Supervision: Bharat Rai, Rewan Kumar Dahal.

Validation: Bharat Rai, Rewan Kumar Dahal.

Writing – original draft: Bharat Rai.

Writing – review & editing: Rewan Kumar Dahal, Binod Ghimire.

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