Mobile Phone Buying Decisions among Young Adults: An Empirical Study of Influencing Factors

Muhammad Tanveer [1,*](ID)**, Harsandaldeep Kaur** [2]**, George Thomas** [3](ID)**, Haider Mahmood** [4](ID)**, Mandakini Paruthi** [5] **and Zhang Yu** [6,7]

1 Prince Sultan University, Riyadh 11586, Saudi Arabia
2 School of Financial Studies, Guru Nanak Dev University, Amritsar 143005, India; harsandal.usfs@gndu.ac.in
3 Department of Marketing, College of Business Administration, Prince Sultan University, Riyadh 11586, Saudi Arabia; gthomas@psu.edu.sa
4 Department of Finance, College of Business Administration, Prince Sattam Bin Abdulaziz University, Al-Kharj 16278, Saudi Arabia; h.farooqi@psau.edu.sa
5 School of Management Studies, Chaitanya Bharathi Institute of Technology, Hyderabad 500075, India; mandakini_sms@cbit.ac.in
6 School of Economics and Management, Chang'an University, Xi'an 710054, China; Zhangyu19@foxmail.com
7 Department of Business Administration, ILMA University, Karachi 75190, Pakistan
* Correspondence: mtanveer@psu.edu.sa

Abstract: Owing to the novelty and dynamism of mobile phone shopping behavior of adults within the context of contemporary social, technological, and market norms necessitated the need to study this phenomenon frequently. In the same league, there is a pressing need to empirically examine the mobile shopping behavior of young adults in Pakistan. This paper examines the factors influencing mobile phone shopping behavior within the context of young adults in Pakistan. First, a questionnaire-based survey consisting of a five-point Likert scale was conducted. A total of 416 respondents provided their complete responses. Then, we employed the structural equation modeling (SEM) model using AMOS 24 to empirically test the hypothesized model. The empirical results revealed that price and attractiveness positively influence mobile phone buying behavior among young adults in Pakistan. On the other hand, Service Encounter, Convenience, Avoidance of Core Service Failure, and Response have negative but statistically insignificant influences on mobile phone buying behavior in Pakistan. This finding revealed that the mobile shopping behavior of young Pakistani adults is predominantly influenced by the price of mobile phones and their attractiveness. Therefore, it is highly recommended that companies need to offer affordable mobile phone prices. Additionally, the attractiveness of the mobile phone needs to be maintained at competitive prices.

Keywords: shopping behaviors; price; attractiveness; service encounter; convenience

1. Introduction

In contemporary literature, technology has been termed as the most dynamic and rapidly evolving domain. One of the tremendous improvements relating to communication technology is the development of mobile phones, which are evidence of the rapid change in technological advancements [1]. Remarkable developments in mobile technology and applications have encouraged people to use them in their day-to-day life [2,3]. In recent years, the mobile phone has evolved from essentially an interpersonal communication device to a multimedia machine [4]. The technology of mobile phones has penetrated every aspect of daily life. Mobile e-commerce is considered an alternative approach for comparison and buying products and services anywhere anytime. Mobile phones are used for multi-purposes such as calling and sending messages, capturing pictures, accessing the internet, playing games, socializing, and downloading applications. Academicians and practitioners have recognized the pertinence of accessing health, education-related services virtually and the dire need of getting connected online. Mobile phones enable

billions of people across the globe to easily access services like banking, insurance, health, education, etc. Existing literature has documented the impact of mobile phone industry on sustainable development. Studies have reported positive benefits of mobile phone penetration on the number of dimensions of human life such as financial inclusion [5,6], poverty reduction [7,8], women empowerment [9], reducing income inequality [10,11], educational outcomes [2], etc. GSMA [12] highlighted the role of mobile phones in driving significant social, economic, and environmental benefits and the achievement of all 17 Sustainable Development Goals (SDGs). Smith et al. [13] empirically documented the role of mobile phones as a unique platform for the massive and multidimensional enhancement of capabilities in economic, social, and governance spheres in developing countries. A global study by Rotondi et al. [14] has provided empirical evidence of the role of mobile phones in attaining sustainable development. Merma-Molina et al. [15] have also highlighted the contribution of mobile phones to achieve United Nation's 17 Sustainable Development Goals.

In recent years, the number of mobile phone subscribers has increased substantially. Figure 1 shows the global trend of mobile phone sales in billions of dollars and also the share of mobile commerce as a % of total e-commerce is presented. Mobile e-commerce has been increasing tremendously from USD 0.97 billion in 2016 to USD 3.56 billion in 2021. The growth rate is also impressive as the yearly growth of mobile phone sales remained higher than 20% during 2016–2021. The yearly growth rates are 40%, 32%, 28%, 25% and 22% in years 2017, 2018, 2019, 2020 and 2021, respectively. Moreover, the percentage share of the use of mobile phones in the total e-commerce is also increasing every year during 2016–2021. For instance, the percentage share of the use of mobile phones in total e-commerce was 52.4% in the year 2016, which increased to 72.9% in the recent year 2021 [16]. Globally, the total number of mobile subscribers (those subscribing to a cellular service) is going to grow from 5.1 billion in 2018 to 5.7 billion by 2023 at a CAGR of 2% [17]. This rapid growth has changed the future of mobile commerce and reshaped the present shopping dynamics, evident from Figure 1, which depicts tremendous growth in mobile e-commerce. Further, we believe that studying underlying trends will be of keen interest to practitioners and researchers [18–20].
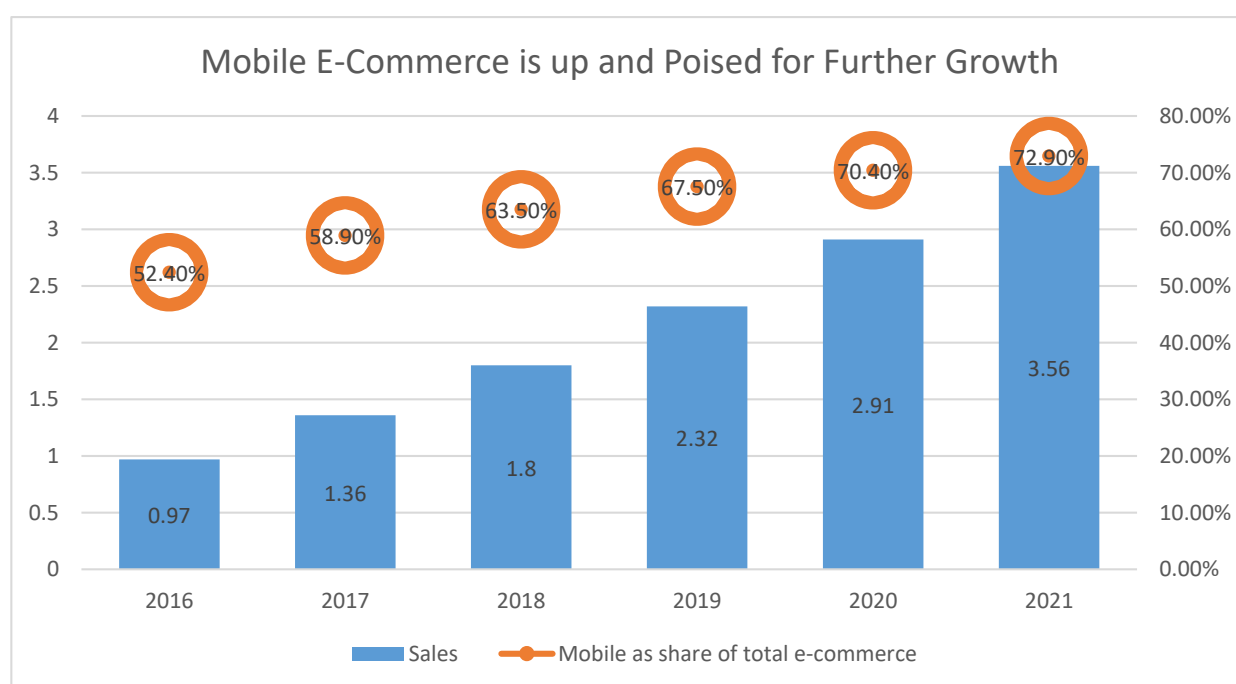
Figure 1. Mobile phone sales worldwide (in billions) and the share of mobile commerce as a % of total e-commerce.

Developments in the Asia-Pacific region trigger the growth in the mobile sector. In 2020, the Asia-Pacific region captured the largest share of more than 32.0% and was expected to witness significant growth from 2021 to 2028 [21]. Pakistan is an emerging mobile economy in the Asia-Pacific region that has witnessed unprecedented growth in the mobile sector. In Pakistan, the mobile industry has continued to lead the proliferation of telecommunication services since the deregulation of the telecommunication sector and the first mobile spectrum auction in 2004 [22]. The total number of cellular subscribers reached 170 million by the end of 2020, and mobile teledensity reached 81% by October 2020 [22]. In addition, the demand for the mobile phone has been double-fold in Pakistan due to the changing demographics. The majority of the population is young, with rising awareness and usefulness of mobile phones and increasing disposable income for households and young individuals. However, compared to the expansion of mobile phones in Pakistan, there have been 30 million fixed and mobile telephone lines. As the country's population was more than 162.4 million in 2008 [23], the country had 5.37 million fixed telephone lines. The subscription of mobile has surged over 19.6 million, which makes the sector of telecom stronger than ever. It is also regarded as the rapidly expanding sector in the world. It is due to the restrictions lifted in 1994, and a third operator over GSM obtained a license in 1995 [24]. It mainly leads to the rapid increase in the subscriber counts and figures that have started to return to original targets. However, it is observed that from the previous six years' data, the telecom sector has witnessed extraordinary growth, which in turn has influenced mobile phone purchasing as it has become an indispensable part of our daily lives [25]. In Pakistan, the recent increase in smartphone penetration coupled with improving 3G and 4G access are vital enablers to allow the country to digitalize, reduce the digital divide, and ultimately make progress on achieving the SDG goals [26].

To conduct activities online and access the internet, mobile phones have quickly become the forerunner. In Pakistan, the usage of smartphones has witnessed an increasing trend for several years, as depicted in Figure 2, and is expected to grow further in the foreseeable future. With the increase in the use of smartphones, there is an opportunity for companies to target other potential firms through online channels. Moreover, smartphone adoption and usage rate among young consumers is high compared to older people who are less interested in technology due to challenges associated with learning and using this technology [27]. It is mainly due to the complexities involved in the user interfaces and smartphones on which they are not aware. Conceivably, the use of smartphones is observed more among young customers as compared to old customers [24]. In this regard, young consumers prefer to make online purchases, mainly due to the lack of availability of time. However, it is regarded as an inverse case for the old consumers that prefer to go for offline purchases by visiting the store. There is also no consensus in the literature regarding the significance of factors impacting the choice of mobile phones. Karjaluoto et al. [28] reported that price and brand are the most influential factors affecting the actual choice between mobile phone brands. However, Saif et al. [29] said that price does affect consumers' preference for a mobile phone in Pakistan. Moreover, testing the effects of conveyances, avoidance, service encounters, and attraction on mobile phone buying behavior is also missing in Pakistan's literature, considering the young population in analyses. It indicates a gap in the contemporary literature that lacks explanation of the consumer behavior with respect to mobile phones' buying behavior among young adults in Pakistan. Hence, the present study aims at exploring mobile shopping behaviors among young adults considering the influencing factors, such as price, conveyances, avoidance, service encounters, and attraction. The study fills the literature gap by examining mobile shopping behaviors among young adults in Pakistan. Identifying influencing factors affecting mobile phone usage surely would help marketers to deliver attractive and affordable mobile phones, which in turn helps in achieving sustainable development of the economy. Owning a mobile phone and getting connected to the virtual world predominately could uplift an individual's social status as well. This chunk of customers is recognized as prospective mobile phone purchasers worldwide [30,31]. Marketers consider this cohort of young

adults quite attractive for building a pool of brand-loyal customers and seeking revenues on a long-term basis.
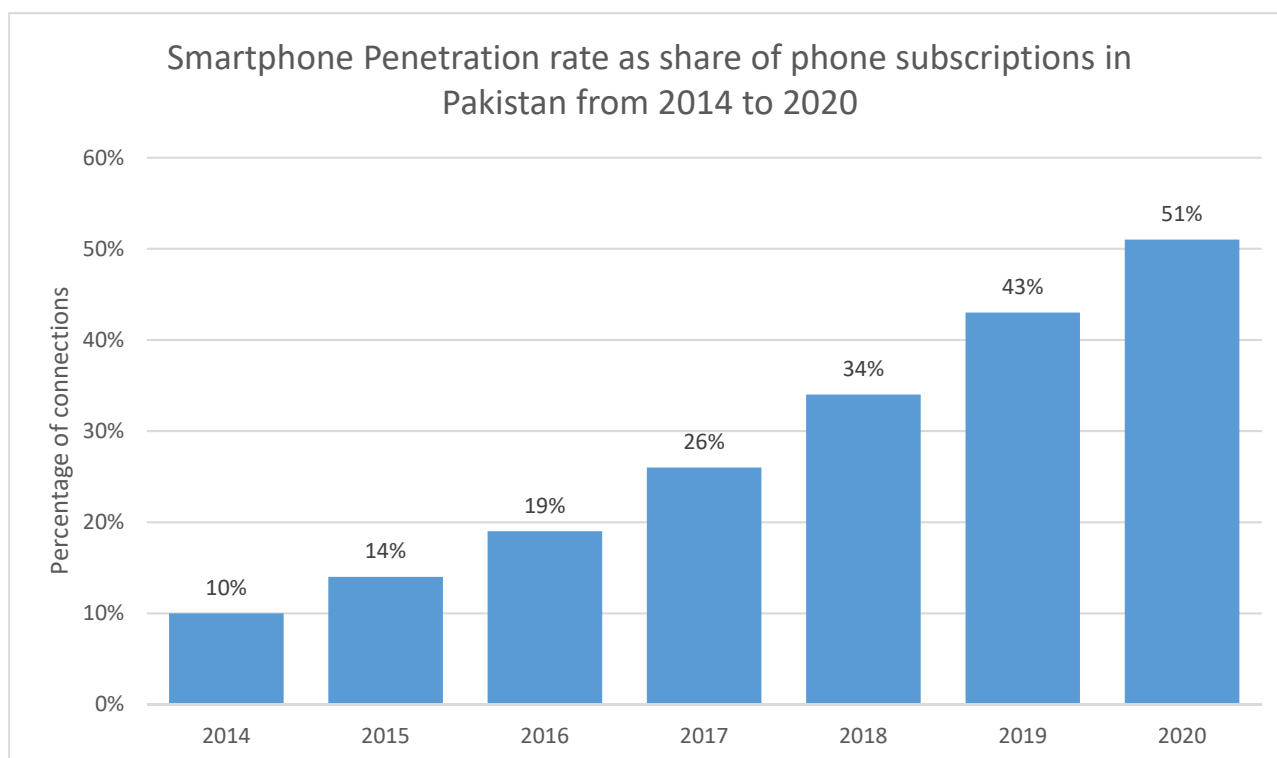
Figure 2. Penetration rate of mobile phones in Pakistan [20].

The remaining part of this research study is organized as follows. The following section provides a review of the pertinent literature related to the study. In the third section, we discuss the research methodology employed. Results from data analysis are presented in the subsequent section. Finally, we concluded the paper followed by recommendations, limitations, and future research directions.

2. Literature Review

In terms of competition, mobile phone markets are considered to be uncertain. The main factors affecting purchase for new mobile phones include brand, price, characteristics of the products, etc. Additionally, these factors also influence customer purchase intention [20,24]. Previous studies related to information systems have made us understand the way individuals adapt to new technologies [32–35]. A literature review on technology acceptance and mobile shopping suggests that a number of theories based on information systems and technology adoption, which are extended with other variables, are used to examine the adoption of mobile devices and their use in the purchase of products and services. The technology acceptance model (TAM) proposed by Davis [35] is a widely used model for evaluating consumer acceptance of new technology. The TAM uses variables like perceived ease of use and perceived usefulness to predict behavior intention [2,10]. Several researchers have extended the TAM model by adding more constructs such as self-efficacy, external control, anxiety, playfulness, enjoyment, and usability [36–38]. Venkatesh et al. [39] empirically compared eight models in the information technology acceptance research and proposed a unified model that integrates elements across the eight models, known as a unified theory of acceptance and use of technology (UTAUT). The UTAUT model includes four key constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions. Venkatesh et al. [40] extended the UTAUT model in the consumer

context and proposed UTAUT2 by incorporating three constructs into UTAUT: hedonic motivation, price value, and habit.

In terms of competition, mobile phone markets are considered to be uncertain. The harsh market conditions and the rapid pace of technology in the mobile phone industry force companies to better understand their consumers to offer unique and competitive products with desired attributes [41]. Several empirical studies have been conducted to study the mobile shopping behavior of consumers. The main factors affecting purchase for new mobile phones include brand, price, characteristics of the products, etc. Additionally, these factors also influence customer purchase intention [19,24]. In the present study, we adapted constructs from the field of technology acceptance and mobile marketing to understand factors affecting the mobile phone shopping behavior of young adults.

2.1. Price

The mobile phone price has been identified as a key factor in the choice of mobile phones, especially among young consumers [22]. The intense competition in the mobile phone market has led to a sharp fall in prices, further enhancing mobile phone usage [42]. Park and Koo [43] examined switching costs in the mobile phone market and reported that price was an important factor influencing consumer's decision to change their mobile phone. Therefore, mobile companies should consider price as an important determinant for retaining customers [24]. Appropriate pricing strategies are required to be employed for offering numerous diverse services to the customers. However, this is a costly affair. Therefore, companies should enforce retention strategies vigilantly [26]. The existence of multinational companies offering international brands in the mobile phone market in Pakistan is phenomenal, and it has made the market highly competitive. Moreover, Pakistan being a developing country, price determines consumer purchase decisions largely [35].

Agarwal et al. [44] investigated the mobile buying behavior in two cities of Odisha in India. The authors found that faster-changing technology was an important reason among others for mobile buying behavior. Hence, the price policy for every mobile set should be at per features and technology of the handset. Prakash and Shivdas [45] argued that mobile phones had become a necessity instead of a luxury in this modern era of technology. Nowadays, product differentiation is challenging in a galaxy of mobile phone choices. The study investigated the migrated labor in India to observe their mobile buying behavior. The advertisement is found to be the most influencing factor for buying behavior, among other factors related to the price and features of mobile phone sets. Mittal [46] investigated the characteristics of buying behavior of mobile in females of Delhi in India. The authors found that price, advertisement, brand loyalty, changing technology, and recommendations of peers were found effective in determining buying behavior. Adetunji and Adetunji [47] explored mobile buying behavior in Nigeria. The price was found most influential among students' communities among the other factors, like shape and brand of mobile phones. Kim [48] investigated and found that touch screens and health-related facilities in mobile phones were significant in determining and differentiating the demand for mobiles in Europe. Further, mobile tracker and 4G were found attractive in Asia-Pacific and the Middle East. The camera's features were found engaging in the price spending behavior of customers. Moreover, the price perception was based on the perceived value of any mobile set in all investigated regions. Pakistan has observed diversity in terms of population, needs, demands, affordability, and perception of quality. Hence, it would be fascinating to investigate the relationship between price and mobile shopping behavior empirically. Thus, the following hypothesis has been proposed:

Hypothesis 1 (H1). *There exists a significant effect of price on mobile phone buying behavior among young adults.*

2.2. Convenience

Convenience has also been considered another factor affecting the customers' buying behavior in the mobile phone shopping industry [25]. Inconvenience forced 21% of the customers to switch their mobile phone brands. These inconveniences are related to infrastructure, mark-up pricing for maintenance, or distant location of the service center. Therefore, location-based services need to be provided to retain the customer base. It, in turn, surely helps the companies in gaining competitive advantage and in succeeding. Perceived ease of use and convenience indeed change the attitude of the consumers. It has also been investigated by Shaikh et al. [34], and the author found it a critical factor, but no latest study could guide this factor. Hence it is proposed to empirically investigate how convenience plays a role in influencing mobile phone shopping behavior, and the following hypothesis is constructed:

Hypothesis 2 (H2). *There is a significant effect of convenience on the mobile phone buying behavior of young adults.*

2.3. Avoidance of Core Service Failure and Response

Core service failure is the most common reason, which forces customers to switch mobile phone services [49]. According to Keaveney [50], core service failure includes all critical incidents due to mistakes or other technical problems with the service. This core service failure factor alone or sometimes in combination with other factors often increases the dropout rate of customers [51]. The failure to deliver core service is not only a breakdown in providing apt service but also damages customers' possessions [52]. Hence, quality products augmented with flawless core service delivery must be delivered to customers to prevent customer switching behavior. Furthermore, to build, maintain and retain a loyal customer base, companies need to provide value-added features in mobile phones and an inbuilt quick response and feedback system [25]. Core service failure was found as a critical factor, but no latest study could guide this factor. Hence, it is proposed to empirically investigate how convenience plays a role in influencing mobile phone shopping behavior. Thus, the following hypothesis is constructed:

Hypothesis 3 (H3). *There is a significant effect of avoidance of core service failure and response on mobile phone buying behavior among young adults.*

2.4. Service Encounter

Service encounter failures have also been identified as one of the factors that induce customer's mobile phone switching behavior [50]. Service encounter has been defined as any interaction between customers and employees of the service provider in relevance to core service offering [52,53]. It was found that 34% of the customers switch mobile phone services owing to service encounter failure [50]. Furthermore, customers often look for convenience and accessibility features while exhibiting mobile shopping behavior [40]. The customer's switching behavior might be enhanced if the company fails to address the customer's complaints. Service employees' estranged behavior and attitudes are often responsible for service encounter failures. These failures often affect customer's mindsets [20,50]. Hence, failure to provide convenience and accessibility furthermore aggravates service encounter failures [54]. The impact of service encounters on mobile phone shopping behavior in the context of a developing economy like Pakistan has not been explored yet. Therefore, the following hypothesis is proposed:

Hypothesis 4 (H4). *There is a significant effect of service encounters on mobile phone shopping behavior among young adults.*

2.5. Attraction by Competitors

The mobile phone industry in Pakistan has been flooded with multinational corporations (MNCs), and customers have full knowledge about the prevalence of stiff competition among MNCs. Many companies provide better-differentiated services to their customer base, which is indeed difficult for the competitors to meet, thus keeping only a few brands in the market [25]. While exploring the factors influencing the consumer buying behavior towards a mobile phone buying decision, innovativeness, usefulness, price, enjoyment, attractiveness, and skillfulness were found as the key drivers responsible for this switching behavior among young adults [55]. Competitors may provide value-added services along with more benefits, pushing customers to switch from their existing service providers [56]. However, mobile phone companies are expanding as well as growing in technology. Therefore, to empirically investigate the role of attraction by competitors in the case of Pakistani consumers, the following hypothesis is proposed:

Hypothesis 5 (H5). *There is a significant effect of attraction by competitors on the mobile phone shopping behavior of young adults.*

Some studies focused on the other factors of mobile buying behavior. For instance, Sivakumar and Uyyala [57] investigated mobile buying behavior and argued that customers shared their views regarding buying experiences immediately after purchasing. Hence, mobile companies focused on intelligent systems to detect their opinions regarding many aspects related to customer buying behavior, which remained helpful for marketing purposes for Amazon cell phone reviews. Ganesh and Fattakhova [58] investigated the customers' behavior about mobile advertising in the age of information technology to buy mobiles. They found a significant relationship between attitude and entertainment, which was due to the moderation of information. However, the role of irritation was not substantial. Shokouhyar et al. [59] investigated reverse logistics because of environmental concerns and competitive advantage. Reverse logistics were found helpful to win customer satisfaction. Hence, mobile companies should focus on customer-centric reverse logistics to control buying behavior of customers. Zaware et al. [60] explored the different modern channels to change mobile phone buying habits on the omnichannel. They found that socio-economic features work with consumer choice regarding alternatives and buying behavior through online and offline channels. Mashhadi et al. [61] investigated the services system of leasing mobile phones. They found that previous buying behavior dramatically influenced future buying behavior. For instance, a customer who has a mobile on lease is more likely to have another set on lease. The same behavior was observed in the case of cash-buying customers. Fang et al. [62] investigated Baidu Index in buying behavior of Huawei phones in China. Baidu Index was found helpful in increasing the predictability of the buying behavior trends of customers of mobile phones. Rajasekaran and Venkatramaraju [63] investigated mobile buying in Chennai, India. Brand loyalty was found biased among different investigated factors in the different types of the population of mobile users. Jain and Singh [64] studied mobile phone buying behavior in India. They found that consumer's mindset was found most influential in buying behavior of mobiles. Roy and Mandal [65] found that brand engagement and trust in mobile phones were highly influenced by self-congruity, involvement, and interactivity.

After developing the study's hypotheses related to the determinants of mobile phone buying decisions, it can be noted that major determinants of mobile buying decisions are still missing the context of Pakistani literature. Although Saif et al. [29] have investigated the effect of the price factor, the focus was not on the young population and reported an insignificant impact. Moreover, Aslam and Frooghi [32] considered the technological-based aspects of the switching behavior of the young population in Pakistan but ignored many other vital aspects. The recent literature has highlighted the importance of mobile phones to boost banking services in Pakistan [18,19,26,27]. However, still, there is a gap to identify the role of some factors in buying behavior of young adults in Pakistan, i.e.,

conveyances, avoidance, service encounters, attraction, etc. To fill the gap, the present study hypothesized the role of price, conveyances, avoidance, service encounters, and attraction on mobile phone buying behavior in the young population of Pakistan. It may help the markers from mobile businesses to design attractive and affordable mobile phone policies for the young population of Pakistan to uplift the social status of the young population and achieve the sustainable development of the economy.

3. Research Instrument

The research instrument considered in this study is a survey questionnaire developed after following measure-development guidelines provided by Churchill [66]. First, an extensive literature survey was carried out to generate a large pool of items for measurement. Next, a questionnaire was developed in which each item was measured on a 5-point Likert Scale ranging from "very strongly agree" to "very strongly disagree". A panel of three marketing professors reviewed the questionnaire to evaluate the items for content validity. The suggested items were redundant, double-barreled, and ambiguous, which were removed. Finally, pre-testing was conducted to test the reliability and validity of the instrument. The results revealed that the instrument is valid and reliable. The selected items are shown in Appendix A.

4. Data Collection and Sampling Technique

Respondents selected for the study were screened with a criterion of having purchased a mobile phone in the previous six months. The study sample consists of young adults of Pakistan. A self-administered questionnaire was employed to collect the data. Respondents were selected via purposive sampling. The questionnaire was distributed among the respondents via Google forms. Virtual platforms helped in obtaining responses from target respondents who were in distant places. It highlights the element of randomness in the sample and, in turn, representative sample. Here, it is interesting to discuss the common method biases as data of all dependent and independent variables are collected from the same respondents using the same methods. However, various diagnostics are applied to cater to this problem. Data was collected using a self-administered questionnaire. In consideration of the sample size, the formula from the study of Ryan [67] was used. The sample size for the study was calculated using Ryan's [67] formula.

$$n = \frac{\sigma^2 \left(Z_\beta + Z_{\alpha/2}\right)^2}{\delta^2} \tag{1}$$

According to Ryan's [67] formula, the required sample size with this confidence interval and precision is 385. Therefore, approximately 430 respondents were approached through Google forms and online platforms. Of the 439 completed questionnaires, 416 were usable, resulting in a response rate of 96.74%.

4.1. Data Analysis Techniques

Data analysis was carried out in three stages. In the first stage, an exploratory factor analysis (EFA) was performed using the principal component analysis with Varimax Rotation. In the second stage, confirmatory factor analysis (CFA) using AMOS 24.0 was carried out to establish the reliability and validity of the measurement model. In the third, structural equation modeling (SEM) using AMOS 24.0 was used to test the structural model.

4.2. Data Pre-Processing

In the initial stage, the missing values were determined and removed through the nearby points. In addition, the outliers were detected using the univariate technique. In this manner, four outliers were removed based on the z-score value of ± 3. On the other hand, the multivariate variables were also tested for outliers through Mahalanobis distance.

Based on the results, it was determined that no outliers were detected. Therefore, the data was considered for further analysis.

4.3. Assessment of Normality

Normality is one of the core assumptions of statistical analysis, which states that the distribution of sample means is normal. A normal distribution of sample means refers to the data that roughly fits in a bell-curve shape. It is a prerequisite of various statistical tests that data should be approximately normally distributed. If this assumption is violated, then the results of the study may also be misleading and inapplicable to real-world problems [68]. In addition, one of the core assumptions of AMOS (statistical package) also assumes that data is normal. Then, the best results are produced. Similarly, SEM and confirmatory factor analysis (CFA) were used. Hence the multivariate normality was assessed [69]. In the general case, the value of kurtosis and skewness falling within the range of −2 to +2 indicates that data is approximately normally distributed. However, in multivariate normality, the multivariate value for kurtosis should be less than 5 to assume that data is approximately normally distributed [70]. Table 1 demonstrates the normality results, and the multivariate kurtosis is less than 5 thresholds for each of the factors. Hence, there is sufficient evidence to claim that data is approximately normally distributed. It also suggests that results generated through AMOS are best-produced results since the core assumption of AMOS is also met.

Table 1. Assessment of normality.

Variable	Min	Max	Skew	Composite Reliability (CR)	Kurtosis	CR
MSB4	3	5	−0.171	−1.095	−0.811	−2.597
MSB1	3	5	−0.247	−1.579	−0.732	−2.344
MSB2	3	5	−0.198	−1.269	−0.575	−1.841
MSB3	3	5	−0.119	−0.764	−0.537	−1.718
CON4	1	5	−0.019	−0.121	−0.312	−0.999
CON1	1	5	−0.198	−1.27	0.011	0.035
CON2	1	5	−0.314	−2.008	−0.246	−0.787
CON3	1	5	−0.147	−0.941	−0.057	−0.182
AC4	1	5	−0.064	−0.408	−0.851	−2.725
AC1	1	5	0.204	1.304	−0.527	−1.689
AC2	1	5	−0.158	−1.01	−0.848	−2.714
AC3	1	5	0.223	1.425	−0.683	−2.188
ASFR4	1	5	0.197	1.263	−0.171	−0.546
ASFR1	1	5	0.145	0.926	−0.643	−2.059
ASFR2	1	5	−0.022	−0.142	−0.193	−0.617
ASFR3	1	5	0.387	2.478	0	0.001
SE4	1	5	−0.348	−2.228	−0.66	−2.113
PRC1	2	5	−0.297	−1.9	−0.988	−3.164
PRC2	2	5	−0.305	−1.95	−0.762	−2.441
PRC3	2	5	−0.378	−2.421	−0.602	−1.927
SE1	1	5	−0.064	−0.408	−0.78	−2.496
SE2	1	5	−0.493	−3.159	−0.346	−1.108
SE3	1	5	−0.178	−1.141	−0.636	−2.035
Multivariate					35.492	8.208

4.4. Exploratory Factor Analysis (EFA)

Exploratory factor analysis was conducted on the 23 statements to identify the number of factors. We used principal component factor analysis (PCA) followed by Varimax Rotation with Kaiser Normalization. The results of EFA are depicted in Table 2. The Kaiser–Meyer–Olkin Measure of Sampling Adequacy Value was 0.737, which is above the cut-off value of 0.50 as suggested by literature [71,72]. It indicates that data is suitable for factor detection. Bartlett's Test of Sphericity was tested through chi-square value 3139.765, indicating that the data has low sphericity. Therefore, it is suitable for factor analysis. Six

components with eigenvalues greater than one were extracted from the data. The loadings for the first factor (service encounter) was ranged from 0.836 to 0.847, the second factor (avoidance of core service failure and response) ranged from 0.72 to 0.868, the third factor (attraction by competitors) ranged from 0.81 to 0.867, the fourth factor (price) ranged from 0.859 to 0.883, the fifth factor (convenience) ranged from 0.696 to 0.876, and the sixth factor (mobile phone shopping behavior) ranged from 0.813 to 0.9. Thus, the 23 items can be grouped into six different categories of factors, and each of the categories would measure a different construct together, enhancing the explanatory power of the model.

Table 2. EFA results.

Item	Factor Name	Component					
		1	**2**	**3**	**4**	**5**	**6**
SE1			0.842				
SE2			0.845				
SE3	*Service Encounter*		0.847				
SE4			0.836				
ASFR1						0.775	
ASFR2	*Avoidance of Core Service Failure*					0.72	
ASFR3	*and Response*					0.868	
ASFR4						0.821	
AC1				0.867			
AC2	*Attraction by Competitors*			0.804			
AC3				0.82			
AC4				0.81			
PRC1							0.861
PRC2	*Price*						0.883
PRC3							0.859
CON1					0.853		
CON2	*Convenience*				0.696		
CON3					0.876		
CON4					0.835		
MSB1		0.9					
MSB2	*Mobile Phone Shopping Behavior*	0.894					
MSB3		0.881					
MSB4		0.813					
	Kaiser–Meyer–Olkin (KMO) Statistic = 0.737						
	Bartlett's Test of Sphericity						

4.5. Confirmatory Factor Analysis (EFA)

Confirmatory factor analysis (CFA) was employed to assess the latent factor structure. The model fit of the measurement model was assessed using common fit indices, which are chi-square fit statistics/degree of freedom (CMIN/df), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), root mean square residual (RMSR), root mean square error of approximation (RMSEA). The measurement model yields were fit to data: CMIN/df = 1.526, GFI = 0.903, AGFI = 0.874, CFI = 0.962 and RMSEA = 0.046, respectively. Table 3 depicts the model fitness criterion. All five model fitness indices meet the criteria of standard model measurements. Hence, it can be stated that the measurement model fits well with the data.

Table 3. Model fit indices of the measurement model.

Index of Fit	CMIN/df	GFI	AGFI	CFI	RMSEA
Value	1.526	0.903	0.874	0.962	0.046
Source	[30]	[31]	[31]	[31]	[31]

As presented in Table 4, the values of all factor loadings were above 0.5, and the average variance extracted (AVE) for all constructs was greater than 0.5, as suggested by Hair et al. [48]. In addition, composite reliability (CR) was also computed, and all values were found to be above the minimum acceptable level of 0.70 [73]. Thus, it can be seen in Table 4, the values of CR and AVE were according to the acceptable parameters, CR > 0.70 and AVE > 0.50, thereby establishing convergent validity [74,75]. Moreover, maximum shared variance (MSV) and maximum reliability (MaxR[H]) were also utilized.

Table 4. Standardized factor loadings, composite reliability, AVE, MSV, and MaxR(H) of the constructs.

Statements	Standardized Factor Loadings	CR	AVE	MSV	MaxR(H)
Service Encounter		0.842	0.573	0.04	0.858
SE1	0.697				
SE2	0.845				
SE3	0.676				
SE4	0.796				
Price		0.88	0.71	0.238	0.887
PRC1	0.793				
PRC2	0.849				
PRC3	0.884				
Avoidance of Core Service Failure and Response		0.821	0.536	0.014	0.844
ASFR1	0.71				
ASFR2	0.631				
ASFR3	0.853				
ASFR4	0.718				
Attraction by Competitors		0.838	0.571	0.04	0.912
AC1	0.939				
AC2	0.672				
AC3	0.773				
AC4	0.773				
Convenience		0.842	0.577	0.007	0.869
CON1	0.837				
CON2	0.552				
CON3	0.839				
CON4	0.773				
Mobile Phone Shopping Behavior		0.912	0.721	0.238	0.921
MSB1	0.873				
MSB2	0.908				
MSB3	0.831				
MSB4	0.779				

Notes: CR = composite reliability; AVE = average variance extracted; MSV = maximum shared variance; MaxR(H) = maximum reliability.

In order to determine whether there is discriminant validity, the heterotrait–monotrait ratio of correlations (HTMT) ratio suggested by Ab Hamid et al. [76] was used on the constructs, i.e., Service Encounter (SE), Price (PRC), Avoidance of Core Service Failure, and Response (ASFR), Attraction by Competitors (AC), Convenience (CON), and Mobile Phone Shopping Behavior (MSB). HTMT ratio represents a measure of similarity between latent constructs and is a novel method for assessing discriminant validity [77]. Table 5 provides the HTMT ratio. To conform to the discriminant validity, the value of HTMT should be less than 0.85 [78]. The estimated ratio of HTMT for all constructs is less than the said threshold of 0.85, which suggests that all constructs conform to the discriminant validity.

Table 5. Discriminant validity analysis.

HTMT	SE	PRC	ASFR	AC	CON
SE					
PRC	0.076				
ASFR	0.066	0.053			
AC	0.202	0.047	0.054		
CON	0.017	0.028	0.054	0.125	
MSB	0.004	0.492	0.021	0.174	0.02

4.6. Structural Equation Modeling

We used structural equation modeling using AMOS version 24 to examine the hypothesized relationships (see Figure 3). As seen in Table 6, the results indicated an excellent model fit (CMIN/DF = 1.94, GFI = 0.877, AGFI = 0.849, CFI = 0.928 and RMSEA = 0.061). The values of all the fit indices were within the recommended range. Moreover, Figure 3 shows SEM results.
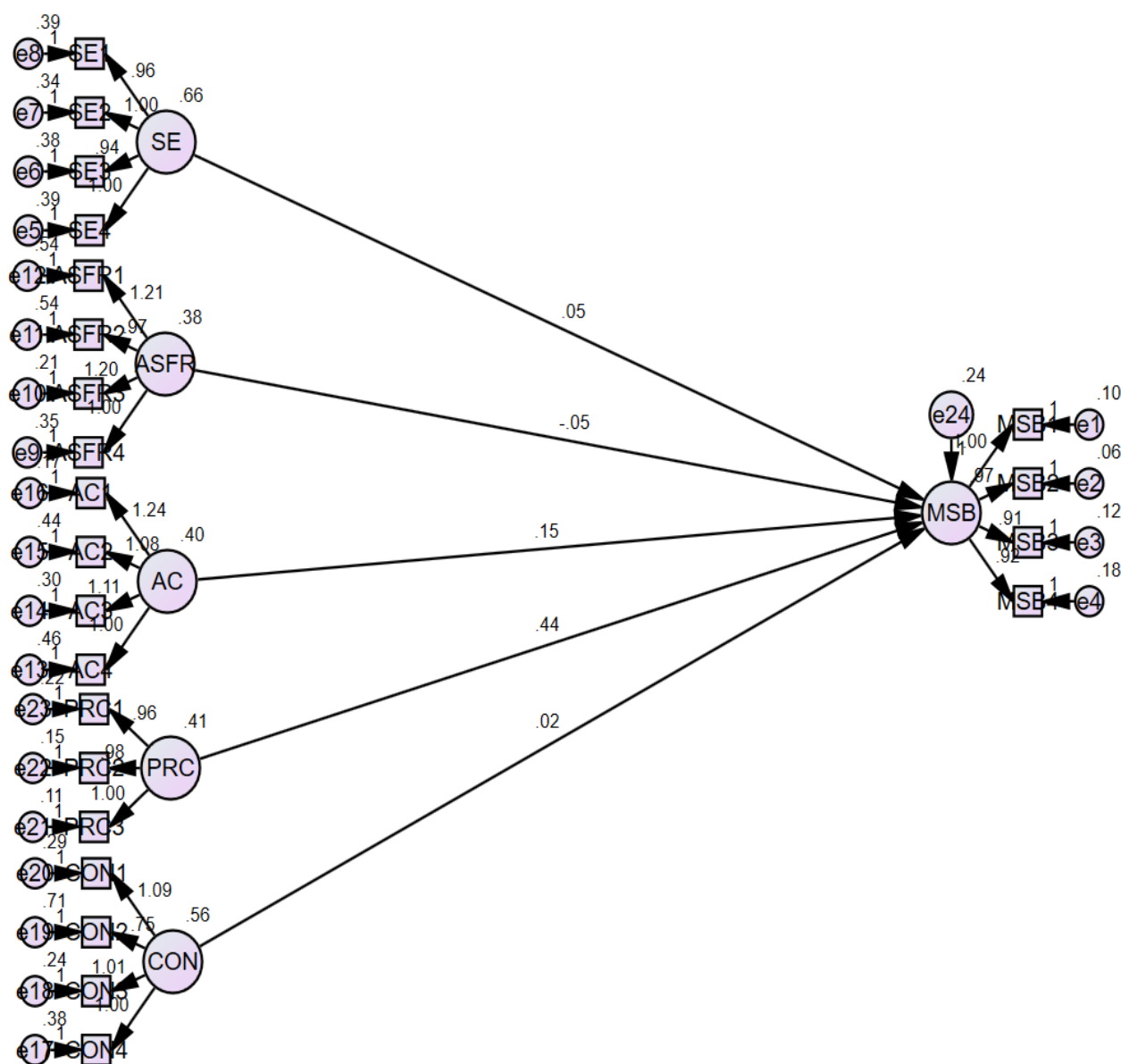
Figure 3. Structural equation modeling.

Table 6. Model fit indices of the structural model.

Index of Fit	CMIN/df	GFI	AGFI	CFI	RMSEA
Value	1.94	0.877	0.849	0.928	0.061
Source	[30]	[31]	[31]	[31]	[31]

The results of the structural model analysis are shown in Table 7. As seen in Table 7, the price had a significant positive impact on the mobile phone shopping behavior of young adults (H1: β = 0.436, $p < 0.001$). Convenience was found to have an insignificant relationship with young adults' mobile phone shopping behavior (H2: β = 0.02, $p > 0.05$). The analysis further revealed that avoidance of core service failure and response is statistically insignificant on the mobile shopping behavior of young adults (H3: β = −0.05, $p > 0.05$). Service encounters showed an insignificant relationship with mobile phone shopping behavior of young adults (H4: β = 0.049, $p > 0.05$). Attraction by competitors was also found to have a significant positive impact on the mobile phone shopping behavior of young adults (H5: β = 0.155, $p < 0.05$). Therefore, H1 and H5 were accepted, while H2, H3, and H4 were rejected.

Table 7. Results of hypotheses testing.

Proposed Relation		Standard Estimate	*p*-Value	Hypotheses Supported
Price	Mobile Phone Shopping Behavior	0.436	0.000	H1 Accepted
Convenience	Mobile Phone Shopping Behavior	0.02	0.682	H2 Rejected
Avoidance of Core Service Failure and Response	Mobile Phone Shopping Behavior	−0.05	0.401	H3 Rejected
Service Encounter	Mobile Phone Shopping Behavior	0.049	0.265	H4 Rejected
Attraction by Competitors	Mobile Phone Shopping Behavior	0.155	0.008	H5 Accepted

5. Discussion of Findings

The study results revealed a significant effect of price on the mobile phone shopping behavior of young adults. The study's findings are consistent with previous studies, which suggest that price plays a significant role in young adults' mobile phone shopping behavior [78–80]. Moreover, the finding is in contrast with the finding of Saif et al. [29], who reported that price does affect consumers' preferences for a mobile phone in Pakistan. This contradiction has a good theoretical background as the price is a major player in the choice of mobile phones in developing countries like Pakistan. Notably, young adults have lower purchasing power compared to mature and employed individuals in society. Hence, price should determine the buying behavior of young adults in developing countries, as we find it true in the case of Pakistan. Further, we did not find any significant influence of convenience on the mobile phone shopping behavior of young adults. The findings are consistent with the study of Bringula et al. [81], who reported that convenience did not contribute to explaining the mobile phone shopping behavior of university students. Hence, convenience is not an issue as young adults are highly mobile and energetic to do shopping. Avoidance of core service failure and response was also found to have an insignificant influence on the mobile phone shopping behavior of young adults. This finding is also consistent with the study of students at private universities of Peshawar [82]. The author concluded that post-purchase services comprising guarantee, emergency repair, and software services are the least influential in youth's choice of mobile phone. Attraction by competitors was also found to have a significant influence on the mobile phone shopping behavior of young adults. The findings corroborate the results of existing studies on the

switching behavior of consumers in the mobile phone industry [83,84]. It also aligns with the findings of literature [85,86] that customers mainly switch to other service providers if the competitors are providing more benefits than the service providers that already exist. One of the tremendous improvements relating to communication technology is the development of mobile phones, which are evidence of the rapid change in technological advancements.

6. Conclusions and Recommendations

With the rapid advancement in communication technology, mobile phone use is increasing among young consumers, attracting many studies to find the determinants of mobile phone buying decisions among young adults. The present study examined the factors influencing mobile phone buying decisions and behaviors among young adults in Pakistan. The factors determined in this study include price, convenience, avoidance of core service failure and response, service encounter, and attraction by competitors. The study employed purposive sampling, and data were collected from young adults in Pakistan. For the data analysis, the EFA was conducted to reduce the data to a smaller set. Furthermore, CFA was employed to test the reliability and validity of the measurement model. Finally, we used SEM to test the hypothesized relationships.

Moreover, concerning the study results, the service encounter and convenience have coefficients of 0.049 [$p = 0.265$] and 0.02 [$p = 0.682$], suggesting statistically insignificant influences of service encounter and convenience on mobile phone buying behavior. Similarly, avoidance of core service failure and response has a coefficient of -0.05 [$p = 0.401$]. It suggests that avoidance of core service failure and response has a very weak negative and statistically insignificant influence on mobile phone buying behavior in Pakistan. However, factors like price and attractiveness have the coefficients 0.436 [$p = 0.00$] and 0.155 [$p = 0.00$], suggesting that price and attractiveness are two key factors having a positive and significant influence on the mobile shopping behavior in young adults in Pakistan. In addition, it was determined that there is an insignificant effect of convenience, avoidance, and service encounter on the mobile phone shopping behavior of young adults. Hence, the present study contributes to the current body of marketing literature of young adults in Pakistan by finding the significant role of price and attractiveness in mobile phone buying behavior. Moreover, it also highlights that convenience, avoidance, and service encounter are not very important for young adults in Pakistan. Hence, the investigated factors should be considered while designing the marketing policies for mobile phone businesses.

Price is found to have a significant influence on the mobile shopping behavior of young adults. Therefore, it is suggested that the companies selling mobile phones targeting young adults should focus more on price. For this purpose, the price of the mobile phones needs to be in accordance with the target market, and the product category should also be identified according to the characteristics of the target market. The companies should target young adults by offering an attractive pricing strategy. Attractive credit facilities can be provided to attract young adults. The study also found the significant effect of attraction by competitors on the mobile phone shopping behavior of young adults. Since youngsters are attracted to competing offerings, companies should develop an attribute-based branding strategy to create a unique image in the minds of young adults. Mobile phone companies should focus on product features like technical quality, appearance, and after-sale support. Companies can use an integrated communication strategy to build brand image and reduce switching intentions.

7. Limitations and Future Implications

This study was conducted to determine the mobile phone buying behaviors of young adults in Pakistan. Consequently, the major limitation of this study is that the results of this study are restricted to the young adults of Pakistan. In addition, the factors that were considered for testing the effect on mobile phone buying behavior are limited. However, several other factors that influence the mobile shopping behavior of young adults in

Pakistan may also be considered. In this manner, it is suggested the future studies would expand the scope of the study by considering the young adults from other countries in the region. Thus, it would help to present the broader findings and significant contributions to the existing literature. In addition, it is suggested that future studies should include other factors like cultural and social factors that could help further understand mobile phone buying decisions by consumers in Pakistan.

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Appendix A

Factor	Item Label	Item
Service Encounter	SE1	I think the main problem is when the customers do not obtain the desired product.
	SE2	The buying decision of youth relies on the quality of service.
	SE3	In mobile shopping, customers expect high service quality.
	SE4	In mobile shopping, I believe that the risk of quality issues is high
Price	PRC1	I think people change their buying decisions based on price.
	PRC2	Leverage in price helps in developing consumer loyalty.
	PRC3	Lower prices attract more customers.
Avoidance of Core Service Failure and Response	ASFR1	Due to service delivery failure, the companies increase their customer churn. Therefore, it should be avoided.
	ASFR2	I think if the company is not able to meet the failures, the customers will switch from the brand.
	ASFR3	I avoid buying products from mobile shopping if I had encountered service failure.
	ASFR4	If the company promises to avoid service failure, I can take the risk to shop again.
Attraction by Competitors	AC1	For youth, I believe that they compare the products from different brands before purchasing.
	AC2	I consider that customers mainly switch to other service providers in case the competitors are providing more benefits.
	AC3	I consider the marketing of products by competitors as a key factor that urges consumers to switch.
	AC4	I believe that to attract more youth, each brand should work on a competitive advantage.
Convenience	CON1	If people face inconvenience, they change the brand of their phone.
	CON2	For the convenience of the customers, the companies should offer services that are based on location.
	CON3	Mobile shopping is a convenient way because it limits interaction with a salesperson.
	CON4	Mobile shopping is more convenient than in-person shopping.
Mobile Phone Shopping Behavior	MSB1	I feel that mobile phone technology has penetrated every aspect of daily life.
	MSB2	I consider the trend of mobile commerce to be very important for the industry.
	MSB3	Mobile phone shopping is knowledgeable.
	MSB4	I consider the purchase intentions of youth depending on smartphone use relies on the purchase intentions of consumers.

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