CONSUMERS' PERCEPTIONS TOWARDS CELL PHONE BRAND PREFERENCE: THE CASE OF BANGLADESH

[1]Md. Rahat Khan, [2]Md. Zahir Uddin Arif & [3]Mohammad Ali
[1]Army Institute of Business Administration, Savar
(An Affiliated Institute of Bangladesh University
of Professionals), Dhaka, Bangladesh
[1&2]Department of Marketing, Faculty of Business Studies
Jagannath University, Dhaka, Bangladesh
[3]Department of Business Administration in Management Studies
Bangladesh University of Professionals, Dhaka, Bangladesh

[1]Corresponding author: rahatkhan.mrk14@gmail.com

ABSTRACT

Consumers are becoming more interdependent and open as a result of globalization. Because of the idea of globalization, branding is essential to take into account from both the marketing and consumer viewpoints. The current study intends to determine Bangladeshi customers' preferences for cell phone brands based on global versus local perspectives and to comprehend the influencing factors and cell phone features that could affect users' purchasing decisions. A structured questionnaire was used to survey 850 consumers selected

through a simple random sampling technique for the study, and 593 of their responses were deemed sufficient to continue the research. According to the study's findings, customers favored the Android operating system and the Samsung brand the most. The majority of consumers believed that having a cell phone's 'convenient' usage was its best feature. The study also identified a range of preferred budgets for a new cell phone. Eventually, a new measurement model for cell phone brand preference factors among Bangladeshi consumers was excavated by the study. Only four of the nine items selected for measurement in the study were sufficient for validating the model. The study's inability to pinpoint any local ethnocentrism for brand preference was one of its flaws. The study will contribute and originate the value with novel and significant implications for cell phone consumers to choose their preferred brands with quality of service, cell phone brand marketers, telecom service providers, payment gateway service providers, and their support systems, including producers, supply chain and industry experts, before and after-sale service providers, brand promoters, stakeholders, policymakers, and governments of various developing and developed countries to build up and implement brand strategies and policies in the global cell phone device and internet-connected digitalized era. As a result, consumers can achieve their greater perceived brand value, ensuring their desired level of satisfaction with highly cognitive brand preferences, brand trust, and brand loyalty to their expected cell phone brands.

INTRODUCTION

Branding has constantly been a vital trait of marketing (Khan & Imami, 2020). A brand is an influential discriminator in a vastly competitive marketplace with a competitive pricing policy (Islam & Arif, 2022). It offers the business authority to bounce competitive forces (Khan et al., 2018). A solid brand builds reliability, trust, comfort, and confidence in the mind of consumers (Arif et al., 2022; Hossain et al., 2020). Brands are alive in the hearts of consumers and are greater than just a label for consumers' identification and recognition (Hossain & Khan, 2016). Those are the origin of consumer association which brings

both the marketers and consumers nearer by mounting a connection of trust and faith between them (Islam & Arif, 2022; Khan & Arif, 2023a). The aptitude of a brand is coherent with feasible service, service quality, and whole psychological gratification (Arif, 2015c; Arif, 2016; Arif et al., 2022; Ingavale et al., 2012). Bangladesh serves as a clear example of the cell phone or mobile phone industry's rapid expansion due to consumer preferences for new technology (Baten et al., 2006) and an expanded focus on less expensive cell phones. Bangladesh has advanced toward rapidly expanding communication tools, just like other developing or developed nations, with the assistance of cell phone operators (such as Grameenphone, Robi, Banglalink, and Teletalk) and cell phone companies (Chowdhury & Rahman, 2013).

Internationally, due to the rapid advancement of technology, particularly in the area of mobile telecommunications, and its influence on other industries by facilitating both corporate and personal communication, including smart communication via cell phone, telecommunications appear to be one of the main drivers of economic growth (Arif & Haider, 2010; Arif 2012; Arif, 2017; Baten et al., 2006; Khan & Arif, 2022; Mpwanya, 2022; Khan & Pervin, 2022; Khan & Arif, 2023b). A cell phone is also well known by several other names that sound similar to it, including cell phone, mobile phone, smartphone, hand phone, basic phones, handset phone, iPhones, and satellite phones, and these terms are typically interchangeable (Yan & Chen, 2015). A cell phone is an example of a device that can send and receive phone calls with the aid of a radio link while moving across a large geographic area. Mobile phones can be considered as a large and varied group of cutting-edge portable technologies, with millions of mobile software and apps (such as applications for running GPS, sending messages, or making calls) and hundreds of mobile hardware and devices (e.g., smartphones, basic phones, tablet computers, handheld computers) (Yan & Chen, 2015). The device is generally used for the purpose of private or professional communication (like voice calls, short messaging, etc.), as well as multimedia and applications-based services (audio and video player, Facebooking, IMO, etc.) through internet browsing. So, the product can be considered a durable and extremely distinguished shopping product (Rashid & Elder, 2009). Once upon a time, the cell phone was expensive and not widely available in the country. However, due to the

advancement and feasibility of cell phone accessories and handsets, the culture of cell phone use trends has changed in Bangladesh. The most commonly preferred cell phone brands by Bangladeshi users are Samsung, Nokia, HTC, LG (Chowdhury & Rahman, 2013), Sony, iPhone, Xiaomi, OPPO, Walton, Huawei, etc.

The extent to which users or consumers prefer one brand over another in the context of consumer brand preferences is referred to as choosy demand towards the company's brand rather than the products or services it provides (Arif, 2015c; Arif, 2016; Hossain et al., 2020). By creating a positive brand image in users' or customers' thoughts, it is possible to win over the consumers' brand preferences. The brand image represents how the consumer perceives the effectiveness of the brand's physical or service attributes. The brand signifies to its users not only the use of the product or service but also the associations and emotions it grows. In addition, the brand image creates a symbolic or imagery sense. Therefore, the analysis of preferences and choice decisions of brands is very critical for marketers (Ingavale et al., 2012).

Abundance of studies were conducted by various scholars on consumers' perception of the brand image (Arif et al., 2020; Chanavat et al., 2009; Rojas-Méndez & Papadopoulos, 2012), store image (Arif, 2013; Arif & Rahman, 2016; Collins-Dodd & Lindley, 2003; Delgado-Ballester et al., 2014), brand identification and brand communication (Hossain et al., 2020), brand design and brand preference (Lieven et al., 2015), brand love (Rajput et al., 2020), consumers perception and brand attitude (Arif et al., 2020; Wu & Lo, 2009; Zaki et al., 2019), purchase intention (Jaafar et al., 2013; Lee et al., 2015), consumers' perceptions towards food brand preference (Ahmad et al., 2013; Feldmann & Hamm, 2015; Wierenga, 1980), consumers' perceptions towards global/local brand (Davvetas & Diamantopoulos, 2016; Halkias et al., 2016); consumers' perceptions towards repurchasing cell phone brands (Tong et al., 2010) and factors influencing cell phone brand in a particular country and class groups (Negi & Pandey, 2013; Riyath & Musthafa, 2014). But reviewing previously published research and their literature, limitations, and used methodologies, the authors did not find any exclusive and in-depth research on consumers' perceptions towards cell phone brand preferences in the broader context of Bangladesh with a robust methodology.

Recent huge growth and development of the smartphone or cell phone market have expanded the opportunities for virtual communications and remote working worldwide during and post-COVID-19 pandemic era since March 2000. Remotely working from home or staying anywhere during the COVID-19 via smartphones with internet connectivity is one of the great challenges and opportunities for employees of various organizations with peace and satisfaction in their mindset and perceived productivity during the COVID-19 outbreak situation (Arif, 2015b; Arif et al., 2017; Rahman & Arif, 2020). Another study identified that most of the consumers (65.7%) use smartphones or cell phones to binge-watch on Netflix as an over-the-top (OTT) platform during the COVID-19 pandemic, and small and portable devices like smartphones or cell phones are more favorable in developing country context (Rahman & Arif, 2021). Additionally, since Netflix is an OTT platform that is primarily used on cell phones or smartphones, the Bangladesh Telecommunication and Regulatory Commission (BTRC) and local telecom services providers like Banglalink, Grameenphone, Robi, and Teletalk have an opportunity to launch high-speed mobile data packages that can provide to young Bangladeshi users. When it comes to watching episodes streamed online, consumers of OTT entertainment services are highly connected (Rahman & Arif, 2021). As a result, branded smartphones or cell phones with good quality and standard configurations can play an important role with high-speed internet for better telecommunications, boredom-free, and anxiety-free entertainment at home or casual places (Rahman & Arif, 2021), working from home or staying anywhere, education, research, and knowledge sharing, dissemination and transformation remotely in developing countries including Bangladesh and other developed countries around the world during and after the COVID-19 outbreak (Rahman & Arif, 2020).

Therefore, the present research attempted to understand and measure the consumers' perceptions towards cell phone brand preferences with new dimensions in the changing situation of the global village of digital connectivity. As a result, the authors did brainstorming and planned to run this current research to fill up the literature gap. The aims of the study were (a) to learn the present cell phone brands' preferences by Bangladeshi consumers based on global versus local perspectives and (b) to develop a consumer preference model based on consumer

perceptual factors. The present paper was designed to present as follows. A few closely similar studies that are consistent with the current research were discussed in the paper's second section. The third section describes the research methods; the fourth section displays the data analysis and research findings; and the remaining sections include the result discussion, management implications, conclusion, recommendations, limitations, and future research directions.

LITERATURE REVIEW

Theoretical Background

During the past few years, the study of consumer perception was the hotcake for behavioral and psychology researchers. Behavioral theories have integrated the effects of both internal as well as external variables in consumer perception and preferences (Stampa et al., 2020). Previous theories were frequently used as a foundation for subsequent ones. For example, the writers of the widely used theory of Planned Behavior (PB) explained it as an outgrowth of the reasoned-action theory that includes the perceived behavioral influence. Although the PB theory acknowledges the relevance of external variables that might impact a consumer's behavior, it also emphasizes behavioral intentions like a superior psychological interest (Ajzen, 1991). On the other hand, consumer preference or purchasing behavior is constantly contextual and can be altered based on external circumstances. Therefore, according to the Attitude-Behavior-Context (ABC) theory, behavior is influenced by external circumstances (context), which include any external supports for or barriers to behavior, such as physical, social, legal, or financial preferences (Guagnano et al., 1995, Islam & Arif, 2016).

There are a number of psychological hurdles to brand adoption and the concept of brand image, brand attitude, geographical dispersion of brand, store image, celebrity endorsing, demographic characteristics, brand love, trustworthiness, brand loyalty, etc., can elicit a range of perceptions and emotions (Arif, 2013; Arif, 2016; Arif & Balo, 2017; Arif et al., 2020; Chanavat et al., 2009; Collins-Dodd & Lindley, 2003; Davvetas & Diamantopoulos, 2016; Delgado-Ballester et

al., 2014; Halkias et al., 2016; Islam et al., 2012; Khan & Sharma, 2020; Khan et al., 2022a; Lieven et al., 2015; Negi & Pandey, 2013; Rojas-Méndez & Papadopoulos, 2012; Rajput et al., 2020; Riyath & Musthafa, 2014; Wu & Lo, 2009; Zaki et al., 2019). Previous research considered acceptable preferences throughout time or occasion, or festival (Arif, 2015b), but it is also characterized and regulated in social as well as cultural contexts. In the current situation, buying a cell phone is deemed to be a repeated action and consumer perception should be considered when analyzing consumer preferences (Wendin & Nyberg, 2021). For instance, cooking and health-conscious food habits (Ahmad et al., 2013) have an influence on buying organic food over conventional food (Arif, 2015a). In addition, consumer attitudes, beliefs, and expectations have an impact on preferred shopping places (Islam et al., 2012). New habits are formed as a result of purchasing brand preference activity (Ahmad et al., 2013; Zepeda & Deal, 2009). Finally, consumer preferences are implicitly determined by demographic characteristics based on their influences on perceptual formation.

Cell Phone Brands and Features in Bangladesh

The beginning of the cell phone industry in Bangladesh was too costly to consumers and each cell phone connection cost was more than one lac BDT (Khan et al., 2015). It was like a daydream for the lower or middle-class earners to have a phone connection of their own during the time of 1993 to 1996 in the country. Till the June of the year 2021, the sum of total cell phone subscribers (subscribers are considered as those who are verified by a biometric system and have any of the following activities like short messaging (SMS), voice calling, or data using, etc. not less than once in the previous 90 days) was counted as 176.41 million. Among them, Grameenphone was in the leading position with 82.03 million subscribers, Robi was in the second position with 51.84 million, Banglalink was in the third position with 36.56 million, and the government-backed Teletalk was in the fourth position with 5.98 million subscribers in Bangladesh (BTRC, 2021).

Since 2012, Bangladesh's import of cell phones has increased from an ordinary $20 million to $430 million dollars, while it was anticipated that this figure would reach $620 million by 2020 (Zaman, 2017).

Price reductions influence the quality of the product or brand, which in turn has an impact on consumer trust, which is essential for creating a long-lasting relationship with customers (Islam & Arif, 2022). In Bangladesh, the sales of smartphones bounced back in the very 1st quarter of the year 2019 with the support of falling prices after the commencement of native assembling. Across the globe, the total sales declined by about 1 percent but the sales of handsets in Bangladesh rose by about 19 percent in the 1st quarter of that year. Surprisingly, Bangladesh saw a sales volume of 20.5 lac smartphone devices out of a total global sales volume of 68.97 lac units (Nayeem et al., 2020).

After the liberalization of the mobile phone industry now, there are four mobile operators that exist in the market named Grameenphone, Robi, Banglalink, and Teletalk. However, from the beginning to now, there are lots of cell phone brands that have been found in the Bangladeshi market. Many of them have not existed till now or many of them are losing their market share from the new entrants. For instance, the beginner mobile phone service provider named City Cell could not sustain itself due to the huge competition with other operators. Likewise, in 2005, Nokia and Motorola were the leading cell phone brand, with 34.1 percent and 18.2 percent of the market share, respectively, whereas Samsung was placed in the third position (Quamruzzaman et al., 2021). In 2019, Motorola was not in a place of leading market share and Nokia lost its market share but Samsung was placed in the first position. Whereas new brands like Xiaomi, Huawei, and OPPO have acquired a strong position in the Bangladeshi cell phone market (Statcounter, 2021).

According to Statcounter (2021), there are many cell phone brands operating in Bangladesh. Based on their market share, the names of those brands are Samsung and a few unknown and other brands– Huawei, Xiaomi, OPPO, Symphony, Nokia, Lava, Itel, Mobicel, Lenovo, Apple, Micromax, HTC, Sony, Asus, Tecno, Xolo, LG, AIS, OnePlus, Motorola, Meizu, Alcatel, Spice, Google, BBK, Wiko, ZTE, Infinix, Gionee, Coolpad, Panasonic, QMobile, Blu, Neffos, RIM, Acer, Vodafone, Luowan, etc. From the statistics, unknown brands are in second place with 21.52 percent of the market share. There are a few more well-known cell phone operating systems (OS) accessible in Bangladesh, such as Android OS by Google Inc., Bada OS by Samsung, iOS by Apple, Windows OS by Microsoft, BlackBerry

OS, and also Java OS for the normal handset (Beal, 2018). The most common features generally followed by cell phone users are long-lasting battery, speed of processing, display, camera, near field communication, storage space, fingerprint sensor, wireless charger, infrared remote control (Komando, 2013), connectivity, cost, video chatting, and battery life (Cornell, 2019), etc.

Consumers' Perceptions and Preferences of Cell Phone Brands

Perception towards international cell phone brands was considered differently by both the consumers as well as the practitioners. The past behavior tends to express global or international brands based on the scope of business operation. For instance, the top global brands were given inter-brand allocations, and about one-third of their revenue had to come from international markets. The contributions of numerous marketing strategists and scholars also provided an overview of major markets, such as Europe, Japan, and the USA (Zou & Cavusgil, 2002). In the case of consumers, conversely, global brands denote beyond the presence of a broad market; more prominently, those are generally accepted and recognized (Dimofte et al., 2010). Incidentally, Nokia, Samsung, Sony, Xiaomi, Huawei, etc., are considered global or international brands. This global branding concept is a fairly current issue of research. Because these global contributions can benefit from a balanced economy, globalization typically presents various opportunities for international marketers through their global brands (Khan, 2020; Khan & Arif, 2022). For illustration, by presenting globally a similar brand to the consumers instead of a definite country, the marketers could avail the assistance of a balanced economy through marketing and standardized production (Arif, 2017; Khan & Arif, 2022). The opportunity can significantly lessen its cost in comparison to localizing of the marketing and production (Baten et al., 2006; Khan & Arif, 2022; Steenkamp, 2014). Also, consumers perceive that using a cell phone, mobile commerce, mobile banking, and mobile remittance services can also be easily performed; certain financial transactions (small money transfers and credit payments) can be done (Arif et al., 2022). Mobile remittance service to send and/or to get remittances is cheaper or cost-effective, legal, more accessible, secured, speedy, transparent, and more convenient for transactions in terms of time, distance, and money with greater consumer satisfaction (Arif et al., 2022). As a result, mobile phone users, banks, mobile

phone operators, agents, governments, and policymakers are benefitted from using such cellular phone technology and contribute to the socioeconomic development of countries (Arif & Haider, 2010; Arif & Rahman, 2016; Arif et al., 2022; Baten et al., 2006; Rahaman & Arif, 2018).

According to Steenkamp et al. (2003), having a strong reputation as a worldwide brand allows one to govern with a high value for perceived prestige and quality. Exactly, using the data from the consumer of Korea and the USA, the study revealed that global brands create better consumer perception of both the perceived social prestige and brand quality. Furthermore, that perception leads consumers to strong purchase intensity towards global brands (Holt et al., 2004). Globalization is spreading global philosophy throughout the world, which motivates local customers by pushing their mindset with peace and happiness as global residents to act similarly to other people throughout the world (Arif, 2015b; Khan & Arif, 2022). These psychological and economic benefits undoubtedly express the marketers' intention to deal with global brands. A study also found a positive correlation between the global brands operating in a particular country to its enhancement in GDP (economic growth) (Arif, 2012; Arif, 2017; Baroncelli et al., 2004). Numerous developing nations (such as Brazil, China, India, and Russia) have had rapid economic growth, which has led to the emergence of a global brand from them (Sheth, 2011). Owing to the above reasons, developed countries' consumers experience progressive developing countries' brands as global brands (Kumar & Steenkamp, 2013). A study by Isaid and Faisal (2015) tried to scrutinize the factors influencing consumer intention to repurchase a mobile phone brand in the context of Qatar and revealed that the attitudes of users to social standards, acts, and past behavior tend to have an important impact on their intentions for repurchasing. Another investigation revealed a negative correlation between consumer desire to repurchase and the price of mobile phones, their size, and their previous actions (Isaid & Faisal, 2015).

Seeing the significance of globalization, Arnett (2002) expressed that in recent times, consumers' tendency is to consume both global and local identities. Local identity refers to consumers' psychological associations with their admiration for and trust in their native cultures and traditions (Arif et al., 2011), and global identity refers

to psychological associations with their confidence in the positive effects of globalization that are also attractive in other cultures (Arif et al., 2011; Guo & Hong, 2018; Islam & Arif, 2022). Based on the above research, the authors of the present study tried to develop measurements for Bangladeshi cell phone users to understand the preferable features for purchasing cell phone brands and also tried to unearth the preferences in local and global identities. Finally, the authors also tried to develop a cell phone purchasing preference model for Bangladeshi cell phone users.

It is evident that there are literature gaps in the earlier studies based on the discussions in the introduction and literature review sections. Most of the documented studies regarding cell phone brand preferences were dominated by the global vs local context and few were found in the behavioral context but not on the Bangladeshi market in the recent behavioral changes (Bhakat & Arif, 2021) of cell phone users in various perspectives. Hence, the present study considered global vs local, demographic characteristics, as well as the brand preference model, as the scope of this study for the Bangladeshi consumers to meet the literature gaps. In recent times, Bangladesh has been a large market for cell phone companies, in which, Bangladesh has recorded 176.41 million legal cell phone subscribers (BTRC, 2021), and it is anticipated to be 190 million in 2025 (GSMA Intelligence, 2018). Hence, the current study has been conducted to examine cellphone preferences in the context of a country with a rapidly expanding mobile phone industry, i.e. Bangladesh.

RESEARCH METHODOLOGY

Research Design

The current study followed a quantitative research design with a cross-sectional time horizon and with the support of qualitative analysis to identify some key features which are preferred by Bangladeshi cell phone users to purchase a new cell phone (Arif et al., 2017; Arif et al., 2022; Hossain et al., 2020; Islam et al., 2012; Islam & Arif, 2022; Kothari & Garg, 2016; Khan & Rammal, 2022; Khan & Roy, 2023; Malhotra, 2019; Saunders & Lewis, 2018; Zikmund, 2003; Zikmund et al., 2013).

Data

For this particular study, the targeted population (i.e., cell phone users) is located in Bangladesh. Primary data and information were collected regarding consumers' demographic characteristics, consumers' cell phone brand preferences based on global vs. local perspectives, and the brand preference model based on consumer perceptual factors. Due to time and budget constraints, it was difficult to visit the whole country to collect primary data. Thus, the authors collected primary data through an online survey using Google Forms from eight administrative divisions of Bangladesh, such as Dhaka, Chattogram, Rajshahi, Khulna, Barishal, Sylhet, Rangpur, and Mymensingh. Among the 850 respondents, 487 respondents' responses were collected from the Dhaka division and the rest of the 363 responses were collected from the other seven divisions of Bangladesh. In addition, secondary information for an extensive literature review was gathered from reliable sources such as books, conference proceedings, and peer-reviewed journals. Also, secondary information was only compared with the primary data for the purpose of the study (Roy et al., 2016; Arif et al., 2022; Khan et al., 2022b; Rahman & Arif, 2021).

Sampling Frame, Sample Size, and Sampling Technique for Respondents Selection

As per BTRC (2021), the total number of legal cell phone connections or users was 176.41 million in Bangladesh. However, there were no statistics for upcoming users. As the population size was very large, it was difficult to go for a census due to time, budget, and other legitimate barriers. According to the sample size calculator created by Raosoft (http://www.raosoft.com/samplesize.html), 385 cell phone users were estimated with a 95 percent confidence level and a 5 percent margin of error. However, 850 cell phone users were targeted as a larger sample size for the present study's SEM (structural equation modeling) analysis, taking into account the methodologies and sample sizes used in earlier studies with SEM analysis. The final questionnaire was then distributed to this group in order to collect their responses. As a result, the authors used a structured (closed-ended) questionnaire to survey 850 cell phone users who were selected using a simple random sampling technique. In a simple random sampling strategy, a selection of participants from a larger population is selected randomly by the

researchers. The advantages of its simplicity and lack of bias include the fact that every member of that population has an equal chance of being selected (Al Ahad & Khan, 2020; Arif et al., 2022; Hossain et al., 2020; Islam et al., 2012; Kothari & Garg, 2016; Malhotra, 2019; Saunders & Lewis, 2018; Zikmund, 2003; Zikmund et al., 2013; Khan et al., 2022c).

Data Collection Procedure

The study used a survey method to gather primary data through Google Forms because of the COVID-19 epidemic. To gather primary data from selected respondents, a closed-ended structured questionnaire in Google Forms containing survey items was distributed online. Using an online survey method has many advantages, some of which include adaptability, convenience, reduced administrative costs, and controlled sampling (Evans & Mathur, 2005; Rahman & Arif, 2021). It is an essential instrument for gathering primary data because of the strict restrictions imposed and other regulatory measures implemented by the Government of Bangladesh during the COVID-19 lockdown (Arif et al., 2022; Rahman & Arif, 2021). The individuals who provided their consent received a structured (closed-ended) questionnaire. The questionnaire was divided into three sections. The first section included personal information on the demographic characteristics. The second section of the questionnaire was made to gather primary information on how consumers perceive various cell phone brands, features, and expectations for the future. Brand preference factors were included in the questionnaire's third and final section. A 7-point Likert scale was used to develop this section, with 1 denoting strongly disagree and 7 denoting strongly agree (Rasmussen, 1989; Dawes, 2008). Only 593 of the 850 questionnaires that were surveyed had responses that were accurate and deemed sufficient to continue the investigation. The study's response rate was calculated to be 69.77 percent. According to Fincham (2008), an appropriate response rate for studies should be at least 60 percent; however, the current study's response rate was higher than that recommended (Rahman & Arif, 2021).

Research Procedure

Three procedures were used to analyze the study. The study examined the demographic characteristics in the first step. The study separated

the preferred features for buying a cell phone in the second step. The criteria for disclosing characteristics were developed in earlier publications (psychological and economic aspects of consumers towards cell phones). The third and last part of the study revealed a model of the influencing factors that Bangladeshi consumers consider when preferring a cell phone brand.

Measurement Techniques

SPSS (version 22) was used to evaluate the demographic and cell phone feature-related data in the first and second steps. The measurement techniques used were simple ranking based on the respondents' response rate, accumulated sum analysis, arithmetic mean analysis, and percentile calculation. The third and last step involved using SPSS (version 22) and SPSS AMOS (version 23) to process the primary data acquired about consumers' perceptions of their preferred cell phone brand. The following data analysis section presents the underlying findings.

DATA ANALYSIS

Step 1

Demographic Analysis

The study was conducted on 593 respondents. There were 468 males and 125 females among the respondents. Hence, out of the entire sample, 78.92 percent of respondents were male, and 21.08 percent of respondents were female. The average age of the 299 respondents (50.42%) was more than 30 years; the age range of the 194 respondents (32.72%) was between 20 and 30 years; and the age range of the teens (those under 20 years old) was 100 (16.86%). The study surveyed various class groups of people, where most of them, i.e. 147 were found as teachers (24.79%); then students were found as 93 (15.68%); businessmen were found as 75 (12.65%), doctors were found as 57 (9.62%); rickshaw pullers were found as 41 (6.91%); garment workers were found as 23 (3.88%); nurses were found as 22 (3.72%); bankers were found as 15 (2.53%), engineers were found as 10 (1.61%), defense service employees were found as 10 (1.61%), preachers were found as 6 (1.01%), and there were 94 (15.99%) respondents

who were working in various positions in different organizations in Bangladesh.

Step 2

Cell Phones and Features Related Preference Analysis

The authors asked the respondents about their current phone brands. The study found that 178 (30.1%) users had Samsung phones; after that, Xiaomi users were found as 87 (14.7%); then unknown or other brands users were found to 83 (14%); Symphony users were found as 76 (12.8%); Microsoft/Nokia users were found as 48 (8.1%); another local brand Walton BD users were found as 41 (6.9%); OPPO users were found as 29 (4.9%); Huawei users were found as 14 (2.35%); Sony users were found as 14 (2.35%); iPhone users were found as 10 (1.6%); HTC users were found as 7 (1.2%); and finally Asus users were found as 6 (1%).

Among all the users, 146 (24.62%) respondents were using normal phones and the rest of the 447 (75.38%) respondents had smartphones. Through the questionnaire, the researchers asked the respondents about the best part of having a mobile phone. Approximately 75 percent of the respondents (74.70%) answered the 'Convenient' of having a cell phone; 'Style' was considered by 69 (11.64%) respondents; 'Feeling Safe' was marked by 51 (8.6%) respondents and the rest of the 30 respondents said 'Any other'. Therefore, it can be found from the above analysis that the most influential perception of the best part of having a mobile phone to Bangladeshi users is the 'Convenient' of having cell phones rather than the 'Style' or 'Feeling Safe'.

The study also attempted to understand the perception toward the mobile OS (Operating System) due to the upgrading of mobile OS (operating system). Most customers chose an 'Android-based' operating system for their cell phones. Among the respondents, 498 (82.645%) were marked on the Android-based OS. After that, Java/Normal OS was ticked by 71 (12%); Windows OS was picked by 18 (3.04%); iOS was chosen by 10 (1.61%); and finally, Blackberry OS in a cell phone was preferred by 5 (0.84%). As a result, the 'Android' OS was found to be the most preferred OS system for Bangladeshi cell phone users.

The selected respondents were also asked about their perception related to which part of a mobile phone is important to them. The study set up four criteria for giving importance to cell phone parts. Table 1 reflects the answers from the users. The study tried to rank the preference based on the revealed responses and the touch screen was judged as the 1st by the users, whereas the weight of the cell phone was judged as the 4th.

Table 1

Important Part of a Cell Phone to Consumers

Touch Screen	3.97 out of 5	1st
Screen Size	3.76 out of 5	2nd
Color	3.56 out of 5	3rd
Weight	2.99 out of 5	4th

The budget allocation for purchasing a cell phone was a very important issue for both consumers and sellers. Thus, the study attempted to identify Bangladeshi cell phone users' perceived budget allocation to purchase their new cell phones. The responses of users to their perceived budget allocation for purchasing a new cell phone are shown in Table 2.

Table 2

Budget for a New Cell Phone (n=593)

৳ = BDT	n	Percentage (%)
Less than ৳7,000	137	23.12 (%)
৳7,000 - ৳10,000	87	14.67 (%)
৳10,000 - ৳12,000	76	12.81 (%)
৳12,000 - ৳15,000	65	10.96 (%)
৳15,000 - ৳20,000	123	20.74 (%)
৳20,000 - ৳25,000	58	9.78 (%)
৳25,000 - ৳35,000	25	4.21 (%)
৳More than ৳35,000	22	3.71 (%)

Table 2 shows that there are different types of budget ranges that were picked up by the users and each of the preferences was almost nearer

to the other. Where the majority of the users, i.e., 137 (23.12%) users were selected for less than ৳7,000; then the budget range of ৳15,000 - ৳ 20,000 was selected by 123 (20.74%) users'; and the rest of the budget ranges before ৳15,000 - ৳ 20,000 were closely nearer. However, after the ৳15,000 - ৳ 20,000 range budgets (such as ৳20,000 - ৳25,000; and ৳ 25,000 – ৳ 35,000), the respondents' selection rates declined consecutively as 58 (9.78%; 4.21%) and there are only a few, i.e., 22 (3.71%) respondents who were willing to place a budget range of more than ৳ 35,000.

Finally, in step 2, the study tried to reveal the average rating for cell phone choosing criteria for Bangladeshi users. Table 3 discloses the results and tries to rank the criterion based on the respondents' responses.

Table 3

The Average Rating for Cell Phone Choosing Criteria

Camera Resolution	4.28 out of 5	1st
Name of Brand	3.94 out of 5	2nd
Functionality	3.87 out of 5	3rd
Internal Memory	3.85 out of 5	4th
Operating System (OS)	3.84 out of 5	**5th**
Connectivity	3.84 out of 5	**5th**
Pricing	3.68 out of 5	6th
Look and Feel	3.59 out of 5	7th
Nationality (Local)	2.95 out of 5	8th
Advertisement	2.74 out of 5	9th

It can be presumed from Table 3 that most of the respondents were generally focusing on 'Camera Resolution' before purchasing a new cell phone, where the 'Name of the Cell Phone Brand' was placed at 2nd by the consumers' preference. 'OS' and 'Connectivity' were jointly placed at 5th by the cell phone users. Surprisingly, 'Nationality' and 'Advertising' did not play a great role in consumers' presence before purchasing a new cell phone. Both two were marked as 8th and 9th consecutively.

Step 3

Cell Phone Purchase Influencing Model (SEM)

By establishing content validity and convergent validity, where nine items were chosen for the measurement model, the goodness of fit of the measurement model was verified. Table 4 displays the items.

Measurement Model

List of nine items that were picked for the cell phone purchase influencing model.

Table 4

Measurement Model

Items Name	Code
The mobile phone has become a necessity today.	Q17
The model I buy tells how fashionable I am.	Q18
The design or style (Look and Feel) of a mobile phone, to me, is the most important as opposed to functionality**.**	Q19
Handset size is important for me when purchasing a cell phone.	Q20
I do prefer a Bangladeshi phone as I am Bangladeshi.	Q21
Nationality doesn't matter; I prefer the best one as my cell phone.	Q22
I will buy a cell phone if my favorite celebrity is to endorse it.	Q23
Foreign celebrity endorsement persuades me personally to purchase a cell phone.	Q24
Mass media advertisements persuade me the most to purchase a cell phone.	Q25

Source: Khan et al., 2015; Guo & Hong, 2018; Khan et al., 2022

Model Validity

First, the study conducted a reliability test to verify the model's content validity. Reliability refers to the data's sensitivity, accuracy, and lack of bias (Hossain et al., 2018). Based on the reliability results, all the nine selected factors and the reliability were found as ($\alpha = .78$), Cronbach's higher than 0.70 is reliable for further study (Nunnally & Bernstein, 1994). To ensure measurement, factor loadings for every

item were also employed. Prior studies recommended that constructs should be loaded highly and significantly (Chin, 1998; Hair et al., 2010). Out of the nine items, only four were found to have more or less high loading. However, among those four, two of them were also loading with below 0.50 loading. Table 5 shows all the high-loading items.

Convergent Validity

The degree to which a certain set of variables or indicators converges in order to calculate the relevant concept is known as convergent validity (Hair et al., 2010). According to the SEM literature, a study requires testing the CR (composite reliability) of the items as well as AVE (average shared of variance) to demonstrate the convergent validity of a construct model. The results of the aforementioned measurements are shown in Table 5.

Table 5

Convergent Validity

Constructs	Items	Loadings (CFA)	Mean	St. Dev.	Internal reliability (α)	Composite reliability (CR)	AVE
Purchase Influencing Model	Q19	0.60	3.872	1.846			
	Q23	0.85	2.992	1.839	0.78	0.89	0.56
	Q24	0.86	2.781	1.698			
	Q25	0.64	3.516	1.740			

According to Hair et al. (2010), the acceptable level of CR values is over 0.70, and Table 5 shows that the current study's CR is 0.89, which is above the acceptable level. The AVE should be above 0.50 (Hair et al., 2010) and the AVE of the current study was determined to be 0.56, which is also above the acceptable level for the convergent validity of the model. Therefore, the research can conclude that the cell phone purchase influencing model (measurement model) has an acceptable level of convergent validity. All the mean responses are also shown in Table 5 (between 2.7 to 3.9 on a 7-point Likert scale), along with the standard deviation (SD). As the scale difference

is 1, all the items' standard deviations lie between 1.6 to 1.9, which reflects the variety of responses toward each item. The mean values are comparatively low because there might have been some other factors that are more influential for the mobile phone users' purchase influencing model and the outcomes of SD results support the same.

DISCUSSIONS AND IMPLICATIONS

The study tried to unearth the actual users of different cell phone brands where Samsung was found to be the most popular, then the others or unknown brands came second. The outcomes supported the findings of Statcounter (2019); however, the consequences of other cell phone brands' users were not found to be exactly similar to the result of Statcounter (2019) and the percentage of users was also dissimilar as well. Based on the literature, the study tried to learn the cell phone features preferences and the result found more or less similar to the explanation of Komando (2013) and Cornell (2019). The current study also found the most popular operating system for cell phones was 'Android' and the result supported the description of Beal (2018). The study also investigated whether any ethnocentrism or localization concept could affect the perception of consumers or not, and the study disclosed no or nothing significant impact on local ethnocentrism from Bangladeshi consumers rather they preferred their best solution. The aforementioned findings also supported the findings of the research on Turks users but did not support the result on Thai users (Dogerlioglu-Demir & Tansuhaj, 2011). The research also provided some additional values in the following ways to the body of literature.

Firstly, the research tried to understand the best part of having a cell phone to the users and most of them replied the 'Convenient' of using a cell phone. Still, the consequences of having a cell phone were as follows from the research findings; 'Convenient', 'Style', Feeling Safe', and then 'Any others'. Secondly, the study tried to learn the average perceived budget for a new cell phone from the users and the majority of them showed two ranges, which were almost equivalent to each other. Those ranges were 'Less than BDT 7,000' and 'BDT 15,000 to BDT 20,000'. However, a few users were interested in spending a budget range of more than BDT 20,000 for a new cell phone. Thirdly,

it was possibly the very first attempt by any Bangladeshi researcher(s) to unearth a new measurement model for cell phone brand preference factors for Bangladeshi consumers. The study picked up nine items for measurement. Conversely, only four factors were retained for the model and the rest of the five factors fell short due to poor factor loading.

The findings also connected the two important behavioral theories as well; one was the theory of Planned Behavior (PB) (Ajzen, 1991) and another one was the Attitude-Behavior-Context (ABC) theory (Guagnano et al., 1995). Initially, the consumers' perceptual differences towards cell phone brands based on demographic classification such as age, gender, and occupation; perception of cell phone features' preferences; and average perceived budget contributed to the cell phone brand's PB theory as well as the brand perception theory.

On the other hand, the findings on the perception towards popular operating systems; ethnocentrism or localization concept; the best part of having a cell phone; and a new measurement model for cell phone brand preference factors, are the new contributions of ABC theory along with the cell phone barding and brand preference theories in the context of Bangladeshi cell phone users. All the stated contributions can also be connected to the entrepreneurial leadership theory from the producers' perspective (Khan, 2019; Khan, 2021). Here the cell phone brand producers might get some ideas of innovation (Arif & Ahammed, 2010) for their upcoming cell phone features for an emerging economy like Bangladeshi consumers.

The current state of Bangladesh's mobile phone industry may be improved by the government and policymakers. If the government can reduce the import duty, cell phone companies will be capable of serving local consumers with better products at a cheap cost. From the argument, the study can assume that the prompt growth of the cell phone industry is exceedingly conceivable with assistance and support from the local government, although the government can also initiate some new steps to further the mobile phone industry in Bangladesh. Meanwhile, the cell phone market is a huge market for many foreign cell phone companies and investors. In an interview with The Daily Star (Islam, 2019), Rezwanul Hoque, the CEO (Chief Executive Officer) of Transsion Bangladesh Limited, said,

> *"2018 was a terrible year for the cell phone industry because sales dropped in almost every quarter after the government increased taxes on imports. The circumstance is changing and the second quarter will be much superior to the first one."* He also included, *"Leading businesses say as the sales of essential and feature phones have dropped quickly, it has affected the total sales volume. However, enhanced monitoring has made it harder to bring in gadgets through illegal channels."*

Presently, in total, five local along with international phone brands are assembling smart devices for cell phones in Bangladesh, whereas the local brands' assembly is now calculated as about 13 percent of the entire consuming devices (Islam, 2019). The most popular cell phone brand, Samsung, is now assembling its handsets with the assistance of Fair Electronics Limited at Narsingdi, Bangladesh. The CMO (Chief Marketing Officer) of Fair Electronics Limited, Mr. Mohammad Mesbah Uddin, shared his expression with The Daily Star (Islam, 2019),

> *"From the viewpoint of Samsung, we are delighted with our assembling growth, but the overall cell phone industry has not kept pace with us."*

Another opinion from the Joint Secretary of the BMPIA (Bangladesh Mobile Phone Importers Association) with The Daily Star (Islam, 2019) is that,

> *"Bangladesh is a high potential market for the cell phone business, but the growth rate of the market is not much as anticipated."* He also added, *"Maybe, the network quality of mobile phone operators is an important issue. If users do not get the anticipated speed on their gadget, what will they do with smart devices?"*

The discussions can highly motivate businessmen, policymakers, and users to reshape their thinking regarding the cell phone industry in Bangladesh and researchers from other parts of the world may also be motivated to conduct related research in their own contexts.

This particular study has managerial implications. Firstly, cell phone brands can reshape their business policies based on the preferred features and unveiled expected factors. Secondly, cell phone brands can rethink their current business position in Bangladesh. Thirdly, the current study has tried to find out some expectations from the actual users that can be the basis of innovation (Arif & Ahammed, 2010) or renovation of the existing features. Finally, the unearthed influencing model will support the managers to focus more on it to add new featured cell phones and ignore some backdated features.

LIMITATIONS, FUTURE RESEARCH DIRECTIONS, AND CONCLUSION

The present study did not go beyond the constraints like the prior studies. The budget and legislative constraints to run new research were obvious for this particular research. The respondents might have some lack of ideas and knowledge on the existing features of cell phones and brands. Moreover, the responses might be biased (Halo effect, judging based on a single characteristic) as per the consumer perspectives.

The future directions of the research could be more extensive than the current research. In further studies, the researchers can investigate the existing model along with some new factors. Consumer satisfaction or the service quality of cell phone brands may also be explored based on the current research findings. In addition, some mediating effects can also be tested based on age, gender, using time, etc., towards the relationship between cell phone preferences and users' satisfaction. The current study gives new insight and originates the value with significant implications for the telecom service providers, payment gateway service providers, and their support systems, including producers, supply chain and industry experts, before and after-sale service providers, brand promoters, stakeholders, as well as consumers, policymakers, and governments of various developing and developed countries to build up and implement brand strategies and policies in the global cell phone device and internet-connected digitalized era; because the title is very new according to the context as well as the physical research area. The present study attempted to explore and reveal some novel findings in response to

the research questions. The study surveyed various class groups of people to understand the actual scenario and the perception of real-life consumers towards their cell phone brands. The study's findings indicate that among users, the Samsung brand and Android OS were the most popular. However, there was no evidence of local ethnocentrism for brand preference in the study. The majority of consumers believe that the convenience of using a cell phone is its finest attribute. The study also identified a preferable budget range for a new cell phone. Eventually, a new measuring model for factors influencing cell phone purchases among Bangladeshi consumers was discovered by the study. The study picked up nine items for measurement and only four factors were found satisfactory to validate the model. As a result, consumers can attain their higher perceived brand value while ensuring their desired level of satisfaction through highly cognitive brand preferences, brand trust, and brand loyalty to their expected cell phone brands.

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