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Understanding the Factors Influencing Smartphone Purchase Decisions

Dr. Asha Chawla
Associate Professor in Commerce
G.V.M.Girls College, Sonipat, India.

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Abstract: ***Yes, consumer behaviour is a wide area of research that includes all the choices and behaviours people make before, during, and after making a purchase, as well as their post-purchase analyses. It's true that while making purchases, a lot of people now-a-days choose to focus on the newest features, cutting-edge technology, affordable prices, and reliable brands. In a market that is becoming more and more competitive, these choices represent the changing trends and expectations of contemporary customers. This study aims to investigate consumers' preferences about product attributes when they are trying to choose which smartphone to buy. Taking into consideration this, the characteristics that consumers take into account while choosing a smartphone were investigated. The convenience sampling technique was used to select 240 respondents from the sample in order to meet the research's objectives. The outcome shows that the mean of the product features does not significantly differ based on gender. Performance and Price have mean values of 4.30 and 4.38, respectively, indicating that these are highly regarded attributes.***

This study evaluates the significance of smartphone features among users in the National Capital Region (NCR) by employing technological theories and methodologies. The Google forms that were used for data collection were distributed online via email, posted on social media and copies of the questionnaires were also given to a random sample of NCR customers. For study, 240 responses in all were taken into account and the data was analysed based on the users' income, gender, age, occupation, and educational status. Five theories were developed and the data were first analysed using an electronic spreadsheet on Google Respondent Analyzer before being run through the Statistical Package for Social Sciences (SPSS). Anova, t-test, weighted average score, and descriptive statistics were further used to measure the variability and test the hypothesis.

Keywords: Smartphones, Purchase Decision, Importance level, Features, NCR.

I. INTRODUCTION

With their critical function in both personal and professional domains, smartphones have become an essential part of our everyday life. With the ability to instantly connect with people worldwide through calls, messages, and a variety of messaging apps, these pocket-sized devices have completely changed the way people communicate. They are also effective tools for using the internet to acquire resources and information, which puts knowledge at our fingertips. While their multimedia features provide fun and relaxation through gaming, streaming and photography, smartphones also help us be more productive by enabling us to collaborate on work assignments, check emails, and manage schedules. Additionally, they facilitate the sharing

and storing of documents and provide easy access to crucial files. Essentially, cellphones have become an indispensable part of our contemporary lives, improving connectedness, efficiency, and convenience in a multitude of ways.

Given the extensive use and growing interest in smartphones, our research on consumer behaviour in the Indian smartphone market is quite pertinent. Businesses and legislators alike must comprehend the incentives and variables driving consumer decisions.

It is crucial to take a number of aspects into account when purchasing a smartphone to make sure it fulfills our demands. When purchasing a smartphone that meets our unique needs and tastes, we can make an informed choice by carefully weighing the characteristics. A few key elements have been taken into account for this investigation:

1. **Price:** Establish your spending limit and select a phone that provides the most value for your requirements.
2. **Performance:** To guarantee seamless multitasking and app performance, check the processor, RAM, and storage capacity.
3. **Brand:** Take into account your inclination for a particular brand and how well it works with the other gadgets you own.
4. **Storage Options:** Select a model that has enough capacity or that can be expanded with micro SD cards.
5. **Camera:** Assess the camera's quality, taking into account its megapixel count, aperture size, and extra features like low-light capability and picture stabilization.
6. **Display:** For a high-quality viewing experience, take into account the screen's size, resolution, and type (LCD, OLED, etc.).
7. **Battery Life:** Verify that your phone's battery can sustain your daily use by checking its capacity and efficiency.
8. **Software and Updates:** Take into account how frequently security patches and software updates are offered by the manufacturer.
9. **Water and Dust Resistance:** Look for an IP-rated device if you require a more durable one.
10. **Operating System (OS):** Based on your tastes and how well it works with your ecosystem, select Android, iOS, or another option.

II. Literature Review

One of the most vibrant and quickly changing segments of the consumer electronics business nowadays is the smartphone industry. The factors that impact customers' intentions to buy smartphones are of great interest to marketers, researchers, and businesses. This study of the literature digs into previous investigations and studies that have looked into the variables influencing customers' plans to buy smartphones.

The primary determinant of smartphone purchasing intentions is price. Research by **Suki (2017)** and **Fang et al. (2014)** highlights that when the price of a smartphone is in line with its perceived benefits, users view it as a worthwhile investment. Brand loyalty is a major factor in the smartphones that customers choose. Studies by **Kim et al. (2019)** and **Lien et al. (2019)** emphasize that reputable and well-known companies encourage consumers to make more purchases. Features on cellphones that improve users' daily life draw in customers.

Research by **Ha and Stoel (2009)** and **Chong and Wong (2012)** underlines that Purchase intentions are highly influenced by perceived quality and features such as processing speed, screen size, and camera quality. Purchase intentions are significantly influenced by recommendations from peers and social networks as well as word-of-mouth **(Zhang et al., 2014)**. Before making a purchasing decision, consumers frequently look to their social circles for validation. One factor propelling the

smartphone market is the speed at which technology is developing. Research by **Abu-Shanab et al. (2019)** and **Chen et al. (2015)** demonstrates that Customers are more likely to buy smartphones that feature the newest innovations in technology. One of the most important variables influencing purchase intentions is the overall user experience and simplicity of use **(Chen and Yen, 2011**). Customers like devices that make their daily duties easier. Purchase intentions may be hindered by perceived risk, which includes worries about privacy and data security **(Hernández-Ortega et al., 2017).** A crucial component is having faith in the manufacturer's dedication to data security. The consideration of environmental effect is an emerging factor. The interest of consumers in sustainable and environmentally friendly smartphone solutions is growing. **(Reyes-Menendez et al., 2019).** Purchase intentions are influenced by societal conventions, cultural values, and demographics.

Research by **Wong and Ting (2011)** suggests that Cultural influences can have a big impact on smartphone preferences. The financial circumstances of consumers, including their income and level of economic stability, influence their capacity and inclination to buy expensive smartphones **(López-Miguens et al., 2017).**

The researched literature offers a thorough understanding of the various elements influencing consumers' propensity to buy smartphones. It is clear that the main factors influencing consumers' intents to buy are cost, brand, quality, and the influence of social media. Trust, environmental sustainability, and the integration of new technology are all becoming more and more important. Businesses must take these issues into account as the smartphone market develops and modify their marketing and product development strategies accordingly. This literature review provides a fundamental framework for further investigation and comprehension of the dynamic field of smartphone purchase behavior.

III. Purpose of the Research

A multitude of social and personal factors are important in shaping consumer behaviour. Analysing how social and personal traits affect smartphone sales can highlight cricial information about the Indian market. In this dynamic and quickly changing industry, businesses may use this research as a roadmap to better customize their products and marketing tactics to the requirements and preferences of consumers. Furthermore, it can assist users in choosing cellphones that complement their unique tastes and lifestyles with greater knowledge.

Using a 5-point Likert scale, the study attempted to know consumer preferences for various product aspects, including as price, performance, brand, display, storage, battery life, camera, water and dust resistance, operating systems, software, and updates, on an importance level.

Research Objectives

The significant objective of this study is to understand the users' intentions towards smartphone's important features in National Capital Region **and specific objectives are:**

1. To analyse the socio-economic/demographic profile of the users of smartphone in NCR.
2. To comprehend and evaluate the characteristics that affect the decision to buy a smartphone based on its significance.
3. To find out if there is any significant difference in importance level of features perceived by respondents on the basis of demographic variables.

Research Methodology:

Research Design:

- **Population of Study:** The study population consisted of smartphone users who resided in Delhi's NCR. For the study, people who have used smartphones were the target population.

- **Sampling Unit:** The users of various smartphone brands in the National Capital Region (NCR) of Delhi served as the study's sample unit. The approach of convenience sampling, which is non-random, was used to choose the users. Age, education level, or occupation were not grounds for discrimination.
- **Sample Size:** The sample size was 240. This is fairly large to represent the population.
- **Research Instrument:** A meticulously organized survey was created. The questionnaire is divided into two sections: the very first part asks questions about the demographics of the target audience, and the second part asks about the importance of the features on smartphones. The secondary data is derived from websites and journals.
- **Research Tools:** Descriptive Statistics, Weighted Average Scores, One-way Anova.

IV. Data Analysis and Interpretation

In the research process, analysis and interpretation work hand in hand. Data collection, processing, and summarization are all part of analysis, and interpretation aids in the useful deduction of conclusions and insights from the data. They are in fact interrelated and necessary for comprehending the importance of research findings and successfully answering the research questions.

Research Hypotheses

The study developed and tested five null hypotheses as stated below:

H_{01}: There is no significant difference between importance level of smartphone features on the basis of gender.

H_{02}: There is no significant difference between importance level of smartphone features on the basis of age.

H_{03}: There is no significant difference between importance level of smartphone features on the basis of education.

H_{04}: There is no significant difference between importance level of smartphone features on the basis of occupation.

H_{05}: There is no significant difference between importance level of smartphone features on the basis of income.

Table 1. Demographic Profile of Respondents

Variable	Characteristics	Frequency	Percentage
Gender	Male	104	43.3
	Female	136	56.7
	Total	240	100
Age	Under 18 Years	20	8.3
	19 to 30 Years	97	40.4
	31 to 45 Years	80	33.3
	46 to 60 Years	36	15.0
	More than 60 years	7	2.9
	Total	240	100
Education	Upto 12^{th} Class	30	12.5
	Graduate	51	21.3
	Post Graduate	113	47.1
	Ph.D. & Higher	46	19.2
	Total	240	100
Occupation	Student	77	32.1
	Job	102	42.5
	Business	20	8.3
	Professional	21	8.8
	Homemaker	12	5.0
	Retired	8	3.3
	Total	240	100

Family Income Per Month	Less than 50000 ₹	54	22.5
	50000 ₹ to 100000 ₹	66	27.5
	100000 ₹ to 150000 ₹	35	14.6
	More than 150000 ₹	85	35.4
	Total	240	100

Source: Primary Data

Personal profile of the respondents

Comprehending the attributes and demography of customers is undoubtedly essential for enterprises and market research. As a result, it becomes important to note the socioeconomic background of the sample respondents. A survey of 240 smartphone users in the NCR area produced the following findings.

The respondents' profile that is displayed in Table 1 depicts the smartphone user profile. Table 1 suggests that the respondents' sex composition was 56.7% female and 43.3% male. When it comes to age, 40.4% of respondents are between the ages of 19 and 30 and 33.3% are between the ages of 31 and 45. When these stated two age groups are combined, 73.7% of responders will fit this description. Of the total respondents, 8.3% were under the age category of 18 years, and only 2.9% of the sample respondents were over 60. It is quite evident that the National Capital Region (NCR) is the location with the most educational facilities; of the sample, 47.1% included postgraduates, 19.2% included Ph.D. holders and above, and 21.3% included graduates.

Of the sample responses, the majority (42.5%) were employed, followed by students (32.1%) and professionals (8.8%). Based on monthly income, the majority of respondents (35.4%) fell into the category of earning more than Rs.150,000, followed by those earning between Rs.50,000 and Rs.100,000 (27.5%).

According to the facts and data we obtained, most smartphone users in this area are young, educated, and earn a respectable living, which is in line with the trend of tech-savvy people integrating technology into their daily lives. Businesses may better satisfy the interests and wants of this particular consumer segment by customizing their products and marketing methods with the aid of this invaluable data.

Validity and Reliability

The smartphone is a relatively new product on the Indian tech scene. Respondents were asked to mark the aspects of cellphones they thought were extremely important, important, somewhat important, slightly important, or not at all significant before making a purchase in order to determine which features were the most important.

The questionnaire's design was reviewed and validated by specialists. As a result of their comments, the survey's extraneous items have been removed, keeping it focused and efficient in collecting pertinent information. This procedure contributes to the questionnaire's increased effectiveness and quality, which yields more precise and significant study findings. In terms of dependability, the degree of internal consistency shown by Cronbach's alpha was utilized to show how closely similar the items are.

Reliability Statistics

Cronbach's Alpha	N of Items
.736	10

The test's outcome demonstrates the survey's items' consistency. The 10 items' alpha coefficient is 0.736, indicating that their internal consistency is rather strong. Most social science research scenarios regard a reliability coefficient of 0.70 or more to be "acceptable" (Mockovak, 2016).

Respondents' views on importance level regarding various features of Smartphone

Table 2: Respondents' views on importance Level regarding Smartphone Features

Factors/Features	Very Important	Important	Somewhat Important	Slightly Important	Not at all important	Total Score	WAS	Rank
1. Price	136 (56.7%)	76 (31.7%)	14 (5.8%)	11 (4.6%)	3 (1.3%)	1051	4.38	**1**
2.Performance	136 (56.7%)	66 (27.5%)	19 (7.9%)	11 (4.6%)	8 (3.3%)	1031	4.30	**2**
3. Brand	67 (27.9%)	80 (33.3%)	35 (14.6%)	39 (16.3%)	19 (7.9%)	857	3.57	**4**
4.Storage	66 (27.5%)	43 (17.9%)	41 (17.1%)	36 (15.0%)	54 (22.5%)	751	3.13	**9**
5. Camera	67 (27.9%)	78 (32.5%)	38 (15.8%)	35 (14.6%)	22 (9.2%)	853	3.55	**5**
6. Display	87 (36.3%)	83 (34.6%)	28 (11.7%)	24 (10.0%)	18 (7.5%)	917	3.82	**3**
7. Battery Life	55 (22.9%)	86 (35.8%)	36 (15.0%)	29 (12.1%)	34 (14.2%)	819	3.41	**6**
8.Software & Updates	76 (31.7%)	29 (12.1%)	28 (11.7%)	70 (29.2%)	37 (15.4%)	757	3.15	**8**
9. Water & Dust Resistance	43 (17.9%)	74 (30.8%)	39 (16.3%)	26 (10.8%)	58 (24.2%)	738	3.08	**10**
10.Operating System	71 (29.6%)	59 (24.6%)	41 (17.1%)	29 (12.1%)	40 (16.7%)	812	3.38	**7**
Overall Average Weighted Score : 3.58								

Source: Primary Data
*Data in parentheses indicate percentage of respondents.

Interpretation:

The information in Table 2 makes it evident which variables respondents consider when making smartphone purchases. The vast majority of respondents, or 88.4%, believe that pricing is an important consideration when making a smartphone purchase. Merely 11.7 percent think it's less significant. The performance of a smartphone is prioritized by a substantial 84.2 percent of respondents, whereas 15.8 percent feel it to be less important. When selecting a smartphone, the display is a feature that matters to 70.9 percent of respondents, demonstrating its importance in their decision-making process.

While not as essential to everyone as price, 48.7% of respondents still think that dust and water resistance is an important consideration when choosing a smartphone. The features that Indian smartphone users favour is an interesting observation. With mean scores of 4.38 and 4.30, respectively, price and performance appear to be highly appreciated, suggesting a focus on quality and a willingness to pay for it. Simultaneously, storage, water and dust resistance, software and updates, and all three receive scores above average—3.15,3.13, and 3.08, respectively—indicating their importance.

Furthermore, ranking third, fourth, fifth, and sixth out of ten qualities, features like display, brand, camera, and battery life are also important considerations for Indian smartphone users. Price and performance are the most important variables, according to these statistics, which offer insightful information about the priorities of smartphone users. When creating and promoting their smartphones, smartphone makers must keep these preferences in mind.

Table 3: One-way ANOVA for Consumer Views on Importance Level towards the various features of Smartphones across Demographic Variables

S.no.	Features/ Aspects	Gender		Age		Education		Occupation		Income	
		T Value	Sig.	F Value	Sig.	F Value	Sig.	F Value	Sig.	F Value	Sig.
1.	**Price**	.143	.706	2.126	.078	1.946	.123	.948	.450	6.079	**.001**
2.	**Performance**	.290	.591	1.666	.159	.581	.628	1.182	.319	1.030	.380
3.	**Brand**	.334	.564	.637	.637	3.235	**.023**	.997	.420	.413	.744
4.	**Storage**	1.554	.214	1.472	.212	3.848	**.010**	.826	.533	.516	.672
5.	**Camera**	.116	.734	2.364	.054	3.177	**.025**	3.166	**.009**	2.608	.052
6.	**Display**	.146	.703	3.092	**.017**	2.632	.051	1.792	.115	.782	.505
7.	**Battery Life**	.034	.854	3.859	**.005**	1.125	.340	1.221	.300	5.672	**.001**
8.	**Softwares & updates**	2.168	.142	.711	.585	.354	.786	2.718	**.021**	.516	.672
9.	**Water and Dust Resistance**	1.012	.315	3.613	**.007**	2.356	.073	.425	.831	.575	.632
10.	**Operating System**	.214	.644	1.651	.162	2.944	**.034**	1.782	.117	1.824	.143

The ANOVA findings on respondents' opinions regarding the significance of various smartphone features across demographic variables are displayed in Table 3. The p-value was compared to 0.05. If the value is low, we will draw the conclusion that, based on that demographic characteristic, there is a considerable variation in the features' relative relevance.

The first hypothesis was to determine how important each attribute was in relation to each of the two gender categories. We accept the null hypothesis (H01) and come to the conclusion that there are no significant differences in importance level based on gender for all features, based on the sig/p-values displayed in Table III.

The purpose of the second hypothesis was to evaluate the degree of significance of each trait for each of the five age groups. We accept the null hypothesis (H02) based on the sig/p-values presented in Table III and come to the conclusion that, with the exception of display, battery life, and water and dust resistance, there are no appreciable differences in satisfaction levels based on age for any feature.

The purpose of the third hypothesis was to evaluate the degree of significance of each attribute for each of the four educational categories. We accept the null hypothesis (H03) based on the sig/p-values presented in Table III and come to the conclusion that there are no appreciable changes in the importance level of any feature based on education, with the exception of brand, storage, camera, and operating system.

The purpose of the fourth hypothesis was to evaluate the degree of significance of each attribute for each of the six occupational categories. We accept the null hypothesis (H04) based on the sig/p-values presented in Table III and come to the

conclusion that, with the exception of camera and software updates, there are no appreciable differences in importance levels based on occupation.

The purpose of the fifth hypothesis was to evaluate the degree of significance of each feature for each of the four income levels. We accept the null hypothesis (H05) based on the sig/p-values in Table III and come to the conclusion that there are no appreciable variations in the importance level of smartphone characteristics based on income, with the exception of price and battery life.\

V. FINDINGS

- Performance and price have mean values of 4.30 and 4.38, respectively, indicating that these are highly regarded attributes.
- With all attributes, there are no appreciable variations in priority level based on gender.
- Age-based variations in feature satisfaction with regard to display, battery life, and dust and water resistance are noteworthy.
- The degree of relevance varies significantly depending on education when it comes to characteristics like operating system, storage, camera, and brand.
- With the exception of the camera, software, and updates, there are notable variations in the degree of importance according on occupation for all aspects.
- The degree to which smartphone features are important varies significantly depending on income, price, and battery life.

VI. LIMITATION

The core data for this study was gathered online using Google Forms, as direct communication between the researcher and respondents was not feasible.

It's possible that the sample size of 240 is insufficient to count the actual population.

VII. FUTURE SCOPE OF THE STUDY

Subsequent studies may encompass the entirety of India, yielding more broadly applicable outcomes. Potential research topics include comparing different smartphone brands and evaluating user behavior and satisfaction after a purchase.

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