POTENTIAL OF USING DIGITAL MEDIA FOR MARKETING MOBILE HANDSETS TO BASE OF PYRAMID CONSUMERS IN BANGLADESH

A DISSERTATION SUBMITTED BY

MUHAMMAD RISALAT SIDDIQUE

REGISTRATION NUMBER: 29/2018-19

DATE OF REJOINING: 20-01-2019

INSTITUTE OF BUSINESS ADMINISTRATION

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SHEIKH MORSHED JAHAN

PROFESSOR, IBA

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DEDICATION

To

My wife and two sons who help me believe

that we, #RisRonRioRay, are an everyday real-life superhero family.

To

All the fathers and mothers, both natural and in-law,

who inspire us to pursue knowledge to be better.

To

All the digital warriors of Bangladesh

that are working relentlessly for the true digital transformation of the country.

ACKNOWLEDGEMENT

The African saying "it takes a village to raise a kid" has had a tremendous impact on me since it highlights the value of community. This sentence resonates with me as I work on a Doctor of Business Administration degree. I am grateful to Allah, and I consider myself extremely fortunate to have been surrounded by many people who have provided steadfast support to me over the difficult process of completing my thesis, which nearly feels like a third child of mine. My achievements would not have come to fruition without their continued support and inspiration.

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of the focus group participants from the bottom of the pyramid consumer base for their time during the research process. I salute the survey enumerators who showed integrity at the highest level. I am grateful to the esteemed faculty members at IBA for their wisdom and assistance throughout this lengthy trip, which occurred during colloquiums, seminars, and personal consultations. I was fortunate to be among some of the most brilliant brains in my doctorate class, and they have been invaluable resources in both course work and research. I am appreciative of the IBA office staff, particularly the DBA program employees, for their assistance with administrative processes along this journey.

Last but not least, I consider myself extremely fortunate to have my family in my life. Their belief in my ability, the wise guidance they have given, and their never-ending drive have been a never-ending source of motivation and inspiration for me, carrying me along even in the most challenging of circumstances. The combined efforts of those folks have not only contributed to my academic success but have also enriched my personal growth during this entire trip. Every time I felt down, I asked my sons, Muhammad Riyaan Siddique, and Muhammad Rayeef Siddique, to assist me in completing my thesis. While my elder one assisted in many instances in collating information, my younger one, who is 5 years old, actually asked me to brief him on what he needed to do without flinching. My thanks to Allah for giving me a life partner like Nahid Akter (Ronee), who has unwavering faith in me when it comes to academics, among other things, and who has been driving me to remain at it till it is done despite my hectic lifestyle as a serial entrepreneur. My mother, Anowara Sharmeen, has been a continual source of motivation for me since the first day of my enrolment in the doctorate program until the last day, pushing me to finish. My father, A.B.M. Siddique, my mother-in-law, Shahanara Alam, and father-in-law, Md. Safiul Alam, who are always happy about each milestone in my life, had been looking forward to this day.

DECLARATION OF ORIGINALITY

I declare that my doctoral dissertation, titled "Potential of Using Digital Media for Marketing Mobile Handsets to Base of Pyramid Consumers in Bangladesh," is an original work of my own.

I certify that the report followed the highest ethical and moral standards of research as deemed appropriate for a doctoral-level thesis. It prohibits containing any substantial number of materials accepted or submitted for any other degree at the University of Dhaka or any other institution. All the materials that have been sourced from secondary sources have been properly cited and acknowledged.

Muhammad Risalat Siddique
Registration Number: 29/2018-19
Date of Joining: 20-01-2019
Institute of Business Administration (IBA)
University of Dhaka

CERTIFICATE OF ORIGINALITY

"Potential of Using Digital Media for Marketing Mobile Handsets to Base of Pyramid Consumers in Bangladesh" is an original research work submitted by Muhammad Risalat Siddique. The research has been completed under my supervision as a requirement of the Doctor of Business Administration degree by the Institute of Business Administration, University of Dhaka.

To the best of my knowledge, the research results do not contain any materials accepted or submitted for any other degree at the University of Dhaka or any other institution.

Sheikh Morshed Jahan
Professor
Institute of Business Administration (IBA)
University of Dhaka

LIST OF ABBREVIATIONS AND ACRONYMS

AIDA	Attention, Interest, Desire, and Action
AIDCAS	Attention, Interest, Desire, Conviction, Action, Satisfaction
ANOVA	Analysis of Variance
BIDA	Bangladesh Investment Development Authority
BOP	Base of Pyramid/ Bottom of Pyramid
BOTP	Bottom of the Pyramid Population
BPDB	Bangladesh Power Development Board
BRIC	Brazil, Russia, India, China
BTRC	Bangladesh Telecommunication Regulatory Commission
CBN	Cost of Basic Needs
CD	Compact Disc
CDMA	Code-Division Multiple Access
CMO	Chief Marketing Officer
DVD	Digital Versatile Disc
EFA	Exploratory Factor Analysis
EIU	Economist Intelligence Unit
EKB	Engel, Kollat and Blackwell
EMI	Equated Monthly Instalment
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GPS	Global Positioning System
GSM	Global System for Mobile
GSMA	Groupe Speciale Mobile Association
HCR	Head Count Ratio
HIES	Household Income and Expenditure Survey
ICT	Information and Communications Technology
IVR	Interactive Voice Response
JSC	Junior School Certificate
KMO	Kaiser-Meyer-Olkin
LDC	Least Developed Country
MAC	Middle and Affluent class

MFS	Mobile Financial Service
NGO	Non-governmental organization
OECD	The Organization for Economic Cooperation and Development
OPHI	Oxford Poverty and Human Development Unit
PCA	Principal Component Analysis
PPP	Purchasing Power Parity
RACE	Reach, Act, Convert, Engage
RAM	Random Access Memory
ROM	Read Only Memory
SDGs	Sustainable Development Goals
SIM	Subscriber Identity Module
SMS	Short Messaging System
SPSS	Statistical Package for Social Sciences
SPSS	Statistical Package for Social Sciences
TV	Television
UNCTAD	United Nations Conference on Trade and Development
USD	United States Dollar
USSD	Unstructured Supplementary Service Data
VOD	Video on Demand
WDI	World Development Indicators
WIFI	Wireless Fidelity

ABSTRACT

Digital media is a rapidly expanding marketing tool, both globally and in Bangladesh. There are nearly 183.89 million cellular mobile connections in Bangladesh, and 126.12 million people are using the internet. However, a huge gap exists between the time spent by consumers on digital media (close to 2-3 hours a day on the internet and nearly 16–18 hours on mobile phones) and the marketing spend or use of digital communication (less than 20%) as a marketing tool in the country. Interestingly, the fact that advertising through digital media is still 8–9 times cheaper than traditional media is also not able to fast-track the use of this modern medium.

Our country is making a leap from "digital Bangladesh" to "smart Bangladesh" with steady improvements in material access and skill access. However, most of the digital marketing activities in the country are still directed at top-of-the-pyramid customers. This only contributes to the notion of a digital divide inside the country by restricting mental access, motivational access, and usage access. The prevalent assumption is that the gap is occurring due to marketers' own lack of understanding of BoP's triggers and barriers to using digital media tools. This is leading to the belief that digital media tools are too complicated for BoP consumers. There is also a lack of research or a framework for understanding the potential of digital media as a marketing tool.

Thus, the aim of this research was to assemble a conceptual framework of interventions that enable marketers to use digital communication as a tool for BoP consumers by overcoming identified barriers and harnessing triggers among consumers in Bangladesh, focusing on the mobile handset industry.

Literature reviews, focus group discussions, experience surveys, and in-depth interviews were done to identify 28 trigger variables and 18 barrier variables under 9 complex variables and 5 parameters (mental, material, motivational, skill, and usage) that can influence intent to use digital media and smartphones. A Kobo Toolbox-based digital survey was done on 421 base of pyramid consumers from 8 divisions of Bangladesh using Android smartphones and an encoded Bangla questionnaire. The sample was evenly split between urban and rural areas and between genders and ages according to their population ratio. The selection process of the respondents was to filter-in consumers in the income range of taka 6500–13500 (lower poverty line equivalent of 6500 taka at the lower end to filter out the destitute and 13,500 taka at the higher end to filter out the middle-income group based on up to grade 10/11 ("third-class" equivalent) salary of the government pay scale) only. The interviews captured their mobile handset usage behaviour and digital platform usage behaviour and identified the major variables that influence their digital usage behaviour in terms of intent to use. Additional analyses using ANOVA, regression, and principal component analysis were done on the survey data.

The findings of the research contradict the general perception among marketers and hence provide original scientific evidence involving the maturity of the BOP market for the application of digital marketing tools to market mobile handsets. On the one hand, the study identified mobile handset usage behaviour among base of pyramid users through the features they look for in a mobile handset, sources of purchase influences, preferred price range, preferred purchase location for mobile handsets, source of money for the purchase, and after-sales requirements. On the other hand, the study revealed the usage behaviour of digital platforms in terms of the purpose of their use, the type of internet packages they avail, the platforms they use, and the contents they consume. An important outcome of this study has been to recognize the main factors that mobile handset marketers can trigger to encourage the intent to use digital platforms among base-of-the-pyramid consumers. The result of this analysis concluded that only two components with 4 trigger points, i.e., the complex variables, including only 17 trigger variables out of 28, need to be harnessed to attain desired results. Interestingly, none of the barriers out of 18 survived the rigorous step-by-step reliability, regression, and component analysis. This essentially shows how the base of the pyramid audience is ready for digital transformation if the right framework is applied.

The study also helped identify potential approaches to getting people to use more digital media: reducing the price of the internet, increasing coverage, and raising awareness, while the best possible way to advertise smartphones was identified as communicating price, advertising benefits, and demonstrating usage on Facebook along with television. In terms of how to increase use of the internet and smartphones, reducing the price of mobile handsets, increasing network coverage, improving speed, and raising awareness were identified as key approaches.

The three key information areas – factors of intent to use, digital media usage behaviour, and mobile handset usage behaviour – were then combined to create the overall conceptual framework to use digital media for marketing mobile handsets to base of pyramid consumers in Bangladesh. The research proposed a brand-new marketing framework called the 5R Funneloop model with reach, relate, recruit, retain, and reflect stages to be at the centre of the framework, taking inspiration from exiting consumer purchase decision models and marketing funnels. The strength of the model is that, keeping intent to use and digital media usage factors of the framework intact, marketers of any other industry can just identify and insert their industry product or service usage behaviour in the framework to use the model as a guiding tool for digital media as a marketing tool for base of pyramid consumers.

Key words: digital communication, marketing tools, traditional marketing, digital marketing, media, Bangladesh, base of the pyramid, triggers, barriers, bottom of the pyramid, digital divide, levels of digital divide, material access, usage access, skills access, mental access, motivational access, advertising, effectiveness, efficiency, lifestyle products, mobile phone, smartphone, funneloop, 5R, reach, relate, recruit, retain, reflect, smart Bangladesh, digital Bangladesh

Table of Contents

List of Tables

List of Figures

1.0 INTRODUCTION

1.1 Background

Digital media in Bangladesh has grown exponentially in recent years with easier access to mobile devices and the internet. There is now a staggering number of mobile connections standing at 183.89 million and internet connections at 126.12 million (both numbers are the number of users who used them at least once in the last 90 days) (BTRC, 2023). However, a huge gap has been created among consumer time spent on digital media, which is about 2-3 hours on the internet and approximately 16-18 hours on mobile phones, versus what the marketers assume the average consumption is (TNS – Google Bangladesh Digital Profiling 2015). This is ultimately affecting the use of digital media as a marketing tool versus traditional media among brands that are formally operating in different industries. In-depth discussions with media experts in the industry reveal that the percentage use of digital media as a percentage of total communication has moved from as low as 2% back in the year 2015/2016 to approximately 15% in 2021/2022 among formal players, despite an estimated cost difference of close to 8-9 times versus traditional media like TV (National Media Survey, 2021), (Market Intelligence).

With the emergence of digital media in addition to traditional television, print, radio, and outdoor media, marketing in the modern world is undergoing a radical transformation. Digital media are any media encoded in a manner that is machine-readable. Digital material can be made, viewed, distributed, edited, and stored on personal computers, tablet or laptop computers, feature phones, and smart phones, among others, and shared across electronic networks such as the internet, intranet, etc. The media allows two-way communication and immediate feedback. To sell products and services to consumers, the integration of social media tools, websites, instant messaging, and search tools into daily life is becoming a vital aspect of marketing.

According to Simon Kemp of Data Reportal (2023), the number of unique internet users was around 67 million at the beginning of the year 2023 in Bangladesh, with a penetration rate of around 39%. Please note that this data gap between sources (BTRC

vs. Data Reportal) is hypothesized to be due to the fact that there are dual users using the same email account from one household, which might have been counted as one user by Data Reportal due to data access issues. At the same time, there were approximately 45 million social media users, which is equivalent to approximately 26% of the total population. Nearly 180 million mobile connections were seen at the beginning of 2023. About 40 million people who are age 18 and above have been included in the number that indicates the usage of social media, which is equivalent to 34.5 percent of the whole population. In January 2023, 66.8 percent of Bangladesh's total internet users (regardless of age) utilized at least one social media platform. One of the notable factors is that at that time, the male users of social media were more than double the female users, at 67.4 percent and 32.6 percent, respectively. The highest-used social media platform is Facebook, with 43.25 million users in Bangladesh, followed by YouTube with 34.40 million users. It should be noted that Facebook restricts users who are under 13 years of age, which is almost 32.3 percent of the population. Instagram, Facebook Messenger, and LinkedIn closely followed YouTube as popular social media platforms. Twitter also joined the list despite having many restrictions on using the platform, with a user base of 1.05 million.

Despite the total number of users that we see above across different digital platforms, the marketing investment, which is as low as 15% of total marketing money, is being concentrated on the top of the pyramid customers. The assumption is that the gap is being created by a lack of understanding among marketers regarding how BoP consumers handle triggers and barriers related to the marketing tool. This leads the marketer to assume that marketing tools are complicated for the BoP consumer to grasp.

Although smartphones have become an integral part of day-to-day life to get access to any information, in a country like Bangladesh, marketers still consider smartphones a luxury product among BoP consumers. Although, according to the GSMA (2021), 69% of mobile phone users will have smartphones by 2025, products that fall beyond the five basic needs of survival, like basic food, clothes, education, treatment, and housing, are still being categorized as lifestyle products. However, one can argue that the internet is almost becoming a sixth basic need. While this industry is growing very fast at the BoP with the rise of local and international companies (Walton, Symphony, Samsung, or Xiaomi), this industry also requires stronger and far more detailed communication

versus fast-moving consumer goods and services because of their complexity of usage. Mobile handset manufacturing is also a growing industry in Bangladesh. Although Bangladesh recorded the highest number of shipments in 2021 (R S, 2022), the country is now also manufacturing mobile handsets, which feed into the growing number of mobile phone users. Although the manufacturing industry is quite new in terms of being an industry, it has seen an exponential rise in sales, which now include a combination of several local and international brands. In the fiscal year 2020-2021, more than 40 million mobile phones have been recorded to have been manufactured and imported to Bangladesh, of which 63% or more were manufactured locally in Bangladesh (Faruquee, 2022). According to GSMA Intelligence, at the start of 2022, cellular mobile phone connections were at 178.5 million, which is 106 percent of the whole population (Okeleke, 2021).

Other than the existing gap in actual consumption of digital media versus what the marketer thinks of it, another occurring factor is the digital divide among consumers. The "digital divide" indicates the difference between groups or individuals who can access or have the ability to reach information through the internet effectively. This divide can happen due to many factors. Generally, the factors that are considered for the creation of the digital divide are income, demography such as age, education, gender, and other socio-economic factors. This whole concept is only working to make the digital divide more prominent in the country by restricting mental access and usage access, despite the rise of digital media in Bangladesh, which is slowly but surely growing in other avenues that are skill access and material access.

Industry experts and marketers tend to think that digital media tools are too complex for the BoP. Another factor is that marketers assume there is a lack of enthusiasm about the digital platform among BoP and thus a reluctance to communicate any brand to them through digital media. However, the price reduction of mobile handsets and internet connections has enabled the BoP to access information and communicate via social media, which ultimately discards the marketers' assumptions about their digital media consumption. Another basic idea that marketers hold against their decision to communicate with the BoP through digital media is that they believe the BoP consumers still lack accessibility to mobile phones due to their purchase ability of lifestyle products; hence, they try to reach the BoP consumers through mass media.

1.2 Issues and Problems

One morning, Mr. Atik Syed Kamal, partner in a CP franchise food shop, got a Viber notification that someone named "Bickey" had added him as a contact in their list. Being curious about the name and his recent efforts to connect with foreign countries to look for export opportunities, he tapped on the profile picture to zoom in. To his utter surprise, the picture was that of Kader, a 15–16-year-old kid who works as a runner in his CP shop to deliver food to customers. He decided to have a discussion with the kid who lives in the Adabor slum in Mohammadpur and has no formal education. Kader's first reaction was that the name Bickey was much cooler as a screen name than Kader itself, hence the use. Also, upon inquiry, he said he is very much accustomed to using WIFI, as he and four of his friends have purchased a WIFI router and subscribed to a local broadband service, splitting the monthly subscription (author's experience, 2015).

Another case in point would be the curious case of pen drives in rural Bangladesh. There are a lot of CD and DVD rental stores in rural areas across the country that have converted to say: "PENDRIVE E GAAN, MOVIE LOAD KORA HOY" [We download and load songs and movies for a price]. These stores sell content downloaded straight from YouTube. The purchasers are people who do not have enough money to buy internet access and watch videos or other contents directly from the internet and are reliant on these services for their daily supply of entertainment.

This is the present scenario in Bangladesh, and this is one experience of the author that leads him to believe in the potential of the proposed research. According to the Economist Intelligence Unit (EIU) of The Economist Newspaper Ltd. archives (2023):

- Bangladesh is already in the lower-middle income bracket, as per the World Bank.
- According to Goldman Sachs, Bangladesh is in the "Next 11" after BRIC.
- Bangladesh has yet to default on any loans; it has a better record than Greece, Cyprus, Spain, and Italy.
- According to research by the Oxford Poverty & Human Development Initiative (OPHI), whereas India has reduced poverty by 1.2% per year, Bangladesh has reduced poverty by 3.2%.

- Despite frequent political unrest and natural disasters, Bangladesh has maintained consistent GDP growth above 5% over the past 15 years.
- The contribution of foreign aid to national GDP has lowered from 6% to 1.8%.

This shows how rapidly our motherland, Bangladesh, has been making an entry into the world growth scenario. Moreover, the data presented here helps us realize the potential of the country to enter a digital era of communication. Marketing through digital media is a novice approach around the world and in Bangladesh. Currently, most of the digital marketing tools, approaches, and guidelines are only concentrated towards high-income groups of consumers, with a clear lack of understanding on how to use the tools for low-income groups of consumers who are also consuming digital services and entertainment. The reason for this can be outlined as follows: marketers' own lack of understanding of digital media tools leads to assumptions that the tools are too complicated for low-income Base of the Pyramid (BoP) consumers; general assumption that BoP consumers do not use "complex" digital media; and lack of impact calculation tools for understanding the potential of digital media as a marketing tool for BoP. Thus, we can develop the following problem statement:

"Despite increasing access and a lower cost of marketing compared to traditional media, a lack of understanding about the digital media consumption behaviour of base of the pyramid consumers in Bangladesh is leading to a lack of appropriate utilisation of digital media compared to traditional media in the mobile handset industry."

1.3 Research Question

In light of the problem statement that has been identified that there is a lack of understanding regarding the digital media consumption behaviour of base of the pyramid consumers in Bangladesh, the research aims to answer the following question:

Is there any potential approach for using digital media as a communication tool to market mobile handsets to the base of the pyramid consumers of Bangladesh alongside traditional media?

1.4 Research Objectives

1.4.1 Broad Objective

The broad objective of the research is *"to identify the potential of using digital media as a marketing tool that marketers can use for base of the pyramid consumers by overcoming identified barriers and harnessing the triggers among consumers in the mobile handset industry of Bangladesh."*

1.4.2 Specific Objective

Five specific objectives have been identified to achieve the broad objective, as follows:

1. Understand the status of digital media as a marketing tool versus traditional media for BoP.
2. Identify the specific triggers and barriers for BoP consumers to consume digital media versus traditional media.
3. Identify the usage behaviour of mobile handsets among BoP consumers.
4. Identify if digital media has potential as a marketing tool for BoP in the mobile handset industry.
5. If digital media is identified as a potential tool, develop an approach framework for digital media as a marketing tool for BoP in the mobile handset industry.

1.5 Rationale of the Research

Because of the following reasons, this research is required to establish a connection between consumer, customer, public, and marketer via the right information, which can help improve understanding of digital media:

- Digital media is an exponentially growing tool of marketing, and with rapid cost reductions in technology, digital media can be an effective tool of marketing to BoP consumers who need to be educated on mobile handset products.
- In the era of the fourth or fifth industrial revolution, this research can help pave the way for a data-driven approach to marketing versus the typical traditional approach.

1.6 Significance of the Research

Digital media has existed in our lives since the advent of email, interactive voice response (IVR), automated call centre or helpline services, and short messaging systems (SMS). However, even the early days of "search" through the internet thanks to Yahoo and Google could not catapult this medium to the masses the way social media platforms like Facebook and YouTube did approximately fifteen years ago. Nevertheless, digital media as a phenomenon reached its current status in Bangladesh only 8 to 10 years ago, when global platforms allowed brands to advertise and promote their products and services targeting Bangladeshi consumers. Since then, a gradual increase in the use of digital media has started happening, although the consumer base on the platforms has grown exponentially. However, this also resulted in a growing digital divide across geography (urban-rural), socioeconomic classes (rich-poor), age groups (old-young), etc. in the country.

Adding to that, the availability of research on digital media and marketing through digital media is still quite scarce in the country. Accordingly, research in the area of digital media for BoP is non-existent, which could contribute towards explaining and supporting policy and an action-oriented approach to address the digital divide throughout the country. Essentially, this research can be one of the earliest in the field to establish a policy dialogue and provide momentum to the efforts of a truly smart Bangladesh.

Furthermore, the notions of both the actual and perceived digital divide that exist among BoP consumers have led to a lack of utilization of this medium by marketers. Despite the media being 8–9 times cheaper than traditional media like television, marketers are not using the media effectively for base-of-the-pyramid consumers due to a lack of data and research in the area. Moreover, proponents of traditional media tend to advocate against digital media to delay the inevitable in the industry. This research has the potential to contribute towards breaking that myth and assist in ensuring the use of digital media not just for mass or top-end consumers but also at the base of the pyramid. This can save all important marketing investments and ensure a proper return on investment for marketers, which has become vital in the post-COVID economic crisis throughout the globe and in Bangladesh.

1.7 Scope of the Research

The scope of this research has been limited to the following:

- All eight administrative divisions are covered to balance the national representation of BoP consumers. To ensure accurate urban-rural geographic representation, samples have been taken from municipal corporation/pourashava areas to represent urban areas and outside these areas to represent rural areas. However, data has only been collected from the divisional headquarters and nearby urban and rural areas.
- Consumers were selected using the ratio of population by division.
    - The lower end of the income range for BoP consumers was determined by the lower poverty line, according to the Household Income and Expenditure Survey (HIES) of the Bangladesh Statistical Bureau done in 2016 (approximately 6500 taka).
    - The higher end of BoP is determined by the latest announced government pay-scale-based income for up to Grade 10 starting salary as the reference point (approximately 13,500 taka).
- Consumers below the lower poverty line, who are essentially destitute, are not part of the scope as they do not have the minimum level of income to enjoy mobile handset facilities.
- Organizations, agencies, and experts from the mobile handset manufacturing industry were also part of the scope. However, only qualitative research through experience surveys and in-depth interviews was done among them since only 10 companies and their respective agencies constituted more than 80% of the mobile handset market.

1.8 Limitations

The factors that could be considered the major limitations of this study are mentioned below:

- The availability of secondary data has been a major limitation since limited work has been done on digital marketing for BoP as digital media is a relatively new sector in Bangladesh and in a global context. As a result, surveys and interviews were heavily relied upon.
- The assessment of the literature review and subsequent qualitative studies showed that the overall significance of different attributes shifts when considering decision analytics. The findings of this study are specific to the Bangladesh mobile phone market, implying that the findings might not be extrapolated to the global mobile phone industry.
- Given the fact that the mobile handset market is extremely competitive, detailed data access from the marketers and experts in the industry was impossible. Moreover, given the fact that researcher himself is an entrepreneur in the Digital Marketing industry, only qualitative discussions along with indicative numbers were available for use in the research due to data privacy concerns.
- The restrictions of statistical approaches that apply to any analysis are also applicable here. Furthermore, the respondents replied primarily based on their own perspectives rather than any acquired knowledge on the topics discussed.

1.9 Conceptual Framework

This research focused on identifying the triggers and barriers that influence a base-of-the-pyramid consumer to consume digital media and their usage behaviour of different digital platforms and mobile handsets. The triggers and barriers were categorized into five parameters and nine groups based on a qualitative studies among BoP consumers and marketers. In addition to that, using the theories of the consumer purchase decision model in combination with the digital marketing process funnel, an overall non-linear framework, as mentioned in the following figure, has been developed.

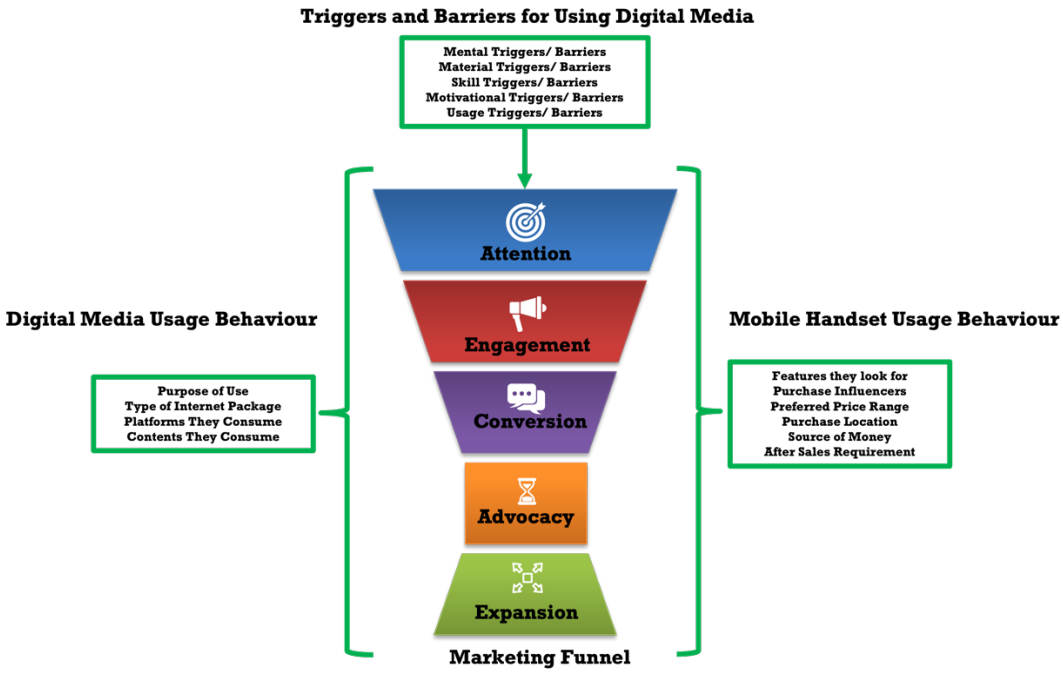


Figure 1-1: Conceptual Framework of Digital Marketing for Base of Pyramid Consumers

(Source: Adapted from Consumer Purchase Decision Models and Marketing Funnels mentioned in Chapter 3)

Digital media usage behaviour consists of the purpose of digital media consumption, meaning why BoP consumes digital media, what types of platforms they use (i.e., social media, search, web, etc.), types of internet (WIFI, 3G, 4G, broadband), packages (daily, weekly, monthly, etc.), and the contents they consume in the form of content category (drama, news, sports, etc.) and content type (short clip, music video, live video, documentary, etc.).

On the other hand, mobile handset usage behaviour consisted of features they look for in a phone (durability, design, camera, display, etc.), preferred price range of a mobile handset, source of fund for purchase (self, family, loan, etc.), sources who influence purchase (family, friends, offspring, etc.), point of sale preference, and after-sales requirements.

The entire notion of the research was that if it was identified that digital media has significant potential as a marketing tool for BoP to market mobile handsets, then which specific triggers and barriers play a role behind that significance would be identified as the first point of interaction in the marketing funnel of awareness or catch stage for marketers. Essentially, from there on, marketers can utilize the digital media behaviour data in combination with mobile handset-related behaviour data to craft their marketing

campaigns to harness the right triggers and remove the important barriers to gradually move the potential BoP audiences through the marketing funnel of awareness, catch to engage, connect to convert, and close to make them purchase their brand's mobile handset and thereafter make the consumers their advocates or continue the relationship with them. The framework is expected to be developed in such a way that by replacing the data for mobile handset usage with any other product or service, the model can be used in multiple other industries.

1.10 Structure of Dissertation

The thesis is divided into ten different chapters, starting with Chapter 1.0 Introduction, which covers the background, research issue, question, objectives, rationale, scope, limitations, conceptual framework, hypothesis, etc.

Chapter 2.0 is dedicated to describing the methodology of the research, including the research process, data collection process, qualitative research design through FGDs, experience surveys, and in-depth interviews; quantitative research approach through pilot studies, survey design, sampling technique, questionnaire development, and pretesting; alignment of objectives to methods and sampling units; and statistical analysis tools used during the research process.

Chapter 3.0 features the literature review section of the research establishing the concepts of triggers and barriers through the parameter of the "digital divide," the difference between traditional marketing and digital marketing, the different established digital marketing models, defining and highlighting the importance of base-of-pyramid consumers, and the potential of the smartphone industry. All these reviews of secondary data essentially help in developing the core conceptual framework of the research.

Chapters 4.0–8.0 are focused on the findings and analysis of the research. Chapter 4.0 concentrates on the findings of the qualitative research stages and the pilot study. It shows the consumer's and marketer's qualitative research outputs from FGDs, experience surveys, in-depth interviews, and the pilot study that was done in the Rayer Bazar slum area. Chapter 5.0 details the outputs of the questionnaire survey that was

done among 421 BoP consumers. It shows their basic characteristics in terms of demography and psychography, their choice of phones and reasons, factors involved in the decision-making process, mobile handset purchase and usage behaviour, the impact of after-sales on their choice of phone brands, internet usage behaviour, platform usage behaviour, content consumption behaviour, advertisement consumption behaviour, etc. Chapter 6.0 dives into hypothesis development and testing based on the analyses done in Chapter 5.0. This chapter essentially works as a binding mechanism between basic characteristics, demographic findings, and the factors that play a role as triggers and barriers for BoP's intent to use digital. Chapter 7.0 goes deeper into analysing BoP's intent to use digital platforms, which is the crux of the research and the source of an essential dilemma among marketers. Chapter 8.0 identifies the principal components that influence intent to use through rigorous exploratory factor analysis and regression modelling.

Chapter 9.0 summarizes all the findings and essentially develops the conceptual framework for digital marketing as a tool for BoP. The research proposes a brand-new marketing model in the form of 5R Funneloop framework taking inspiration from existing consumer purchase decision models and marketing funnels. Chapter 10.0 revisits the primary objective of the research to feature the major findings, identify a few recommendations, discuss the contribution to academia and industry, and outline the scope for future research.

2.0 METHODOLOGY

2.1 Research Process

Research merely aims to provide human endeavours with answers to some questions that have not yet been resolved. Research is just the process of coming up with a solid answer to a question through the deliberate and methodical gathering, analysing, and interpreting of evidence. The most crucial process for expanding knowledge is research. It enables an individual to relate to his environment more effectively, fulfil his goals, and resolve problems. It is one of the more efficient methods of solving scientific problems, although it is not the only one (Singh, 2006).

Research methodology describes the procedural framework within which the research is carried out as well as the logic of the evolution of the process utilized to construct theories. It offers guidelines for setting up, organizing, planning, designing, and carrying out research. The research paradigm a researcher uses to guide their methodology is important. The research paradigm directs the choice of competing theoretical approaches as well as the means for acquiring data and analysing it (Mohajan, 2017). A conceptual framework, a technique of data collection, and a method of analysis are the three components that make up a methodology. Together, these three components offer the foundation for the objective scientific study of subjectivity. (Salkind N. J.). Ideas are what make up a conceptual framework, and those ideas support one another, articulate their respective phenomena, and build a philosophy that is distinctive to the framework. Each notion contained inside a conceptual framework serves either an ontological or epistemological purpose, and the methodological assumptions that underpin conceptual frameworks can be broken down into three categories: ontological, epistemological, and methodological (Jabareen, 2009).

Ontology is the study of assumptions made about the character of reality. The ontological assumptions shape the way an individual sees and investigates the subjects of the study, even though this may appear irrelevant and far removed from the research project. In the fields of business and management, examples of these items include management, organizations, the working lives of individuals, and events and artefacts produced by businesses. Therefore, the approach of ontology investigates how an

individual understands the world of business and management, and as a result, it will determine what the researcher decides to explore for the research project (Mark NK Saunders, 2009).

Epistemology is concerned with knowledge assumptions, what we can accept and deem valid and genuine, and how we might transfer this knowledge. While ontology may appear abstract at first, the importance of epistemology is more obvious. The interdisciplinary character of business and management allows for the legitimacy of multiple types of information, such as numerical data, textual and visual data, facts and interpretations, and narratives, tales, and even fictional accounts. As a result, various business and management researchers adopt various epistemologies in their research, including archival research and autobiographical accounts (Mark NK Saunders, 2009).

Methodology refers to a collection of systematic methods, established customs, and fundamental beliefs that are utilized to acquire information and understanding about the universe. The distinction between methodology and method is frequently blurred. To be specific, methodology entails the prescription of specific data collection techniques and the incorporation of planning, design, analysis, and dissemination procedures. These components are interconnected by shared ontological and epistemological presumptions (Tisdall, Davis, & Gallagher, 2008).

The purpose of this research is to use a mixed-methods approach that includes both qualitative and quantitative research techniques to evaluate the digital consumption behaviour of the Bottom of the Pyramid (BoP) segment and its impact on leveraging digital media as a marketing tool to target this demographic. The findings are based on a thorough examination of the literature as well as multiple focused group talks with consumers and mobile phone marketers. Furthermore, the validity of these factors was confirmed by conducting in-depth interviews with digital media industry executives with substantial expertise in the sector. This chapter describes the study's research methods, target population, data collection approach, sample size, and other strategic measures used to assure ethical standards and study validity.

The following figure describes all the steps from the initial step of problem discovery to data gathering, processing, interpretation, conceptual model preparation, and final reporting.

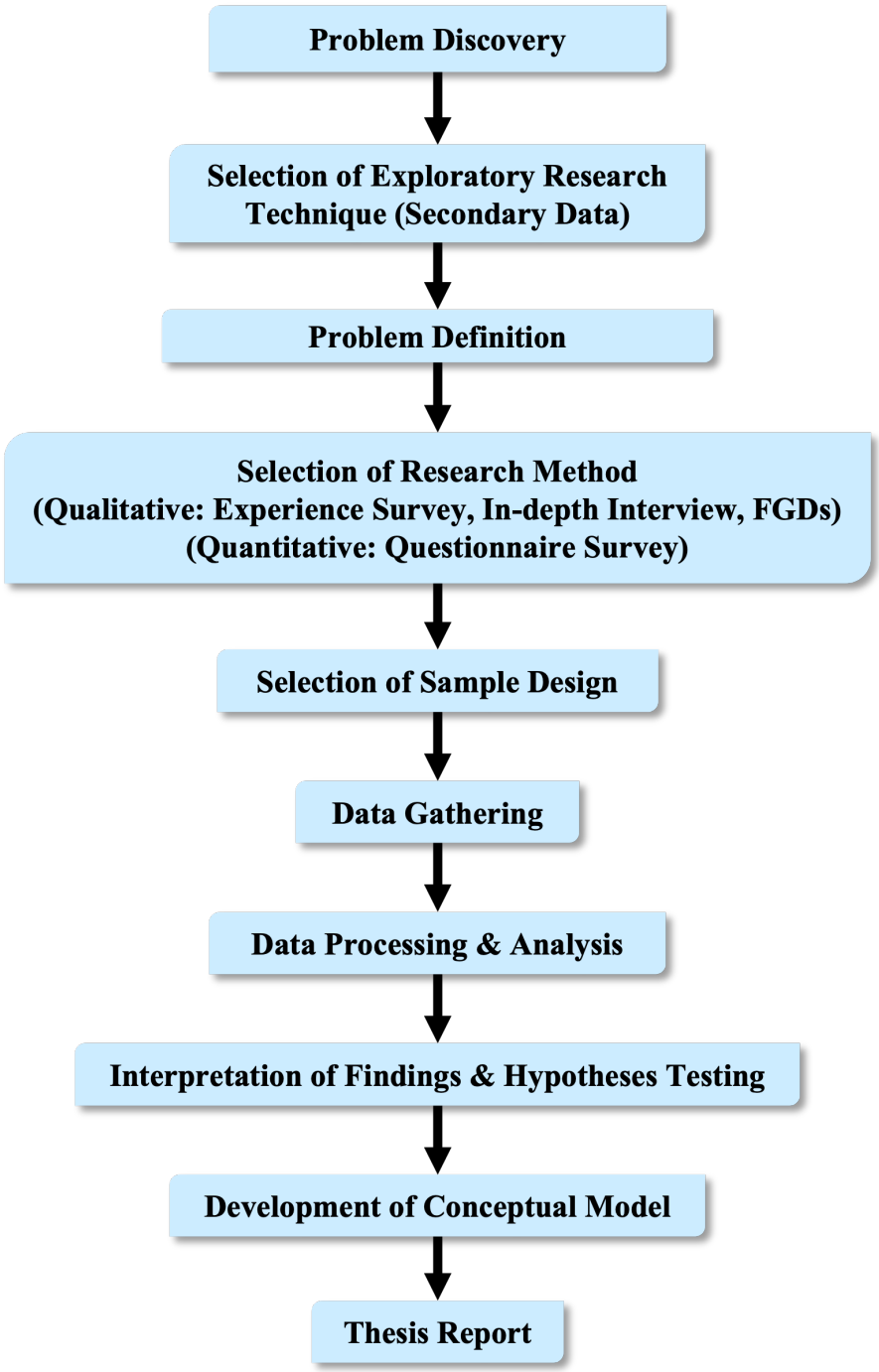


Figure 2-1: Steps of the Research Process

2.2 Data Collection Process

Theoretical frameworks for research are generally independent of data collection methods, implying that any research approach can be paired with any data collection technique. Nevertheless, certain forms of data gathering are frequently employed in experimental methodologies. Some research methods are frequently utilized in comparative or associational (survey) approaches, while others are more prevalent in qualitative research (Morgan & Harmon, 2001). This study focuses on the combination of both quantitative and qualitative data collection. The utilization of mixed-method data collection strategies involves the amalgamation of various individual methods, thereby creating an approach that offers distinct advantages for certain research problems. Based on an analysis of the pros and cons of different ways to collect data, Axinn and Pearce (2006) found that mixed methods are especially useful when a research question requires the presence of several key elements that are typical of individual methods.

2.3 Qualitative Study Approach

Qualitative research offers in-depth insights into real-world issues. Unlike quantitative research, qualitative research does not require the gathering of numerical data points or the intervention or introduction of therapies. Instead, qualitative research aids in the development of hypotheses, the generation of insights, and the expansion and comprehension of quantitative data. A deep dive into the feelings, perceptions, and behaviours of study participants is either observed or gathered through qualitative research. It relies on the reasons behind certain behaviours rather than trying to understand their quantification. It is possible to set it up as a standalone study that relies solely on qualitative data, or it may be a component of a mixed-methods investigation that incorporates both qualitative and quantitative data (S, Brannan, & Brannan, 2017).

In this study, the author has used focused group discussions with BoP consumers, in-depth interviews with industry experts, and secondary data for the literature review. These were the qualitative study tools that the researcher applied for the purpose of a qualitative study. The following segments describe the different qualitative approaches utilized during the research process.

2.3.1 Literature Review

The primary focus of the initial qualitative study process was secondary data collection. The reliability of secondary data is supported by the fact that it generally has more consistent quality and validity since it has been evaluated by a variety of researchers. The literature reviews also assisted in identifying the factors that influence intent to use digital media among BoP consumers. Internal and external sources are regarded as the two most important methods for collecting secondary data (Salkind N. J., 2010). Internal sources of secondary data included data collected from mobile handset marketers and digital experts, which included marketing activities, marketing cost and price information, consumer feedback, etc., many of which presented confidentiality issues for the researcher.

In the first phase, the researcher conducted exploratory research to obtain a deeper understanding of the research topic. In addition, the literature review identified the required components of the conceptual framework and the steps required in designing the framework. This was done to learn more about how Bangladeshi smartphone users use digital media and to support the research's theoretical and methodological foundations for the triggers and barriers that affected the intention to use digital media and mobile handsets. Essentially, the literature review helped establish the skeleton of the thesis.

2.3.2 Experience Surveys and In-depth Interviews with Marketers

An interview is a key qualitative research procedure in which the researcher collects information directly from the participants. Interviews are significant for elucidating opinions, experiences, values, and many other facets of the population under study. Interviews are typically coupled with other research methods such as surveys, focus groups, etc. Interviews are always objective-driven (Nayeem & Huma, 2017). In line with this requirement, the researcher had preliminary discussions in the form of unstructured experience surveys with experts working in the digital and mobile handset marketing industries. During the early stages of the research, experts involved in this phase included brand managers, category managers of the telecom and mobile handset industries, as well as owners and strategic planners of the digital marketing industry.

Later, ten industry experts were interviewed to understand the status of digital marketing vis-à-vis traditional marketing in the industry, the perspective of marketers, be it positive or negative, when it comes to evaluating the potential of using digital media as a marketing tool for the BoP, and also to check if the trigger-barrier factors discovered through a literature review and experience survey were relevant. The individuals who are experts in digital media have been selected on the basis of the criterion that the individual should have about five years of experience working in the mobile handset industry focusing on marketing or digital media.

Table 2-1: Digital Marketers' Interview Schedule

Experience Survey & In-depth Interviews	Digital Media & Marketing Experience	Educational Qualification	Interview Date
Experience Survey 1	More than 10 years	Graduate	January 25, 2016
Experience Survey 2	More than 10 years	Graduate	January 27, 2016
Experience Survey 3	More than 10 years	Postgraduate	March 05, 2016
Interviewee 1	5 years	Graduate	March 27, 2017
Interviewee 2	6 years	Postgraduate	April 04, 2017
Experience Survey 4	8 years	Graduate	July 26, 2019
Interviewee 3	13 Years	Postgraduate	February 24, 2021
Interviewee 4	9 years	Postgraduate	March 05, 2021
Interviewee 5	7 years	Graduate	February 27, 2022
Interviewee 6	5 years	Graduate	March 04, 2022

These interviews were conducted with the ultimate goal of determining whether the distinct factors identified through the literature study and the focused group discussions are applicable to the context of Bangladesh. As a result of the feedback provided by these industry experts, the list was modified by including some new elements and removing others. In this manner, each one of the straightforward variables for this investigation was developed. The interview that has been conducted among the market experts was followed by a set of pre-prepared questions (Appendix A), but it was more of an open discussion to get insightful information from the marketeers. Some of the interviewees were individuals responsible for or using presently available measurement models for digital, i.e., Google Analytics, Google Trends, Facebook Insight, Facebook

Competitor Page Tracking, Socialbakers, and Local AD Network reports from Partners. Also, the researcher collected information regarding their systems and identified procedures to replicate the process of information collection. Questions were tailored to the different informants, i.e., agencies and marketers, utilizing findings from previous interviews. The findings were validated by comparing them to other questions and data from other sources.

2.3.3 Focus Group Discussions with BoP Consumers

Focus groups have gained popularity as an instrument for social and market research in a variety of industries. The focus group technique is a form of qualitative research methodology, usually characterised by a structured discussion with a limited number of people, led by a facilitator or using a team of moderators, to generate qualitative data on a specific topic of interest, using a series of open-ended questions (Masadeh, 2012). The participants in the engaged focused groups were representatives of the base of the pyramid consumers as per the scope section of the Introduction chapter. Five meetings with small, focused groups were held to identify the usage behaviours, triggers, barriers, and variables that contributed to this study. The researcher's own office and Zoom meetings for remote groups served as two locations for all the focused group discussions.

Table 2-2: FGD Schedule

Date of FGDs	No. of Discussants
July 26, 2016	7
October 13, 2016	6
April 10, 2019	12
February 15, 2022	8
February 27, 2022	7

The outcome of the focus group discussions was the identification of the most significant triggers and barriers to BoP consumers' access to advanced digital media. During the conversations, several factors were discussed, taking indications from the literature review as described in Chapter 3. Again, these factors were cross-checked and verified with BoP consumers and marketers alike to determine whether they are truly relevant for Bangladesh.

2.4 Quantitative Study

Quantitative research is the systematic examination of phenomena through the collection of quantitative data and the application of statistical, mathematical, or computational techniques. Quantitative research collects information from present and potential customers through sampling techniques and the dissemination of online surveys, polls, and questionnaires, for example. The ability to mathematically portray the results is one of the most notable characteristics of this form of research. After gaining a thorough comprehension of these numbers, it is possible to predict the future of a product or service and make appropriate adjustments (Proprof Survey Maker, 2018). The author attempted to determine the variables that influence the digital media usage behaviour of the target audience, which is equivalent to determining why marketers prefer mass communications over digital media as a marketing tool. To gain a deeper understanding of the variables, some Bangladeshi digital media industry experts were also interviewed.

2.4.1 Pilot Study in Slum Area of Dhaka

To gain proper insights into a novice industry like digital marketing and smart mobile handsets among BoP consumers, researcher found it prudent to do a pilot quantitative study among 250 mobile phone users in the Rayer Bazar slum area of Dhaka city. The primary objective of the study was to develop an understanding of mobile phone usage behaviour among BoP consumers and to reinvestigate the reason for research. The idea was to fact check if there is solid enough reason to explore potential to use digital media as a marketing tool for BoP despite the fact that most of the marketers seemed predetermined that BoP was still not ready for digital media. The sampling process was non-probabilistic convenience sampling. The pilot has been conducted with

assistance from an NGO, Spreeha Bangladesh. Spreeha is a Washington, DC-based NGO that has operated in the Rayer Bazar area for the last 10 years. While the field personnel interviewed 250 respondents in the Rayer Bazar slum area, after the screening questions, only 191 responses were recorded. The pilot study questionnaire and summary of analysis from the pilot study are attached in Appendix B. However, the key outputs of the pilot study are presented in "Chapter 4.0: Findings from Qualitative and Pilot Studies".

2.4.2 Population and Sample Frame for Questionnaire Survey

All BoP consumers in Bangladesh, except the destitute population that does not have the minimum income to attain lifestyle products, can be considered the population of the researcher's topic. We targeted people with an income range of taka 6500–13500, where the lower range was taken from HIES poverty line income and the higher range is from the salary of a government pay-scale grade 10 or lower-income group. Divisional representation was also ensured by distributing samples based on a division-wise geographic split into urban and rural areas. The process is detailed in the sampling technique section.

2.4.3 Sample Size for Questionnaire Survey

A research population is a group of people or things that have comparable characteristics (Krejcie & Morgan, 1970). Sampling is the determination of a group of people from a statistical population to extract the characteristics of that entire population (Krejcie & Morgan, 1970). According to Fely P. David, sampling is a "process that assists in the selection and sorting of sample cases or a subset of sample units from a population, providing all sampling instances an equal chance of inclusion" (2002). Olken and Rotem (1986) did not say anything directly, but they did say that "basic random sampling incorporates a method that can complete random selection of population members so that each member individually has a probability of being included in the sample."

Naing, Winn, & Nordin (Pratical Issues in Calculating the Sample Size for Prevalence Studies, 2006) mention a simple formula that is reinforced in multiple references like

Daniel (Biostatistics: A Foundation for Analysis in the Health Sciences, 1999) to determine sample size for population sizes larger than 10000 or for infinite populations, which is:

$$n = \frac{Z^2.p.q}{d^2}$$

$$n = \mathbf{385}$$

Where n = Sample size (to be determined)

p = Expected sample proportion in the target population for a particular characteristics, 0.5 if no estimate available

q = 1-P

Z = the standard normal deviate value at a given confidence level 1.96 for 95%

d = Margin of error or precision level (5%)

As can be seen, the research needed 385 BoP users as a sample size.

As per Zikmund, Babin, Carr, Adhikari, & Griffin (2013); for factor analysis, the sample size is to be at least 5 times the number of variables and not less than 100. Since in the current study, the number of trigger and barrier variables stands at 46, our sample size of more than 385 is sufficient to conduct factor analysis as per this requirement of 230 (46x5). Same approach has been endorsed by many authors throughout history, like Arrindell and Ende (1985).

However, in this research the total sample size has been 421 considering minimum sample size of 30 per division and including the pre-testing participants' (30) responses.

2.4.4 Sampling Technique

A quota-based, non-probability sampling approach was followed for the research. The study tried to ensure administrative and geographic representation of the population ratio. Since the study was expected to include BoP mobile handset users in Bangladesh, the process of segmenting the national population into division-wise populations, age groups of population, division-wise urban and rural segments, and division-wise male and female distribution in urban and rural areas was done. The following table describes the approach that used the BBS 2011 Population and Housing Census Data as a starting point.

Table 2-3: Required Sample Size from Each Division

Division	Population (2011)	Ratio	Female within 15-60 Age Group	Male within 15-60 Age Group	Quota Based on Sample Size 385	Quota Based on Minimum Rounding up to 30	Split by Location and Gender					
							Rural	Urban	Male Rural	Female Rural	Male Urban	Female Urban
Barisal	8,325,666	0.0535	1180403	1116778	21	30	25	5	12	13	2	2
Chittagong	29,145,000	0.1874	4132144	3909417	72	72	55	18	26	28	9	9
Dhaka	46,729,000	0.3006	6625183	6268079	116	116	78	38	39	39	20	19
Khulna	15,687,759	0.1009	2224192	2104306	39	39	32	7	16	16	4	3
Mymensingh	11,370,000	0.0731	1612025	1525136	28	30	23	7	11	12	3	3
Rajshahi	18,484,858	0.1189	2620762	2479500	46	46	38	8	19	19	4	4
Rangpur	15,787,758	0.1015	2238370	2117720	39	39	34	5	17	17	3	3
Sylhet	9,910,219	0.0637	1405059	1329325	25	31	26	5	13	13	2	2
Total	155,440,260		77290305	78149955	385	402	310	92	153	157	48	44

Source: 2011 BBS Population and Housing Census

With the age distributed quota, the total sample size groups by gender were ensured to have a minimum of 30 samples in division to meet the basic requirements of t-testing process.

Based on meeting the overall gender group-based population requirement, the split of age groups was done by gender to ensure national age group representation at an overall level. The following tables describe the sample distribution by age group for rural and urban areas.

Table 2-4: Sample Distribution by Age for Rural Areas

Division	Male (Age and Location wise sampling)										Female (Age and Location wise sampling)									
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	**Total**	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	**Total**
Barisal	2	1	2	2	2	1	1	1	1	**12**	2	2	2	2	2	1	1	1	1	**13**
Chittagong	4	3	4	3	3	3	2	2	2	**27**	4	4	5	4	3	3	3	2	1	**28**
Dhaka	7	5	5	5	5	4	3	3	2	**39**	6	6	6	5	5	4	4	2	2	**39**
Khulna	3	2	2	2	2	2	1	1	1	**16**	2	2	3	2	2	1	1	1	1	**16**
Mymensingh	2	1	2	1	1	1	1	1	1	**11**	2	2	2	2	1	1	1	1	1	**12**
Rajshahi	3	2	3	2	2	2	2	1	1	**19**	3	3	3	2	2	2	2	1	1	**19**
Rangpur	3	2	2	2	2	2	2	1	1	**17**	3	3	3	2	2	2	2	1	1	**17**
Sylhet	2	2	2	2	2	1	1	1	1	**13**	2	2	2	2	2	1	1	1	1	**13**
Totals	26	18	21	20	20	15	14	11	9	**154**	24	24	25	20	19	14	14	9	8	**157**

Source: Researcher's Calculation based on 2011 BBS Population and Housing Census

Table 2-5: Sample Distribution by Age for Urban Areas

Division	Male (Age and Location wise sampling)										Female (Age and Location wise sampling)									
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	**Total**	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	**Total**
Barisal	1	0	1	1	0	0	0	0	0	**3**	1	1	0	0	0	0	0	0	0	**2**
Chittagong	2	1	1	1	1	1	1	1	1	**9**	1	1	1	1	1	1	1	1	0	**9**
Dhaka	3	2	3	3	3	2	2	1	1	**21**	3	3	3	2	2	2	2	1	1	**19**
Khulna	1	0	1	1	1	0	0	0	0	**4**	1	1	1	0	0	0	0	0	0	**3**
Mymensingh	1	0	1	1	0	0	0	0	0	**3**	1	1	1	0	0	0	0	0	0	**3**
Rajshahi	1		1	1	1	0	0	0	0	**4**	1	1	1	1	0	0	0	0	0	**4**
Rangpur	1	0	1	1	0	0	0	0	0	**3**	1	1	1	0	0	0	0	0	0	**3**
Sylhet	1	0	1	0	0	0	0	0	0	**2**	0	1	1	0	0	0	0	0	0	**2**
Totals	8	6	7	6	6	5	4	3	3	**48**	7	7	7	6	5	4	4	3	2	**44**

Source: Researcher's Calculation based on 2011 BBS Population and Housing Census

Once the sampling distribution was done as per the required quota, the next filtration process was applied through the lens of poverty line distribution. Since the poverty line

in Bangladesh stands at as low as 1677 taka per capita, as can be seen from the following table, and the population per household stands at approximately 4.2, the minimum threshold for a family to be above the poverty line stands at approximately 7,043.4 taka. Thus, the minimum household income was set at 6500 takas for interviewees in the questionnaire survey. A household with an income below 6500 taka was considered destitute and thus not included in the survey process.

Table 2-6: Poverty Line by Geography of Bangladesh

Stratum	Geography	Lower Poverty Line (Taka per capita)	Upper Poverty Line (Taka per capita)
1	Dhaka Rural	1835	2152
2	Dhaka Urban	1947	2657
3	Dhaka SMA	2020	2929
4	Chittagong Rural	2030	2439
5	Chittagong Urban	2135	2606
6	Chittagong SMA	2097	2660
7	Khulna Rural	1677	2019
8	Khulna Urban	1817	2419
9	Khulna SMA	1942	2360
10	Rajshahi Rural	1716	2065
11	Rajshahi Urban	1864	2251
12	Rajshahi SMA	1764	2244
13	Sylhet Rural	1764	1865
14	Sylhet Urban	1911	2315
15	Barisal Rural	1778	2056
16	Barisal Urban	1993	2756
	Total	1862	2268

(Source: Household Income & Expenditure Survey 2016 by BBS)

The higher end of the Base of Pyramid definition was set based on the National Pay Scale of 2015. Since, as per protocol, up to Grade 10, government service holders belong to the support roles as third-class employees, their approximate initial income range of 13,500 taka was set to be the higher end of BoP.

2.4.5 Coordination Schema for Digital Usage Triggers and Barriers

For the triggers and barriers that influence the intent to utilize digital platforms, a coordination schema was created. These were determined through a literature review, experience surveys, focus group discussions, and in-depth interviews, and were then split into topic variables or elements for the study in the database so that it could be easily understood by anybody. Using the digital divide characteristics as the primary five parameters for this study, nine complex variables and forty-six simple variables were discovered and arranged to build the coordination schema.

Table 2-7: Coordination Schema for Trigger-Barrier Variables

Digital Divide Parameter	Complex Variable	Simple Variable
1. Mental	1.1 Mental Trigger	Ease of learning
		English knowledge not needed
		Communication with relatives
		Not seen as luxury
		Benefits overshadow demerits
		Utility outshines complexity of usage
		Inspiration through other's creative expressions
		Urge to express creativity
		Plethora of choice in media
	1.2 Mental Barrier	Role of age
		Not safe for women
		Personality traits
		Health concern
		Irrelevance of digital media
		Access to digital services through others
		Anxiety to upgrade
		Fear of complications in life
		Impact of assistance
		Preference for traditional method
2. Material	2.1 Materials Trigger	Reducing Price of internet
		Impact of higher speed

Digital Divide Parameter	Complex Variable	Simple Variable
		Affordability of devices
	2.2 Materials Barrier	Lower access to broadband internet
		Impact of poor network
3. Skill	3.1 Skill Trigger	Professional Requirement
		Getting things done remotely
		Ease of multi-tasking
		Assisted use for lifestyle
		Importance of Digital Services
4. Motivational	4.1 Motivation Trigger	Opportunity to express views
		One stop solution for multiple utilities
	4.2 Motivation Barrier	Difficulty of devices
		Fear of change
		Complications of the medium
		Having time in hand
5. Usage	5.1 Usage Trigger	Necessity of use
		Access to skill
		Interest due to lifestyle utility
		Becoming Integral part of daily life
		Must have for households
		Scope of personal development
		Access to internet
		Customized services for user groups
		Digitization of local services
	5.2 Usage Barrier	Choice overshadows necessity
		Support services for using digital media

2.4.6 Questionnaire Development

The survey questionnaire for base-of-pyramid consumers, as detailed in the sampling section, was designed to collect objective-based data. There were five major segments in the questionnaire for ease of understanding among the BoP consumers.

Part A: Demographic Understanding of the Survey Respondent

This first part of the questionnaire contained questions related to relevant demographic information to filter out the right respondents as per the sampling technique. Most questions were closed-ended to determine the right location, age, gender, education, marital status, family orientation, income, income source, and self-declared personality type to filter out the accurate base of pyramid consumers as detailed in the earlier sections of the methodology chapter.

Part B: Digital Device Usage Behaviour

This section contained questions related to the types of digital device access that respondents have, starting from cellular phones to computers to smart televisions that can be used as digital media and digital content can be consumed. This section also contained a separate stream of questions for people who currently do not have but intend to buy smartphones to understand their intent and requirements. For the people that have access to digital devices, questions went into understanding their digital device and mobile handset, i.e., smartphone purchase and usage behaviours. Both groups were asked questions related to the features they want, the purpose of using a device, influencers of purchase, location of purchase, source of money, and after-sales requirements.

Part C: Digital Media and Platform Usage Behaviour

For the digital device users who use digital media, the questions went into a separate stream to understand their in-depth digital media usage behaviour. This section contained questions related to the purpose of using digital platforms, frequency of usage, content consumption behaviour, usage behaviour changes during COVID-19, and the impact of different variables, i.e., price, access, and need for usage.

Part D: Exposure to Marketing of Mobile Handsets and Media

Part D of the questionnaire contained questions related to the marketing and promotional efforts of mobile handsets that they had been exposed to. This part asked

questions about where they have seen advertisements, reviews, or other marketing contents of mobile handsets and what type of communication media and content they are influenced by to make a purchase decision. This helped in understanding the level of knowledge the audience has regarding different marketing tools and factors that marketers think play a role in using digital media to market mobile handsets to BoP consumers.

Part E: Perception of Different Trigger-Barrier Variables That Influence Intent to Use Digital Media

This was the most critical part of the questionnaire, as this segment contained rating questions for perception regarding the triggers and barriers that influence intent to use among both users and non-users of digital media. The 5 parameters, 9 complex variables, and 46 simple variables that are either triggers or barriers to the intent to use digital media among BoP. The questionnaire is attached in Appendix C.

2.4.7 Pre-Testing of the Questionnaire

The BoP consumer survey questionnaire went through multiple rounds of testing and pre-testing. The pilot study in Rayer Bazar slum played a pivotal role in developing a strong and suitable questionnaire for BoP consumers. Additionally, pre-testing was done in urban, suburban, and rural areas of Dhaka and Savar to determine the right approach to asking the questions, whether respondents were clearly understanding the wording of the questions, the sequence, whether there were adequate options in fixed answer-based questions, etc. This was pertinent, as mentioned in several literatures related to research for BoP similar to José, Rosario-Flores, & Huerta-Estévez (2020). The importance of right data collection, data analysis, coding, and interpretation for BoP is of utmost importance, as mentioned by these researchers along with Khandker (2022). 30 relevant respondents were tested during the pre-testing phase, and these respondents were also included in the final survey after the questionnaire was corrected and additional questions were also answered by them.

2.4.8 Questionnaire Reliability and Validity

Reliability and validity were also ensured through appropriate mechanism since they are evaluation criteria for the level of measurement error in a given metric. They serve as indications of consistency and accuracy of measurements. Following segments describe the process of reliability and validity for BoP consumer survey questionnaire.

Reliability Analysis

Reliability is the degree to which a repeated measurement gives consistent findings (Marsden & Wright, 2010). Reliability evaluates the consistency of measures while understanding that all measurements are subject to random error (Carmines & Zeller, 1979), (Price, Jhangiani, & Chiang, 2014), (Middleton, 2019).

In research, Cronbach's alpha is a commonly employed measure of dependability (Bonett & Wright, 2014), (Bonett, 2002). It studies the extent to which items on a scale evaluate the same underlying notion. Cronbach's alpha is calculated by determining the average correlation between all possible pairs of test items (Cronbach, 1951). Considering the research environment and the nature of the construct being tested, we fixed the alpha criterion at 0.6. The Cronbach's Alpha dependability is provided below.

Table 2-8: Internal Consistency Reliability of Constructs

Constructs	Cronbach's Alpha (CA)	CA based on standardized items
Mental Trigger	0.749	0.763
Mental barrier	0.703	0.705
Material Trigger	0.688	0.694
Material Barrier	0.601	0.601
Skill Trigger	0.807	0.819
Motivational Trigger	0.668	0.668
Motivational Barrier	0.711	0.71
Usage Trigger	0.833	0.845
Usage Barrier	0.351	0.355
Component 1: Convenience of Using Digital	0.918	0.923
Component 2: Complexities of Usage	0.875	0.874
Component 3: Connectivity and Services	0.799	0.801
Component 4: Scope and Choices	0.609	0.666
Component 5: Utility and Need	0.657	0.713
Component 6: Enabling Power	0.71	0.712
Component 7: Adaptability	0.717	0.719
Component 8: Necessity	0.454	0.456
Component 9: Compatibility	0.764	0.764
Component 10: User Relevance	0.741	0.741

(Source: SPSS Analysis Output)

The Cronbach's alpha dependability value for seventeen of the constructs is above 0.6, leaving two below the threshold number. For those that exceed the minimum value, we can conclude that the constructs are trustworthy.

Validity Analysis

Validity refers to the precision and suitability of a measurement or instrument for evaluating what it is designed to evaluate. It requires the ability to draw meaningful conclusions from test scores and to distinguish, appraise, or forecast based on the results (L.G. & M.P., 2017).

According to Polit and Beck (2017), validity consists of a number of components, including face validity, content validity, criteria validity, and construct validity. Collectively, these components evaluate various aspects of the measuring instrument's capacity to accurately capture and represent the target construct.

Both external and internal validity are subjective. Face validity refers to the apparent correspondence between a measure and the construct it aims to evaluate. It requires professional judgment to establish whether the items on a scale are suitable and reflective of the construct being measured (Polit & Beck, 2017). Content validity refers to the extent to which a measure covers the relevant items that adequately represent the investigated construct. Experts in the area evaluate the items on a scale to see whether they are necessary and relevant to the item being examined (DeVellis & Thorpe, 2021). A detailed literature review was done to discover all existing scales regarding the possibilities of leveraging digital media to promote mobile handsets to Bangladeshi customers at the base of the pyramid. Using focus group discussions and in-depth interviews, these scales were then subjected to rigorous scrutiny. A refined set of 46 scales for data gathering was then compiled. The questionnaire incorporating these measures was pilot tested to establish face validity, and responses from 30 respondents validated their acceptance and comprehension of the scales. The intensive process of scale building and the large number of included scales establish the content validity of the measurement approach utilized in this study.

Criterion validity is defined by DeVellis and Thorpe (2021) as the degree to which a scale corresponds with an external criterion that is known to measure the same construct. Kline (2010) defines this as the degree to which a measure correlates with an external criterion known to measure the same construct. There are two types of criterion validity: predictive validity and contemporaneous validity.

Construct validity is the degree to which a measure accurately examines the underlying construct for which it was designed. It is evaluated by studying the interrelationships among scale items and their connections with other measures that are related to the construct (Streiner, Norman, & Cairney, 2015), (DeVellis & Thorpe, 2021).

To determine the validity of each component, an exploratory factor analysis with identified components (triggers and barriers) and accompanying variables was done to determine the principal components that impact intent to use digital media. The factor loading range measures the intensity and direction of the association between variables and underlying factors. A greater number of significant and meaningful factor loadings suggests a more robust link with the intended construct, thereby providing evidence for construct validity.

The proportion of variance explained is the amount of observed variable variability that can be explained by the specified factors. A greater proportion of variance explained shows that the identified factors account for a greater portion of the data's total variability. This shows that the components are relevant and significantly contribute to the assessment of the construct, thereby establishing construct validity.

The range of factor loadings and proportion of variance are provided below.

Table 2-9: Variability of Constructs

Constructs	Factor Loading Range	Variance after Rotation
Component 1: Convenience of Using Digital	0.791 - 0.528	**17.575**
Component 2: Complexities of Usage	0.823 - 0.443	**9.593**
Component 3: Connectivity and Services	0.796 - 0.473	**6.961**
Component 4: Scope and Choices	0.6776 - 0.4696	**4.799**
Component 5: Utility and Need	0.706 - 0.419	**4.551**
Component 6: Enabling Power	0.603 - 0.579	**4.539**
Component 7: Adaptability	0.757 - 0.616	**4.123**
Component 8: Necessity	0.737 - 0.411	**3.922**
Component 9: Compatibility	0.813 - 0.779	**3.844**
Component 10: User Relevance	0.706 - 0.700	**3.618**

(Source: SPSS Analysis Output)

On the selected 46 simple variables, the Kaiser-Meyer-Olkin measure of sample adequacy and Bartlett's test of sphericity were also undertaken.

Table 2-10: KMO and Bartlett's Test of Sampling Adequacy

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.904
Bartlett's Test of Sphericity	Approx. Chi-Square	9673.427
	df	1035
	Sig.	.000

(Source: SPSS Analysis Output)

The Kaiser-Meyer-Olkin (KMO) sampling adequacy measure value of.904 shows that the sample size is adequate for factor analysis. A result greater than the frequently recommended threshold of.6 indicates that the data are appropriate for factor analysis, hence boosting the validity of the analysis. In addition, the significant result of Bartlett's test of sphericity (2 (1035) = 9673.427, p .001) suggests that there is sufficient correlation between the variables, validating the data's eligibility for factor analysis and providing evidence of construct validity.

Using the scree plot and eigenvalues (>1), the number of underlying components was determined. Ten factors accounted for 63.525 percent of the overall variance in the data, as determined by the analysis. This shows that the detected factors account for a significant amount of the variance in the measured variables, hence bolstering the construct validity of the assessment.

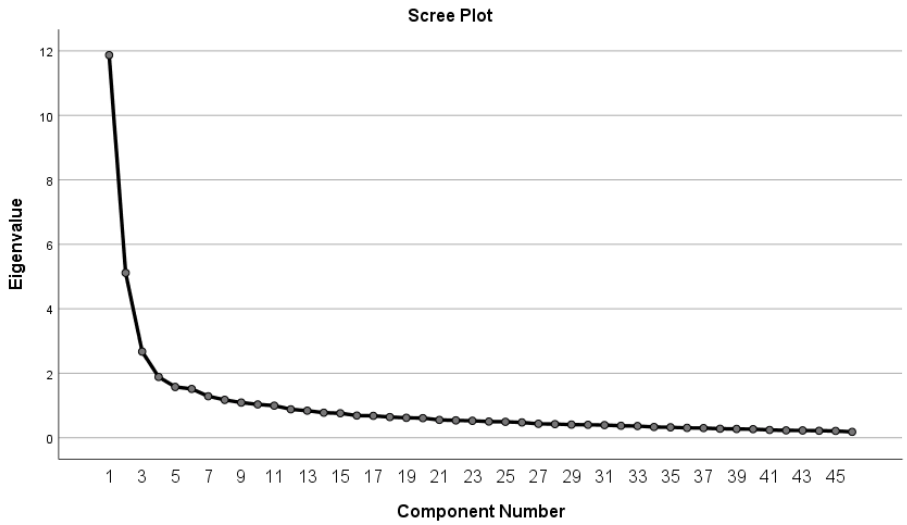


Figure 2-2: Scree Plot of Variables

(Source: SPSS Analysis Output)

2.4.9 BoP Consumer Survey Data Collection Process

After finalizing the questionnaire through paper-based pre-testing, an expert in the Kobo Toolbox survey process assisted the researcher in encoding the entire Bengali questionnaire in Kobo Toolbox to deploy the questionnaire through both the web tool and Android mobile application (Kobo Collect). The researcher also got acquainted with the process of using Kobo Toolbox through different learning materials and secondary literature (Olajide, 2019). While the digital development process for the questionnaire was completed, 10 expert survey enumerators under the direct supervision of the researcher were recruited to conduct the survey in all eight divisional headquarters of the country and nearby semi-urban and rural areas. Selection criteria for the enumerators were a minimum of five years of experience in collecting consumer survey data with at least a bachelor's degree level education.

Once the selection of the survey enumerators was completed, they were taken through extensive training of more than 4 hours to familiarise them with the Android data collection tool Kobo Collect, the digital questionnaire, the nested approach of the entire survey, the selection process, the BoP filtration approach, and to help them understand the essence of the entire research through Zoom-based training. They were then deployed nationally with Android devices of their own under the strict digital supervision of the researcher, who monitored them both online and in person.

While collecting data in the field, the enumerators asked the participants questions and filled out the digital survey questionnaires. Visits were made at their natural workplaces during the working hours. GPS coordinates were recorded to ensure proper national representation of both administrative and geographic locations. Appendix D has the geographic heat map of the survey respondents and the number of respondents by location (both division and type of location i.e., urban-rural-suburban) in three figures.

2.5 Alignment of Research Objectives with Research Methods

The following table details how the research methods were aligned with the specific objectives of the research.

Table 2-11: Alignment of Objectives to Methods

Objectives	Method of Research
Understand the status of digital media as a marketing tool versus traditional media for BoP.	• Literature Review • Experience Survey • Depth Interview • FGDs • Questionnaire Survey
Identify the specific triggers and barriers for BoP consumers to consume digital media versus traditional media.	• Literature Review • FGDs • Questionnaire Survey
Identify the usage behaviour of mobile handsets among BoP consumers.	• Literature Review • Depth Interview • FGD • Questionnaire Survey
Identify if digital media has potential as a marketing tool for BoP in the mobile handset industry.	• Experience Survey • Depth Interview • FGDs • Questionnaire Survey
If digital media is identified as a potential tool, develop an approach framework for digital media as a marketing tool for BoP in the mobile handset industry.	• Questionnaire Survey

2.6 Alignment of Specific Objectives with Sampling Units

The following table describes how the sampling units have been identified as per specific research objectives.

Table 2-12: Alignment of Objectives to Sampling Units

Objectives	Sampling Unit
Understand the status of digital media as a marketing tool versus traditional media for BoP.	• Brand/ Marketing Managers/ Media Managers of Mobile Handset Industry • Digital Media Industry Experts/ Agency Planners/ Owners • BoP Consumers
Identify the specific triggers and barriers for BoP consumers to consume digital media versus traditional media.	• Digital Media Industry Experts/ Agency Planners/ Owners • BoP Consumers
Identify the usage behaviour of mobile handsets among BoP consumers.	• Brand/ Marketing Managers/ Media Managers of Mobile Handset Industry • BoP Consumers
Identify if digital media has potential as a marketing tool for BoP in the mobile handset industry.	• BoP Consumers
If digital media is identified as a potential tool, develop an approach framework for digital media as a marketing tool for BoP in the mobile handset industry.	• BoP Consumers

2.7 Statistical Tools Used

2.7.1 Cross-tabulation, Charts and Figures

Statistical analysis tools like cross-tabulation, bar charts, line graphs, and pie charts were used to represent various forms of demographic, behavioural, and market analysis data throughout the entire thesis report. These helped in the proper and convenient visual representation of complex data in many cases.

2.7.2 Chi-Square, ANOVA, and Independent Samples T-Test

The Chi-square test, ANOVA, and Independent Samples T-Test—all three of these were used for hypothesis testing in Chapter 6.0.

The Chi-square test was used to detect whether two categorical variables were significantly associated. The tests were conducted by comparing the observed frequencies in the contingency table with the anticipated frequencies under the independent null hypothesis. If there was a substantial difference between the observed and anticipated frequencies, the test rejected the null hypothesis and concluded that the two variables had a meaningful relationship.

Analysis of variance (ANOVA) tests were used to assess whether there were significant differences in the mean preferences of participants based on various control variables, including location, age, gender, and income. Descriptive analysis was conducted to identify the preferred attributes, but the ANOVA test was used to determine whether the mean preferences were statistically different based on the control variables.

The independent samples t-test was used to determine whether there was a significant difference between the means of two independent groups of data. The independent sample t-test works by calculating the difference between the means of the two groups and then comparing this difference to the variability within each group. It calculates a t-statistic and a p-value, which indicate the strength of the evidence against the null hypothesis of no difference between the two groups.

2.7.3 Principal Component Analysis

The study utilised principal component analysis to identify the critical factors that determine the triggers and barriers to digital usage among the BoP population. This technique enabled the comparison of how each respondent perceives the involvement of specific items in particular factors.

During the analysis process, Kaiser-Meyer-Olkin (KMO) measurement, factor loading, and Barlett's test of sphericity were considered. The KMO value of 0.904 indicated that the data was appropriate for analysis, as it was acceptable (0.6 to 1.0). The study identified approximately 46 variables through a comprehensive literature review, which were subsequently analysed using EFA to identify the factors that influenced digital usage behaviour among the BoP. The detailed findings of the data analysis are presented in the relevant section of this report.

2.7.4 Linear Regression Analysis

Linear regression analysis determines the relationship between a dependent variable and two or more independent variables. This technique can be utilized with a single or numerous dependent and independent variables. Multiple regression analysis was used in this research in both chapters 7.0 and 8.0 to evaluate the strength of the relationship among the trigger-barrier variables and the intent to use digital. The explanatory ability of the regression models, the coefficient of determination (R^2), was also computed. R^2 with a value between 0 and 1 indicates the proportion of variance in the dependent variable that is explained by the independent variables. A greater R^2 value suggests a stronger link between the variables and a better regression equation fit.

2.7.5 NVivo World Cloud and Tree Mapping

The NVivo program was utilized to determine word mapping and clubbing of ideas presented by consumers during the survey as unstructured answers to questions that were placed before them. It helped in organizing, analysing, and visualizing patterns of thoughts from the unstructured information. While the software only works in English and the research questionnaire was in Bangla, it still assisted in creating component names and summarizing open-ended questions, suggestions, and feedback from the survey respondents.

3.0 LITERATURE REVIEW

This section's goal is to feature the secondary sources of academic, industry, and research data that are currently available. This will allow the researcher to create a conceptual model for testing and detecting the elements that impact consumers at the bottom of the pyramid's intention to utilize digital media. The following diagram shows how the chapter is divided into six sections. The idea of the gap between digital consumption and brand communication is briefly discussed in section 3.1. The Digital Divide: The phenomenon of triggers and barriers was the subject of section 3.2. Section 3.2 is followed by sections 3.3 and 3.4, which compare traditional and digital marketing strategies. section 3.4 provides an outline of the marketing funnel. After this one, sections 3.5 and 3.6 explore the literary method for defining the base of the pyramid and the potential of the mobile phone industry in Bangladesh, respectively.

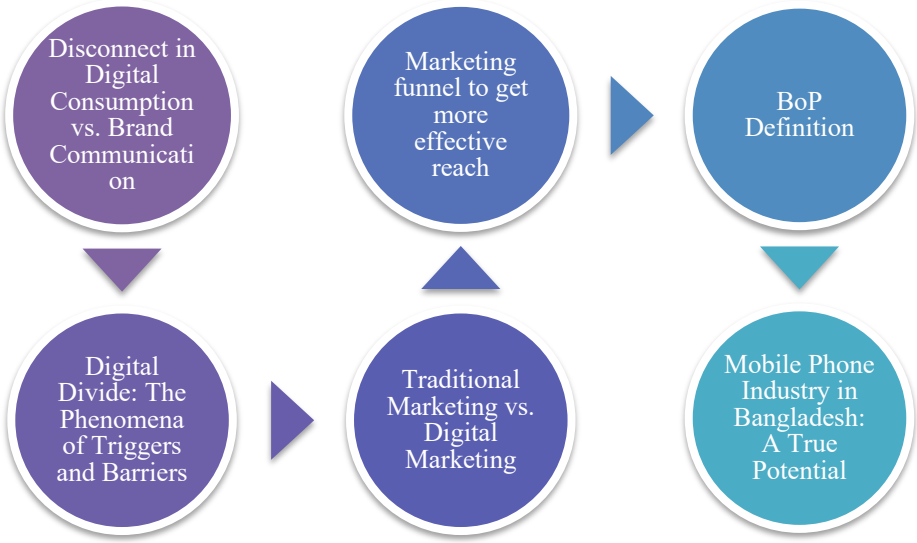


Figure 3-1: Literature Review Framework Followed by Researcher

3.1 Disconnect in Digital Consumption vs. Brand Communication

There is a disconnect between the "percentage of time consumers spend online" and "a brand's online ad budget allocation" that exists in many countries, not just Bangladesh. It is seen that even in Southeast Asia, out of the 74 hours per week an average beauty product buyer spends consuming media, she spends 45% of that time online, 29% on TV, 14% on radio, 6% on magazines, and 6% on newspapers. But despite that, brands are allocating a mere 1.7% of their ad budget online, 57% on TV, 40% on magazines, and the rest on radio, outdoor media, and newspapers. This gap is a wonderful

opportunity to connect with the top of the pyramid as well as the bottom of the pyramid consumers (Bangladesh Brand Forum, 2014).

As was seen in the background section of the research, digital media is growing at an exponential rate in the country. 183.89 million mobile connections and 126.12 million internet users that used them at least once in the last 90 days (BTRC, 2023) are a real testament to that growth. However, as identified by TNS in Bangladesh for their Google Bangladesh Digital Profiling in 2015, consumers spend about 2-3 hours on the internet and approximately 16-18 hours on mobile phones (2015), but marketers still use the media as a secondary or even tertiary one compared to traditional media like TV or even below-the-line (BTL) tools like activation and trade initiatives because of the gap in understanding about average consumption of digital media. Hence, most of the formal brands operating in the mobile handset industry or other industries are giving the media less than its fair share of usage when it comes to advertising and promotion. This is also visible from the National Media Survey, where it is seen that the percentage use of digital media as a percentage of total communication has moved from as low as 2% back in the year 2015/2016 to approximately 15% in 2021/2022 among formal players, despite an estimated cost difference of close to 8-9 times versus traditional media like TV (2021).

According to Ranganathan Somanathan, Chief Operating Officer of MediaVest, a subsidiary of Publicis Groupe, the world's third-largest communications group and second-largest media counsel, which opened an office in Bangladesh in February 2014, annual advertising spending in Bangladesh is approximately Tk 200 crore, with television and newspapers controlling the majority of it. "There are several chances across the nation that are simply waiting to be seized." "There is expansion potential across the board for clients that do not receive suitable media solutions," he asserted. "Our research and observations indicate that the substance of Bangladesh's diverse media sources falls short of expectations." “The difficulty we have is determining whether or not we can provide our clients with experiences that are meaningful to them. Always and foremost, we focus on executing a task effectively and providing the best quality products and services”. You will then begin to expand your customer base." According to Somanathan, there is a chance for Bangladesh's research products to become more advanced, whether it be for television data, readership data, or digital

data. This is true regardless of the data type. According to him, the fact that the Bangladeshi market has more than nine billion mobile consumers makes online examination of consumer behaviour more crucial. "With a 3G connection at their disposal, these nine crore mobile subscribers will leapfrog some of the western world in terms of internet access," he said, adding that cheaper smartphones and data plans will accelerate the internet's expansion throughout the world. According to him, when consumers interact with the internet for the first time through their mobile phones, they leave behind a fresh set of data for advertising companies to analyse. This is especially true for younger generations. According to him, a substantial number of consumers have already begun consuming content in the digital domain, despite the fact that marketers have not yet engaged with the new communication channels and have not yet created meaningful experiences for their customers. "Digital media has already advanced and will continue to evolve as well as grow to ever-greater heights." "How we organize ourselves in order to capitalize on the potential of digital media will become increasingly crucial." Even though the country has one of the lowest levels of advertising spending on new media platforms, Somanathan also acknowledged the digital transformation occurring in the country. According to Somanathan, less than 2 percent of total advertising expenditures in Bangladesh are allocated to digital media, but this number is closer to 5 percent globally. "The globe is experiencing a huge change toward digital technology, particularly in Bangladesh." "We must rethink our approach to content and come up with innovative solutions for our clients and the consumers of their products." Somanathan noted that it is essential to have the proper policy framework in place so that media owners can invoice in taka and receive payment in taka while simultaneously generating Bangla-language content (Md. Fazlur Rahman, 2014).

According to Rubayat Khan (Mobile Penetration in Rural Bangladesh and Its Possibilities, 2013), rural mobile phone penetration is phenomenally extensive. Everyone had a mobile phone, including the rickshaw puller, the day labourer labouring in the field, and most surprisingly, the elderly, ladies, and adolescents. Even as recently as 2010, it was typically the man of the house who carried a phone, indicating that women lacked sufficient access to the phone for genuine empowerment. By 2013, each family appeared to have many phones, and even in the poorest households, women appeared to have their own phones. This is a new frontier that even development

organizations have yet to explore, as it demonstrates how much can be accomplished by delivering services and messages directly to targeted people. Even more intriguing was the fact that at least 3 out of 10 rural phones appeared to be "smart" already. The significance of this observation becomes more apparent when we consider that the majority of people who carry mobile phones have less than an elementary education and minimal English proficiency. And it's not like they're not using the intelligent features! They utilize Facebook and own an email address. In fact, practically all rural Internet traffic (despite its low volume) is generated by handheld devices. Imagine the potential when, in a couple of years, all rural phones will be equipped to tell policymakers, corporations, and development specialists about many aspects of the rural lifestyle and environment. This would enable data-driven, customized marketing, communications, and interventions on an unprecedented scale. Even from meetings and activities hosted by organizations such as Katalyst, panellists and experts from other sectors emphasized the necessity for digital innovation and wealth at the base of the pyramid. According to the chief marketing officer of Grameenphone Ltd. (GP), Arild Kaale, information technology empowers individuals. He offered success stories of several GP service interventions, such as GP CIC and GP Baadhon, designed to empower the BoP and emphasized the significance of the BoP: "Because we know that our most devoted clients reside in rural areas, we are also committed to entering these regions through innovation."

3.2 Digital Divide: The Phenomena of Triggers and Barriers

“Global digital divide” is a term coined to describe the disparity nations that have high-level ICT participation contrasting the nations with low-level ICT participation (World Economic Forum, 2013). This disparity between industrialized and developing nations can be assessed through teledensity i.e. the number of cellular phone users, phone lines per capita, number of internet service providers, number of internet users, and the number of computer owning households (Campbell, 2001). However, this gap reducing gradually throughout the world.

According to Kiara Taylor (2022), the gap that exists between regions and demographics and regions that can access contemporary information and communications technology and those that cannot, is the sheer definition of “digital

divide". When Lloyd Morrisett, President of the Markle Foundation first coined the term "digital divide" (Hoffman, Novak, & Schlosser, 2001), he cursorily discussed about a divide between the information-haves and have-nots which essentially meant "a disparity in access to technological resources among socioeconomic categories" (Roblyer, 2003). However, the word today incorporates the technical and financial capacity to use existing technology, as well as access (or lack thereof) to the internet—the gap it alludes to is continuously altering with the growth of technology (Taylor, 2022).

Also, the digital divide can result from innovation disparities throughout the world. Wrong policy decisions and tactics can embolden the digital divide. The COVID-19 pandemic has actually further marginalized the least developed and developing nations due to the skill gap that exists in the ICT arena. This has resulted in untrained digital resources, small and mid-sized businesses suffering due to not being online, and an overall lack of digital transformation at the national level. This has even impacted United Nations Sustainable Development Goals (SDG) achievements (Johnson, 2021).

3.2.1 The Impact of Digital Divide

The current digital gap can be traced back to an obvious lack of innovation. Even in more developed nations, multiple public arrangements and procedures usually fail to eliminate the loophole. The pandemic caused by the Coronavirus has considerably exacerbated this challenge, putting countries with less developed innovative capacities at a high risk of falling behind. How did things turn out? The human resource is not being exploited to its fullest potential, small and medium-sized enterprises are struggling, and the delayed digital transformation of networks is stymieing progress toward achieving the United Nations Sustainable Development Goals (SDGs) (Johnson, 2021).

The global growth of the COVID disease has pushed us farther into a digital environment, and behavioural changes are expected to have long-term consequences after the economy recovers. However, not everyone is prepared to adopt a more digital presence. Since the previous great global calamity, the financial crisis of 2008-2009, the UNCTAD has published a second report that maps the topography of the evolving

digital scene. It examines how a carefully enabled environment functions differently for different people. The COVID emergency, according to the research, has boosted the use of digital solutions, tools, and services, hastening the worldwide march toward a high-tech economy (UNCTAD, 2020).

However, it has also revealed the enormous divide between the connected and the disconnected, indicating how far behind many people are in terms of digital penetration. Imbalances in digital preparation, according to UNCTAD's technology and logistics director, Shamika Sirimanne, limit the ability of vast portions of the world to leverage advances that let us adapt to the COVID epidemic by staying at home. This circumstance had critical advancement applications that can't be disregarded (UNCTAD, 2020).

A nation-wide representative survey was done in Netherlands in April 2020 among which 1733 respondents of the Dutch populace has uncovered a large portion of the digital divide causes in (not) involving the Web for Coronavirus information and correspondence. A nation-wide representative survey overview in April 2020 among which 1733 respondents of the Dutch populace has uncovered a large portion of the digital divide causes in (not) involving the Web for Coronavirus information and correspondence (Dijk, 2020).

The primary consequence of the review is that those with the best access to the Web, particularly having the inspiration and uplifting perspective or encouragement to utilize the Web, the best material access (a wide range of digital media utilized), and great digital skills utilized more Internet COVID-19 information and correspondence applications and helped most about its valuable data and correspondence results. Inspirational perspectives on using the Web (trust) were significant on the grounds that this medium is great for explicit and individual issues or questions. Particularly when individuals are at home, the only other data sources left are broadcasting and the press. Physical access to the Web is fundamental, obviously, and material access matters since all digital media have various chances to communicate and inform (Dijk, 2020).

However, the overall, takeaway was those who have access to internet and the skill to utilize have benefitted from the information regarding the coronavirus pandemic. More

data about the infection and better heeding the guidance of measures of the authorities and seek support from web when they thought they might be sick. On the flip side those who had the barrier of access was benefitted less as they lacked the information regarding the disease. Therefore, this digital divide or the digital inequalities resulted in a much more dire situation in the covid-19 phase (Dijk, 2020).

Although the existence of digital divide is always there but the covid-19 pandemic made it more prominent when the digital inequalities created direct impact regarding the spread of the disease. Another aspect that feeds the digital divide is the access and skill to use technology. It is common believe that the fast world country thrives in their economy because they have the access to information while third world country faces the exact opposite. However, Digital divide can have an impact within a third world country. This parity comes from different access issue. The existence of digital is segregating the gap between the group having different income bracket. While those who have information getting richer on information while those who lack information are staying behind (Steele, 2018).

3.2.2 Deep Diving into the levels of Digital Divide

The phrase "digital divide" refers to the inequality between those who have easy access to ICT and the knowledge they provide and those who do not. This disparity exists in even the majority of developed nations. This could be the result of access restrictions, socioeconomic challenges, regional factors, educational, attitude, and generational issues. There is still a large technical adoption gap between the industrialized and developing nations within the global community (Cullen, 2021).

Because there are many degrees of digital inequality, corresponding to the three levels of digital inequality, the East EU area cannot be seen as a single, uniform entity. In fact, disparities persist in terms of access (the first level), the digital skills and competencies required to use the Internet competently (the second level), and the ability to reap the benefits of Internet access and use (the third level) (Ragnedda & Kreitem, 2018).

A second digital divide separates computer users with the necessary competencies and skills from those without. After addressing access to information and communication

technology, the second level of the digital divide focuses on the intensity and manner of technology usage, as well as differences between groups. (Scheiding, 2015).

Considering that first-level analysis was insufficient to comprehend the digital divide as a whole, some authors have attempted to comprehend the digital divide's new levels. Two additional dimensions of the digital divide have been uncovered. There is a growing realization that differences in access to or usage of digital resources have real-world outcomes and consequences. These effects are regarded as the third phase of the digital divide (Alexander J. A. M., 2015).

3.2.3 The Factors That Act as Triggers or Barriers

Four distinct sorts of barriers contribute to the digital divide: "Mental access" is restricted owing to a lack of elementary digital expertise, which is caused by a lack of interest, computer phobia, and the unappealing nature of the new technology; "Material access" is limited if there are no computers or network connections; "Skills access" refers to a lack of digital skills that can be ascribed to poor user-friendliness as well as inadequate education or social support and "Use access" refers to a lack of significant usage options that can restrict access to a specific ability (Van Dijk & Hacker, 2003).

In 2003, Chen and Wellman (Charting and bridging digital divides) highlighted four categories to digital divide: technological access (ICT infrastructure: hardware, software, bandwidth), technological literacy (technological skills; social and cognitive skills), social access (economic, organisational and cultural factors, for example the affordability) and social use (information seeking, resource mobilisation, social movements, civic engagement, social inclusion). These overlap some of the access categories mentioned by Dijk and Hacker.

Typically, the digital divide exists between people living in cities and those living in rural regions; between the educated and the uneducated; between socioeconomic categories; and, worldwide, between the more and less industrially developed nations. Even among communities with some access to technology, the digital divide can manifest as lower-performing PCs, slower wireless connections, cheaper connections such as dial-up, and restricted access to subscription-based content (Chen & Wellman,

Charting digital divides: Comparing socioeconomic, gender, life stage, and rural-urban internet access and use in five countries , 2005).

Instead of tracking many types of digital divides such as fixed and mobile phones, narrow- and broadband Internet, digital TV, and so on, the ITU has proposed simply measuring the quantity of kbit/s per actor. This method has revealed that the digital gap in kbit/s per capita is growing in relative terms: "In 2001, the typical resident of the developed world had around 40 kbit/s more than the average member of the information society in developing nations; by 2010, this difference had grown to more than 3 Mbit/s per capita." When assessed in terms of subscriptions per capita, the gap between developed and developing nations is narrowing. In 2001, fixed-line telecommunications penetration reached 70% in rich OECD nations and 10% in underdeveloped ones. This resulted in a 7 to 1 ratio (divide in relative terms), or a 60% difference (divide in measured absolute terms). During the next decade, fixed-line penetration in OECD nations remained nearly steady (at 70%), but the rest of the world began to catch up, reducing the gap to a ratio of 3.5 to 1. In 2001, the average member of affluent nations counted 29 kbit/s more than a person in developing countries; this difference was compounded by a factor of 1,000 (to a difference of 2900 kbit/s). In terms of fixed-line capacity, the OECD had 20 times greater capacity per capita than the rest of the world during the arrival of broadband Internet in the middle of the first decade of the 2000s. This demonstrates the need of measuring the division in terms of kbit/s rather than counting devices. According to the International Telecommunications Union, "the bit becomes a unifying variable, facilitating comparisons and aggregations across many types of communication technology." (Charlene & Leanne, 2012), (Bernadas, Verville, & Burton, 2012).

According to Doreen Bogdan-Martin, Director of the ITU Telecommunication Development Bureau, 4.9 billion people utilized the internet in 2021, based on the current estimations in the 2021 edition of "Measuring Digital Development: Facts and Figures" (International Telecommunication Union Development Bureau, 2021). By 2021, 63 percent of the world's population was online, a 17 percent increase, with approximately 800 million people joining since 2019. Internet penetration increased by almost 20% in Africa, Asia, the Pacific, and UN-designated Least Developed Countries (LDCs). ICTs and the internet have ensured business activity, employment, education,

basic citizen services, entertainment, and socializing. Digital platforms and services have improved health, social, and economic outcomes and built resilience for future disasters. The pandemic has highlighted the devastating effects of digital exclusion and derailed most of the 17 Global Goals. There is a clear and present need to establish ubiquitous meaningful connectivity by the end of the decade to fulfil the SDGs. Measurement is needed to close the digital gap. The unconnected cannot be connected efforts to bridge the gap cannot be evaluated until it is clear that who all are suffering from the digital gap, where they live, and why they're disconnected. With 95% of the world's population inside mobile broadband range, the access gap is reducing, but major gaps remain. 30% of rural Africa lacks mobile broadband. Mobile broadband is available to most people, yet just two-thirds use it. 96 percent of the 2.9 billion offline live in poor countries. Findings clearly suggest geographic, age-based, gender-based, access-based, price-based, and last but not the least skill-based digital divide. The urban internet users are twice as many as rural ones. 71 percent of the world's 15-24-year-olds use the internet, compared to 57 percent of all other age groups. 62 percent of males and 57 percent of women use the internet globally. In many of the world's poorest countries, where web access has the most potential, women remain digitally excluded. Closing the digital gap requires more than just internet access. As digital platforms and services advance, people's ability to use connectivity meaningfully is defining the digital divide. Price affects this ability. The Broadband Commission for Sustainable Development wants entry-level broadband to cost less than 2% of monthly gross national income per capita by 2025. Nearly half of the economies with data have not reached that goal. Digital skills are also important, as a lack of them prevents many individuals from going online and limits others' use of products and services. Cyberattacks, fraud, fake news, and poisonous information can also affect those without digital literacy. The ITU's Facts and Figures can help policymakers and the global development community prioritize digital development.

According to Christine Bernadas et al. (2012), the majority of research on the digital divide sought to identify causes and solutions to its effects. It would be fascinating to compare all those causes and implications with the classification, which can compare nations in the same state of digital divide and control for this dimension to determine what generated this divide and its effects. For example, a country with low access and usage of internet might get a bigger impact compared to countries with higher access

and usage when they make a policy change. In the same study, the authors talk about different study levels of digital divide namely individual, community, nation-state, and global level of digital divide.

According to the findings of Chauhan et al. (2018), lack of digital knowledge, complexity, and language barriers all have a significant influence on the BoP segment's internet adoption in India. However, neither perceived risk nor cost had an impact on Internet adoption. The significant relationship between lack of digital literacy and intention to use shows that if the BoP sector can find, assess, and apply digital information, it will be more likely to use the internet. Similarly, the relationship between complexity and intention to use indicates that the BoP sector is more likely to use the internet if it is easy to use and grasp.

Authors Muhammad Sabbir Rahman, Mahafuz Mannan, and Riasat Amir (2018) discovered that a customer's life satisfaction, internet literacy, perceived usefulness, and perceived ease of use have a significant influence on a customer's intention to use mobile internet; however, these relationships are partially mediated by a customer's attitude toward mobile i. Furthermore, pricing perception was found to have a positive moderating effect on the relationship between attitude toward mobile internet and intention to use it, as well as a direct influence on whether or not participants intended to utilize mobile internet. Furthermore, the researchers observed that a customer's intention to utilize mobile internet might have a considerable influence on their mobile internet adoption behaviour.

3.3 Traditional Marketing Versus Digital Marketing

Research on digital communication appears to be rare in Bangladesh. According to Kamrul Hasan et al. (2012), a large number of research studies on the topic of online marketing have been conducted around the world. However, it is challenging to discover studies that focus solely on internet marketing practices in Bangladesh. For a comprehensive understanding of internet marketing and its supporting activities, it may be useful to read a variety of foreign and domestic articles and research papers.

During his session on Marketing in Challenging Times at the World Marketing Summit by Bangladesh Brand Forum (2014), Mr. Sunil Alagh, the Founder and Chairman of SKA Advisors with 40 years of hands-on experience building successful brands such as Britannia Tiger, stated that in the twenty-first century, a brand is equivalent to an unchanging idea from the owner's perspective and an experience from the user's perspective. The twentieth-century brand notion held that corporations engage in marketing activities that culminate in the formation of a brand. In the twenty-first century, the game has changed dramatically. The brand comes first, then commercial activities, and last marketing. He emphasized the greatest problem for brands in the twenty-first century: social media. Social media may both assist and hurt a brand's reputation. "If you do not control social media, you are finished!" he said about it.

3.3.1 Traditional Marketing

Since the beginning of the basic understanding of the consumer purchase model, the world has seen a simple funnel method of consumer purchase, as mentioned in the following figure (Stevenson Financial Marketing, 2012).

Figure 3-2: Traditional Consumer Purchase Model (Steven, 2012)

In this model, people were funnelled from awareness to the purchase stage in a seven-step process. However, the modern digital world is far more complex, as mentioned in the following figure (Vya Marketing Systems Staff Contributor , 2014).

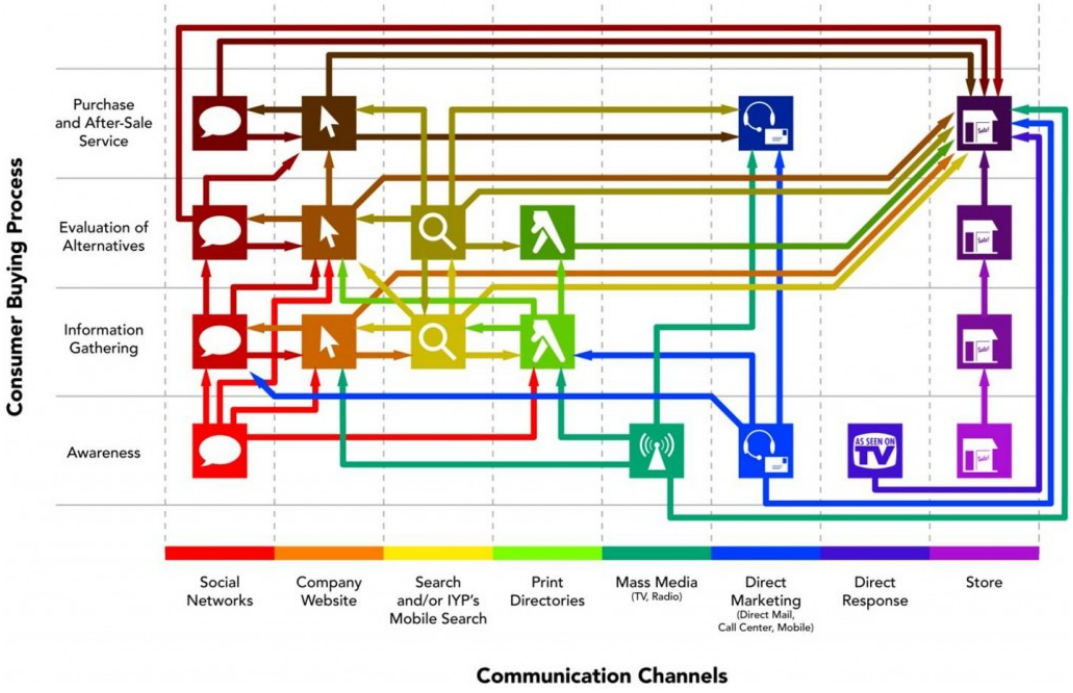


Figure 3-3: Modern Matrix Consumer Purchase Model (Vya Marketing,2014)

Now people go through a highly complex communication channel in the buying process where multiple channels of interactive communication ultimately flow from awareness to purchase. Moreover, people are now not just exposed to one-way, mundane forms of communication; rather, they interact, understand, and react with brands.

3.3.2 The Room for Digital Marketing alongside Traditional Marketing

While traditional marketing can be an effective tool to reach a mass audience and drive the core message to the audience, implementing digital media alongside the traditional marketing tool will enhance the communication's reach. Traditional marketing strategies, for instance, print advertisements, radio and TV plugs, boards, and post office-based mail, can be compelling in reaching native or more established crowds who may not be used to using digital equipment. However, comparing digital marketing to traditional marketing helps the marketer react to consumers' perspectives on time while being on the digital channel (Lawrence, Deshmukh, & Navajivan, 2018).

With the combination of traditional and digital marketing approaches, organizations can profit from the qualities of each methodology while mitigating their limits. For instance, a business could utilize traditional marketing techniques to construct brand awareness and trust with the targeted group while utilizing digital marketing to drive site traffic, create leads, and increase sales.

3.3.3 Digital Marketing Process

The digital marketing process can be explained in the simplest terms as a process of: GETTING FOUND >>>> CONVERTING CONSUMERS AS FANS >>>> MEASURING ENGAGEMENT (Kassam, 2009).

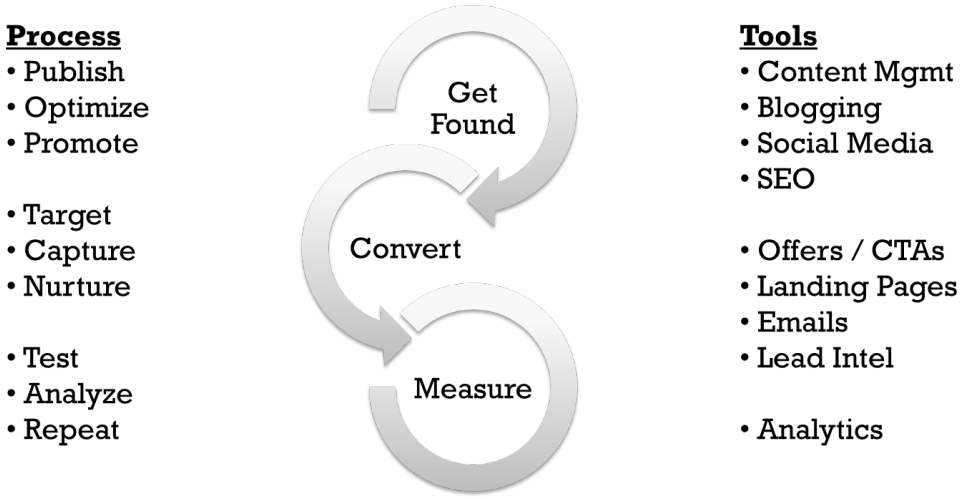


Figure 3-4: Digital Marketing Process (Kassam, 2009)

The process to get found is to publish content, optimize it for search engines so that they find it more easily than others, and promote it towards the appropriate target audience through the utilization of appropriate content management, blogging in support of your brands, social media platform utilization, and search engine optimization. Targeting the proper audience, capturing them, and nurturing them through ALWAYS ON content by employing calls to action and offers, as well as utilizing brand websites, email marketing, and discovering the right intelligence on sales leads, all play a big role in the conversion process.

In the measure phase, brands need to test their creative, analyse post-campaign data, and repeat successful models and activities in order to take corrective actions and make use of the appropriate insights about their target audience. This can be accomplished with the assistance of tools such as Google Analytics, Facebook Insight, Google Trends, Socialbakers statistics, and other paid third-party services.

The beautiful thing about digital media is that all of the tools are real time, and they provide a multitude of data for brands to LEARN BY DOING in the digital marketing field. This is one of the advantages of digital media.

Because of this, the review that has been provided here makes it abundantly evident why it is of the utmost importance to establish a comprehensive understanding of the triggers, impediments, and channels for digital communication with customers at the BoP. At a minimum, the research can contribute to a better understanding of the triggers and barriers on both the part of marketers and consumers. At a maximum or broad level, the proposed research can help develop a conceptual framework or model that shows how to overcome the barriers and accelerate the triggers using the right pathways or interventions on both sides of the spectrum, where marketers become interested in utilizing digital communication tools for BoP and where BoP consumers become interested in using digital communication tools for BoP.

3.4 Marketing Funnel to Get More Effective Results

3.4.1 The AIDA Model and Extension of AIDA Model

The AIDA Model, which represents Attention, Interest, Desire, and Action model, is an advertising model that recognizes the stages that an individual goes through during the process involved with buying any products or services.

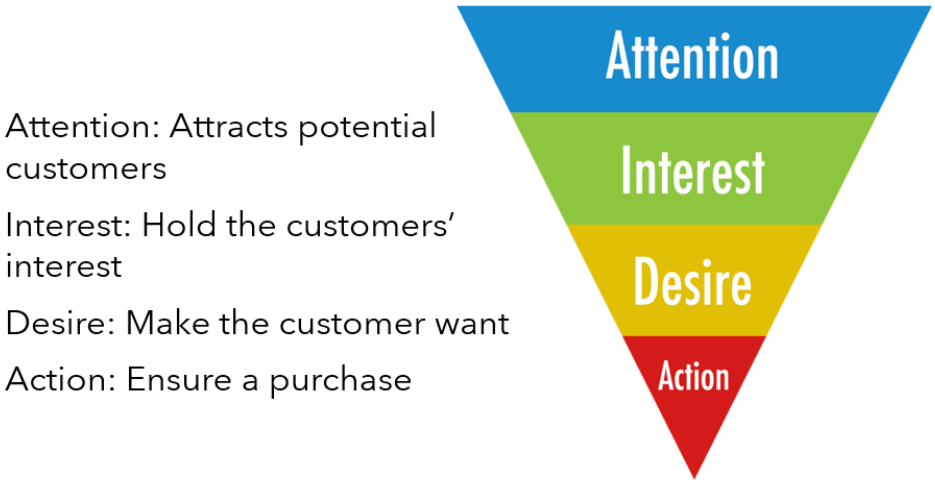


Figure 3-5: AIDA Model (Lewis, 1904)

AIDA model contains a four-step approach to certainly stand out enough to create attraction, draw in interest, build desire, and then take action, when the consumer is making a purchase decision (Lewis, 1904).

AIDCAS is a popular and straightforward expansion of the original AIDA class of hierarchical models, sometimes known as hierarchy of effects models. Whether the AIDA model covers only four aspects of the consumer journey, the AIDCAS model extended it with another two stages and that is Conviction and Sales. (Foster, 1986).

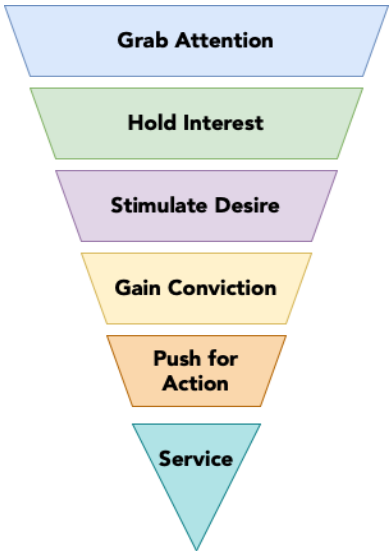


Figure 3-6: Figure 3 6: Extension of AIDA Model (Foster, 1986)

3.4.2 The REAN Model

The REAN funnelling model is a system utilized in digital marketing to direct expected clients through the various phases of the purchasing process. REAN is an abbreviation that represents Reach, Engage, Activate, and Nurture. Every one of these stages addresses an alternate move toward the purchaser's journey, and the objective is to move clients from one phase to the next until they end up purchasing.

Figure 3-7: The REAN Model (Blanc, 2018)

The REAN customer life cycle in online marketing can be characterized by four stages (Blanc, 2018).

The different stages are:

- Reach: The way of drawing in guests that are possibilities or customers who have the intention to exit a website.
- Engagement: This is about how thoroughly a customer consumes the content of a website that has been uploaded.
- Activation: The means of activating visitors to transform towards website goals and objectives
- Nurture: The necessary resources to provide service to the current clients or registrants with re-marketing devices and cycles, frequently characterized as email promotion consolidated with customized pages, for example, “My Pages” on travel websites.

3.4.3 YouTube Subscriber Funnel

The YouTube marketing funnel is explicitly cantered around the client's venture from YouTube to the VOD business. This YouTube marketing channel is divided into three phases: The primary objective here is to push the interest group from the actual top of the pipe to the extremely bottom, all the way to being a paying subscriber to the VOD site (YouTube, 2005).

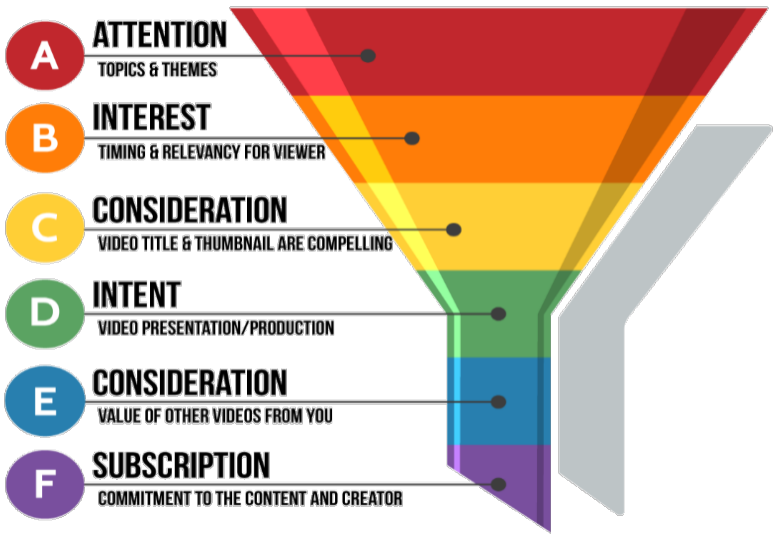


Figure 3-8: YouTube Subscriber Funnel (YouTube, 2005)

Starting with capturing attention and eventually attempting to convert a visitor into subscriber through a six-step process is what the YouTube subscriber funnel does. This model not only helps in increasing view for similar types of contents, but it can also help in persuading similar audiences. However, click-baiting can become an issue when this model is extensively used by channel owners. Although, YouTube keeps upgrading the algorithm to prohibit that by continuously checking and rechecking bounce rate and other related KPIs.

3.4.4 Google Ads Marketing Funnel

The Google Ads funnel is a marketing procedure that utilizes a grouping of different missions that guide possibilities through the purchaser's journey. It's planned to draw in outsiders, create interest and demand, provide warm-up possibilities to effectively start looking for the items or services, and convert them into paying clients with designated content and offers (Google, 2000).

Figure 3-9: Google Ads Marketing Funnel (Google, 2000)

The Google AdFunnel can help associate additional possibilities that could be interested in the contributions with upper-channel campaigns. With a decent blend of promotion, information, and content, the brand can be introduced to a totally new crowd and create demand.

In any case, individuals would rather not buy from outsiders, regardless of how great the keywords are or how engaging the deal is. A Google AdFunnel takes care of this issue by presenting your image at different touch points all through the purchaser's journey. Subsequently, when a possibility is prepared to act and purchase, they are bound to act on the offers.

3.4.5 Bowtie Funnel

A bow-tie funnel broadens the traditional funnel past the buy stage to the reliability and client support stages. The pipe is flipped evenly and shows steady development. The bow-tie funnel centres around keeping clients snared on to the brand by fortifying their confidence in the brand and, in the long run, driving them to become ambassadors of the brand. This approach emphasizes building long-term associations with the customers (Brogan & Smith, 2010).

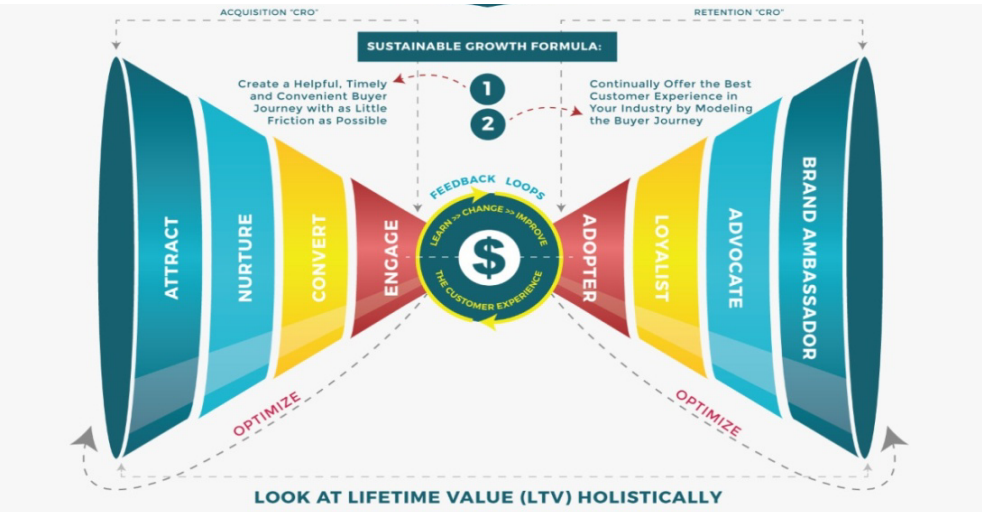


Figure 3-10: Bowtie Funnel (Brogan & Smith, 2010)

Customer retention procedures are a definitive advantage of the bow-tie funnel. Revenue is best tied down when the organization keeps its clients cheerful and faithful post-purchase. Past putting an emphasis on keeping customers blissful, the bow-tie funnel gives one of the main advantages required for information collection: time. The bow-tie funnel follows the client all through their whole client venture, giving adequate opportunity to assemble information (Brogan & Smith, 2010).

3.4.6 The RACE Model

The RACE model is a system that empowers associations to take a more organized, coordinated, and strategic approach to dealing with digital marketing. The RACE model is made up of 4 stages, progressive and with individual objectives, through which there is a change of future potential customers into customers with a high level of loyalty to the brand (commitment) (Chaffey, 2017). The 4 stages are:

- Reach: In the main stage, the goal is to build the scattering of the brand among potential customers by doing a wide range of showcasing and virtual entertainment and leading the executives' activities.
- Act: When the brand is scattered and spread the word among customers, the time has come to connect with them to build their fascination with the brand and subsequently produce a requirement for procurement.

Figure 3-11: RACE Funnel Model (Chaffey, 2017)

- Convert: Having created the need to get, the time has come to emerge in deals for our organization, or at least, to change our objective from possible client to purchaser.
- Engage: This framework doesn't end with the client's purchasing cycle; the brand is keen on building enduring and stable associations with them.

3.4.7 The Inbound Marketing Funnel

The inbound marketing funnel works similarly to the previous business funnel, but with one key distinction. It tells the advertisers precisely what the showcasing message ought to discuss and when. The inbound marketing funnel labels clients with different titles based on how interested they are in different offers (Halligan & Shah, 2009).

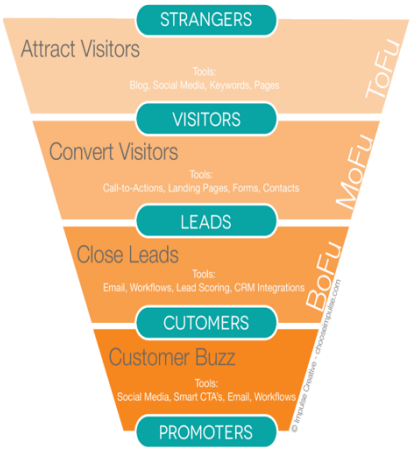


Figure 3-12: Inbound Marketing Funnel (Halligan & Shah, 2009)

- Strangers: These are consumers who don't know about the brand or the company.
- Visitors: These are the strangers who come to the website and learn a bit about the company.
- Leads are website visitors who have navigated deeper into the site and ultimately provided their contact information.
- Customers: prospects or leads who convert into customers by making a purchase.
- Promoters: Customers who are happy with the brand's continual efforts to ensure they have all they need and who are so pleased with the company and service that they enjoy recommending the brand to their friends and family.

3.4.8 Micro Moment Digital Marketing Funnel

The micro-moment digital marketing funnel is a step-by-step guide to creating a digital marketing strategy based on different moments (Google, 2015).

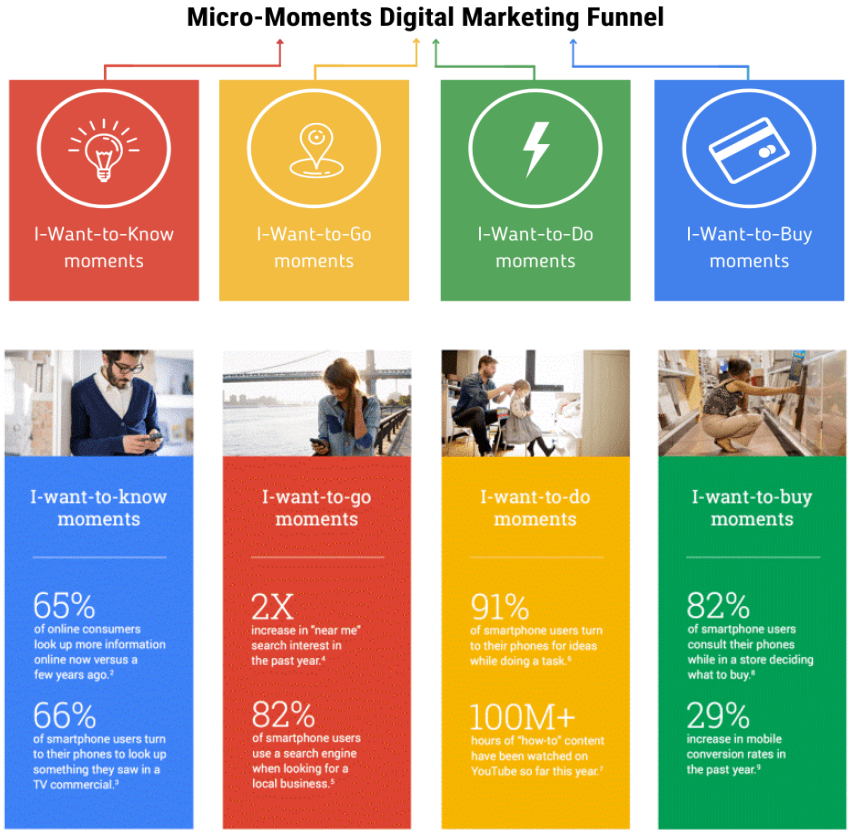


Figure 3-13: Google's Micro-Moment Digital Marketing Funnel (Google, 2015)

3.4.9 Facebook and Google Ad Types Mapped to the Customer Journey

Brett Loney of Marin Software Ltd. (2017), featured a format developed by the company to combine the efforts of search (through Google) and social (through Facebook) across the customer purchase decision journey. The model encompasses the journey in the form of a funnel containing the five stages of Awareness, Consideration, Conversion, Maintain and Expand. It also assembles the different ad types that marketers can deploy through Google and Facebook for each stage of this journey.

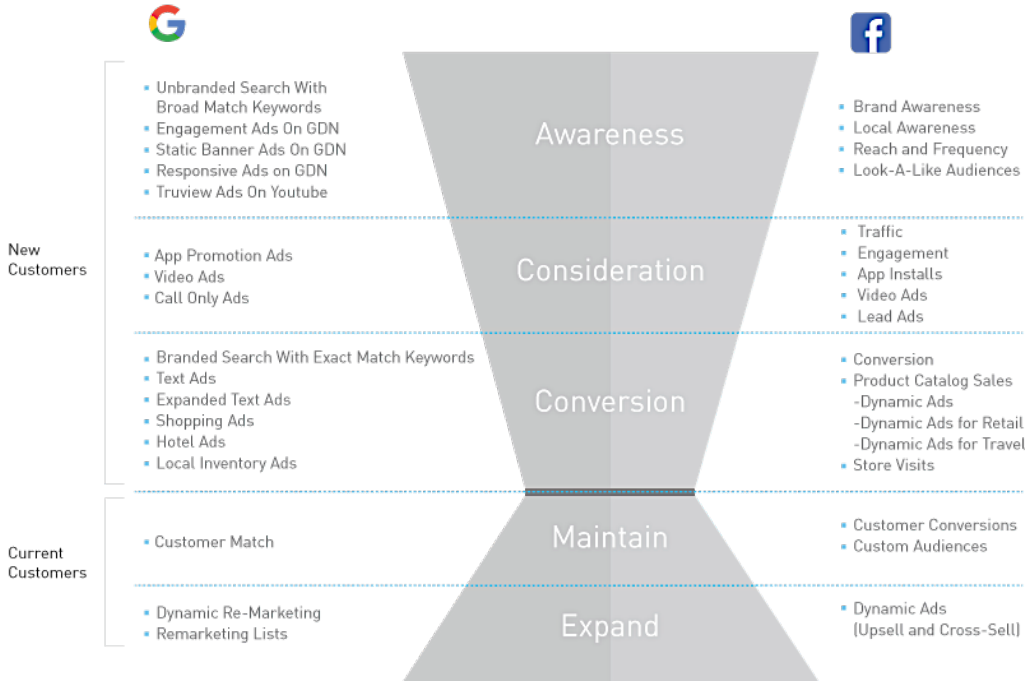


Figure 3-14: Facebook and Google Ad Types in the Customer Journey (Loney, 2017)

The model covers the journey for both new customers and existing customers and highlights the importance of the fact that if marketers want to deliver the best possible return on investment from their marketing campaigns, their focus should be on sharpening their focus on identifying which stage of the purchase journey the customers belong to rather than thinking about which channels to use.

3.5 Base of Pyramid (BoP) and Poverty Line Defined

The international poverty line is a metric that enables cross-country comparisons of poverty levels. The value of the international poverty line is equivalent to US$1.90 in purchasing power parity (PPP) terms.

The poverty estimation methodology officially employed in Bangladesh relies on the Cost of Basic Needs (CBN) approach. The CBN approach computes the expenses associated with acquiring a consumption package that is deemed sufficient to fulfil fundamental consumption requirements. If an individual is unable to meet the financial requirements of this package, they may be classified as economically disadvantaged. The poverty rate is determined through the utilisation of an upper poverty threshold, which encompasses the expenses associated with a package consisting of fundamental food and non-food commodities. The measurement of the extreme poverty rate entails the utilisation of a poverty line that is comparatively lower and encompasses the cost of a bundle primarily comprising food, in addition to a minor proportion of non-food commodities (Bangladesh Poverty Assessment, 2019).

Ravallion recommends that poverty lines (PLs) in Bangladesh be updated at regular intervals using a price index (Growth, Inequality, and Poverty: Looking Beyond Averages, 2001). This has been implemented in the past, with updates occurring in 1995/96 and 2000 for food as well as non-food PLs, and in 2010 with regard to food PLs only. Alternatively, the expenditure of basic needs (CBN) method has been used to re-estimate PLs, which occurred in 1991/92 and 2005. It is anticipated that either of the two approaches, namely the price index or CBN method, could ensure stability in real expenditure or any welfare measure, thereby offering a reliable gauge of poverty and price fluctuations over time.

The initial approach, known as the Food PL method, entails a predetermined quantity of items within the food basket, with only the market price being subject to revision through the implementation of a suitable price index. The CBN method, also known as the non-food PL approach, involves computing the poverty line by approximating the mean per capita expenditure required for individuals to fulfil their fundamental food and non-food necessities. The implementation of the CBN method comprises a tripartite

process. Initially, the computation of the fixed food bundle cost is performed. The bundle of food items in Bangladesh comprises eleven essential commodities, namely rice, wheat, pulses, milk, meat, oil, freshwater fish, potatoes, other vegetables, sugar, and fruits. This food package offers the essential nutrients necessary to meet the minimum dietary needs of an individual consuming 2,122 kilocalories per day. The subsequent stage involves the computation of two distinct non-food allowances for non-food consumption, namely the lower and upper non-food allowances. The first figure pertains to the median expenditure on non-food commodities by households whose overall consumption is nearly equivalent to their food-poverty threshold. The second figure corresponds to the non-food expenditure of households whose food consumption is approximately equal to their food-poverty line. The third step involves the summation of both food and non-food allowances. The upper poverty line is comprised of the combined total of the upper non-food allowances and food allowances. The poverty lines in 2010 underwent adjustments through two methods: (i) the application of food inflation rates to the 2005 food poverty lines, which were derived from the unit values of the HIES 2005 and HIES 2010 data; and (ii) the re-estimation of non-food poverty lines using the HIES 2010 data to account for changes in non-food and food rates. The government has publicly released poverty estimates via the preliminary testing report on HIES 2010 (Bangladesh Bureau of Statistics, 2011).

As per Ravallion (Poverty Lines in Theory and Practice, 1998), the establishment of a poverty line serves to direct the concentration of governments and civil society towards the living standards of individuals experiencing poverty. Poverty lines serve the purpose of not only measuring and monitoring poverty over time but also indirectly conveying information regarding fluctuations in prices, as they are frequently used to gauge the actual cost of fundamental necessities over a given period.

Table 3-1: Alternative Measures of National Inflation

Table IA-1.1: Alternative Measures of National Inflation

Index (Base 2000)	National		
	2000	2005	2010
General-CPI (Base Year: 2000/01=100)	100	126	184
General-UPL (Pop. Weighted)	100	126	234
General-UPL (Rural Dhaka)	100	129	230
Food-CPI (Base Year: 2000/01=100)	100	127	196
Food-UPL (Pop. Weighted)	100	125	224
Food-UPL (Rural Dhaka)	100	129	219
Non-Food-CPI (Base Year: 2000/01=100)	100	126	167
Non-Food-UPL (Pop. Weighted)	100	127	252
Non-Food-UPL (Rural Dhaka)	100	130	252

CPI = Consumer Price Index. U(L)PL = Upper (Lower) Poverty Line.

(Source: Giménez & Jolliffe , 2014)

Table 3-2: Inflation by Area and Per-Capita Consumption

Table IA-1.2: Alternative Measures of Inflation by Area

Index (Base 2000)	Urban			Rural		
	2000	2005	2010	2000	2005	2010
General-CPI (Base Year: 2000/01=100)	100	125	180	100	124	182
General-UPL (Pop. Weighted)	100	118	221	100	127	232
General-UPL (Rural Dhaka)	100	129	230	100	129	230
Food-CPI (Base Year: 2000/01=100)	100	127	201	100	125	192
Food-UPL (Pop. Weighted)	100	118	213	100	127	224
Food-UPL (Rural Dhaka)	100	129	219	100	129	219
Non-Food-CPI (Base Year: 2000/01=100)	100	124	159	100	123	164
Non-Food-UPL (Pop. Weighted)	100	118	235	100	126	247
Non-Food-UPL (Rural Dhaka)	100	130	252	100	130	252

CPI = Consumer Price Index. U(L)PL = Upper (Lower) Poverty Line.

Table IA-1.3: Nominal and Per-capita Consumption Using Alternative Measures of Inflation

Consumption	2000	2005	2010	%Δ00-05	%Δ05-10	%Δ00-10
Nominal per-capita	877	1231	2447	40	99	179
Real per-capita (CPI)	877	990	1350	13	36	54
Real per-capita (UPL-Rural Dhaka)	877	951	1064	8	12	21
Real per-capita (UPL-Stratum)	877	991	1067	13	8	22
Real per-capita (UPL-Pop. weighted)	877	978	1047	12	7	19

(Source: Giménez & Jolliffe , 2014)

Table 3-3: Harmonized Poverty Lines across Years (2000, 2005, and 2010)

	2000		2005		2010	
Region	**LPL**	**UPL**	**LPL**	**UPL**	**LPL**	**UPL**
Barisal (Rural)	580	714	753	926	1284	1485
Barisal (Muni.)	643	764	800	951	1419	1963
Chittagong (Rural)	619	733	753	891	1404	1687
Chittagong (Muni.)	643	827	749	963	1495	1825
Chittagong (SMA)	639	978	766	1171	1479	1876
Dhaka (Rural)	563	651	728	842	1276	1497
Dhaka (Muni.)	625	742	749	890	1314	1793
Dhaka (SMA)	678	855	806	1018	1406	2038
Khulna (Rural)	511	582	652	743	1192	1435
Khulna (Muni.)	561	690	670	825	1262	1680
Khulna (SMA)	582	773	706	938	1348	1639
Rajshahi (Rural)	511	598	656	766	1236	1487
Rajshahi (Muni.)	575	707	696	857	1312	1585
Rajshahi (SMA)	576	682	722	856	1223	1556
Sylhet (Rural)	560	661	697	822	1240	1311
Sylhet (Muni.)	666	843	806	1020	1286	1558

(Source: Giménez & Jolliffe , 2014)

According to Giménez & Jolliffe (Inflation for the Poor in Bangladesh: A Comparison of CPI and Household Survey Data, 2014), based on the head count rates computed using upper poverty lines from the 2010 Household Income and Expenditure Survey (HIES), it can be observed that Rangpur Division exhibits the highest incidence of poverty (HCR) at 46.2%. This is followed by Barisal Division at 39.4% and Khulna Division at 32.1%. In contrast, the Chittagong Division has documented the most minimal HCR pertaining to poverty incidence, standing at 26.2%. This is succeeded by the Sylhet Division at 28.1% and the Rajshahi Division (New) at 29.8%. The Cost of Basic Needs (CBN) method has been used as the standard approach for assessing poverty incidence by the Bangladesh Bureau of Statistics since 1995-96. This approach involves the estimation of two poverty thresholds. (i) lower poverty line and, (ii) upper poverty line (Household Income and Expenditure Survey, 2010).

Households that have a combined expenditure on both food and non-food items that is equivalent to or lower than the food poverty line are classified as extremely poor. The estimation of the upper poverty line involves the summation of both the food and non-food poverty lines. Moderately poor households refer to those whose overall expenses are equivalent to or below the upper poverty threshold (Understanding Poverty, 2015).

Division	Per Capita Income of the Poor					
	Using Lower Poverty Line			Using Upper Poverty Line		
2010						
National	1102.84	1083.72	1250.18	1270.93	1211.57	1545.96
Barisal	1097.64	1055.96	1333.31	1190.67	1130.25	1488.23
Chittagong	1051.67	1034.62	1259.46	1307.27	1304.64	1328.03
Dhaka	1159.30	1106.74	1650.28	1406.36	1237.32	1955.93
Khulna	1079.46	1132.25	914.54	1226.21	1267.15	1106.41
Rajshahi	1119.90	1101.63	1215.21	1200.34	1182.47	1273.50
Rangpur	1100.35	1101.41	1088.57	1163.75	1154.61	1258.77
Sylhet	996.95	1000.87	905.13	1045.37	1045.20	1047.29
2005						
National	646.51	630.53	741.52	731.73	703.98	862.40
Barisal	646.60	641.59	686.69	707.62	702.45	747.05
Chittagong	648.71	646.21	666.38	798.03	793.04	817.99
Dhaka	650.01	612.69	820.26	731.21	662.67	952.67
Khulna	669.23	669.30	668.88	746.02	729.20	814.37
Rajshahi	640.77	625.47	746.74	708.46	693.85	802.13
Sylhet	596.40	588.32	703.11	667.50	634.75	1081.61

Figure 3-15: Per-Capita Income of the Poor based on Cost of Basic Needs (CBN) Method

(Source: Household Income and Expenditure Survey 2005, 2010)

In 2010, the nominal per capita income of individuals living below the poverty line was Tk. 1102.84 at the national level, Tk. 1083.72 in rural areas, and Tk. 1250.18 in urban areas, as determined by the lower poverty line. According to the findings of the Household Income and Expenditure Survey (HIES) conducted in 2005, the average monthly expenditures were Tk. 646.51 at the national level, Tk. 630.53 in rural areas, and Tk. 741.52 in urban areas. Alternatively, when employing the upper poverty threshold at the national level, the individual nominal income of impoverished individuals amounts to Tk. 1270.93, Tk. 1211.57 in rural regions, and Tk. 1545.96 in urban areas (Household Income and Expenditure Survey, 2005).

According to data from 2010 (Household Income and Expenditure Survey, 2010), the per capita expenditure of individuals living below the poverty line was Tk. 1064.92 at the national level and Tk. 1056.03 in rural areas, based on the lower poverty line. According to data from 2010, the per capita expenditure of individuals living below the upper poverty line was Tk. 1245.76 at the national level, with those residing in rural areas spending Tk. 1200.02 and those in urban areas spending Tk. 1457.65.

As a result, the poverty line can be defined as the lowest level of household income that is required to be able to purchase a package of goods and services sufficient to fulfil the fundamental requirements of the household.

The method employed to estimate poverty lines involved the utilization of the cost of basic needs (CBN) approach. This method identifies households with per capita expenditure below a specified poverty line as impoverished. The CBN approach utilizes poverty lines as a metric to gauge the extent to which a household's per capita expenditure is sufficient to cover their fundamental requirements, which encompass both food and non-food consumption.

The United Nations' Development Goals employ the $1 per day metric as proposed by Sachs (The End of Poverty: Economic Possibilities for Our Time, 2005). Hammond et al. (2008) define the base of the economic pyramid as comprising four billion individuals with low incomes, who fall below $3,000 in local purchasing power and consequently experience relative poverty. According to the World Bank's 2015 estimates, approximately 10% of the global population resided in conditions of extreme poverty, defined as living on less than $1.90 per day. This represents a decrease from the 11% reported in 2013 and a significant reduction from the nearly 36% recorded in 1990. In summary, the most viable range for purchasing power parity (PPP) of the Bottom of the Pyramid Population (BOTP) is estimated to be between an annual income of $1,500 and $2,000 or a daily income range of $1 to $2. World Bank projections suggest that the population situated at the base of the socioeconomic pyramid may exceed 6 billion individuals within the next four decades (Jungsuk Kim).

A comprehensive analysis of the consumption patterns of low-income individuals found that a significant portion of their overall income is allocated towards alcohol, tobacco, and leisure activities such as television, weddings, and festivals. Individuals with lower socioeconomic status derive comparable or potentially greater enjoyment from consumer goods relative to their more affluent counterparts, particularly considering the relatively austere conditions that often characterize their daily lives (Banerjee & Duflo, 2007).

Expenditure on festivals constitutes a significant proportion of the budget for a considerable number of impoverished households with a daily per capita income of less than $1. From a multinational corporation's standpoint, the market size of the bottom of the pyramid (BOP) is estimated to be $0.3 trillion. This estimation is based on the fact that companies are required to convert local currencies into their respective home

currencies at prevailing exchange rates. Enterprises adhering to the BOP proposition frequently encounter setbacks due to their overestimation of the buying capacity of impoverished individuals, leading to the establishment of prices that are excessively elevated as well as an overestimation of the extent of the market. The estimated market size of BOP is within the range of $13 to $15 trillion (Karnani, 2009).

3.6 Mobile Phone Industry in Bangladesh: A True Potential

According to the Bangladesh Investment Development Authority (BIDA) of the Prime Minister's Office, Bangladesh's low-cost, highly skilled labour resource in the electronics industry gives corporations excellent returns on investment (2020).

Manufacturing of semiconductors could become a separate industry; Bangladesh will be one of the largest cell-phone markets in South Asia; the home appliance market in Bangladesh is expanding rapidly; and the labour-intensive nature of the electronic industry corresponds to Bangladesh's ability to provide a source of highly skilled labour. Bangladesh's electronic sector mostly produces consumer items. Mobile phones, televisions, refrigerators, air conditioners, ovens, and blenders are among the household equipment being built. The key challenges in this business to ensuring performance dependability are technical assistance and industry-wide technological orientation. Improving one's capacity and expertise in the assembly and production of a vast array of electronic components and parts is vital. However, there is no private sector telecommunication equipment manufacturing industry in Bangladesh. Existing entrepreneurs, government officials, and professionals, however, feel an urgent need for diversification and modernization. The government is eager to provide and ensure development assistance for this sector. Bangladesh has nearly two decades of basic electronics experience. In recent years, European and Asian electronic companies have collaborated technically with their Bangladeshi counterparts to develop competitively priced electronic items. This has great expansion potential.

To address the country's telecommunications needs, the government has been creating and expanding the Bangladesh Telegraph and Telephone Board's systems and services. Private sector operations in rural telephony, paging, cell phones, and riverine radio trunking are currently permitted. Currently, seven private service providers serve

approximately 100,000 customers. The government has authorized the expansion of 300,000 digital telephone lines in Dhaka with participation from the private sector through open bidding. Consistent with the national strategy as a whole, the deregulation of the telecommunications sector will continue. However, the government retains the ability to select the number of economically viable contracts for certain services. The strategy is to give all competitors an equal and rational opportunity.

Human resources that are skilled, easily trainable, and inexpensive are the primary cost advantages of establishing an electronic business in Bangladesh. Increasing domestic demand and access to international markets are two of the most alluring factors for investors. In economies such as Malaysia, Singapore, Korea, and Thailand, electronics contribute significantly to the gross domestic product. They are urging the electronic industry to transition from low-end assembly operations with a high import content of inputs to upstream activities with greater value-added. In this setting, relocation, overseas investment, and collaborative ventures with Bangladeshi firms may be profitable strategies. To leverage their comparative advantages, significant foreign investment from these nations is strongly encouraged.

According to Statista (2023), the revenue of the smartphone market in Bangladesh will amount to $5.86 billion in the year 2023. It is anticipated that the market will expand by 8.23 percent annually (CAGR 2023-2028). The market is expected to reach a value of $8.70 billion, being one of the fastest growing countries in the world.

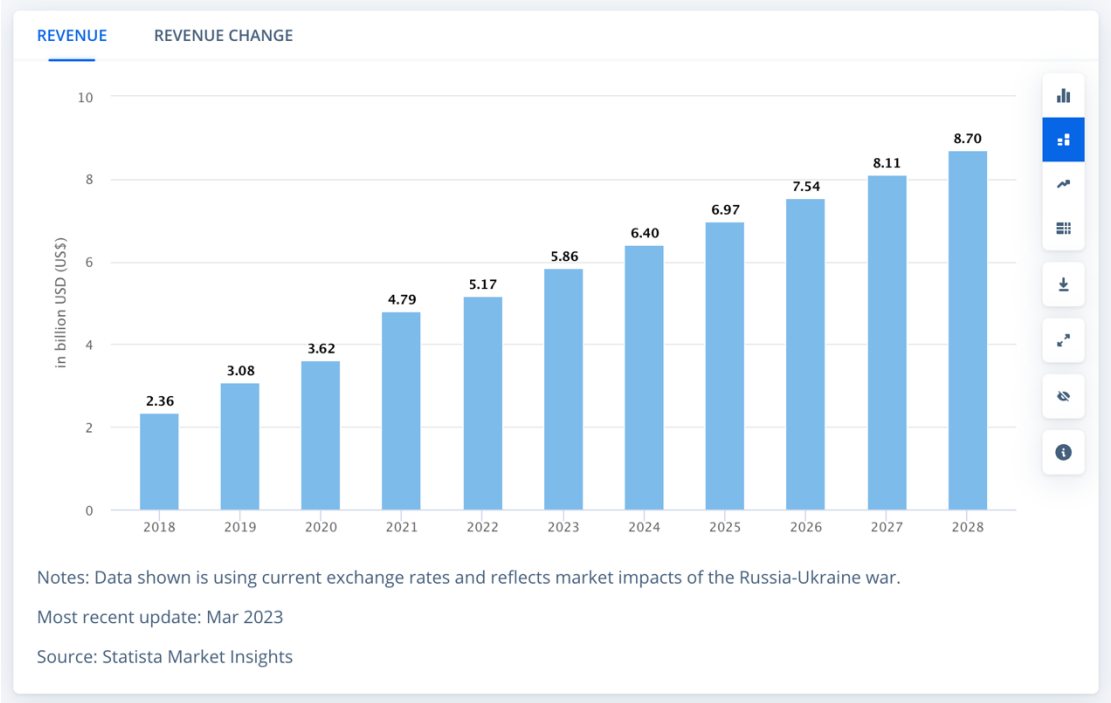


Figure 3-16: Revenue Market Size for Smartphones in Bangladesh (Statista, 2023)

Compared to other countries around the world, China brings in the largest revenue ($119.20 billion in 2023). Regarding the numbers for the entire population of Bangladesh in 2023, revenue of $34.58 USD is generated per individual, which is expected to go up to $49.30 USD by 2028.

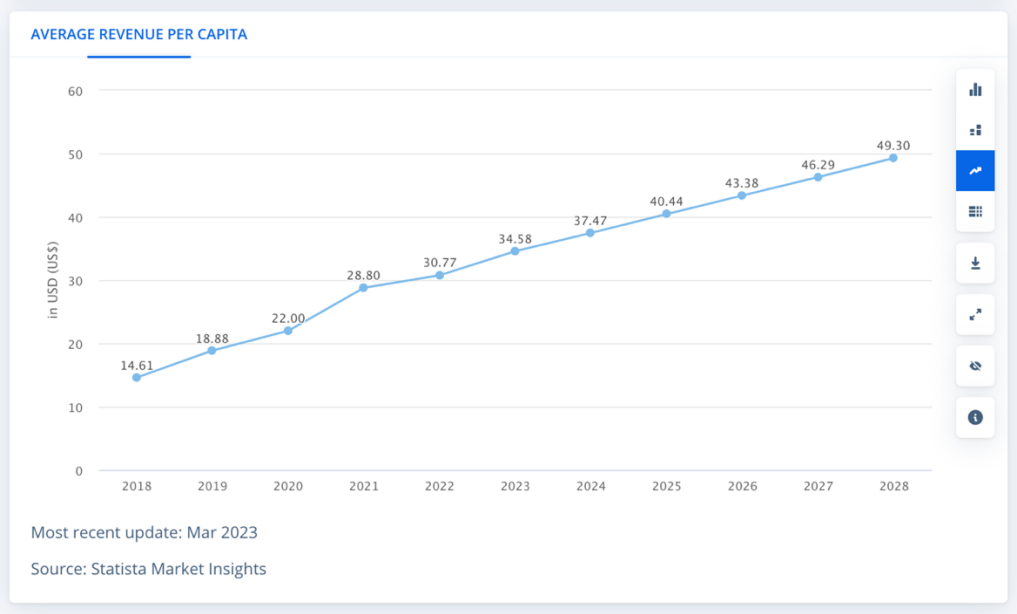


Figure 3-17: Average Revenue per Capita in Bangladesh (Statista, 2023)

The average price per unit stands at 254.60 USD per piece in 2023 for smartphones in Bangladesh, and it is anticipated that the price will go up to 297.40 USD per piece due to currency devaluation and raw material price increases in the smartphone sector.

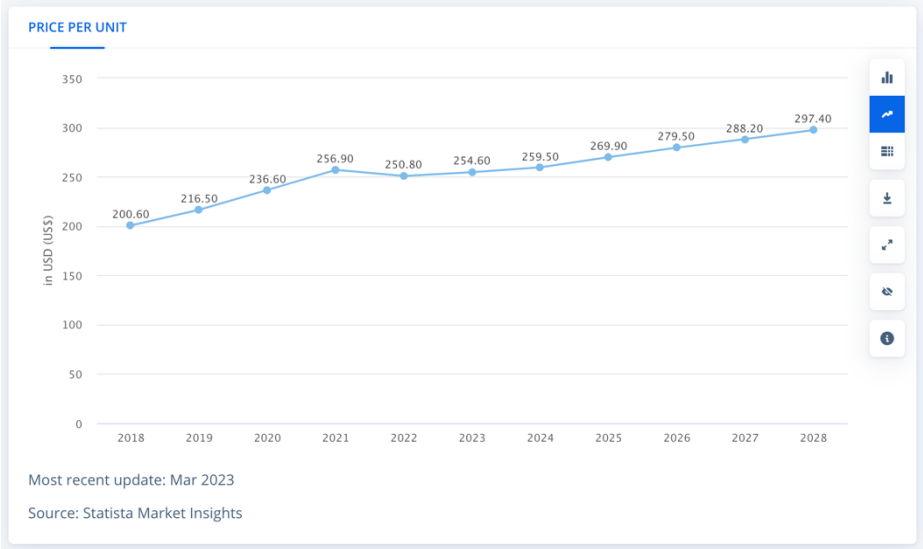


Figure 3-18: Price per Unit of Smartphone in Bangladesh (Statista, 2023)

By the year 2028, it is anticipated that the volume of the market for smartphones will amount to 29.26 million pieces. It is anticipated that the volume of the Bangladesh market for smartphones will increase by 7.3% in 2024.

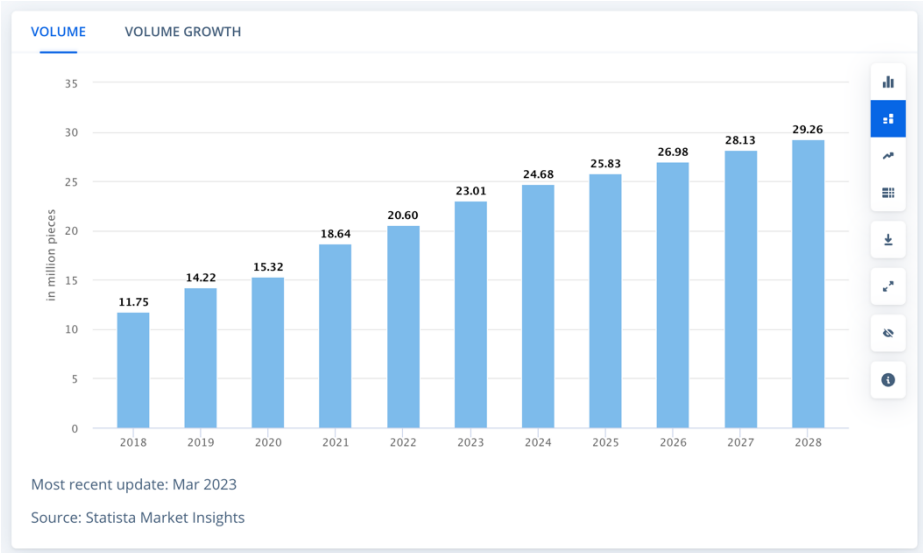


Figure 3-19: Volume Market Size of Smartphones in Bangladesh (Statista, 2023)

In the year 2023, it is anticipated that the volume of smartphones sold on a per-person basis will equal 0.14 pieces on average.

According to Statcounter Global Stats' data from May 2022 to May 2023 (Statcounter, 2023), Samsung, Xiaomi, Vivo, Realme, Oppo, Unknown brands, Huawei and Apple combined represent more than 85% of the market. While Samsung, Xiaomi and Huawei lost share in the last 12 months, Vivo, Realme, Oppo and Apple gained. The following table details the share change status.

Table 3-4: Mobile Handset Share Change Status

Brand	May 2022	May 2023	Share Change
Samsung	24.97	21.7	-3.27
Xiaomi	20.94	19.99	-0.95
Vivo	10.96	11.77	0.81
Realme	9.27	10.49	1.22
Oppo	8.28	9.08	0.8
Unknown	5.94	7.21	1.27
Huawei	4.92	3.44	-1.48
Apple	3.58	4.15	0.57

(Source: Adapted from Statcounter, 2023)

The following figure shows the monthly share trend of all mobile handset players in the market over 13 months, from May 2022 to May 2023.

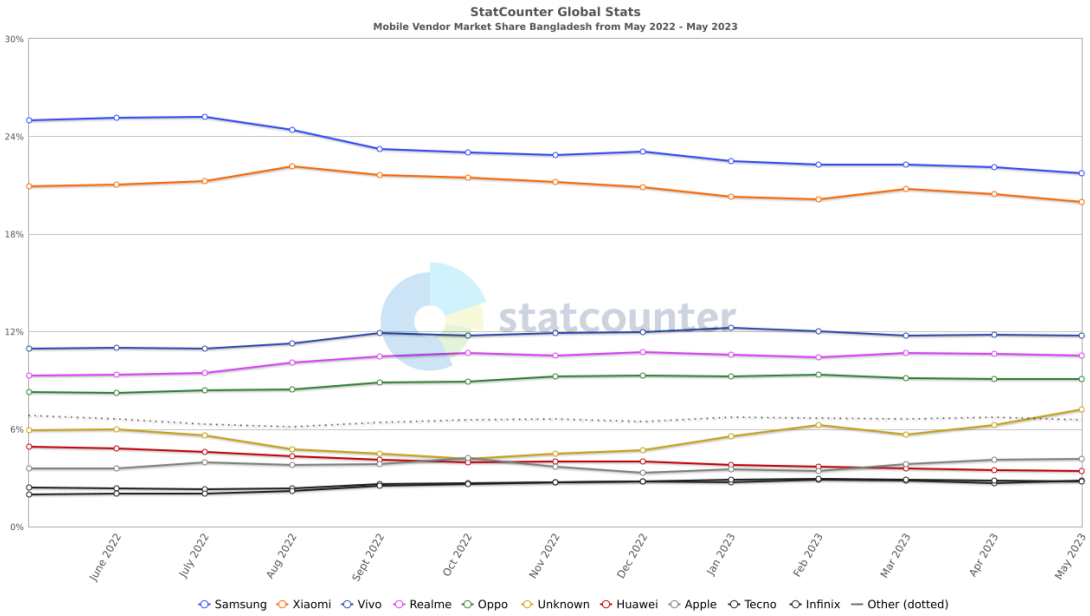


Figure 3-20: Mobile Handset Manufacturer Share Trend (Statcounter, 2023)

4.0 FINDINGS FROM QUALITATIVE AND PILOT STUDIES

This chapter focuses on the outputs that were derived from the FGDs and the pilot study that was done among the BoP consumers during the qualitative research phase of the study. It also presents the learnings that were gathered from marketers and digital marketing experts from the experience surveys and in-depth interviews that were done with them. The chapter then depicts the validation process of the trigger-barrier variables that were identified mainly through literature review with a few from FGDs.

4.1 Findings from FGDs with BoP Consumers

The five meetings with small, focused groups were done with two clear objectives. The first objective was to gather as much insight as possible to develop a robust and easy to understand survey questionnaire regarding mobile handset usage, digital media usage, and other related issues. The second objective was to validate the triggers and barriers identified through the literature review and perform additions and deletions to the list.

Accordingly, given the researcher's own background working for mass brands and being an entrepreneur in the digital marketing and advertising industry, the researcher himself led the discussions while a graduate assistant took notes. The discussions started with ice-breaking and developing a demographic understanding of the FGD participants. The participants were a decent mix of low-level workers from the NGO sector, garment sector, private companies, government sector, day laborers, and small entrepreneurs. A good balance of gender and age was maintained. Education-wise, most of them belonged to the group of students with less education than the HSC equivalent.

The conversation then naturally shifted to the digital devices that participants own or do not own, ranging from mobile phones to laptops to smart televisions that may be used to access digital media and consume digital material. Participants who did not own a smartphone were questioned about their intention and need to get one. For those with access to digital devices, there were questions about their digital device and mobile handset, i.e., smartphone purchase and usage patterns. Both groups were asked about

the characteristics they desire, the reason for utilizing a device, purchasing influencers, location of purchase, source of funds, and after-sales requirements. All of these measures were used to establish critical knowledge for developing a solid questionnaire for the final survey.

The participants eventually engaged in a comprehensive debate about the use and non-use of digital media. In this session, general topics regarding digital media are tackled. This section explored the goal of utilizing digital platforms, the frequency of usage, content consumption behaviour, changes in usage behaviour throughout COVID-19, and the influence of various variables, such as price, access, and utilization requirements. People who did not utilize digital media were also asked about their use of alternative media. This entire conversation naturally turned to the exposure of digital media users and non-users to marketing and promotional materials for mobile phones. It was discussed where they had seen advertising, reviews, or other marketing material for mobile phones, as well as what types of communication channels and content affected their purchasing decisions. This aided in determining the audience's degree of awareness regarding the various marketing techniques and aspects that marketers believe play a part in using digital media to promote mobile phones to customers at the base of the pyramid.

The final segment of the FGDs handled the most critical component of the entire research: the triggers and barriers that determine intent to use digital media among this group of consumers. Both users and non-users of digital media and mobile handsets were given equal importance in discussing and finalizing the trigger-barrier variables for “Intent to Use.” A comprehensive list of which variables were either identified or validated through FGDs is mentioned in a detailed table in the last segment of this chapter.

4.2 Findings from the Pilot Study with BoP Consumers

Initially, the researcher felt it sensible to undertake the quantitative pilot study in the Dhaka slum area of Rayer Bazar, as described in the Methodology chapter. As a struggling pioneer in the digital marketing business, the researcher found it difficult to persuade marketers of various products or services to use digital media for high-end or

even middle-of-the-pyramid consumers. Consequently, the primary objective of the pilot study was to re-examine the research's reasoning for this doctoral thesis. The purpose was to determine whether sufficient reasoning existed to evaluate the prospect of employing digital media as a marketing tool for the BoP, despite the fact that the majority of marketers believed that the BoP was not yet ready for digital media. While the entire analysis is included in Appendix B, the main relevant findings of the pilot research were as follows:

4.2.1 Demographic Characteristics of the Pilot Study Respondents

74% of the respondents were female, while 49% only had education up to the primary level, and 24% were uneducated. 50% of the respondents were within the age range of 18–24, while 24% of the respondents within that group had only primary-level education. 22% of the respondents with primary education had incomes below 10,000 takas, while 19% of them had incomes below 15,000 takas. Of the total, 40% of the people had a below-10,000-taka income and a low level of education. 50% belong to the age group of 28-24 and 35% to 24-35, and of the respondents, a staggering 50% were housewives, followed by 10% students.

4.2.2 Phone Types and Features

It is evident from the data that smartphone users belong to a relatively young population group of 18–24 years of age, and the income group has a bearing on the type of phone chosen by consumers. The relative penetration of feature phones is higher among lower-income populations. More importantly, smartphone penetration was found to be 32%. Feature phone users prefer Symphony (43%) as a brand followed by Nokia (22%) and Smartphone users prefer Symphony (52%) and Samsung (26%). For a feature phone buyer, price (54%) and his or her comfort (22% of using the phone) get top priority, followed by ease of using the product and some sort of honour in owning the brand. For smartphone owners, being able to own a new model (43%) of phone is the most important aspect. Battery capacity followed by size of display are top priorities for choice among feature phone users, while smartphone users look for camera quality followed by multimedia function when choosing a specific model of a brand.

4.2.3 Phone Usage Behaviour

From the data, 58% of smartphone users use the internet, whereas only 5% of feature phone users have said they do. Among the different types of phone owners, a staggering 21% (mobile Internet + WIFI) use the internet. More importantly, it is clear that the conversion to smartphones leads to more internet usage. The top reason for using the internet is Facebook, followed by online calling among both smartphone and feature phone users. The mean usage time for mobile phones per day for males and females is significantly different at the 95% confidence level, with a mean value of 4.27 hours for males versus 3.03 hours for females. From the chi-square test, we conclude that there is an association between income and the type of phone used. We conclude that the mean price of a phone is significantly different for at least one of the income groups.

4.3 Findings from Interviews with Marketers

The unstructured experience surveys and in-depth interviews with marketers of the telecom and mobile handset industries, as well as owners and strategic planners of the digital marketing industry, were real eye-openers for the researcher. The objectives were to: (i) determine the status of digital marketing relative to traditional marketing in the industry; (ii) determine the positive or negative perspective of marketers when it comes to evaluating the potential of using digital media as a marketing tool for the BoP; and (iii) determine the applicability of the trigger-barrier factors identified through the literature review and FGDs.

The interviews led to some significant analytical openings for the research topic since the people interviewed are players who have been actively working for all segments of the pyramid. They have been working relentlessly to try and crack the secret formula of how to penetrate new, untapped markets for the BoP and at the same time increase the market share of their existing business portfolio. The mobile phone handset industry is a very competitive market, as there are a lot of players who are constantly trying to get a share of the pie from their competitors and increase their brand value and market share. In the pursuit of this chase, they have shared a handful of pieces of information that are significantly relevant to the research and have helped the researcher understand the current scenario of how the marketers are addressing the BoP consumer market

segment and particularly identify how important it is to indulge them in the right practice of using the digital media industry to reach their business targets.

Both marketers and digital marketing specialists agree that BoP makes a substantial impact (more than 30 percent of their portfolio in some cases). However, the way they assess if BoP is contributing significantly to their portfolio is based on the fact that the lower-end cellular phone models in their portfolio, such as the Samsung AO series, Xiaomi's Redmi A series, Vivo Y0 series, or Realme C series phones, etc., that cost between taka 8,000-15,000 approximately, contribute significantly to their overall sales. However, marketers showed no active interest in understanding the precise demographic, behavioural, or psychographic segmentation of BoP customers.

Marketers assume that the BoP is very price-sensitive, and that price competition is the key to effective market penetration. According to a mobile phone handset industry expert, "Although there are a good number of individuals at the bottom of the pyramid in our country utilizing mobile phones, the majority of consumer conversion has occurred at retail points through price offers vs. competition." The interview analysis revealed that marketers believe that the use and effect of digital media on low-income customers are less important. In their opinion, the influence of digital media has been quite linear. Consumers at the BOP are less likely to be aware of the best practices for using digital media and the range of information available on platforms to make a purchasing decision. Furthermore, the experts themselves have relatively limited data on customer usage patterns and behaviour on digital platforms. As a result, mobile handset firms' involvement in digital media targeting BOP consumers has been dispersed rather than systematic. They also stated that ATL and television media have been more effective than digital channels because of a lack of understanding about the use of digital media. Another finding from the experience surveys and in-depth interview sessions is that the pattern of utilizing mobile handsets in the BOP is that each home has one single smart phone that serves an average family of four.

During discussion with the marketers, one generalized understanding that was revealed was that the mass (and not necessarily BoP, to be precise) are using Facebook and YouTube as good sources of entertainment. Capitalizing on this fact, marketers have tried to steer information through these channels. However, the percentage investment

is still low compared to their level of investment in retail channels and TV. Moreover, platforms like Imo and TikTok, which are generally known to be famous among the masses, and BoP are just being used as "reach" top-up media whenever additional budget is available. It was also seen that marketers are driven to use the "old" platforms by their top leadership team in many cases, as some of the younger marketers revealed. Lack of understanding among the first- and second-generation leaders of these mobile handset companies often leads to not even experimenting with these new platforms. Essentially, there is no strategic approach that is being taken by the marketers exclusively for BoP when it comes to digital media. Marketers still believe that the factors that contributed to the barrier to using digital media were the pricing of internet packages and BoP's general capability and access to digital platforms. Hence, there has been a significant amount of leniency toward traditional media. There has not been any systematic communication funnel, and there have been untapped touch points that have not yet been identified and addressed by the marketers. They did not yet make an active effort to understand the triggers and barriers of the BoP consumers from a strategic point of view as well as a product point of view. There have been irregular interventions in the digital channel with information that could not inform, educate, or, lastly, convert the people at the bottom of the pyramid towards the brand.

Moreover, when the discussion turned towards the identification and validation of the triggers and barriers of intent to use, most marketers were actively proposing the barriers. According to their understanding, they believed that eventually digital would reach the BoP, but as of now, that is not the case according to their belief system and supporting data system. In essence, although the digital experts and marketers of the mobile handset industry have been using digital media as a communication tool, there was no significant strategic route set for the BOP. The mobile phone handset marketers are yet to identify the true potential and value of digital media for the BOP, where they will be able to find sustainable results for their organization. The output of the trigger-barrier identification and validation process is summarized in the next section of the chapter.

4.4 Identification and Validation of Triggers and Barriers

The FGDs, the experience surveys, and in-depth interviews culminated in the identification and validation of the digital divide factors, i.e., the triggers and barriers that were expected to influence intent to use among the BoP consumers.

The following table summarizes all 5 parameters, 9 complex variables, and 46 simple variables and how they have been either identified or validated through different sources. While most of the items were identified through a literature review, there are some that had certain local nuances attached to them, and hence they were only included once they were identified or validated through consumer FGDs or through marketers' interview and/or experience surveys. There were five such variables: English knowledge not needed, inspiration through others' creative expressions, access to digital services through others, impact of assistance in using platforms, and digitization of local services.

Table 4-1: Sources of Identification and Validation of Variables

Legend: I- Identified, V- Validated

Parameter	Complex Variable	Simple Variable	Literature Review	Consumers	Marketers
Mental Access	Mental Access Trigger	Ease of learning	I	I, V	V
		English knowledge not needed	-	I	V
		Communication with relatives	I	I	V
		Not seen as luxury	I	I	-
		Benefits overshadow demerits	I	V	V
		Utility outshines complexity of usage	I	I	V

Parameter	Complex Variable	Simple Variable	Literature Review	Consumers	Marketers
		Inspiration through other's creative expressions	-	I	V
		Urge to express creativity	I	I, V	V
		Plethora of choice in media	I	I, V	V
	Mental Access Barrier	Role of age	I	I, V	V
		Not safe for women	I	I, V	V
		Personality traits	-	I	I, V
		Health concern	I	I, V	V
		Irrelevance of digital media	I	I, V	V
		Access to digital services through others	-	I	V
		Anxiety to upgrade	I	V	V
		Fear of complications in life	I	V	V
		Impact of assistance in using platforms	-	I	V
		Preference for traditional method	I	I, V	I, V
Materials Access	Materials Access Trigger	Reducing price of internet	I	I, V	I, V
		Impact of higher speed	I	I, V	I, V

Parameter	Complex Variable	Simple Variable	Literature Review	Consumers	Marketers
		Affordability of devices	I	I, V	I, V
	Materials Access Barrier	lower access to broadband internet	I	I, V	I, V
		Impact of poor network	I	I, V	I, V
Skill Access	Skill Access Trigger	Professional Requirement	I	I, V	I, V
		Getting things done remotely	I	V	V
		Ease of multi-tasking	I	V	V
		Assisted use for lifestyle	I	I, V	I, V
		Importance of Digital Services	I	I, V	I, V
Motivational Access	Motivation Trigger	Opportunity to express views	I	I, V	V
		One stop solution for multiple utilities	I	I, V	V
	Motivation Barrier	Difficulty of devices	I	V	V
		Fear of change	I	V	V
		Complications of the medium	I	V	V
		Having time in hand	I	V	V
Usage Access	Usage Access Trigger	Necessity of use	I	V	V
		Access to skill	I	V	-

Parameter	Complex Variable	Simple Variable	Literature Review	Consumers	Marketers
		Interest due to lifestyle utility	I	V	V
		Becoming Integral part of daily life	I	V	V
		Must have for households	I	V	-
		Scope of personal development	I	I, V	I, V
		Access to internet	I	I, V	I, V
		Customized services for user groups	I	V	V
		Digitization of local services	-	I	V
	Usage Access Barrier	Choice overshadows necessity	I	V	V
		Support services for using digital media	I	V	V

Once the identification and validations were done, their representative Likert scale statements, both in Bangla and English, needed to be endorsed. Bangla for clarity of understanding among BoP during the questionnaire survey and English for analysis purposes, so that the meaning and essence of the Likert statements were kept as close to Bangla as possible. Hence, all the variables and their representations were discussed with BoP consumer participants of the FGDs, the marketers, and the digital experts of the industries during experience surveys and interviews. The following table summarizes the parameters, the variables, and their representative English and Bangla translations.

Table 4-2: Summary of Parameters, Variables and Likert Statements

Parameter	Complex Variable	Simple Variable	Likert Scale Statement (English)	Likert Scale Statement (Bangla)
Mental Access	Mental Access Trigger	Ease of learning	Using smartphone and internet can be learned quickly even without any prior experience	স্মার্টফোন ও ইন্টারনেট এর ব্যবহার আগে থেকে না জানলেও সেটির ব্যবহার দ্রুত শিখে নেয়া যায়
		English knowledge not needed	Knowing English is not mandatory for using smartphone and internet	ইংরেজি জানা না থাকলেও স্মার্টফোন ও ইন্টারনেট ব্যবহার করা যায়
		Communication with relatives	Internet can facilitate continuous communication with distant family members	পরিবারের কেউ দূরে থাকলে ইন্টারনেটের কল্যাণে সারাক্ষণ যোগাযোগ রক্ষা করা যায়
		Not seen as luxury	The use of smartphones and internet is no longer a luxury	স্মার্টফোন ও ইন্টারনেট ব্যবহার এখন আর বিলাসিতা নয়
		Benefits overshadow demerits	The demerits of using digital platforms are negligible compared to the benefits	ডিজিটাল মাধ্যম ব্যবহারের উপকারের তূলনায় ক্ষতির দিক নগন্য
		Utility outshines complexity of usage	Despite the difficulties one may face, everyone must start using digital platforms	ডিজিটাল মাধ্যমের উপযোগীতার এতো বেশি যে ব্যবহার শুরুতে জটিল হলেও এর ব্যবহার শুরু করা উচিৎ
		Inspiration through other's creative expressions	Seeing other people publishing their creative works through digital media, people are becoming gradually interested to use digital platforms	ইন্টারনেটে অন্যের ক্রিয়েটিভ লেখা, ছবি কিংবা ভিডিও প্রকাশের বিষয়টি অনেককেই ইন্টারনেট ও ডিজিটাল মাধ্যমে আগ্রহী করে তুলছে
		Urge to express creativity	Opportunity to express creativity and inner voice to mass audience, can influence my decision to adopt digital platforms	ডিজিটাল মাধ্যমে নিজের সৃষ্টিশীল কাজ তৈরির সুযোগ বা মানুষকে সেসব জানানোর/দেখানোর সুযোগ থাকলে সেই সুযোগ নিতে আগ্রহী

Parameter	Complex Variable	Simple Variable	Likert Scale Statement (English)	Likert Scale Statement (Bangla)
		Plethora of choice in media	Digital platforms have wide range of options to do whatever the users want	ডিজিটাল মাধ্যমে যার যেমন ইচ্ছে তেমন সব মাধ্যম ব্যবহার করার সুযোগ রয়েছে
	Mental Access Barrier	Role of age	Smartphone usage is compatible for youths only	স্মার্টফোন ব্যবহার কেবল তরুণদের সাথেই মানানসই
		Not safe for women	It is unsafe for women to use smartphones and internet connection	নারীদের জন্যে স্মার্টফোন ও ইন্টারনেট ব্যবহার অনিরাপদ
		Personality traits	Only the extroverts in real world uses social media (Facebook, TikTok, Emo)	কেবল বাস্তবে মিশুক মানুষেরাই সামাজিক যোগাযোগ মাধ্যম (ফেসবুক, টিকটক, ইমো) ব্যবহার করে
		Health concern	Using Smartphones and internet can be harmful for physical and mental health	স্মার্টফোন ও ইন্টারনেট শারীরিক ও মানসিক স্বাস্থ্যের জন্যে ক্ষতিকর
		Irrelevance of digital media	One can live without using any sort of digital media	কোনো প্রকার ডিজিটাল মাধ্যম ব্যবহার না করেও চলা সম্ভব
		Access to digital services through others	Availability of help from others to avail digital services impacts interest of users negatively	ডিজিটাল প্ল্যাটফর্ম ব্যবহারে পরিচিত অন্যকারো সহায়তা পাওয়া যায় বলে ব্যক্তিগত ভাবে স্মার্টফোন বা ইন্টারনেট ব্যবহারের আগ্রহ কম
		Anxiety to upgrade	Comfort in using one particular digital device or medium hinders the interest upgrade to latest options	কোন ডিজিটাল ডিভাইস বা মাধ্যমে অভ্যস্ততা চলে আসলে নতুন মাধ্যম ব্যবহারে আগ্রহ কমে যায়
		Fear of complications in life	Using digital media and devices complicates life	ডিজিটাল মাধ্যম ও ডিভাইস ব্যবহারে জীবনযাত্রা জটিল হয়ে যায়
		Impact of assistance in using platforms	Access to digital services through family members or acquaintances affects personal interest to use digital platforms on their own	পরিবার বা পরিচিত কারো মাধ্যমে ডিজিটাল সেবা নেয়া যায় বলে ব্যক্তিগত ভাবে ডিজিটাল মাধ্যম ব্যবহারের আগ্রহ কম থাকে

Parameter	Complex Variable	Simple Variable	Likert Scale Statement (English)	Likert Scale Statement (Bangla)
		Preference for traditional method	Instead of putting effort in digital platforms to get things done, I prefer to avail it through traditional options (reading newspaper instead of new search in google)	ডিজিটাল মাধ্যমে কোন কিছু খুঁজে নেবার চেয়ে বরং নিশ্চিত জেনে কোন নির্দিষ্ট স্থান থেকে সেটি খুঁজে পাওয়াই সহজ (যেমন ইন্টারনেটে সংবাদ না খুঁজে টিভি কিংবা পত্রিকা থেকে সেটি জানা, ই-কমার্সে কেনাকাটা না করে শপিং মলে যেয়ে দোকান থেকে কেনা ইত্যাদি)
Materials Access	Materials Access Trigger	Reducing price of internet	Lowering the price of internet connection can fuel the growth of digital platform usage	ইন্টারনেট ব্যবহারের খরচ নাগালের মধ্যে থাকলে ইন্টারনেট নির্ভর ডিজিটাল প্ল্যাটফর্ম ব্যবহার দিন দিন বৃদ্ধি পাবে
		Impact of higher speed	Availability of high-speed internet connection can make some digital platform more interesting (Movie streaming, cloud gaming etc.)	দ্রুতগতির ইন্টারনেট সংযোগ থাকলেই ডিজিটাল মাধ্যম ব্যবহার অনেক আকর্ষণীয় হয়ে উঠবে
		Affordability of devices	Affordability of digital device and internet connection will increase the usage of digital platforms	স্মার্টফোনসহ ডিজিটাল ডিভাইস কেনা সহজ হলে (দাম কমানো, কিস্তিতে কেনার সুবিধা) এসবের ব্যবহার বাড়বে
	Materials Access Barrier	lower access to broadband internet	Unavailability of broadband internet connection in my locality has barred the growth of digital platform users	স্থানীয় ভাবে সহজলভ্য ব্রডব্যান্ড সংযোগ না থাকায় অনেকেই ডিজিটাল ডিভাইস ও মাধ্যম ব্যবহার করেনা
		Impact of poor network	Usage of digital platforms in my locality is low as mobile network quality is poor	স্থানীয় ভাবে মোবাইল নেটওয়ার্ক দূর্বল থাকায় ডিজিটাল মাধ্যমের ব্যবহার কম
Skill Access	Skill Access Trigger	Professional Requirement	Using smartphone and internet can be beneficial for professional requirement	পেশাগত প্রয়োজনে স্মার্টফোন ও ইন্টারনেট ব্যবহারের সুফল রয়েছে

Parameter	Complex Variable	Simple Variable	Likert Scale Statement (English)	Likert Scale Statement (Bangla)
		Getting things done remotely	Smartphone and internet usage can empower us with getting lot of work done remotely	স্মার্টফোন ও ইন্টারনেট সংযোগ থাকলে ঘরে বসে দৈনন্দিন অনেক কাজ সম্পন্ন করা যায়
		Ease of multi-tasking	Using smartphone and internet can facilitate users with multi-tasking	যেকোনো সময়ে বা স্থানে ব্যবহার করা যায় বলে অন্যান্য কাজের ফাকেও ডিজিটাল মাধ্যম ব্যবহারের সুফল পাওয়া যায়
		Assisted use for lifestyle	Even if assistance is required, using digital platforms has become an integral part of our lifestyle	প্রয়োজনে অন্যের সহায়তায় হলেও ডিজিটাল মাধ্যম ব্যবহার করা জীবন যাত্রার অপরিহার্য অংশ
		Importance of Digital Services	Irrespective of user skills, using the utility digital platforms has become a part of our lifestyle	ডিজিটাল মাধ্যম ব্যবহারের দক্ষতা না থাকলেও ইন্টারনেট নির্ভর ডিজিটাল সেবা গ্রহণ অপরিহার্য
Motivational Access	Motivation Trigger	Opportunity to express views	Opportunities to express inner voice has made more and more people interested to use digital platforms	ক্রিয়েটিভিটি বা মনের ভাব প্রকাশের সুবিধা থাকায় ডিজিটাল মাধ্যম ব্যবহারের প্রতি আগ্রহী মানুষের সংখ্যা বাড়ছে
		One stop solution for multiple utilities	As digital platforms are bringing more and more services access points under a single platform, interest for using digital media is increasing	ডিজিটাল মাধ্যমে বহুবিধ সেবা এক সাথে পাওয়া যায় বলে এর ব্যবহার বাড়ছে
	Motivation Barrier	Difficulty of devices	Latest digital devices and platforms can be hard to learn for beginners	বর্তমানের ডিজিটাল ডিভাইস ও মাধ্যমের ব্যবহার একেবারে নতুন কারো জন্যে ব্যবহার শেখার উপযুক্ত নয়
		Fear of change	Even if it is a necessity, I have no interest to learn using digital platforms.	নিজের প্রয়োজন থাকলেও নতুন কিছুর ব্যবহার শেখার আগ্রহ নেই

Parameter	Complex Variable	Simple Variable	Likert Scale Statement (English)	Likert Scale Statement (Bangla)
		Complications of the medium	Complicated steps in availing digital services have affected my interest to avail digital services	একাধিক ধাপ অনুসরণ করে ডিজিটাল মাধ্যমে সেবা গ্রহণের জটিলতার কারণে ডিজিটাল মাধ্যম ব্যবহারের কোন আগ্রহ নেই
		Having time in hand	The fear of wasting time in digital platforms has barred people from using digital platforms	ব্যস্ততার কারণে সময় নষ্ট হবার ভয়েই ডিজিটাল মাধ্যম ব্যবহারের প্রতি আগ্রহ কাজ করেনা
Usage Access	Usage Access Trigger	Necessity of use	Using smartphones and internet has become a necessity	স্মার্টফোন ও ইন্টারনেটের ব্যবহার এখন দৈনন্দিন প্রয়োজনে পরিণত হয়েছে
		Access to skill	Anyone can learn using digital services via internet from the people around	চাইলে আশপাশের পরিচিতদের কাছ থেকে ইন্টারনেট নির্ভর ডিজিটাল মাধ্যম ব্যবহার শেখার সুযোগ রয়েছে
		Interest due to lifestyle utility	As digital media make our life easy, the Interest to use internet and smartphones is increasing	ইন্টারনেট নির্ভর ডিজিটাল মাধ্যম ব্যবহার করে জীবনযাপন সহজ হয় বলে ইন্টারনেট ও স্মার্টফোন ব্যবহারের আগ্রহ বাড়ছে
		Becoming Integral part of daily life	Using digital platforms has become a daily routine for many.	ডিজিটাল মাধ্যম ব্যবহার অনেকের জন্যেই দৈনন্দিন রুটিনে পরিণত হয়েছে
		Must have for households	Every family must have at least one digital device with internet connection to use digital media	প্রতি পরিবারেই অন্তত একটি ইন্টারনেট সংযোগসহ ডিজিটাল মাধ্যম ব্যবহারের সুযোগ থাকা উচিৎ
		Scope of personal development	Using digital platforms can contribute to professional and academic development	পেশাগত ক্ষেত্রে কিংবা ছাত্রদের পড়াশোনার ক্ষেত্রে ডিজিটাল মাধ্যম ব্যবহারে উন্নতি করা সম্ভব
		Access to internet	Making internet connection more accessible will enhance the number of users	ইন্টারনেট সংযোগ সহজলভ্য হলে ডিজিটাল মাধ্যম ব্যবহার বাড়বে

Parameter	Complex Variable	Simple Variable	Likert Scale Statement (English)	Likert Scale Statement (Bangla)
		Customized services for user groups	Availability of paid services has enhanced the demand for using digital platforms	পেইড ডিজিটাল সেবা (অনলাইন স্বাস্থ্যসেবা, ক্লাস লেকচার, ধর্মীয় শিক্ষা) গ্রহণের সুবিধা থাকায় ডিজিটাল মাধ্যমের চাহিদা বেড়েছে
		Digitization of local services	Making essential local services available in digital platforms can grow internet users.	স্থানীয় পর্যায়ের সেবা সমূহ ডিজিটাল মাধ্যমে পাওয়া গেলে ডিজিটাল মাধ্যম ব্যবহার বাড়বে (যেমন জেলা পর্যায়ের দোকান থেকে অনলাইনে কেনাকাটা, মেয়র/চেয়ারম্যান অফিস থেকে সনদ সংগ্রহ ইত্যাদি)
	Usage Access Barrier	Choice overshadows necessity	Utilizing digital media is a matter of choice, not a necessity	ডিজিটাল মাধ্যম ব্যবহার করা কোনো প্রয়োজন নয়, বরং পছন্দ অপছন্দের বিষয়
		Support services for using digital media	Many people are deprived of availing digital platform-based services as they lack things like not having MFS account/Debit card (bars people from availing paid video streaming services)	ডিজিটাল মাধ্যমে অর্থ প্রদান করে কোন সেবা নেবার উপায় না থাকায় অনেকেই সেই সেবা থেকে বঞ্চিত (অনলাইনে স্বাস্থ্যসেবা কিংবা কেনাকাটার জন্যে বিকাশ/নগদ অ্যাকাউন্ট না থাকা, ডেবিট কার্ড না থাকা ইত্যাদি)

5.0 FINIDINGS FROM QUESTIONNAIRE SURVEY

This chapter discusses the data analysis and findings based on the survey of 421 mobile phone users among the base of the pyramid population of Bangladesh. The chapter describes the participants' basic characteristics in terms of demography and psychography, their choice of phones and reasons, factors involved in the decision-making process, mobile handset purchase and usage behaviour, the impact of after-sales on their choice of phone brands, internet usage behaviour, digital platform usage behaviour, content consumption, media preference for advertisements, etc.

5.1 Basic Characteristics of Respondents

The basic characteristics of the respondents followed the national ratio in terms of gender, location, and age groups. The following segments describe the audience demographics in detail.

5.1.1 Gender & Area wise Participants

Among the participants of the survey, 213 of the total 421 respondents are female (which accounts for 50.6%), while 208 of the respondents are male (which accounts for 49.4%). The table that follows is a cross-tabulation of gender vs. area. It provides information about the distribution of respondents based on their gender and whether or not they live in urban or rural areas.

In terms of location, there are 104 respondents who live in urban regions, which accounts for 24.7 percent of the total, while 317 respondents, which accounts for 75.3 percent of the total, live in rural areas, representing the ratio that was enforced during the sampling procedure.

Table 5-1: Gender Versus Area Cross-Tab

Gender	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Female	45	10.69	168	39.90	213	50.6
Male	59	14.01	149	35.39	208	49.4
Total	**104**	**24.70**	**317**	**75.30**	**421**	**100**

(Source: SPSS Analysis Output)

Investigating the relationship between gender and location, it was discovered that just 45 of the female respondents (10.69 percent) currently reside in metropolitan areas, whereas 168 of them (39.90 percent) call rural places their permanent home. The number of male respondents who live in urban areas is 59, which is 14.01 percent, and the number who live in rural areas is 149, which is 35.39 percent. These numbers give an idea of how people of different genders are distributed in urban and rural locations. More female samples were included in the research to represent their larger proportion of the population. In addition, a sizeable representation of the rural population was included in the research sample.

5.1.2 Age Group & Gender wise Participants

Analysing the age groups, the respondents are categorized into nine different categories. The age group with the highest representation is 15–19, with 73 respondents (17.3%). This group is followed by the 25–29 age group, with 68 respondents (16.2%), and the 20–24 age group, with 60 respondents (14.3%). The lowest represented age groups are 50–54 and 55+, each comprising 24 respondents (5.7%) in total. The following figure represents age group-wise participants, providing insights into the distribution of respondents based on their age as per the population ratio of Bangladesh.

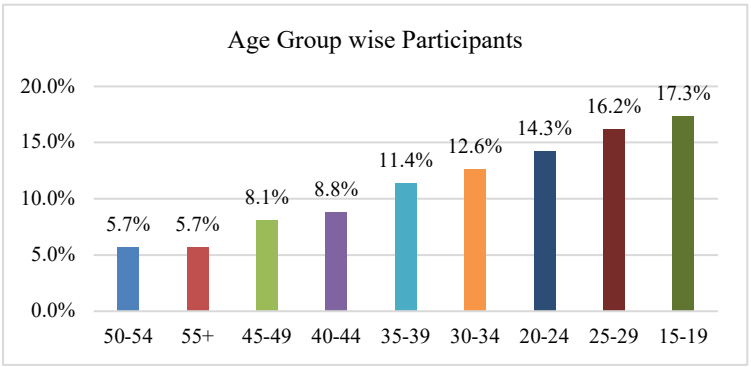


Figure 5-1: Age Group wise Participants

(Source: SPSS Analysis Output through Bar Chart graphed in Microsoft Excel)

Breaking down the data by gender, it can be observed that, of the total female sample of 213, in the 15–19 age group, there are 34 female respondents (16.0%), and of the total male sample of 208, there are 39 male respondents (18.8%). Similarly, in the 20–24 age group, there are 38 female (17.8%) and 22 male respondents (10.6%). This pattern continues for the remaining age groups. Please see the following table:

Table 5-2: Age Group Gender Cross-Tab

Age Group	Female		Male	
	No.	%	No.	%
15-19	34	16.0	39	18.8
20-24	38	17.8	22	10.6
25-29	33	15.5	35	16.8
30-34	26	12.2	27	13.0
35-39	23	10.8	25	12.0
40-44	17	8.0	20	9.6
45-49	18	8.5	16	7.7
50-54	13	6.1	11	5.3
55+	11	5.2	13	6.3
Total	**213**	**100.0**	**208**	**100.0**

(Source: SPSS Analysis Output)

These figures provide valuable insights into the demographic composition of the study sample, allowing researchers to understand the distribution of respondents across different age groups and genders. The data suggests that there is a relatively balanced representation of both male and female respondents across various age categories, facilitating a comprehensive analysis of the research findings.

5.1.3 Education Information Versus Gender Analysis

Analysing the last completed degree, the respondents are categorized into different educational levels. The highest representation is in the "JSC/Equivalent" category, with 88 respondents (20.9%), followed by the "Completion of Primary Education" category, with 80 respondents (19.0%). This is followed by the Higher Secondary (HSC/Diploma/Equivalent) category with 77 respondents (18.3%) and the "Secondary Pass (SSC/Equivalent)" category with 68 respondents (16.2%). On the other hand, the lowest represented category is “Able to read and write English with 2 people (0.5%). An interesting category was "Able to remember information and instructions by looking at symbols or colours," with 13 respondents (3.1%).

The table below shows a cross-tabulation of respondents' last completed degree and their gender, providing insights into the educational attainment of the participants.

Breaking down the data by gender, it can be observed that within each educational category, there is a distribution of female and male respondents. For example, in the

"Completion of Primary Education" category, there are 54 female respondents (25.4%) and 26 male respondents (12.5%). Similarly, in the "JSC/Equivalent" category, there are 40 female respondents (18.8%) and 48 male respondents (23.1%). This pattern continues for the remaining educational categories.

Table 5-3: Cross-Tabulation of Last Completed Degree and Gender

Last Completed Degree	Female		Male		Total	
	No.	%	No.	%	No.	%
JSC/ Equivalent	40	18.8	48	23.1	88	20.9
Completion of primary education	54	25.4	26	12.5	80	19
Higher Secondary (HSC/Diploma/Equivalent)	42	19.7	35	16.8	77	18.3
Secondary Pass (SSC/Equivalent)	37	17.4	31	14.9	68	16.2
Bachelor's/Degree/Equivalent	9	4.2	32	15.4	41	9.7
Only able to read and write In Bengali	9	4.2	12	5.8	21	5
Post-Graduate/Equivalent	2	0.9	13	6.3	15	3.6
Unable to read and write Bengali and English	12	5.6	4	1.9	16	3.8
Able to remember information and instructions by looking at symbols/colours	7	3.3	6	2.9	13	3.1
Able to read and write Bengali and English	1	0.5	1	0.5	2	0.5
Total	**213**	**100**	**208**	**100**	**421**	**100**

(Source: SPSS Analysis Output)

These figures provide valuable insights into the educational background of participants, with a particular focus on the gender distribution within each educational level. The data suggests that there is a variation in educational attainment among the respondents, with different proportions of female and male respondents in each category.

5.1.4 Area wise Monthly Income Range

Analysing the monthly income, the respondents are grouped into different income brackets. The highest representation is in the "12500–13500" income range, with 184 respondents (43.7%). This is followed by the "11000–12500" income range, with 114 respondents (27.1%). On the other hand, the lowest represented income range is "8000-9500," with 30 respondents (7.13%). The following bar chart shows the percentages.

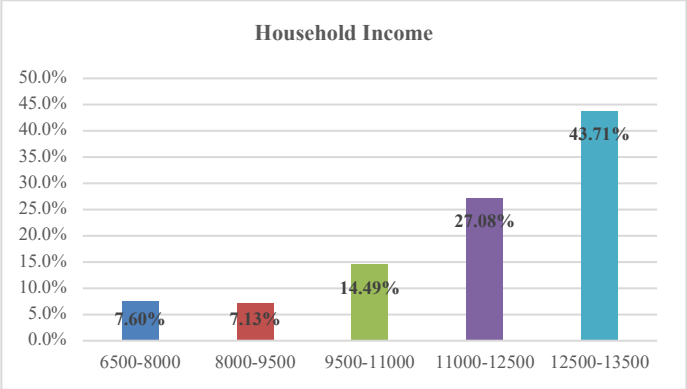


Figure 5-2: Household Income Range of Survey Respondents

(Source: SPSS Analysis Output through Bar Chart graphed in Microsoft Excel)

The table below presents a cross-tabulation of respondents' monthly income range and their area of residence (urban or rural). The data aims to examine the distribution of monthly income among the participants based on their respective areas.

Table 5-4: Monthly Income Range and Area Cross-Tab

Monthly Income Range	Urban		Rural	
	No.	%	No.	%
6500-8000	8	7.7%	24	7.6%
8000-9500	5	4.8%	25	7.9%
9500-11000	17	16.3%	44	13.9%
11000-12500	30	28.8%	84	26.5%
12500-13500	44	42.3%	140	44.2%
Total	104	100.0%	317	100.0%

(Source: SPSS Analysis Output)

Breaking down the data by area, it can be observed from the above table that within each income range, there is a distribution of respondents from urban and rural areas. For example, in the "6500-8000" income range, there are 8 respondents from urban areas (7.7% among urban) and 24 respondents from rural areas (7.6% among rural). Similarly, in the "12500–13500" income range, there are 44 respondents from urban areas (42.3% among urban) and 140 respondents from rural areas (44.2% among rural). This pattern continues for the remaining income ranges.

These figures provide valuable insights into the income distribution among the study participants, considering the distinction between urban and rural areas. The data suggests that there is variation in monthly income across different income brackets and areas of residence, which is generally a good distribution of the sample.

5.1.5 Area wise Occupation Analysis

The provided table presents a cross-tabulation of respondents' occupations and their areas of residence (urban or rural). The data aims to examine the distribution of occupations among the participants based on their respective areas.

Table 5-5: Occupation and Area Cross-Tab

Occupation	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Day Labour	23	5.5	54	12.8	77	18.3
Private Jobs	28	6.7	49	11.6	77	18.3
Business	12	2.9	63	15	75	17.8
Skilled occupations, such as drivers, blacksmiths, barbers) etc.	3	0.7	47	11.2	50	11.9
Dependent on the family (Not involved in any profession)	19	4.5	25	5.9	44	10.5
Agriculture: Crops/ Livestock/Poultry/ Fisheries	6	1.4	17	4	23	5.5
Household chores (housewife)	0	0	17	4	17	4
Part-time employment	4	1	6	1.4	10	2.4
Retired Pensioner	0	0	8	1.9	8	1.9
Government Jobs	0	0	6	1.4	6	1.4
Tuition	1	0.2	5	1.2	6	1.4
House Maid	3	0.7	0	0	3	0.7
Seasonal employment	0	0	2	0.5	2	0.5
Others	5	1.2	18	4.3	23	5.5
Total	104	24.8	317	75.2	421	100

(Source: SPSS Analysis Output)

Analysing the occupation distribution, the respondents are categorized into various occupations. The highest representations are in the "business" category, with 77 respondents (18.3%), followed by the “day labourer” and "private jobs" categories, with 75 respondents (17.8%) each. There are also 50 participants from the “Skilled Occupations” group. Breaking down the data by area, it can be observed that within each occupation category, there is a distribution of respondents from urban and rural areas. For example, in the "Dependent on the Family" category, there are 19 respondents from urban areas (4.5%) and 25 respondents from rural areas (5.9%). Similarly, in the "business" category, there are 12 respondents from urban areas (2.9%) and 63 respondents from rural areas (15.0%). This pattern continues for the remaining occupation categories. These figures provide valuable insights into the occupational profile of the study participants, considering the distinction between urban and rural areas. The data suggests that there are variations in occupation distribution across different categories and areas of residence.

5.2 Choice of Phones and Reasons

5.2.1 Family Income wise Phone Type

The provided table represents the relationship between household income and phone type preference. The respondents' household incomes are categorized into different ranges, namely 6500-8000, 8000-9500, 9500-11000, 11000-12500, and 12500-13500.

Table 5-6: Family Income Wise Phone Type

Phone Type	6500-8000		8000-9500		9500-11000		11000-12500		12500-13500		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Button Mobile	19	5%	20	5%	43	10%	65	15%	111	26%	258	61%
Smartphone/Touch Mobile	16	4%	15	4%	26	6%	59	14%	124	29%	240	57%

(Source: SPSS Analysis Output)

The findings reveal interesting patterns in phone type preference across different income ranges. For the 6500–8000 income range, of the total sample of 421, a slightly higher percentage of respondents (5%) preferred button mobile phones compared to smartphone or touch mobile phones (4%). Similarly, in the 8000–9500 income range, the preference for button mobile phones (5%) was marginally higher than that for smartphone or touch mobile phones (4%). However, as we move into higher income ranges, there is a noticeable shift in phone type preference. In the 9500–11000 income range, the preference for button mobile phones decreased to 10%, while the preference for smartphone or touch mobile phones increased to 6%. This trend continues in the 11000–12500 income range, where 15% of respondents preferred button mobile phones, while 14% preferred smartphone or touch mobile phones. The most significant shift occurs in the 12500–13500 income range, where the preference for button mobile phones drops to 26% while the preference for smartphone or touch mobile phones rises significantly to 29%. This indicates a strong preference for smartphones with touchscreen functionality among respondents with higher incomes.

Overall, the findings highlight a relationship between household income and phone type preference. As income increases, there is a gradual transition from button mobile

phones to smartphones or touch mobile phones. Moreover, there are also multidevice owners among the participants (almost 18%). These understandings can be valuable for phone manufacturers and marketers in tailoring their product offerings, marketing strategies, and pricing plans to cater to the specific preferences and affordability of different income groups.

5.2.2 Smartphone users among participants

The following table shows that 57.0% of the total participants use smartphones. 70.2% of males are smartphone users, while females are 44.1%.

Table 5-7: Gender wise Smartphone User

Female		Male		Total	
No.	%	No.	%	No.	%
94	44.1	146	70.2	240	57.0

(Source: SPSS Analysis Output)

The following table represents the cross-tabulation of the respondent's gender with area. After analysis in SPSS, it can be observed from the results that there are more female smartphone users in rural areas than in urban areas in terms of percentage.

Table 5-8: Smartphone User Gender-Area Crosstab

Gender	Urban	Urban	Urban	Rural	Rural	Rural
	Count	Total	%	Count	Total	%
Female	18	45	40%	76	168	45%
Male	44	59	75%	102	149	68%

(Source: SPSS Analysis Output)

5.2.3 Brand wise Smartphone User

The table below presents smartphone users based on their gender and the brand name of their smartphones. The data aims to analyse the distribution of smartphone brands among female and male users. Among the female respondents, the most popular smartphone brand is Samsung, with 20 users (21.3%), followed by Xiaomi with 11 users (11.7%) and Oppo with 15 users (16.0%). On the other hand, among the male respondents, Samsung also stands as the most popular brand with 37 users (25.3%),

followed by Xiaomi with 32 users (21.9%) and Oppo with 14 users (9.6%).

Table 5-9: Smartphone User Gender-Brand Name Crosstab

Brand Name	Female		Male	
	No.	%	No.	%
Samsung	20	21.3	37	25.3
Xiaomi	11	11.7	32	21.9
Oppo	15	16.0	14	9.6
Vivo	5	5.3	14	9.6
Realme	9	9.6	12	8.2
Tecno	5	5.3	2	1.4
Itel	4	4.3	6	4.1
Infinix	0	0.0	2	1.4
Walton	5	5.3	9	6.2
Symphony	16	17.0	6	4.1
OnePlus	0	0.0	0	0.0
Nokia	0	0.0	4	2.7
OnePlus	0	0.0	0	0.0
Huawei	3	3.2	8	5.5
Others	4	4.3	8	5.5

(Source: SPSS Analysis Output)

The distribution of other brands among the respondents is as follows: Vivo (5.3% female, 9.6% male), Realme (9.6% female, 8.2% male), Tecno (5.3% female, 1.4% male), Itel (4.3% female, 4.1% male), Infinix (0.0% female, 1.4% male), Walton (5.3% female, 6.2% male), Symphony (17.0% female, 4.1% male), Nokia (0.0% female, 2.7% male), Huawei (3.2% female, 5.5% male), and Others (4.3% female, 5.5% male).

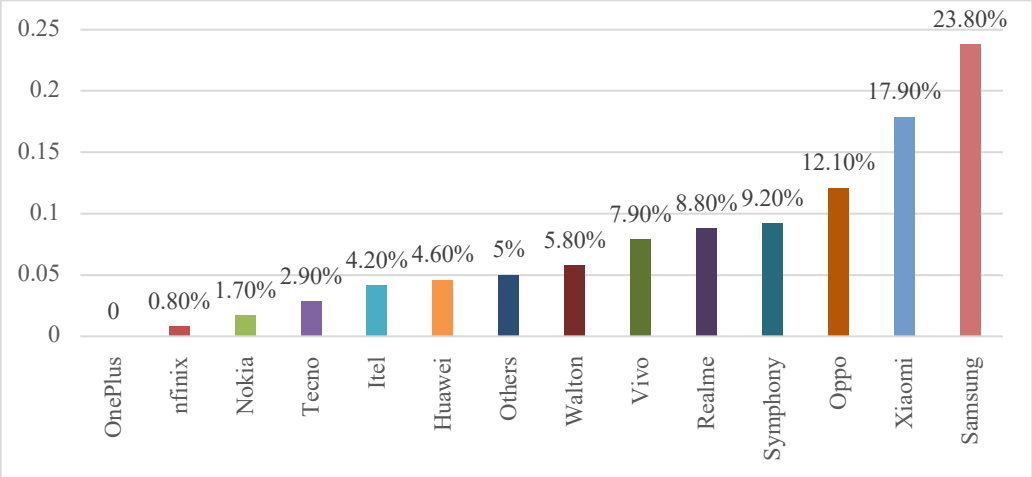


Figure 5-3: Mobile Handset Brand Share among Participants

(Source: SPSS Analysis Output through Bar Chart graphed in Microsoft Excel)

The figure above provides insights into smartphone brand preferences among the study

participants. The data highlights the popularity of certain brands among female and male users and indicates potential differences in brand preferences. It is clearly visible that Samsung leads the show, followed by Xiaomi, Oppo, and Symphony. Realme and Vivo are close followers. Interestingly, the survey data closely mimics the market intelligence data that can be found at Statcounter Global Stats.

5.3 Mobile Handset Purchase and Usage Behaviour

5.3.1 Information Source to Purchase Digital Device or Others

The following table represents the crosstab between gender and information source for purchasing a digital device. After analysis in SPSS, the percentages were calculated in Microsoft Excel.

Table 5-10: Gender wise Information Source to Purchase Digital Device or Others

Sources	Female		Male		Total	
	No.	%	No.	%	No.	%
Family member	172	80.8	114	54.8	286	67.9
Friends	77	36.2	117	56.3	194	46.1
Facebook	57	26.8	71	34.1	128	30.4
YouTube	38	17.8	38	18.3	76	18.1
Internet Search	16	7.5	43	20.7	59	14
TV	23	10.8	20	9.6	43	10.2
Brand ads (billboards, banners, brochures, display centres)	13	6.1	24	11.5	37	8.8
Newspapers/Magazines	8	3.8	19	9.1	27	6.4
The seller of the shop	8	3.8	15	7.2	23	5.5
Others	13	6.1	3	1.4	16	3.8
Online Portals/Blogs	4	1.9	9	4.3	13	3.1

(Source: SPSS Analysis Output)

It can be observed from the results that the information source for 80.8% of female participants is family members, whereas the source from which male participants get most influenced is friends, which in percentage is 56.3%. In the case of overall

participants, 67.9% consider family members as the primary source of information when purchasing a digital device, followed by 46.1% of participants who consider friends, 30.4% considering Facebook, and 18.1% considering YouTube as a source of information. where 10.2% of total participants consider TV as their source of information and 5.5% consider the seller of the shop as their source of information.

5.3.2 Source of Information about New Digital Devices or Offers

The following table represents the crosstab between gender and the information source from whom the participants get to know about new digital devices or offers. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that among female respondents, the most common source of information is family members (69%), followed by friends (37.6%), Facebook (25.4%), TV (12.2%), and brand ads (7.5%).

Among male respondents, the most common source of information is friends (54.8%), followed by Facebook (40.9%), YouTube (22.1%), internet search (20.7%), and TV (13%).

Table 5-11: Gender wise Information Source about new Digital Device or Offers

Sources	Female		Male		Total	
	No.	%	No.	%	No.	%
Family member	147	69	83	39.9	230	54.6
Friends	80	37.6	114	54.8	194	46.1
Facebook	54	25.4	85	40.9	139	33
YouTube	29	13.6	46	22.1	75	17.8
Internet Search	14	6.6	43	20.7	57	13.5
TV	26	12.2	27	13	53	12.6
Brand ads (billboards, banners, brochures, display centres)	16	7.5	25	12	41	9.7
Newspapers/Magazines	6	2.8	17	8.2	23	5.5
The seller of the shop	8	3.8	13	6.3	21	5
Online Portals/Blogs	4	1.9	14	6.7	18	4.3
Others	11	5.2	1	0.5	12	2.9

(Source: SPSS Analysis Output)

Overall, the most common source of information is family members (54.6%), followed by friends (46.1%), Facebook (33%), YouTube (17.8%), and internet searches (13.5%). Among all respondents, the least common sources of information are newspapers and

magazines (5.5%), the seller of the shop (5%), and online portals and blogs (4.3%).

5.3.3 Gender wise Sources that Influence Digital Device Purchase Decision

The following table represents a crosstab between gender and information source that influences the purchase decision of a digital device. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that information source for 54.4% of female participants depends on their spouse to make a purchase decision of any digital device; 41.3% make the decision by themselves, followed by 15.5% who get influenced by friends and 16.9% by parents. In the case of male participants, 72.6% of them make their own decision about purchasing their digital device, while 34.6% get influenced by their friends. Overall, 56.8% of participants make their own decisions; 39% of the total participants depend on their spouse for decision-making; 24% get influenced by friends; and 16.4% make their decisions with the help of their parents.

Table 5-12: Gender wise Influencers of Purchase decision for Digital Device

Recommended Sources	Female		Male		Total	
	No.	%	No.	%	No.	%
I make my own purchase	88	41.3	151	72.6	239	56.8
Husband/Wife	116	54.5	48	23.1	164	39
Friends	33	15.5	72	34.6	105	24.9
Parents	36	16.9	33	15.9	69	16.4
Offspring	30	14.1	10	4.8	40	9.5
Known experienced users	11	5.2	20	9.6	31	7.4
Relatives	11	5.2	7	3.4	18	4.3
Brothers and sister	8	3.8	7	3.4	15	3.6
Others	7	3.3	2	1	9	2.1
Employees of the shop	1	0.5	1	0.5	2	0.5

(Source: SPSS Analysis Output)

5.3.4 Location wise Sources Influencing Purchase Decision

The following crosstab table illustrates the influence of different information sources on the purchase decisions of digital devices or other products, categorized by location, specifically urban and rural areas.

Table 5-13: Location wise Source who influence Purchase decision of Digital Device

Source of Decision	Urban		Rural		Total	
	Count	%	Count	%	Count	%
I make purchase decision by my own decision.	61	59%	178	56%	239	57%
Husband/Wife	29	28%	135	43%	164	39%
Friends	22	21%	83	26%	105	25%
Parents	20	19%	49	15%	69	16%
Offspring	7	7%	33	10%	40	10%
Known experienced users	11	11%	20	6%	31	7%
Relatives	5	5%	13	4%	18	4%
Brothers and sister	3	3%	12	4%	15	4%
Others	0	0%	9	3%	9	2%
Employees of the shop	1	1%	1	0%	2	0%

(Source: SPSS Analysis Output)

In urban areas, the majority of respondents (61 individuals, or 59%) reported making purchase decisions independently, relying on their own judgment. The next influential source was the respondents' spouse, with 29 individuals (28%) indicating their influence on purchase decisions. Friends were also cited as an influential source by 22 respondents (21%). In rural areas, a larger percentage of respondents (178 individuals, or 56%) reported making purchase decisions independently. The influence of their spouse was also significant, with 135 individuals (43%) acknowledging their impact on purchase decisions. Friends were cited as an influential source by 83 respondents (26%).

Other notable information sources influencing purchase decisions included parents (20 urban respondents or 19%, 49 rural respondents or 15%), offspring (7 urban respondents or 7%, 33 rural respondents or 10%), and known experienced users (11 urban respondents or 11%, 20 rural respondents or 6%). Relatives, siblings, and employees of the shop had relatively less influence on purchase decisions in both urban and rural areas.

These findings indicate that individuals in both urban and rural areas tend to rely heavily on their own decision-making when purchasing digital devices or other products. Spouses and friends also play a significant role in influencing purchase decisions, particularly in rural areas.

5.3.5 Purchase Decision Making Sources

The following table represents the crosstab between gender and the information sources that the participants depend on while making a purchase decision for a new digital device. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that 76.5% of female participants depend on family while making purchase decisions, and 41.8% make purchase decisions based on any special offer given. In the case of male participants, 56.3% depend on family, 48.1% make purchase decisions based on special offers given, 47.6% take advice from friends and acquaintances, and 36.5% make decisions based on advertisements for new digital devices. In the overall case, most of the participants, 66.5%, actually make decisions after discussing with family; 44.9% check for special offers; 42.8% follow the advice of friends and acquaintances; and 33.3% get influenced by advertisements.

Table 5-14: Gender wise Purchase Decision Making Sources

Particulars	Female		Male		Total	
	No.	%	No.	%	No.	%
Discussion with family members	163	76.5	117	56.3	280	66.5
Special Offers	89	41.8	100	48.1	189	44.9
Advice from friends and acquaintances	81	38	99	47.6	180	42.8
Advertisements	64	30	76	36.5	140	33.3
Dependence on brand trust	5	2.3	21	10.1	26	6.2
Advice from salespeople	12	5.6	10	4.8	22	5.2
After-sales service	1	0.5	11	5.3	12	2.9
Others	1	0.5	2	1	3	0.7

(Source: SPSS Analysis Output)

5.3.6 Gender wise Preference of Smartphone Purchase Points

The following table represents the crosstab between gender and the information source from which the participants purchased a new digital device. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that 28.5% of female participants purchase smartphones from their familiar shops, 10.7% go to authorized outlets, and 7.4% prefer purchasing smartphones from shopping malls that have multiple phone outlets. In the case of male participants, 23.5% of them prefer

familiar shops to purchase a new smartphone, 14.5% go to authorized outlets, and 8.3% prefer purchasing smartphones from shopping malls that have multiple phone outlets where they can have more options and ideas. In the overall case, 52% of the participants prefer their familiar shop for purchasing a new smartphone, 25.2% go for authorized outlets, and 15.7% prefer purchasing smartphones from shopping malls that have multiple phone outlets where they can have more options and ideas.

Table 5-15: Gender wise Sources of Purchasing Smartphone

Particulars	Female		Male		Total	
	No.	%	No.	%	No.	%
The familiar shop	120	28.5	99	23.5	219	52
Authorized Outlets	45	10.7	61	14.5	106	25.2
Shopping malls with multiple phone outlets	31	7.4	35	8.3	66	15.7
Prominent Dealer	8	1.9	3	0.7	11	2.6
Second-hand device from someone familiar	4	1.0	7	1.7	11	2.6
Others	5	1.2	1	0.2	6	1.4
Online Shop	0	0.0	1	0.2	1	0.2
Second-hand devices from social media groups	0	0.0	1	0.2	1	0.2
Total	213	50.6	208	49.4	421	100

(Source: SPSS Analysis Output)

5.3.7 Area wise Preference of Smartphone Purchase Points

The table illustrates the area-wise preference of smartphone purchase points. In the urban area, authorized outlets were preferred by 45% of respondents, while familiar shops and shopping malls with multiple phone outlets were preferred by 35% and 11%, respectively. In the rural area, familiar shops were the top choice for 52% of respondents, followed by authorized outlets and shopping malls with percentages of 19% and 17%, respectively. Other sources, such as prominent dealers, second-hand devices, online shops, and social media groups, had relatively lower preferences in both areas. These findings highlight the significance of familiar shops as the preferred buying source for smartphones in both urban and rural areas.

Table 5-16: Area wise Purchasing Sources of Smartphone

Type of Purchase Source	Urban		Rural		Total	
	Count	%	Count	%	Count	%
The familiar shop	36	35%	183	58%	219	52%
Authorized Outlets	47	45%	59	19%	59	14%
Shopping malls with multiple phone outlets	11	11%	55	17%	55	13%
Prominent Dealer	1	1%	10	3%	10	2%
Second-hand device from someone familiar	7	7%	4	1%	4	1%
Others	2	2%	4	1%	4	1%
Online Shop	0	0%	1	0%	1	0%
Second-hand devices from social groups	0	0%	1	0%	1	0%

(Source: SPSS Analysis Output)

5.3.8 Problems Usually Faced After Purchasing a Phone

The following table is a crosstab between problems faced after purchasing a phone and different gender groups, which shows the types of problems people mostly face while using smartphones, which needs to be taken into strong consideration while providing after-sales services. 40.6% of the total 421 participants complained about damaging displays due to impact; the second most common complaint was about system hangs; 17.8% of the total participants faced this problem. 15.7% of participants complained about damaged batteries, followed by damaged speakers by 6.2% and damage due to a water spill by 5.5%.

Table 5-17: Problems faced after Purchasing a phone by Gender Groups

Type of Problems	Female	Male	Total	% of Female	% of Male	% of Total
Damaging display due to impact	68	103	171	31.92%	49.52%	40.62%
System hangs	39	36	75	18.31%	17.31%	17.81%
Damaged battery	41	25	66	19.25%	12.02%	15.68%
Damaged speaker	19	7	26	8.92%	3.37%	6.18%
Damaged due to water spill	15	8	23	7.04%	3.85%	5.46%
Damage in charger/speaker port	11	8	19	5.16%	3.85%	4.51%
Block on Appstore account	9	9	18	4.23%	4.33%	4.28%
Malfunctioning SIM connection port	3	6	9	1.41%	2.88%	2.14%
No problem faced yet	3	5	8	1.41%	2.40%	1.90%

(Source: SPSS Analysis Output)

5.3.9 Effect of After Sales Service Centre on purchasing Decision

The table data indicates that the availability of a service centre for a specific phone brand influences the purchasing decisions of potential customers in a particular area. Out of 421 respondents, 40% (169 individuals) stated that the absence of a service centre would affect their decision, while 60% (252 individuals) said it would not.

Table 5-18: Effect of After Sales Service Centre on Purchasing Decision

Availability of Service Centre Affecting Purchase Decision	Response	
	Count	%
Yes	169	40%
No	252	60%

(Source: SPSS Analysis Output)

5.4 Factors Involved in the Decision to Buy a Smartphone

5.4.1 Income Range wise Participants Who Plan to Buy Smartphone

The table shows the participants who intend to buy a smartphone based on their income ranges. In the income range of taka 6500–8000, there are 15 participants, accounting for 3.56% of the total. In the income range of taka 8,000–9500, there are 12 participants, representing 2.85% of the total. For the income range of taka 9500–11000, there are 26 participants, making up 6.18% of the total. In the income range of 11000–12500, there are 38 participants, accounting for 9.03% of the total. The majority of participants who intend to buy a smartphone fall into the income range of 12500–13500, with 89 participants representing 21.14% of the total. Overall, out of the total participants, 180 individuals, or 42.8%, intend to purchase a smartphone in the near future.

Table 5-19: Income Range wise Respondents who intend to buy Smartphone

6500-8000		8000-9500		9500-11000		11000-12500		12500-13500		Total	
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
15	3.56	12	2.85	26	6.18	38	9.03	89	21.14	180	42.8

(Source: SPSS Analysis Output)

Interestingly, the overlap between current users of smartphones (240) and people who have button phones but want to buy smartphones in the near future (63), makes almost 72% of the respondents keen to use smartphones.

5.4.2 Income Range Wise Participants Purpose of Purchasing Smartphone

The following table represents a cross-tabulation of the respondent's reasons for buying a smartphone by income range. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that 89.4% want to buy a smartphone to start using social media, and only 3.3% have the financial stability to afford one. To start using social media, entertainment, professional development, and upgradation of living standards contribute more to the reasons for buying a smartphone than financial stability.

Table 5-20: Crosstab of Respondent's Reasons for Buying a Smartphone with Income

Reasons	6500-8000		8000-9500		9500-11000		11000-12500		12500-13500		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
To start using social media	15	100	11	91.7	24	92.3	30	78.9	81	91	161	89.4
For entertainment purpose	9	60	5	41.7	14	53.8	25	65.8	71	79.8	124	68.9
Smartphone has become a requirement for professional development (Job/Business/Study purpose)	8	53.3	6	50	10	38.5	13	34.2	47	52.8	84	46.7
To upgrade living standard	2	13.3	3	25	4	15.4	9	23.7	40	44.9	58	32.2
Recently moved out of family and need to remain in constant contact	2	13.3	1	8.3	2	7.7	1	2.6	11	12.4	17	9.4
Earned the financial stability to afford smartphone	0	0	1	8.3	0	0	1	2.6	4	4.5	6	3.3
To utilize smartphone for income generation (ridesharing, home delivery, f-commerce etc)	0	0	0	0	0	0	0	0	4	4.5	4	2.2
Others	0	0	1	8.3	0	0	1	2.6	0	0	2	1.1

(Source: SPSS Analysis Output)

5.4.3 Purpose of Purchasing Smartphone Based on Different Location

The following table shows the plans of respondents in urban and rural areas to buy a smartphone in the future. In the urban area, 34% plan to buy, 49% do not, and 17% are unsure. In the rural area, 46% plan to buy, 39% do not, and 15% are unsure. These findings show a higher percentage of rural respondents planning to purchase smartphones.

Table 5-21: Location wise Respondents who Plan to Buy Smartphone

Response	Urban Count	% of Urban	Rural Count	% or Rural
Yes	35	34%	145	46%
No	51	49%	125	39%
I'm not sure yet	18	17%	47	15%

(Source: SPSS Analysis Output)

The crosstabulation of respondents' intentions to buy smartphones based on different locations shows insights into the motivations behind smartphone purchases in urban and rural areas. In urban areas, it is observed that a significant proportion of respondents (8%) plan to buy a smartphone to start using social media, indicating the importance of digital connectivity and social networking in urban settings. Additionally, 5% of urban respondents are motivated by entertainment purposes, reflecting the desire for multimedia and gaming experiences. Furthermore, 3% of urban respondents consider smartphones a requirement for professional development, highlighting the role of smartphones in supporting job, business, or study-related activities. On the other hand, in rural areas, a larger percentage of respondents (31%) are inclined to buy smartphones to start using social media, suggesting the increasing penetration of social networking platforms in rural communities. Entertainment purposes also play a significant role, with 24% of rural respondents expressing interest in smartphone-based entertainment. Interestingly, a notable proportion of rural respondents (17%) view smartphones as a necessity for professional development, emphasizing their importance beyond urban centres.

These findings showcase the varying priorities and motivations for smartphone purchases across different locations, shedding light on the digital aspirations and needs of urban and rural populations.

Table 5-22: Respondent's Purpose to Buy Smartphone based on Different Location

Purpose of Purchase	Urban		Rural	
	Count	%	Count	%
To start using social media	32	8%	129	31%
For entertainment purpose	22	5%	102	24%
Smartphone has become a requirement for professional development (Job/Business/Study purpose)	14	3%	70	17%
To upgrade living standard	15	4%	43	10%
Recently moved out of family and need to remain in constant contact	6	1%	11	3%
Earned the financial stability to afford smartphone	1	0%	5	1%
To utilize smartphone for income generation (ridesharing, home delivery, f-commerce etc)	0	0%	4	1%
Others	0	0%	2	0%

(Source: SPSS Analysis Output)

5.4.4 Gender wise Preference of Features while Purchasing a Smartphone

The provided crosstab table below presents the gender-wise preference of smartphone features. It includes the number and percentage of respondents, categorized by gender (female and male), who selected each feature as important in their smartphone selection. Among female respondents, the most important feature was "providing better service," with 61 respondents (76.3%) considering it a significant factor. This was closely followed by "durable/strong," chosen by 37 respondents (46.3%), and "design," selected by 37 respondents (46.3%). For male respondents, "provides better service" and "durable/strong" were also the top two preferred features, with 74 respondents (74%) considering each important. "Design" ranked third, chosen by 56 respondents (56%).

Other notable features that both genders valued include "camera quality" (30 female respondents or 37.5%, 53 male respondents or 53%), "memory (ROM)" (26 female respondents or 32.5%, 51 male respondents or 51%), and "highest feature on a low budget" (41 female respondents or 51.3%, 35 male respondents or 35%). Less emphasized features included "can enhance social status" (3 female respondents or 3.8%, 8 male respondents or 8%), "EMI facility" (0 female respondents or 0%, 2 male respondents or 2%), and "others" (0 respondents in both genders).

Table 5-23: Crosstab of Respondent's Gender wise Preference of Smartphone Features

Smartphone Features	Female		Male		Total	
	No.	%	No.	%	No.	%
Provides better service	61	76.3	74	74	135	75.0
Durable/Strong	37	46.3	72	72	109	60.6
Design	37	46.3	56	56	93	51.7
Camera quality	30	37.5	53	53	83	46.1
Memory (ROM)	26	32.5	51	51	77	42.8
Highest feature on a low budget	41	51.3	35	35	76	42.2
RAM (RAM)	20	25	50	50	70	38.9
Large battery (more standby time)	22	27.5	36	36	58	32.2
Reputation of the brand	18	22.5	40	40	58	32.2
Large screen	19	23.8	32	32	51	28.3
Quality of the speaker	20	25	31	31	51	28.3
Can enhance social status	3	3.8	8	8	11	6.1
EMI facility	0	0	2	2	2	1.1

(Source: SPSS Analysis Output)

These findings indicate that both genders share similar preferences for key smartphone features such as service quality, durability, and design. However, there are some variations in the importance placed on certain features. Understanding gender-specific preferences can aid smartphone manufacturers and marketers in targeting their product development and marketing strategies to cater to the specific needs and desires of different gender segments.

5.4.5 Location wise Preference of Features while Purchasing a Smartphone

The provided crosstab table presents the preferences for smartphone features among 180 respondents who wanted to buy smartphones based on the respondents' location, specifically distinguishing between urban and rural areas.

The feature that received the highest preference was "provides better service," with 135 respondents (75%) considering it important. This was followed by "Durable", selected by 109 respondents (60.6%), and "Design," chosen by 93 respondents (51.7%).

Table 5-24: Crosstab of Location wise Preference of Smartphone Features

Features	Urban		Rural		Total	
	Count	%	Count	%	Count	%
Provides better service	25	71.4%	110	76%	135	75.0%
Durable/Strong	20	57.1%	89	61%	109	60.6%
Design	21	60.0%	72	50%	93	51.7%
Camera quality	22	62.9%	61	42%	83	46.1%
Highest features on a low budget	15	42.9%	61	42%	76	42.2%
Memory (ROM)	22	62.9%	55	38%	77	42.8%
RAM (RAM)	22	62.9%	48	33%	70	38.9%
Large battery (more standby time)	16	45.7%	42	29%	58	32.2%
Reputation of the brand	16	45.7%	42	29%	58	32.2%
Quality of the speaker	13	37.1%	38	26%	51	28.3%
Large screen	17	48.6%	34	23%	51	28.3%
Can enhance social status	3	8.6%	8	6%	11	6.1%
EMI facility	0	0.0%	2	1%	2	1.1%

(Source: SPSS Analysis Output)

In rural areas, the most preferred feature was also "providing better service," with 110 respondents (76%) considering it significant. The second most valued feature was "durable/strong," chosen by 89 respondents (61%), and "design" ranked third, selected by 72 respondents (50%). Other notable features that both urban and rural respondents "camera quality" (22 urban respondents or 62.9%, 61 rural respondents or 42%), prioritized include "highest feature on a low budget" (15 urban respondents or 42.9%, 61 rural respondents or 42%), and "memory (ROM)" (22 urban respondents or 42.9%, 55 rural respondents or 38%). Features that received relatively less emphasis included "Can enhance social status" (3 urban respondents or 2%, 8 rural respondents or 4%), and "EMI facility" (0 urban respondents or 0%, 2 rural respondents or 1%).

These findings indicate that urban and rural respondents have similar preferences for smartphone features, with both groups prioritizing features related to service quality, durability, and design. However, there may be slight variations in the importance placed on certain features between the two locations. Understanding location-specific preferences can be valuable for smartphone manufacturers and marketers to tailor their product offerings and marketing strategies for urban and rural consumers.

5.4.6 Plan for the Payment of the Next Phone

The following table represents the cross-tabulation of the respondent's gender with the payment plan for the next phone purchase. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that a larger portion of the participants plan to buy the next phone by creating funds from their regular income, followed by previous savings. The next portion plans on selling the current phone and adding a portion from the monthly income. Only two men plan to buy through EMI.

Table 5-25: Crosstab of Respondent's Payment Plan for Next Phone Purchase with Gender

Source	Female	Male	Total
From previous savings	47	53	100
Creating fund from regular income	44	73	117
Borrowing from others and repay later	9	8	17
By selling previous phone and saving a portion from monthly income	16	17	33
Through EMI	0	2	2

(Source: SPSS Analysis Output)

5.4.7 Participants Choice of Price Range According to their Income

The table represents a crosstabulation of participants' choice of price range for smartphones based on their income ranges.

Table 5-26: Crosstab of Participants Choice of price Range with Their Income

Price Range	6500-8000		8000-9500		9500-11000		11000-12500		12500-13500		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 5000	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5000-8000	2	13.3	1	8.3	5	19.2	4	10.5	4	4.5	16	8.9
8000-12000	11	73.3	7	58.3	10	38.5	24	63.2	28	31.5	80	44.4
12000-18000	1	6.7	2	16.7	9	34.6	6	15.8	30	33.7	48	26.7
18000-25000	1	6.7	0	0.0	1	3.8	4	10.5	16	18.0	22	12.2
25000+	0	0.0	2	16.7	1	3.8	0	0.0	11	12.4	14	7.8
Total	15	100.0	12	100.0	26	100.0	38	100.0	89	100.0	180	100.0

(Source: SPSS Analysis Output)

In the income range of taka 6500–8000, there are 15 participants, accounting for 100% of that income group. None of these participants chose a price range of less than taka 5,000. In the 5000–8000 price range, there are 2 participants, representing 13.3% of the income group. For the income range of 8000–9500, there are 12 participants, accounting for 100% of that group. Within this range, 1 participant (8.3%) chose a price range of 5000–8000, while 7 participants (58.3%) opted for the 8000–12000 price range.

In the income range of 9500-11000, there are 26 participants, making up 100% of that group. Within this range, 5 participants (19.2%) chose a price range of 5000-8000, 10 participants (38.5%) selected the 8000-12000 range, and 9 participants (34.6%) opted for the 12000-18000 range.

For the income range of 11000-12500, there are 38 participants, representing 100% of that group. Within this range, 4 participants (10.5%) chose a price range of 5000-8000, 24 participants (63.2%) selected the 8000-12000 range, and 6 participants (15.8%) opted for the 12000-18000 range.

In the income range of 12500-13500, there are 89 participants, accounting for 100% of that group. Within this range, 4 participants (4.5%) chose a price range of 5000-8000, 28 participants (31.5%) selected the 8000-12000 range, and the majority, 30 participants (33.7%), opted for the 12000-18000 range.

Overall, out of the total 180 participants, the majority fell into the income range of 12500-13500 (89 participants, 100%). The preferred price range for participants varied across income groups, with the 8000-12000 range being popular among most income ranges.

5.4.8 Type of Smartphone Usage According to Income Range

The following table represents a crosstabulation of participants' smartphone usage categories based on their income ranges.

Table 5-27: Crosstab of Participants Smartphone Usage Category with Their Income

Usage Category	6500-8000		8000-9500		9500-11000		11000-12500		12500-13500		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Communication (Imo, Messenger)	16	100.0	14	87.5	21	84.0	56	94.9	119	96.0	226	94.2
Playing Mobile Games	8	50.0	6	37.5	5	20.0	12	20.3	46	37.1	77	32.1
Entertainment (songs, plays, movies)	13	81.3	12	75.0	17	68.0	41	69.5	101	81.5	184	76.7
Online Classes	8	50.0	2	12.5	4	16.0	10	16.9	21	16.9	45	18.8
Access to infotainment (sports, news, etc.)	8	50.0	3	18.8	8	32.0	10	16.9	51	41.1	80	33.3
Professional work (checking emails, sending files)	4	25.0	2	12.5	3	12.0	5	8.5	45	36.3	59	24.6
Using social media (Facebook, TikTok etc)	10	62.5	7	43.8	13	52.0	33	55.9	87	70.2	150	62.5
Voice Calls and SMS	12	75.0	13	81.3	19	76.0	43	72.9	88	71.0	175	72.9
Listening to FM Radio	0	0.0	0	0.0	1	4.0	2	3.4	7	5.6	10	4.2
Others	0	0.0	1	6.3	0	0.0	0	0.0	0	0.0	1	0.4

(Source: SPSS Analysis Output)

In the income range of taka 6500–8000, there are 16 participants, accounting for 100% of that income group. All of these participants reported using their smartphones for communication purposes (Imo, Messenger). Additionally, 8 participants (50%) mentioned playing mobile games, 13 participants (81.3%) used their smartphones for entertainment purposes (songs, plays, movies), 8 participants (50%) used them for online classes, 8 participants (50%) accessed infotainment content (sports, news, etc.), 4 participants (25%) used their smartphones for professional work (checking emails, sending files), 10 participants (62.5%) used social media (Facebook, TikTok, etc.), 12 participants (75%) made voice calls and sent SMS, and none reported using their smartphones for listening to FM radio or other purposes.

In the income range of 8000-9500, there are 14 participants, representing 87.5% of that group. Most participants in this income range used their smartphones for communication (Imo, Messenger), playing mobile games, entertainment (songs, plays, movies), online classes, accessing infotainment content (sports, news, etc.),

professional work (checking emails, sending files), using social media (Facebook, TikTok, etc.), and making voice calls and SMS. One participant (6.3%) mentioned using their smartphone for other purposes.

For the income range of $9500–11000, there are 21 participants, accounting for 84% of that group. The most common smartphone usage category in this range is communication (Imo, Messenger), followed by entertainment, online classes, infotainment content, professional work, using social media, and making voice calls and SMS. One participant (4%) reported using a smartphone to listen to FM radio.

In the income range of 11000-12500, there are 56 participants, representing 94.9% of that group. The majority of participants in this range used their smartphones for communication (Imo, Messenger), playing mobile games, entertainment (songs, plays, movies), online classes, accessing infotainment content (sports, news, etc.), professional work, using social media, and making voice calls and SMS.

In the range of 12500-13500, there are 119 participants, accounting for 96% of that group. The most common smartphone usage categories in this range are communication (Imo, Messenger), entertainment, online classes, accessing infotainment content, professional work, using social media, and making voice calls and SMS.

Overall, the majority of participants in each income range reported using their smartphones for communication purposes (Imo, Messenger) and entertainment (songs, plays, movies). The specific usage categories varied across income groups, highlighting the diverse ways individuals utilize their smartphones based on their income levels.

5.5 Internet Usage

5.5.1 Income Range wise Internet Usage

The table provides a breakdown of participants who use the internet based on their income ranges. In the income range of 6500-8000, there are 9 participants, representing 56.3% of that income group, who reported using the internet. In the income range of 8000-9500, 12 participants (75%) mentioned using the internet. For the income range

of 9500-11000, 17 participants (65.4%) reported using the internet. In the income range of 11000-12500, there are 40 participants, accounting for 67.8% of that group, who use the internet. Lastly, in the income range of 12500-13500, 91 participants (73.4%) mentioned using the internet.

Overall, across all income ranges, a significant proportion of participants reported using the internet. The highest usage was observed in the income range of 12500-13500, with 73.4% of participants utilizing the internet. The lowest usage was reported in the income range of 6500-8000, with 56.3% of participants accessing the internet. These findings highlight the increasing prevalence of internet usage across different income groups, indicating the importance of internet access in today's digital age.

Table 5-28: Income Range wise Participants who Use Internet

6500-8000		8000-9500		9500-11000		11000-12500		12500-13500		Total	
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
9	56.3	12	75.0	17	65.4	40	67.8	91	73.4	169	70.1

(Source: SPSS Analysis Output)

5.5.2 Choice of Packages according to Income Range

The following table represents the cross-tabulation of the respondent's choice of internet package with their income range. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that the choice of internet packages is related to the participants' income range. Weekly internet packages on mobile are the most popular among all income ranges of participants, with an exception for income ranges 12500–13500. Participants in the income range of 12500–13500 prefer monthly internet packages on mobile, which are a bit more costly as they need to pay at a time. In terms of total percentage, weekly internet packages on mobile are the most popular with 54.4%, followed by monthly internet packages with 42.6%, and daily internet packages on mobile with 20.1%. WIFI connections from broadband internet are in fourth place with a percentage of 19.5% of total users.

Table 5-29: Crosstab of Participants Choice of Internet Packages with Their Income

Internet Package	6500-8000		8000-9500		9500-11000		11000-12500		12500-13500		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Weekly Internet Packages on Mobile	4	44.4	7	58.3	6	35.3	29	72.5	46	50.5	92	54.4
Monthly Internet Packages on Mobile	1	11.1	5	41.7	6	35.3	9	22.5	51	56	72	42.6
Daily packages on mobile	2	22.2	1	8.3	5	29.4	11	27.5	15	16.5	34	20.1
WIFI connection from broadband internet	2	22.2	2	16.7	5	29.4	5	12.5	19	20.9	33	19.5
Facebook bundle offer on mobile	0	0	0	0	0	0	3	7.5	2	2.2	5	3
YouTube bundle offer on mobile	0	0	0	0	0	0	0	0	4	4.4	4	2.4
Imo/Viber/WhatsApp Bundle Offer on Mobile	0	0	0	0	0	0	1	2.5	3	3.3	4	2.4
Broadband Internet	0	0	0	0	1	5.9	0	0	1	1.1	2	1.2
Package for SIM based modem	0	0	0	0	0	0	0	0	1	1.1	1	0.6
WIFI at office/university/public place	0	0	1	8.3	0	0	0	0	0	0	1	0.6

(Source: SPSS Analysis Output)

5.5.3 Gender wise Preference of Internet Usage

Among female respondents, 40 (24%) expressed a preference for weekly internet packages on mobile, while 52 males (31%) indicated the same preference. Monthly internet packages on mobile were preferred by 12 females (7%) and 60 males (36%).

When it comes to WIFI connections from broadband internet, 12 females (7%) and 21 males (12%) preferred this option. For daily packages on mobile, 16 females (9%) and 18 males (11%) showed a preference.

The provided crosstab table presents the preference for internet usage among respondents categorized by gender.

Table 5-30: Crosstab of Participants Gender with their Choice of Internet Packages

Internet Packages	Female		Male	
	Count	%	Count	%
Monthly Internet Packages on Mobile	12	7%	60	36%
Weekly Internet Packages on Mobile	40	24%	52	31%
WIFI connection from broadband internet	12	7%	21	12%
Daily packages on mobile	16	9%	18	11%
YouTube bundle offer on mobile	0	0%	4	2%
Facebook bundle offer on mobile	2	1%	3	2%
Imo/Viber/WhatsApp Bundle Offer on Mobile	2	1%	2	1%
Broadband Internet	1	1%	1	1%
Package for SIM based modem	0	0%	1	1%
WIFI at office/university/public place	1	1%	0	0%

(Source: SPSS Analysis Output)

Regarding specific bundle offers, none of the female respondents chose YouTube bundle offers on mobile, while 4 males (2%) indicated a preference for this option. Similarly, 2 females (1%) and 3 males (2%) preferred Facebook bundle offers on mobile. For Imo/Viber/WhatsApp bundle offers on mobile, 2 females (1%) and 2 males (1%) expressed a preference.

Other options, such as broadband internet, packages for SIM-based modems, WIFI at the office, university, or public place, and YouTube bundle offers on mobile, did not receive any preferences from the respondents in either gender category.

These findings suggest that both males and females have different preferences when it comes to internet usage. Males tend to show a higher preference for monthly and weekly internet packages on mobile, while females lean more towards daily packages on mobile. The preference for WIFI connections over broadband internet is relatively similar between genders.

5.5.4 Location wise Preference of Internet Usage

The provided crosstab table displays the choice of internet packages among participants categorized by their area of residence (urban or rural).

Table 5-31: Crosstab of Participants Area with their Choice of Internet Packages

Choice of Internet Package	Urban		Rural	
	Count	%	Count	%
Weekly Internet Packages on Mobile	27	16%	65	38%
Monthly Internet Packages on Mobile	21	12%	51	30%
Daily packages on mobile	6	4%	28	17%
WIFI connection from broadband internet	11	7%	22	13%
Facebook bundle offer on mobile	0	0%	5	3%
YouTube bundle offer on mobile	0	0%	4	2%
Imo/Viber/WhatsApp Bundle Offer on Mobile	0	0%	4	2%
Broadband Internet	0	0%	2	1%
WIFI at office/university/public place	0	0%	1	1%
Package for SIM based modem	1	1%	0	0%

(Source: SPSS Analysis Output)

For weekly internet packages on mobile, 27 participants in urban areas (16%) and 65 participants in rural areas (38%) expressed a preference for this option. Monthly internet packages on mobile were favoured by 21 participants in urban areas (12%) and 51 participants in rural areas (30%).

Regarding daily packages on mobile, 6 participants in urban areas (4%) and 28 participants in rural areas (17%) showed a preference for this option. WIFI connection from broadband internet was preferred by 11 participants in urban areas (7%) and 22 participants in rural areas (13%).

Facebook bundle offers on mobile received no preferences from participants in urban areas, but 5 participants in rural areas (3%) indicated a preference for this option. Similarly, YouTube bundle offers on mobile were not chosen by participants in urban areas, while 4 participants in rural areas (2%) expressed a preference.

Imo/Viber/WhatsApp bundle offers on mobile also received no preferences from participants in urban areas, but 4 participants in rural areas (2%) showed a preference. Broadband internet had no preferences from participants in urban areas, but 2 participants in rural areas (1%) indicated a preference.

WIFI at an office, university, or public place was preferred by 1 participant in urban areas (1%) and had no preferences from participants in rural areas. Packages for SIM-based modems received a preference from 1 participant in urban areas (1%) and no preferences from participants in rural areas.

These findings indicate that there are variations in the choice of internet packages between urban and rural areas. Rural participants tend to show a higher preference for weekly and monthly internet packages on mobile compared to urban participants. Daily packages on mobile and WIFI connections from broadband internet are also more popular in rural areas. On the other hand, preferences for specific bundle offers such as Facebook, YouTube, and Imo/Viber/WhatsApp differ between the two areas.

Understanding these differences in internet package preferences between urban and rural areas can help service providers and policymakers tailor their offerings and infrastructure development plans accordingly. By recognizing the specific needs and preferences of residents in different areas, internet service providers can optimize their service offerings and better cater to the demands of urban and rural customers.

5.6 Digital and Traditional Media Usage

5.6.1 Primary Source of entertainment

The following table shows the media preferences of participants as their primary source of entertainment, categorized by gender. A total of 421 individuals participated, with an almost equal distribution of males and females.

The majority of participants (47%) preferred to consume media through TV, with 58.7% of females and 35.1% of males choosing this medium. Facebook was the second-most preferred medium, with 35.6% of participants choosing this social media platform. However, it should be noted that among males, Facebook is even more preferred than TV. The percentage of females (28.2%) and males (43.3%) who preferred Facebook was quite different. YouTube was preferred by 12.6% of participants, with slightly more males (14.9%) than females (10.3%) choosing this medium. Newspapers were only preferred by a small percentage of participants (3.3%), with a slightly higher

percentage of males (2.4%) than females (1.0%) choosing this medium. Online news platforms and radio were the least preferred media, with only 1.2% and 0.2% of participants choosing them, respectively. Only a very small percentage of males (1.0%) preferred online news platforms, while no participants chose radio as their preferred medium.

Table 5-32: Gender wise Primary Source of Entertainment

Media	Female		Male		Total	
	No.	%	No.	%	No.	%
TV	125	58.7%	73	35.1%	198	47.0%
Facebook	60	28.2%	90	43.3%	150	35.6%
YouTube	22	10.3%	31	14.9%	53	12.6%
Newspaper	4	1.9%	10	4.8%	14	3.3%
Online News Paper	1	0.5%	4	1.9%	5	1.2%
Radio	1	0.5%	0	0.0%	1	0.2%
Others	0	0.0%	0	0.0%	0	0.0%
Total	213	100.0%	208	100.0%	421	100.0%

(Source: SPSS Analysis Output)

5.6.2 Preference of Program on Different Media

The following table represents the crosstab between gender preferences for programs enjoyed in different media. After analysis in SPSS, the percentages were calculated in Microsoft Excel. According to the table, a total of 421 individuals participated in the study, with 67.9% of them enjoying drama programs, making it the most preferred type of program. However, there seems to be a gender gap, as the percentage of females (71.4%) enjoying drama programs is higher than that of males (64.4%).

Movie programs were the second most preferred type of program, with 66.3% of participants enjoying them. Again, there seems to be a gender gap, as the percentage of females (71.4%) enjoying movies is higher than that of males (61.1%). The national and local news programs were enjoyed by 51.5% of participants. However, there is a significant difference in gender preferences, as only 35.2% of females enjoyed this type of program compared to 68.3% of males.

Table 5-33: Gender wise preference of programs enjoyed in different Media

Program	Female		Male		Total	
	No.	%	No.	%	No.	%
Drama	152	71.4	134	64.4	286	67.9
Movie	152	71.4	127	61.1	279	66.3
National and local news	75	35.2	142	68.3	217	51.5
Entertaining Program	66	31	76	36.5	142	33.7
Musical shows	79	37.1	62	29.8	141	33.5
International News	30	14.1	102	49	132	31.4
Sports News & Docu.	11	5.2	85	40.9	96	22.8
Educational Programs	41	19.2	52	25	93	22.1
Job Opportunities	6	2.8	11	5.3	17	4
Others	4	1.9	1	0.5	5	1.2

(Source: SPSS Analysis Output)

The entertaining package program and musical shows were enjoyed by 33.7% and 33.5% of participants, respectively. The preference for these programs was similar between males and females. International news programs were only enjoyed by 31.4% of participants, with a significant difference in gender preferences. Only 14.1% of females enjoyed this type of program, compared to 49% of males. Sports news and documentaries were only enjoyed by 22.8% of participants, with a higher preference among males (40.9%) compared to females (5.2%). Educational programs and job opportunities were enjoyed by 22.1% and 4% of participants, respectively, with similar preferences between males and females.

5.6.3 Area wise Preference of Digital & Traditional Media

The table illustrates the area-wise preference of digital and traditional media sources. In the urban area, TV was the most preferred media source (61.5%), followed by Facebook (46.2%), and YouTube (36.5%). In the rural area, TV had a significantly higher preference (72.9%), followed by Facebook (48.9%), and YouTube (36.6%). Traditional media sources remain influential, particularly in rural areas, while digital platforms like TikTok, Likee, and Imo received lower preferences.

Marketers need to start considering these preferences when designing targeted

campaigns, emphasizing TV and popular digital platforms to effectively engage with their urban and rural audiences.

Table 5-34: Area wise Preference of Digital & Traditional Media

	Urban		Rural	
Choice of Media	**Count**	**%**	**Count**	**%**
TV	64	61.5%	231	72.9%
Facebook	48	46.2%	155	48.9%
YouTube	38	36.5%	116	36.6%
TikTok/Likee	8	7.7%	43	13.6%
Imo	5	4.8%	35	11.0%
Newspaper	12	11.5%	27	8.5%
Online newspapers	13	12.5%	20	6.3%
Magazine	5	4.8%	12	3.8%
Radio	3	2.9%	5	1.6%
Others	0	0.0%	5	1.6%

(Source: SPSS Analysis Output)

5.6.4 Type of Popular Digital Platform among Gender Groups

The table provides insights into the popularity of various digital platforms among both males and females. Overall, Facebook emerges as the most widely used platform, with 369 participants (87.6%) reporting its usage. Imo and YouTube also show significant usage, with 295 participants (70.1%) and 294 participants (69.8%), respectively.

Table 5-35: Popular Digital Platform among Males and Females

Digital Platform Category	**Female**		**Male**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Facebook	178	83.6	191	91.8	369	87.6
Imo	139	65.3	156	75	295	70.1
YouTube	124	58.2	170	81.7	294	69.8
Messenger	113	53.1	161	77.4	274	65.1
Mobile financial Services (bKash/ Nagad/ Rocket etc.)	127	59.6	129	62	256	60.8
TikTok/Likee	74	34.7	94	45.2	168	39.9
Email (Gmail)	35	16.4	88	42.3	123	29.2
Google	34	16	85	40.9	119	28.3

Digital Platform Category	Female		Male		Total	
	No.	%	No.	%	No.	%
Share-It App	43	20.2	75	36.1	118	28
Surokkha (Covid-19 vaccine registration)	43	20.2	75	36.1	118	28
Instagram	21	9.9	71	34.1	92	21.9
Ride sharing (Pathao, Uber)	11	5.2	40	19.2	51	12.1
Video streaming platforms (Bioscope, Toffee)	11	5.2	39	18.8	50	11.9
Food delivery services (Foodpanda, Hungrynaki)	10	4.7	39	18.8	49	11.6
Ecommerce (Daraz, Ajker Deal)	12	5.6	37	17.8	49	11.6
UC Browser	9	4.2	37	17.8	46	10.9
Online News Portals	9	4.2	25	12	34	8.1
Others	13	6.1	6	2.9	19	4.5

(Source: SPSS Analysis Output)

Messenger and mobile financial services, such as bKash/ Nagad/ Rocket, are popular among both genders, with 274 participants (65.1%) and 256 participants (60.8%) respectively. TikTok/Likee, Email, and Google also garner considerable usage among the participants, although with varying proportions.

Interestingly, there are some differences in platform preferences between males and females. While Facebook remains the top choice for both genders, Imo and YouTube exhibit higher usage percentages among males compared to females. On the other hand, TikTok/Likee sees greater usage among males, while Email and Google are relatively more popular among females.

These findings provide a comprehensive overview of the digital platform landscape and user preferences. It showcases the dominant role of social media platforms like Facebook, along with the rising popularity of video-sharing platforms such as YouTube. Moreover, the variations in platform preferences between males and females highlight the importance of considering gender-specific marketing strategies and targeted content delivery to effectively engage with different user segments.

5.6.5 Educational Qualification Wise Digital Platform Usage

The following table represents the cross-tabulation of the respondent's digital platform usage according to educational background. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that the highest portion of participants who use digital platforms are from higher secondary educational backgrounds, with a percentage of 12.83% among total internet users. Participants who only completed the primary level of education use the digital platform more than participants who completed the postgraduate or equivalent level of education.

Table 5-36: Usage of Digital Platform by different educational background

Education Level	Digital Platform Usage	
	No.	%
Completion of primary education	22	5.23
JSC/ Equivalent	38	9.03
Secondary Pass (SSC/Equivalent)	40	9.50
Higher Secondary (HSC/Diploma/Equivalent)	54	12.83
Bachelor's/Degree/Equivalent	38	9.03
Post-Graduate/Equivalent	12	2.85
Able to read and write Bengali and English	1	0.24
Only able to read and write In Bengali	4	0.95
Unable to read and write Bengali and English	1	0.24
Able to remember information and instructions by looking at symbols/colours	3	0.71
Others	0	0.00
Total	213	50.59

(Source: SPSS Analysis Output)

5.6.6 Gender wise Different Usage Types of Digital Platform

The table below represents a crosstab of participants' digital platform usage categories and gender. It provides insights into the usage patterns and preferences of different digital platforms among females and males. Among the usage categories, making video calls with acquaintances is a popular activity, with 76 females (93.8%) and 122 males (92.4%) engaging in this activity, making it the most commonly used category overall.

Table 5-37: Crosstab between Participants Digital Platform Usage Category and Gender

Usage Category	Female		Male		Total	
	No.	%	No.	%	No.	%
Making video calls with acquaintances	76	93.8	122	92.4	198	93
Watching videos (dramas, movies, songs)	58	71.6	91	68.9	149	70
Transactions on mobile	34	42	85	64.4	119	55.9
Searching desired information through search engines	24	29.6	63	47.7	87	40.8
Watching short videos on TikTok/Like	36	44.4	46	34.8	82	38.5
Getting regular updates regarding your areas of interest	23	28.4	45	34.1	68	31.9
Email	14	17.3	35	26.5	49	23
Government Services (Vaccine Registration)	13	16	35	26.5	48	22.5
Online classes or office work	11	13.6	18	13.6	29	13.6
Others	0	0	1	0.8	1	0.5

(Source: SPSS Analysis Output)

Watching videos, including dramas, movies, and songs, is also prevalent among both genders. 58 females (71.6%) and 91 males (68.9%) reported engaging in this activity. Transactions on mobile platforms show a gender disparity, with 34 females (42%) and 85 males (64.4%) participating in this category, indicating a higher percentage among males. Searching for desired information through search engines is another commonly practiced activity, with 24 females (29.6%) and 63 males (47.7%) using this category. Watching short videos on TikTok or Like shows a similar trend, with 36 females (44.4%) and 46 males (34.8%) engaged in this activity. Participants also reported getting regular updates regarding their areas of interest, with 23 females (28.4%) and 45 males (34.1%) utilizing this category. Other usage categories, such as email, government services, online classes or offices, and others, show varying degrees of usage among participants.

These findings highlight the different digital platform preferences and usage patterns among females and males. While there are some similarities, such as video calling and watching videos, there are also notable differences in activities like mobile transactions and searching for information. These insights can be valuable for understanding gender-

specific digital behaviour and tailoring digital services and platforms to meet the specific needs and preferences of different user segments.

5.6.7 Gender wise Type of Digital Platform with Personal Account

The crosstab of gender and digital platform category in which participants have a personal account shows the percentage of different platforms on which participants have accounts between males and females. Both male and female participants have the most accounts on social media (Facebook and Instagram), with 91.4% and 93.2%, respectively. The second platform listed is messaging apps (Imo, WhatsApp, and Viber), with 84% total counts. Next are mobile financial services (bKash, Nagad, and Rocket) with 582.2%, followed by email with 38.5% of the total and video creation platforms (TikTok, Likee) with 24.4% of the total participants.

Table 5-38: Gender wise Digital Platform with Participants Having Personal Account

Digital Platform Category	Female		Male		Total	
	No.	%	No.	%	No.	%
Social media (Facebook, Instagram, etc.)	74	91.4	123	93.2	197	92.5
Messaging app (Imo, WhatsApp, Viber)	65	80.2	114	86.4	179	84
Mobile Financial Services (bKash, Nagad, Rocket)	40	49.4	84	63.6	124	58.2
Email (Gmail)	21	25.9	61	46.2	82	38.5
Video creation platform (Likee, TikTok)	16	19.8	36	27.3	52	24.4
E-commerce (Daraz, Ajker Deal, etc.)	4	4.9	12	9.1	16	7.5
There is none	5	6.2	6	4.5	11	5.2
Ride Sharing	0	0	7	5.3	7	3.3
Service Platform (Foodpanda, Home Delivery Courier)	1	1.2	5	3.8	6	2.8

(Source: SPSS Analysis Output)

The data on usage category supports the result from the table of popular digital platforms among gender groups according to their usage and gender-wise different usage types of digital platforms in the case of popular platforms.

5.6.8 Frequency of Use for Different Digital Platform

The two following split tables show the frequency of usage for different platforms across participants in the survey.

Table 5-39: Frequency of Use for Different Platforms (i)

	I use it every day						I use it for at least 1 hour a day						I use it two or three days a week					
	Female		Male		Total		Female		Male		Total		Female		Male		Total	
App Category	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %
Facebook	43	20.2	73	34.3	116	54.5	31	14.6	49	23.0	80	37.6	5	2.3	2	0.9	7	3.3
Messenger	41	19.2	73	34.3	114	53.5	29	13.6	41	19.2	70	32.9	5	2.3	6	2.8	11	5.2
WhatsApp	14	6.6	35	16.4	49	23.0	18	8.5	34	16.0	52	24.4	7	3.3	14	6.6	21	9.9
YouTube	34	16.0	57	26.8	91	42.7	18	8.5	41	19.2	59	27.7	15	7.0	18	8.5	33	15.5
TikTok	19	8.9	30	14.1	49	23.0	7	3.3	16	7.5	23	10.8	15	7.0	14	6.6	29	13.6
Likee	3	1.4	5	2.3	8	3.8	6	2.8	12	5.6	18	8.5	3	1.4	5	2.3	8	3.8
Imo	23	10.8	39	18.3	62	29.1	14	6.6	22	10.3	36	16.9	12	5.6	18	8.5	30	14.1
Alaap	0	0.0	0	0.0	0	0.0	7	3.3	16	7.5	23	10.8	3	1.4	4	1.9	7	3.3
Viber	0	0.0	1	0.5	1	0.5	8	3.8	15	7.0	23	10.8	1	0.5	1	0.5	2	0.9
Shareit	3	1.4	3	1.4	6	2.8	10	4.7	18	8.5	28	13.1	6	2.8	7	3.3	13	6.1
Instagram	1	0.5	5	2.3	6	2.8	8	3.8	15	7.0	23	10.8	1	0.5	7	3.3	8	3.8
bKash/Nagad/Rocket	6	2.8	17	8.0	23	10.8	9	4.2	24	11.3	33	15.5	10	4.7	36	16.9	46	21.6
Daraz	1	0.5	1	0.5	2	0.9	7	3.3	14	6.6	21	9.9	1	0.5	2	0.9	3	1.4
Foodpanda	0	0.0	3	1.4	3	1.4	7	3.3	14	6.6	21	9.9	0	0.0	1	0.5	1	0.5
Gmail	4	1.9	6	2.8	10	4.7	10	4.7	18	8.5	28	13.1	2	0.9	12	5.6	14	6.6
Digital Health	0	0.0	0	0.0	0	0.0	7	3.3	14	6.6	21	9.9	0	0.0	1	0.5	1	0.5

Table 5-40: Frequency of Use for Different Platforms (ii)

	I use it two or three times a month.						I've never used it						I've used it in past						Very irregular use					
	Female		Male		Total		Female		Male		Total		Female		Male		Total		Female		Male		Total	
App Category	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %
Facebook	0	0.0	1	0.5	1	0.5	2	0.9	6	2.8	8	3.8	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	1	0.5
Messenger	1	0.5	3	1.4	4	1.9	3	1.4	7	3.3	10	4.7	1	0.5	1	0.5	2	0.9	1	0.5	1	0.5	2	0.9
WhatsApp	10	4.7	16	7.5	26	12.2	25	11.7	18	8.5	43	20.2	1	0.5	4	1.9	5	2.3	6	2.8	11	5.2	17	8.0
YouTube	2	0.9	3	1.4	5	2.3	5	2.3	7	3.3	12	5.6	1	0.5	2	0.9	3	1.4	6	2.8	4	1.9	10	4.7
TikTok	6	2.8	9	4.2	15	7.0	18	8.5	42	19.7	60	28.2	4	1.9	7	3.3	11	5.2	12	5.6	14	6.6	26	12.2
Likee	2	0.9	5	2.3	7	3.3	55	25.8	89	41.8	144	67.6	5	2.3	7	3.3	12	5.6	7	3.3	9	4.2	16	7.5
Imo	5	2.3	6	2.8	11	5.2	16	7.5	32	15.0	48	22.5	2	0.9	6	2.8	8	3.8	9	4.2	9	4.2	18	8.5
Alaap	1	0.5	2	0.9	3	1.4	61	28.6	104	48.8	165	77.5	4	1.9	3	1.4	7	3.3	5	2.3	3	1.4	8	3.8
Viber	0	0.0	1	0.5	1	0.5	64	30.0	105	49.3	169	79.3	2	0.9	5	2.3	7	3.3	6	2.8	4	1.9	10	4.7
Shareit	4	1.9	20	9.4	24	11.3	41	19.2	63	29.6	104	48.8	5	2.3	7	3.3	12	5.6	12	5.6	14	6.6	26	12.2
Instagram	3	1.4	5	2.3	8	3.8	59	27.7	87	40.8	146	68.5	4	1.9	5	2.3	9	4.2	5	2.3	8	3.8	13	6.1
MFS	12	5.6	33	15.5	45	21.1	25	11.7	17	8.0	42	19.7	3	1.4	0	0.0	3	1.4	16	7.5	5	2.3	21	9.9
Daraz	3	1.4	7	3.3	10	4.7	62	29.1	93	43.7	155	72.8	1	0.5	6	2.8	7	3.3	6	2.8	9	4.2	15	7.0
Foodpanda	2	0.9	4	1.9	6	2.8	64	30.0	100	46.9	164	77.0	1	0.5	7	3.3	8	3.8	7	3.3	3	1.4	10	4.7
Gmail	4	1.9	12	5.6	16	7.5	53	24.9	71	33.3	124	58.2	1	0.5	4	1.9	5	2.3	7	3.3	9	4.2	16	7.5
Digital Health	0	0.0	2	0.9	2	0.9	67	31.5	106	49.8	173	81.2	3	1.4	6	2.8	9	4.2	4	1.9	3	1.4	7	3.3

(Source: SPSS Analysis Output)

It is clear from the data that Facebook, Messenger, WhatsApp, YouTube, TikTok, and Imo are the top-used digital platforms, while digital services in the form of mobile financial services like bKash, Nagad, and Rocket are used by both genders. Gmail is also an important tool used by all the participants, as can be seen from the data.

5.7 Content Consumption Behaviour

5.7.1 Gender wise Content Preference of Participants

The following table represents the crosstab between gender and preference of content enjoyed in different media. After analysis in SPSS, the percentages were calculated in Microsoft Excel. According to the table short video clips, such as drama and parts of movies, were the most preferred type of content, with 58.9% of participants choosing them. There was a slightly higher percentage of males (61.5%) than females (56.3%) who preferred this type of content.

Table 5-41: Content preference among different gender groups

Content	Female		Male		Total	
	No.	%	No.	%	No.	%
Short video clips (drama, part of the movie)	120	56.3	128	61.5	248	58.9
Music Video	65	30.5	61	29.3	126	29.9
Facebook Live	44	20.7	50	24	94	22.3
Pictures with descriptions	55	25.8	37	17.8	92	21.9
Long documentary videos	40	18.8	43	20.7	83	19.7
other. Others	33	15.5	10	4.8	43	10.2
Articles/Features/Blogs	8	3.8	27	13	35	8.3
TikTok Videos	18	8.5	15	7.2	33	7.8

(Source: SPSS Analysis Output)

Music videos were the second-most preferred type of content, with 29.9% of participants choosing them. There was almost no difference in the percentage of females (30.5%) and males (29.3%) who preferred this type of content.

Facebook Live was the third most preferred type of content, with 22.3% of participants choosing it. There was a slightly higher percentage of males (24%) than females (20.7%) who preferred this type of content.

Pictures with descriptions were preferred by 21.9% of participants, with a higher percentage of females (25.8%) than males (17.8%) choosing this type of content.

Long documentary videos were preferred by 19.7% of participants, with almost no difference in the percentage of females (18.8%) and males (20.7%) who preferred this type of content.

"Other" types of content were chosen by 10.2% of participants, with a higher percentage of females (15.5%) than males (4.8%) choosing this option.

Articles, features, and blogs were preferred by 8.3% of participants, with a higher percentage of males (13%) than females (3.8%) choosing this type of content.

Finally, TikTok videos were preferred by 7.8% of participants, with almost no difference in the percentage of females (8.5%) and males (7.2%) who preferred this type of content.

Overall, the study found that short video clips, music videos, and Facebook Live were the most preferred types of content among the participants.

5.7.2 Area wise Contents Enjoyed on Digital Media

The table provides insights into the types of digital content enjoyed in urban and rural areas. In urban areas, drama was the most popular content category, with 28 respondents (18%) expressing their preference, followed by movies with 23 respondents (15%). News content garnered interest from 26 respondents (17%), while sports attracted 19 respondents (12%). Other notable content categories were songs (14 respondents, or 9%), religious content (13 respondents, or 8%), and educational videos (15 respondents, or 10%).

In rural areas, drama also ranked as the most enjoyed category, with 104 respondents (67%) expressing their preference. Movies followed closely behind with 98 respondents (63%). News content was preferred by 61 respondents (39%), and sports attracted 57 respondents (37%). Other content categories, such as songs, religious content, and educational videos, also received some level of interest.

These findings indicate that drama and movies are popular across both urban and rural areas, although there are some variations in preference between the two. News content also garnered significant interest, particularly in urban areas. The differences in content preferences between urban and rural areas can be attributed to various factors, such as cultural differences, access to digital media, and individual preferences. Understanding the content preferences in different areas can assist content creators, digital platforms, and marketers in tailoring their offerings and strategies to cater to the specific preferences of urban and rural audiences.

Table 5-42: Area wise Contents Enjoyed in Digital Media

Content Type	Urban		Rural	
	Count	%	Count	%
Drama	28	18%	104	67%
Movie	23	15%	98	63%
News	26	17%	61	39%
Sports	19	12%	57	37%
Songs	14	9%	32	21%
Religious Contents	13	8%	25	16%
Educational Videos	15	10%	22	14%
Music and Musical Shows	11	7%	21	14%
Health Related contents	6	4%	20	13%
Food and Cuisine	6	4%	10	6%
Documentaries about history, heritage, and sightseeing	12	8%	9	6%
Travel documentaries	5	3%	8	5%
Food vlogs	3	2%	6	4%
Fashion Related Contents	4	3%	4	3%
Contents on legal and civil rights	3	2%	4	3%
Latest Digital Devices/Gears	3	2%	3	2%
Vlogs of Influencers	3	2%	3	2%
Others	0	0%	0	0%

(Source: SPSS Analysis Output)

5.7.3 Age Range wise Contents Enjoyed on Digital Platforms

The table presents data on the types of digital content enjoyed by respondents across different age ranges. Among the age groups, drama was the most popular category, with 132 respondents (20% of the total) in the 15–19 age range, 20 respondents (17% of the total) in the 20–24 age range, 32 respondents (19% of the total) in the 25–29 age range, and so on. Movies were also well-received, with 121 respondents (18% of the total) in the 15–19 age range, 22 respondents (18% of the total) in the 20–24 age range, 31 respondents (16% of the total) in the 25–29 age range, and so on. Other popular content categories included news (ranging from 10% to 15% across different age ranges) and sports (ranging from 8% to 12% across different age ranges).

Table 5-43: Age range wise Contents Enjoyed in Digital Platforms

Particulars	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+	Total
Drama	30	20	32	18	12	11	6	2	1	0	132
Movie	29	22	31	17	8	8	4	2	0	0	121
News	18	13	21	10	9	10	5	1	0	0	87
Sports	18	12	21	8	6	8	3	0	0	0	76
Songs	11	6	13	7	5	3	0	0	1	0	46
Religious Contents	5	4	8	7	6	6	1	0	1	0	38
Educational Videos	9	9	6	4	5	2	1	1	0	0	37
Music and Musical Shows	6	4	8	8	3	2	1	0	0	0	32
Health Related contents	4	4	4	8	4	2	0	0	0	0	26
Food and Cuisine Related Contents	4	2	7	2	3	3	0	0	0	0	21
Documentaries about history, heritage, and sightseeing	6	4	5	1	0	0	0	0	0	0	16
Travel documentaries	3	1	2	3	3	1	0	0	0	0	13
Food vlogs	4	3	1	0	0	1	0	0	0	0	9
Fashion Related Contents	5	1	2	0	0	0	0	0	0	0	8
Contents on legal and civil rights	1	1	0	2	1	2	0	0	0	0	7
Latest Digital Devices/Gears	1	1	3	0	1	0	0	0	0	0	6
Vlogs of Influencers	1	1	1	2	0	1	0	0	0	0	6
Others	0	0	0	0	0	0	0		0	0	0

(Source: SPSS Analysis Output)

These findings suggest that drama and movies are popular across various age ranges, indicating their broad appeal. News and sports content also garnered significant interest. The preferences for specific content categories provide insights into the types of digital content that resonate with different age groups.

Understanding the relationship between age and content preferences can aid digital platforms, content creators, and marketers in tailoring their offerings to specific age demographics. By recognizing the content preferences of different age groups, they can develop targeted strategies to engage and cater to the preferences of their target audiences.

5.7.4 Contents Consumed Most on Digital Platforms

Among the different content types, drama is highly popular among both genders, with 47 females (81%) and 85 males (87.6%) expressing enjoyment in this category. Movies also attract significant interest, with 46 females (79.3%) and 75 males (77.3%) reporting enjoyment of movies.

News consumption shows a notable gender difference, with 18 females (31%) and 69 males (71.1%) expressing interest in this content category. Sports content attracts primarily male participants, with only 4 females (6.9%) compared to 72 males (74.2%) showing enjoyment in this category.

Songs are enjoyed by 18 females (31%), and 28 males (28%), indicating a similar level of interest among both genders. Religious content and educational videos also garner moderate interest from both females and males, with slight variations in percentages. Other content categories, such as music and musical shows, health-related content, documentaries about history, heritage, and sightseeing, food and cuisine-related content, and travel documentaries, show varying levels of interest among participants. It is worth noting that some content categories exhibit gender disparities, such as fashion-related content, content on legal and civil rights, and videos and vlogs of influencers, which receive higher engagement from males compared to females.

Table 5-44: Crosstab of Gender and Content Type in Digital Platforms

Content	Female		Male		Total	
	No.	%	No.	%	No.	%
Drama	47	81	85	87.6	132	85.2
Movie	46	79.3	75	77.3	121	78.1
News	18	31	69	71.1	87	56.1
Sports	4	6.9	72	74.2	76	49
Songs	18	31	28	28.9	46	29.7
Religious Contents	14	24.1	24	24.7	38	24.5
Educational Videos	16	27.6	21	21.6	37	23.9
Music and Musical Shows	10	17.2	22	22.7	32	20.6
Health Related contents	8	13.8	18	18.6	26	16.8
Documentaries about history, heritage, and sightseeing	7	12.1	14	14.4	21	13.5
Food and Cuisine Related Contents	10	17.2	6	6.2	16	10.3
Travel documentaries	3	5.2	10	10.3	13	8.4
Food vlogs	3	5.2	6	6.2	9	5.8
Fashion Related Contents	5	8.6	3	3.1	8	5.2
Contents on legal and civil rights	1	1.7	6	6.2	7	4.5
Latest Digital Devices/Gears	1	1.7	5	5.2	6	3.9
Videos/Vlogs of Influencers	2	3.4	4	4.1	6	3.9

(Source: SPSS Analysis Output)

These findings shed light on the diverse content preferences among females and males in the digital platform landscape. While there are shared interests, such as drama and movies, there are also variations, such as sports and news. Understanding these content preferences can assist marketers in catering to the specific interests and needs of different genders, thereby enhancing user experiences and engagement.

5.7.5 Digital Platform based on Entertainment & Infotainment Content

The following table represents the respondent's gender-wise usage of entertainment and informational content on digital platforms. After analysis in SPSS, the percentages were calculated in Microsoft Excel. The table presents the gender-wise usage of entertainment and informational content on digital platforms. It provides insights into the preferences and engagement of females and males with various platforms.

Table 5-45: Gender wise Entertainment and Infotainment Content in Digital Platform

Entertainment and Infotainment content Digital Platform Category	Female		Male		Total	
	No.	%	No.	%	No.	%
Facebook	56	96.6	91	93.8	147	94.8
YouTube app on mobile	39	67.2	86	88.7	125	80.6
YouTube in computer browser	4	6.9	17	17.5	21	13.5
Video streaming sites in computer browsers (Chorki, Bioscope)	1	1.7	8	8.2	9	5.8
Mobile Streaming App (Chorki, Bioscope)	2	3.4	7	7.2	9	5.8
Download from torrent and various websites	2	3.4	7	7.2	9	5.8
I don't watch plays/movies.	5	8.6	1	1	6	3.9
Others	1	1.7	0	0	1	0.6

(Source: SPSS Analysis Output)

Among the different platforms, Facebook is highly popular among both genders, with 56 females (96.6%) and 91 males (93.8%) using it for entertainment and infotainment content. The YouTube app on mobile is also widely used, with 39 females (67.2%) and 86 males (88.7%) reporting its usage.

There is a notable difference in the usage of YouTube in computer browsers, with 4 females (6.9%) and 17 males (17.5%) utilizing this platform. Similarly, video streaming sites in computer browsers and mobile streaming apps (such as Chorki and Bioscope) are more commonly used by males, although a small number of females also engage with these platforms. A few participants reported downloading content from torrents and various websites, with 2 females (3.4%) and 7 males (7.2%) engaging in this practice. A small portion of the participants, 5 females (8.6%) and 1 male (1%), stated that they do not watch plays or movies. Additionally, there were a few participants who mentioned other platforms not specified in the table.

These findings indicate that Facebook and the YouTube app on mobile are the preferred platforms for entertainment and infotainment content among both genders. However, there are variations in the usage of other platforms, with males showing higher engagement in certain cases.

5.7.6 Digital Platform Used to Watch Sports

The following table represents the respondent's gender-related sports-related content enjoyed on digital platforms. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that 78.4% of male participants watch sports on Facebook, and 71.1% of males watch live on YouTube on their smartphones. Though 32.8% of female participants watch sports on Facebook, 65.5% of the female participants do not watch sports. And only 6.5% of total participants watch sports on video streaming sites or TV channels in computer browsers.

Table 5-46: Gender wise Sports Contents Enjoyed in Digital Platforms

Entertainment and Infotainment content Digital Platform Category	Female		Male		Total	
	No.	%	No.	%	No.	%
Facebook	19	32.8	76	78.4	95	61.3
Live on YouTube app in smartphone	14	24.1	69	71.1	83	53.5
I do not watch sports	38	65.5	12	12.4	50	32.3
Live Score updates on mobile (Cricinfo, Cricbuzz, etc.)	4	6.9	17	17.5	21	13.5
Live on YouTube in computer browser	5	8.6	11	11.3	16	10.3
Live updates on various news sites	0	0	14	14.4	14	9
Video streaming sites of TV channels in computer browsers (GTV Live, Rabbithole, etc.)	1	1.7	9	9.3	10	6.5
Others	0	0	1	1	1	0.6

(Source: SPSS Analysis Output)

5.7.7 Digital Platform Used to Collect News

The following table represents a cross-tabulation of the respondent's gender-wise usage of digital platforms to collect news. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that a significant number of male and female participants rely on Facebook for collecting news. 90.3% of total digital platform users use Facebook to collect news, followed by online news portals at 30.3%.

Table 5-47: Gender wise Usage of Digital Platform to Collect News

Entertainment and Infotainment content Digital Platform Category	Female		Male		Total	
	No.	%	No.	%	No.	%
Facebook	50	86.2	90	92.8	140	90.3
Online News Portals	10	17.2	37	38.1	47	30.3
News analysis on YouTube	13	22.4	31	32	44	28.4
News portal's channel on YouTube	13	22.4	24	24.7	37	23.9
News link shared on WhatsApp/Imo group	12	20.7	18	18.6	30	19.4
There is no need to collect news/ (Do not watch/read news without TV-newspaper)	6	10.3	5	5.2	11	7.1
Streaming platforms that broadcast TV channel feed (Rabbithole, BongoBD etc.)	2	3.4	8	8.2	10	6.5
Others	1	1.7	0	0	1	0.6

(Source: SPSS Analysis Output)

5.7.8 Usage of Digital Platform for Learning Purpose

The table of gender-wise digital platform usage for learning purposes represents the overall counts of male and female participants who use digital platforms for learning purposes. 29.41% of female participants and 26.47% of male participants use digital platforms for learning purposes.

Table 5-48: Gender wise Digital Platform Usage for Learning Purpose

Female		Male		Total	
No.	%	No.	%	No.	%
10	29.41	9	26.47	19	55.9

(Source: SPSS Analysis Output)

The following table represents the crosstab between gender and digital platforms used for learning purposes. After analysis in SPSS, the percentages were calculated in Microsoft Excel. It can be observed from the results that 60% of female and 88.9% of male participants prefer groups or pages related to studying and preparing on Facebook. Learning Website (10 minutes school, Shikho) is in second place among the options with 63.2% total count of participants, followed by Learning App (10 minutes school, Ghoori learning app, Shikho) with total 52.6% counts.

Table 5-49: Crosstab between gender and digital platforms used for learning purposes

Digital Platform for Learning Purpose	Female		Male		Total	
	No.	%	No.	%	No.	%
Groups/pages related to studying and preparing on Facebook	6	60	8	88.9	14	73.7
Learning website (10 Minutes School, Shikho, etc.)	6	60	6	66.7	12	63.2
Learning App (10 Minutes, Ghoori Learning, Shikho etc)	4	40	6	66.7	10	52.6
YouTube channels/Facebook groups/pages of different teachers	5	50	5	55.6	10	52.6
Admission/Test Preparation Assistant Websites	5	50	4	44.4	9	47.4
Exam Preparation Assistant Website (LiveMCQ)	2	20	2	22.2	4	21.1
Test preparation helpful model test-based app	0	0	3	33.3	3	15.8
Others	1	10	0	0	1	5.3

(Source: SPSS Analysis Output)

5.8 Advertisement Consumption Behaviour

5.8.1 Preference of Media for Seeing Advertisements

The following table represents the gender wise participants' media preferences for enjoying advertisements.

Table 5-50: Gender wise media preference for seeing Advertisements

Media	Female		Male		Total	
	No.	%	No.	%	No.	%
TV	166	77.9	129	62	295	70.1
Facebook	78	36.6	125	60.1	203	48.2
YouTube	59	27.7	95	45.7	154	36.6
TikTok/Likee	27	12.7	24	11.5	51	12.1
Imo	27	12.7	13	6.3	40	9.5
Newspaper	13	6.1	26	12.5	39	9.3
Online newspapers	7	3.3	26	12.5	33	7.8
Magazine	4	1.9	13	6.3	17	4
Radio	4	1.9	4	1.9	8	1.9
Others	5	2.3	0	0	5	1.2

(Source: SPSS Analysis Output)

It can be observed from the results that 77.9% of female participants prefer to see advertisements on TV, 36.6% prefer Facebook for seeing advertisements, 27.7% prefer the platform YouTube for seeing advertisements, and TikTok, Likee, and Imo have been preferred by 12.7% of the participants. Among male participants, 62% prefer TV, 60.1% prefer Facebook, 45.7% prefer YouTube, and both newspapers and online newspapers are preferred by 12.5% as the platforms to enjoy advertisements. Overall, 70.1% of the participants prefer to see advertisements on TV, 48.2% prefer Facebook, and 36.6% prefer YouTube.

5.8.2 Reasons Behind Choice of Media for Advertisements

The following table is a crosstab between the reasons why respondents reported using certain media types for advertising, separated by gender. The table shows the number and percentage of females and males and the total number of respondents who reported each reason, as well as the overall percentage of respondents who reported each reason.

Table 5-51: Reasons for Media Preference for Advertisements by Gender

Reasons	Female		Male		Total	
	No.	%	No.	%	No.	%
I spend a lot of time watching TV	145	68.1	104	50	249	59.1
I use Facebook/Messenger regularly	73	34.3	117	56.3	190	45.1
I watch a lot of videos on YouTube	26	12.2	46	22.1	72	17.1
My regular commute on roads that have billboards	31	14.6	34	16.3	65	15.4
I read the leaflet/brochure that I receive	12	5.6	16	7.7	28	6.7
I have a habit of reading newspapers	3	1.4	24	11.5	27	6.4
I like to read newspapers online.	6	2.8	9	4.3	15	3.6
I regularly look for information from a particular Platform	5	2.3	8	3.8	13	3.1
Others	11	5.2	1	0.5	12	2.9
I play a lot of games on mobile	2	0.9	9	4.3	11	2.6
I listen to the radio for long times	4	1.9	3	1.4	7	1.7
I regularly visit ecommerce sites	0	0	0	0	0	0

(Source: SPSS Analysis Output)

The reasons include spending a lot of time watching TV, using Facebook or Messenger regularly, watching a lot of videos on YouTube, having a regular commute on roads that have billboards, reading the leaflet or brochure that is received, having a habit of reading newspapers, liking to read newspapers online, regularly looking for information from a particular platform, playing a lot of games on mobile, listening to the radio for long times, regularly visiting ecommerce sites, and others. The table shows that the most common reason for using TV for advertising is spending a lot of time watching it, with 68.1% of females and 50% of males reporting this reason. For Facebook or Messenger, the most common reason is using it regularly, with 34.3% of females and 56.3% of males reporting this reason. For YouTube, the most common reason is watching a lot of videos, with 12.2% of females and 22.1% of males reporting this reason. For billboards, the most common reason is having a regular commute on roads that have them, with 14.6% of females and 16.3% of males reporting this reason.

5.8.3 Preference of Types of Advertisements

Based on the following table, the TV advertising medium has the highest number of encounters, with a total of 288 respondents, with 77% of them being female and 59.6% male. Facebook ads come in second with a total of 191 encounters, of which 36.2% are female and 54.8% are male. Video ads on YouTube were encountered by 96 respondents, with 17.8% of them being female and 27.9% male.

Table 5-52: Media preference for advertisements among different gender groups

Media	Female		Male		Total	
	No.	%	No.	%	No.	%
TV Advertising	164	77	124	59.6	288	68.4
Ads in Facebook	77	36.2	114	54.8	191	45.4
Video ads in YouTube video	38	17.8	58	27.9	96	22.8
Billboards/Banners/Murals	25	11.7	30	14.4	55	13.1
Ads on Imo	17	8	14	6.7	31	7.4
Print Advertisements	4	1.9	24	11.5	28	6.7
Leaflet/Brochure	8	3.8	13	6.3	21	5
Banner ads on the website	3	1.4	16	7.7	19	4.5
Radio Advertising	5	2.3	4	1.9	9	2.1
Others	7	3.3	1	0.5	8	1.9

(Source: SPSS Analysis Output)

Billboards, banners, and murals were encountered by 55 respondents, with 11.7% being female and 14.4% male. Ads on Imo were encountered by 31 respondents, of whom

8% are female and 6.7% are male. Print advertisements were encountered by 28 respondents, with only 1.9% of them being female and 11.5% male.

Leaflet or brochure advertisements were encountered by 21 respondents, with 3.8% being female and 6.3% male. Banner ads on websites were encountered by 19 respondents, with only 1.4% being female and 7.7% male. Radio advertising was encountered by 9 respondents, with 2.3% being female and 1.9% male.

Lastly, other types of advertisements were encountered by 8 respondents, of whom 3.3% are female and 0.5% are male. Ads on mobile games and ads appearing on different apps' screens were encountered by 4 and 2 respondents, respectively, with very low representation of females and males.

5.8.4 Media on which Smartphone Advertisements Seen the Most

Table 5-53: Media on which Smartphone Advertisements are Seen most by Gender

Media	Female		Male		Total	
	No.	%	No.	%	No.	%
TV	124	58.2	105	50.5	229	54.4
Facebook/Messenger	60	28.2	104	50	164	39
YouTube	42	19.7	76	36.5	118	28
None of it	34	16	14	6.7	48	11.4
Billboards/Banners/Murals	17	8	25	12	42	10
Leaflet/Brochure	8	3.8	18	8.7	26	6.2
Online newspapers	7	3.3	16	7.7	23	5.5
Website	11	5.2	12	5.8	23	5.5
Newspaper	6	2.8	16	7.7	22	5.2
Magazine	3	1.4	7	3.4	10	2.4
Mobile Games	3	1.4	4	1.9	7	1.7
Radio	1	0.5	4	1.9	5	1.2
Others	3	1.4	0	0	3	0.7

(Source: SPSS Analysis Output)

The table is a crosstab of the percentage of people who reported using different media types for advertising, separated by gender. The table shows the number and percentage

of females and males and the total number of respondents who reported using each media type, as well as the overall percentage of respondents who reported using each type. The media types listed in the table include TV, Facebook/Messenger, YouTube, billboards, banners, posters, leaflets, brochures, online newspapers, websites, newspapers, magazines, mobile games, radio, and others. There is also a category for respondents who reported not using any of the listed media types.

The table shows that TV is the most commonly used media type, with 58.2% of females and 50.5% of males reporting its use. Facebook/Messenger is the second most commonly used media type, with 28.2% of females and 50% of males reporting its use. YouTube is the third most commonly used media type, with 19.7% of females and 36.5% of males reporting its use. Pop-up ads on the app screen had 0 respondents reporting their use.

6.0 HYPOTHESES DEVELOPMENT AND TESTING

6.1 Hypotheses for the Framework

Based on the hypothesized conceptual framework as mentioned in Chapter 1.0 and the findings of “Chapter 5.0: Findings From Questionnaire Survey," multiple hypotheses have been developed. The hypotheses surrounded the three core areas of the framework, i.e., the triggers and barriers that influence intent to use digital, digital media usage behaviour, and mobile handset usage behaviour.

6.1.1 Trigger/Barrier Hypothesis

H1: Digital device price is independent of personal income.

H2: Preference of brands is independent of after sales service.

H3: There is no difference in impact of language skill on location.

H4: Preferences of purchasing points are equal across locations.

H5: Preference of digital and traditional media are equal across locations.

H6: Preference of digital and traditional media are equal across age groups.

H7: There is no difference in impact of language skill on gender groups.

H8: Phone type is independent of family income.

6.1.2 Platform Hypothesis

H9: There is no difference in mean platform usage per day by gender or the means are equal.

H10: Digital platform usage is independent of location.

6.1.3 Purpose Hypothesis

H11: Purposes of purchasing a new smartphone is independent of gender.

H12: Purposes of purchasing a new smartphone is independent of location.

6.1.4 Package Hypothesis

H13: Spending on internet is independent of location.

H14: Spending on internet is independent of gender groups.

6.1.5 Source Hypothesis

H15: Sources influencing purchase decision is independent of location.

H16: Sources influencing purchase decision is independent of gender groups.

6.1.6 Content Hypothesis

H17: Contents enjoyed in digital media are independent of gender groups.

H18: Contents enjoyed in digital media are independent of location.

H19: Contents enjoyed in digital platforms are equal across all age groups.

6.1.7 Feature Hypothesis

H20: Features are independent of Gender groups in terms of purchasing a phone.

H21: Features are independent of location in terms of purchasing a phone.

6.2 Alignment of Hypothesis to Objectives

Table 6-1: Alignment of Objectives to Hypotheses

Objectives	Hypothesis
Understand the status of digital media as a marketing tool versus traditional media for BoP.	H3, H5, H6, H7, H9, H10, H13, H14, H17, H18, H19
Identify the specific triggers and barriers for BoP consumers to consume digital media versus traditional media.	H1, H3, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H17, H18, H19
Identify the usage behaviour of mobile handsets among BoP consumers.	H1, H2, H3, H4, H7, H8, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20, H21
Identify if digital media has potential as a marketing tool for BoP in the mobile handset industry.	H3, H5, H6, H7, H9, H10, H11, H12, H13, H14, H17, H18, H19, H20, H21
If digital media is identified as a potential tool, develop an approach framework for digital media as a marketing tool for BoP in the mobile handset industry.	All Hypotheses

6.3 Trigger-Barrier Hypothesis Testing

6.3.1 H1: Digital device price is independent of personal income

Table 6-2: Crosstabulation of Personal Income and Price of Primary Smartphone

			c31. Approximate price of your primary smartphone?						
			Less than 5000	5000-8000	8000-12000	12000-18000	18000-25000	25000+	Total
c12. Personal monthly income	No Income	Count	1	15	39	17	4	4	80
		Expected Count	1.3	10.7	33.0	25.3	7.0	2.7	80.0
	Less than 6500	Count	1	3	5	3	2	0	14
		Expected Count	.2	1.9	5.8	4.4	1.2	.5	14.0
	6500-8000	Count	1	5	7	7	3	0	23
		Expected Count	.4	3.1	9.5	7.3	2.0	.8	23.0
	8000-9500	Count	0	4	1	1	0	0	6
		Expected Count	.1	.8	2.5	1.9	.5	.2	6.0
	9500-11000	Count	1	1	8	7	2	1	20
		Expected Count	.3	2.7	8.3	6.3	1.8	.7	20.0
	11000-12500	Count	0	1	14	13	3	0	31
		Expected Count	.5	4.1	12.8	9.8	2.7	1.0	31.0
	12500-13500	Count	0	3	25	28	7	3	66
		Expected Count	1.1	8.8	27.2	20.9	5.8	2.2	66.0
Total		Count	4	32	99	76	21	8	240
		Expected Count	4.0	32.0	99.0	76.0	21.0	8.0	240.0

(Source: SPSS Analysis Output)

The crosstab shows the relationship between respondents' personal monthly income and the approximate price of their primary smartphone.

Among the 240 smartphone owners, most respondents (99 out of 240) who have a personal monthly income between 8000 and 25000 use a smartphone that costs between 12000 and 18000.

Those who have a personal monthly income of less than 5000 mostly use smartphones that cost between 5000 and 12000.

Respondents who have a personal monthly income between 12500-13500 mostly use smartphones that cost between 12000 and 18000.

Table 6-3: Chi-Square Test between Income and Price of Primary Device

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	47.241[a]	30	.024
Likelihood Ratio	46.296	30	.029
Linear-by-Linear Association	10.381	1	.001
N of Valid Cases	240		

a. 27 cells (64.3%) have expected count less than 5. The minimum expected count is .10.

(Source: SPSS Analysis Output)

A Chi-square test was done between personal monthly income and the price of the primary device. The findings of Pearson's chi-squared test of independence suggest that digital device prices may not be independent of personal income, contrary to the original hypothesis. The test statistic value of 47.241 and the corresponding p-value of 0.024 indicate that there is a significant association between personal monthly income and the price of the primary device.

However, it is important to consider the footnote in the findings, which suggests that the data do not meet the assumptions required for the chi-squared test. This means that the validity of the results may be compromised, and caution should be exercised when interpreting them. Despite this limitation, the findings suggest that personal income may play a role in determining digital device prices. This could have implications for businesses and policymakers who seek to understand consumer behaviour and preferences surrounding these products. Further research is necessary to confirm and extend these findings while accounting for potential confounding factors and improving the methodological rigor of the analysis.

Since the p-value is smaller than our selected significance level of 0.05, **we may reject the null hypothesis and conclude that there is a correlation between the price of digital devices and individual income.** The inability to meet the test's presumptions limits the validity of the results, and additional study is required to confirm and extend these findings.

6.3.2 H2: Preference of brands is independent of after sales service

Table 6-4: Preference of Brand and Availability of After Sales Service

			c3610. Reputation of the brand		
			No	Yes	Total
c58. If service center of a particular brand is not available in your area, does that affect your phone purchasing decision?	Yes	Count	37	35	72
		Expected Count	48.4	23.6	72.0
	No	Count	82	23	105
		Expected Count	70.6	34.4	105.0
Total		Count	119	58	177
		Expected Count	119.0	58.0	177.0

(Source: SPSS Analysis Output)

The crosstab result shows that out of 72 participants who are bothered by the availability of a service centre, 35 responded that the unavailability of an after-sales service centre of a brand in their area affects their purchase decision and brand preference, whereas the expected count was 23.6. This suggests that there is a significant association between brand preference and after-sales service.

Table 6-5: Chi-Square Test for Brand Preference and After Sales Service

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13.828[a]	1	.000		
Continuity Correction[b]	12.642	1	.000		
Likelihood Ratio	13.760	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	13.750	1	.000		
N of Valid Cases	177				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 23.59.

b. Computed only for a 2x2 table

(Source: SPSS Analysis Output)

The findings of the Chi square test of independence suggest that the hypothesis that preference for brands is independent of after-sales service is not supported.

The test statistic value of 13.828 is relatively large, indicating a substantial difference between the observed and expected values. Additionally, the corresponding p-value of 0.000 is much smaller than the conventional level of significance of 0.05, indicating strong evidence against the null hypothesis of independence.

Furthermore, the footnote in the findings indicates that the data meet the assumptions required for the Chi square test, suggesting that the results are reliable.

These findings suggest that customers consider after-sales service when making purchasing decisions, and it may influence their brand preferences. This may have important implications for businesses that seek to improve customer satisfaction and brand loyalty by offering quality after-sales service.

In conclusion, **we can reject the null hypothesis that preference for brands is independent of after-sales service based on the findings of the Chi-square test of independence.** These results suggest that there is a significant association between brand preference and after-sales service. However, further research may be necessary to confirm and extend these findings while accounting for potential confounding factors and improving the methodological rigor of the analysis.

6.3.3 H3: There is no difference in impact of language skill on location

Table 6-6: Group Statistics on area wise Impact of English Language

Group Statistics

	c04r_Type of area	N	Mean	Std. Deviation	Std. Error Mean
c107a_7. English Language Knowledge	Urban	104	4.74	1.344	.132
	Rural	317	5.08	1.049	.059

(Source: SPSS Analysis Output)

The table provides the group statistics for a study conducted to examine the relationship between the type of area (urban or rural) and the importance of English language skill. The data consists of 104 participants from urban areas and 317 participants from rural areas.

The mean Likert score for the variable “English knowledge not needed” was higher for participants from rural areas (mean = 5.08, SD = 1.049) than for participants from urban areas (mean = 4.74, SD = 1.344). The difference in means was statistically significant, as evidenced by the standard error of the mean for the two groups (urban: 0.132, rural: 0.059).

Based on these findings, it can be concluded that participants from rural areas have a significantly better belief that “English knowledge is not needed” for using smartphones compared to participants from urban areas.

Table 6-7: T-Test of English Language Knowledge between different Location

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
c107a_7. English Language Knowledge	Equal variances assumed	14.866	.000	-2.678	419	.008	-.342	.128	-.592	-.091
	Equal variances not assumed			-2.367	146.413	.019	-.342	.144	-.627	-.056

(Source: SPSS Analysis Output)

The findings from the independent sample t-test suggest that the hypothesis "There is no difference in the impact of language skill on location" is not supported.

The p-value of the Levene's test for equality of variances is 0.000, which indicates that the assumption of equal variances is violated, and we cannot assume that the variances in the two groups (urban and rural) are the same.

The p-value of the t-test with equal variances assumed is 0.008, and the p-value of the t-test with equal variances not assumed is 0.019. Both p-values are smaller than the conventional level of significance of 0.05, suggesting strong evidence against the null hypothesis. These findings reveal a statistically significant variation in the influence of language proficiency between urban and rural settings.

In conclusion, **we reject the hypothesis that "There is no difference in the impact of language skill on location" based on the findings of the independent sample t-test.** The results indicate that there is a significant difference in how people view the impact of English language skills between urban and rural areas. Rural consumers seem to have a stronger belief compared to their urban counterparts that they do not need to know the English language to operate smartphones.

6.3.4 H4: Preferences of purchasing points are equal across locations

Table 6-8: ANOVA test on Preference of Purchasing Points across Locations

ANOVA

c93. If you have the opportunity to buy a smartphone in the future, from what source would you like to buy?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.480	1	12.480	7.075	.008
Within Groups	739.126	419	1.764		
Total	751.606	420			

(Source: SPSS Analysis Output)

The findings from the ANOVA test suggest that the hypothesis "Preferences of purchasing points are equal across all locations" is not supported. The value for significance is 0.008, which is less than the conventional level of significance of 0.05. This indicates that there is a statistically significant difference in the preference of purchasing points across different locations. The F value of 7.075 also indicates a significant difference between the means of the groups, further supporting the rejection of the null hypothesis.

The means plot is a visual representation of the ANOVA test, showing the means and variability of the preference of purchasing points across urban and rural locations. From the means plot, it is clear that the mean preference for purchasing points differs between urban and rural areas.

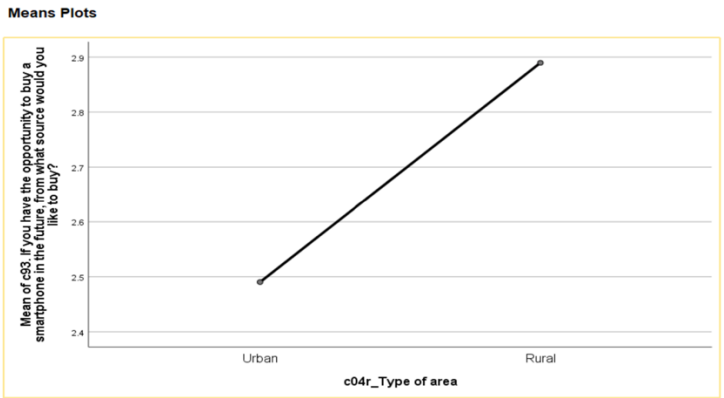


Figure 6-1: Means plot presenting ANOVA test result for H4 from SPSS

In conclusion, **based on the results of the ANOVA test, we reject the hypothesis that "Preference of purchasing points are equal across all locations"**. The findings suggest that there is a significant difference in the preference of purchasing points between urban and rural areas.

6.3.5 H5: Preference of digital and traditional media are equal across all locations

Table 6-9: ANOVA test on Preference for digital and traditional media across Locations

ANOVA

c96 Recoded Digital vs Traditional

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4965.163	1	4965.163	1.611	.205
Within Groups	1291637.174	419	3082.666		
Total	1296602.337	420			

(Source: SPSS Analysis Output)

The findings from the ANOVA test suggest that the hypothesis "Preference for digital and traditional media are equal across all locations" is not rejected.

The value for significance is 0.205, which is greater than the conventional level of significance of 0.05. This indicates that there is no statistically significant difference in the preference for digital and traditional media across different locations.

The F value of 1.611 also suggests no significant difference between the means of the groups, further supporting the acceptance of the null hypothesis.

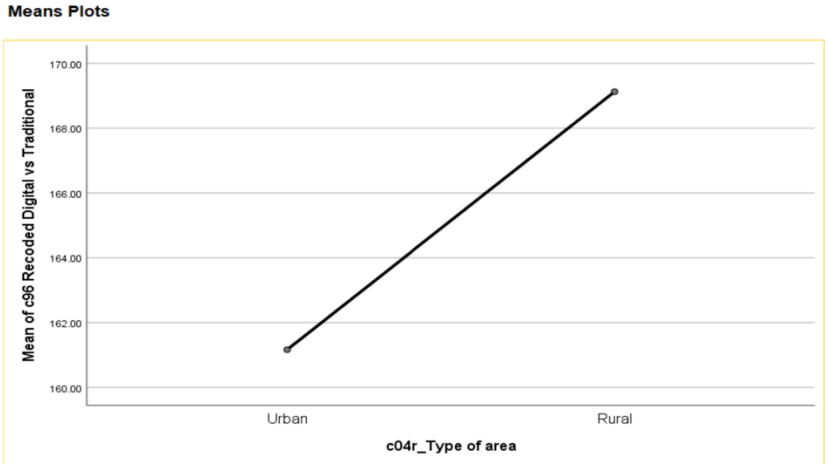


Figure 6-2: Means plot presenting ANOVA test result for H5 from SPSS

The means plot is a visual representation of the ANOVA test, showing the means and variability of the preference for digital and traditional media across different locations. From the means plot, it can be observed that the mean preference for digital and traditional media is relatively similar across different locations.

In conclusion, based on the results of the ANOVA test**, we do not reject the hypothesis that "Preference for digital and traditional media are equal across all locations"**. The findings suggest that there is no significant difference in preference for digital and traditional media across different locations. Further investigation may be necessary to identify the factors that contribute to this similarity and develop strategies for leveraging this similarity to optimize media usage across different locations.

6.3.6 H6: Preference of digital and traditional media are equal across age groups

Table 6-10: ANOVA on Preference for digital and traditional media among Age Groups

ANOVA

c96 Recoded Digital vs Traditional

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	218759.461	8	27344.933	10.452	.000
Within Groups	1077842.876	412	2616.123		
Total	1296602.337	420			

(Source: SPSS Analysis Output)

The ANOVA test was conducted to examine the hypothesis that the preference for digital and traditional media is equal across all age groups. The results showed that the value of significance is 0.000, indicating that there is a significant difference in preference for digital and traditional media across age groups. The F-value was found to be 10.452, which is statistically significant.

The means plot also supports the ANOVA results, as it shows the mean preference for digital and traditional media across different age groups. It indicates that there is a difference in the means of preference for digital and traditional media across different age groups.

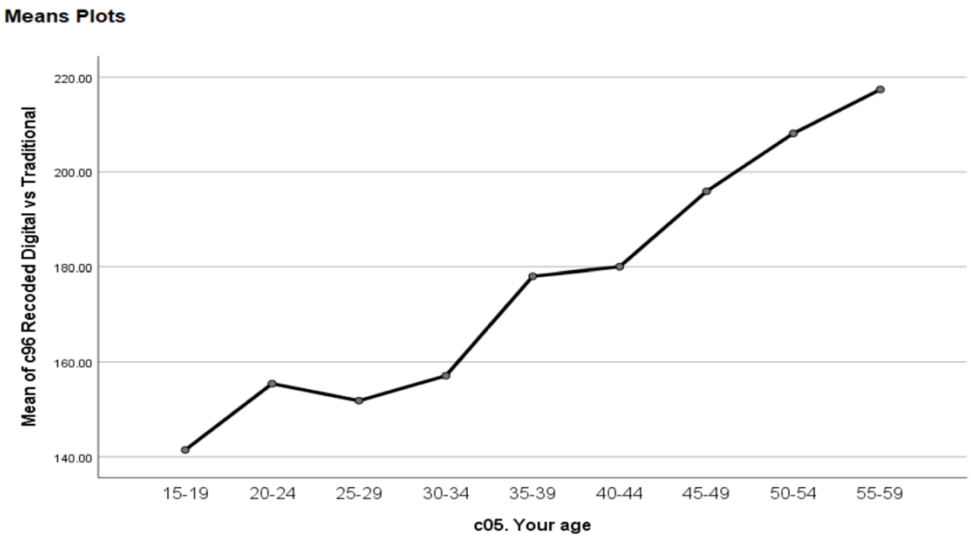


Figure 6-3: Means plot presenting ANOVA test result for H6 from SPSS

Therefore, **we reject the null hypothesis that preference for digital and traditional media is equal across all age groups** and conclude that there is a significant difference in preference for digital and traditional media across age groups.

6.3.7 H7: There is no difference in impact of language skill on gender groups

Table 6-11: Group Statistics on gender wise Need for English Knowledge

Group Statistics

	c03. Your Gender	N	Mean	Std. Deviation	Std. Error Mean
c107a_7. English Language Knowledge	Female	213	4.95	1.170	.080
	Male	208	5.05	1.102	.076

(Source: SPSS Analysis Output)

The group statistics shows that the mean score of "English knowledge not needed" English language knowledge for female participants (M=4.95, SD=1.170) is slightly lower than the mean score for male participants (M=5.05, SD=1.102). The standard error of the mean for female participants is .080, indicating that the sample mean is a reliable estimate of the population mean. Similarly, the standard error of the mean for male participants is .076, indicating a reliable estimate of the population mean. These statistics suggest that there is a small difference in "English knowledge not needed" between the two gender groups, with males having slightly higher scores on average.

Table 6-12: T-test of English Language Knowledge on different Genders

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
c107a_7. English Language Knowledge	Equal variances assumed	.753	.386	-.899	419	.369	-.100	.111	-.318	.118
	Equal variances not assumed			-.900	418.453	.369	-.100	.111	-.317	.118

(Source: SPSS Analysis Output)

Based on the independent samples t-test for the impact of language skill on gender groups, the results show that the p-value for Levene's test is 0.386, which indicates that there is homogeneity of variances assumption between the two groups. The p-value for equal variances assumed is 0.369, which is greater than the alpha level of 0.05, indicating that there is no significant difference in the impact of language skill between male and female groups. The p-value for equal variances not assumed is also 0.369, which supports the same conclusion.

Therefore, **we fail to reject the null hypothesis that there is no difference in the impact of language skill on gender groups**. Thus, we can conclude that there is no significant difference in the impact of language skill between male and female groups. Both genders equally believe that English language knowledge is not needed to use smartphones.

6.3.8 H8: Phone type is independent of family income

Table 6-13: Crosstab between use of Button Phone among Household Income Groups

Crosstab

			c09. Household Income					
			6500-8000	8000-9500	9500-11000	11000-12500	12500-13500	Total
c201. Button Mobile	No	Count	13	10	18	49	73	163
		Expected Count	12.4	11.6	23.6	44.1	71.2	163.0
	Yes	Count	19	20	43	65	111	258
		Expected Count	19.6	18.4	37.4	69.9	112.8	258.0
Total		Count	32	30	61	114	184	421
		Expected Count	32.0	30.0	61.0	114.0	184.0	421.0

(Source: SPSS Analysis Output)

Based on the crosstab analysis between the type of button mobile phone participants are currently using and their household income range, it can be observed that the count and expected count for all income ranges are nearly the same. This suggests that the use of button mobile phones is not significantly influenced by the household income range of the participants. Therefore, it can be concluded that there is no significant association between the type of button mobile phone used and household income range.

Table 6-14: Chi-Square Test between Household Income and Button Phone User

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.541[a]	4	.472
Likelihood Ratio	3.618	4	.460
Linear-by-Linear Association	.498	1	.480
N of Valid Cases	421		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.62.

(Source: SPSS Analysis Output)

Based on the chi-square test conducted between family income and button phone user, the value of the test statistic was found to be 3.541 and the corresponding p-value was 0.472. As the p-value is greater than the conventional level of significance of 0.05, **we fail to reject the null hypothesis for button phone type**. Therefore, we can conclude that there is no significant association between phone type (button phone) and family income. The footnote indicates that the assumption of the test is met, which strengthens the validity of the conclusion.

Table 6-15: Crosstab of Use of Smartphone among Household Income Groups

Crosstab

			c09. Household Income					
			6500-8000	8000-9500	9500-11000	11000-12500	12500-13500	Total
c202. Smartphone/Touch Mobile	No	Count	16	15	35	55	60	181
		Expected Count	13.8	12.9	26.2	49.0	79.1	181.0
	Yes	Count	16	15	26	59	124	240
		Expected Count	18.2	17.1	34.8	65.0	104.9	240.0
Total		Count	32	30	61	114	184	421
		Expected Count	32.0	30.0	61.0	114.0	184.0	421.0

(Source: SPSS Analysis Output)

It can be observed that a majority of respondents (240) reported owning a smartphone/touch, while 181 did not. Among respondents who reported an annual household income between 12500-13500, the majority (124) reported owning a smartphone/touch. However, for respondents with an annual household income between 6500-8000, only 16 reported owning a smartphone/touch, which is lower than the expected count of 13.8. The distribution of smartphone ownership across different income groups suggests that income level may be associated with smartphone ownership.

Chi-square test was conducted to determine the strength and significance of the relationship between these two variables.

Table 6-16: Chi-Square Test between Household Income and Smartphone User

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.770[a]	4	.003
Likelihood Ratio	15.910	4	.003
Linear-by-Linear Association	9.427	1	.002
N of Valid Cases	421		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.90.

(Source: SPSS Analysis Output)

Based on the chi-square test between family income and smartphone user, the findings reveal that the value of the test statistic is 15.770 with a corresponding p-value of 0.003, which is less than the significance level of 0.05. **This suggests that there is evidence to reject the null hypothesis that phone type is independent of family income for smartphone users**. In other words, there is a significant relationship between family income and smartphone users.

Additionally, the footnote indicates that the data meet the assumption for conducting the chi-square test. Therefore, we can conclude that the preference for smartphone is significantly related to family income. This could suggest that individuals with higher family income may be more likely to prefer and purchase smartphones compared to those with lower family income.

6.4 Platform Hypothesis Testing

6.4.1 H9: There is no difference in mean platform usage per day by gender

Table 6-17: Independent Sample T-test of Digital Platform Usage by Gender

Independent Samples Test										
		Test for Equality of		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c63_1. Facebook	Equal variances assumed	0.19	0.663	0.638	211	0.524	0.107	0.167	-0.223	0.436
	Equal variances not assumed			0.673	196.817	0.502	0.107	0.158	-0.206	0.419
c63_2. Messenger	Equal variances assumed	0.221	0.639	0.51	211	0.611	0.098	0.193	-0.283	0.48
	Equal variances not assumed			0.518	177.936	0.605	0.098	0.19	-0.277	0.474
c63_3. WhatsApp	Equal variances assumed	6.387	0.012	-2.53	211	0.012	-0.782	0.309	-1.391	-0.173
	Equal variances not assumed			-2.438	149.734	0.016	-0.782	0.321	-1.416	-0.148
c63_4. YouTube	Equal variances assumed	1.049	0.307	-1.388	211	0.167	-0.305	0.22	-0.738	0.128
	Equal variances not assumed			-1.369	161.898	0.173	-0.305	0.223	-0.744	0.135
c63_5. TikTok	Equal variances assumed	4.427	0.037	0.776	211	0.439	0.242	0.312	-0.374	0.858
	Equal variances not assumed			0.795	182.519	0.428	0.242	0.305	-0.359	0.844
c63_6. Likee	Equal variances assumed	0.659	0.418	-0.367	211	0.714	-0.103	0.28	-0.656	0.45
	Equal variances not assumed			-0.372	176.564	0.71	-0.103	0.277	-0.649	0.443
c63_7. Imo	Equal variances assumed	1.297	0.256	0.446	211	0.656	0.141	0.315	-0.48	0.761
	Equal variances not assumed			0.452	176.286	0.652	0.141	0.311	-0.473	0.754
c63_8. Alaap (BTRC App)	Equal variances assumed	1.078	0.3	-0.307	211	0.759	-0.086	0.279	-0.635	0.463
	Equal variances not assumed			-0.315	183.382	0.753	-0.086	0.271	-0.621	0.45
c63_9. Viber	Equal variances assumed	0.257	0.613	-0.207	211	0.836	-0.056	0.273	-0.594	0.481
	Equal variances not assumed			-0.21	177.3	0.834	-0.056	0.269	-0.587	0.474
c63_10. Shareit	Equal variances assumed	0.039	0.844	-0.441	211	0.66	-0.135	0.307	-0.74	0.47
	Equal variances not assumed			-0.441	169.417	0.66	-0.135	0.307	-0.741	0.471
c63_11. Instagram	Equal variances assumed	4.747	0.03	-1.252	211	0.212	-0.368	0.294	-0.949	0.212
	Equal variances not assumed			-1.286	183.786	0.2	-0.368	0.287	-0.934	0.197
c63_12. BKash/Nagad/Rocket Etc	Equal variances assumed	5.325	0.022	-4.64	211	0	-1.244	0.268	-1.773	-0.716
	Equal variances not assumed			-4.489	151.761	0	-1.244	0.277	-1.792	-0.697
c63_13. Daraz	Equal variances assumed	0.653	0.42	-0.638	211	0.524	-0.175	0.274	-0.714	0.365
	Equal variances not assumed			-0.647	176.911	0.518	-0.175	0.27	-0.707	0.358
c63_14. Foodpanda	Equal variances assumed	1.657	0.199	-0.709	211	0.479	-0.192	0.271	-0.725	0.342
	Equal variances not assumed			-0.731	185.458	0.466	-0.192	0.263	-0.71	0.326
c63_15. Gmail	Equal variances assumed	1.255	0.264	-1.342	211	0.181	-0.429	0.319	-1.058	0.201
	Equal variances not assumed			-1.352	173.515	0.178	-0.429	0.317	-1.054	0.197
c63_16. Digital Health	Equal variances assumed	1.158	0.283	-0.576	211	0.566	-0.149	0.258	-0.658	0.361
	Equal variances not assumed			-0.589	182.078	0.556	-0.149	0.252	-0.647	0.349

(Source: SPSS Analysis Output)

Based on the findings of the independent sample test for gender-wise digital platform usage, the p-value for Levene's test for WhatsApp, TikTok, Instagram and bKash/ Nagad/ Rocket is less than 0.05, indicating that there is a significant difference in the variances of platform usage between genders for these platforms. On the other hand, the p-value of 12 out of 16 platforms including Facebook, Messenger, YouTube, Likee, Imo, Alaap, Viber, Shareit, Daraz, Foodpanda, Gmail, and Digital Health is greater than our chosen significance level $\alpha = 0.05$, indicating that there is no significant difference in the variances of platform usage between genders for these platforms.

Thus, we do not reject the null hypothesis for platforms (Facebook, Messenger, YouTube, Likee, Imo, Alaap, Viber, Shareit, Daraz, Foodpanda, Gmail, and Digital Health), concluding that there is no difference in mean platform usage among male and female for those platforms. However, for WhatsApp, TikTok, Instagram, and bKash/ Nagad/ Rocket, we reject the null hypothesis for those platforms, concluding that there is a significant difference in mean platform usage among male and female.

6.4.2 H10: Digital platform usage is independent of location

Table 6-18: Independent Sample T-test of Digital Platform Usage across locations

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c63_1. Facebook	Equal variances assumed	23.39	0	-2.189	211	0.03	-0.393	0.179	-0.746	-0.039
	Equal variances not assumed			-1.569	65.496	0.121	-0.393	0.25	-0.893	0.107
c63_2. Messenger	Equal variances assumed	21.699	0	-1.392	211	0.165	-0.291	0.209	-0.702	0.121
	Equal variances not assumed			-1.094	72.257	0.277	-0.291	0.266	-0.82	0.239
c63_3. WhatsApp	Equal variances assumed	0.003	0.955	1.386	211	0.167	0.47	0.339	-0.198	1.138
	Equal variances not assumed			1.393	106.174	0.166	0.47	0.337	-0.199	1.138
c63_4. YouTube	Equal variances assumed	44.033	0	-3.125	211	0.002	-0.731	0.234	-1.192	-0.27
	Equal variances not assumed			-2.453	72.114	0.017	-0.731	0.298	-1.325	-0.137
c63_5. TikTok	Equal variances assumed	3.509	0.062	-1.748	211	0.082	-0.589	0.337	-1.254	0.075
	Equal variances not assumed			-1.664	95.648	0.099	-0.589	0.354	-1.292	0.114
c63_6. Likee	Equal variances assumed	2.678	0.103	1.015	211	0.311	0.308	0.304	-0.29	0.906
	Equal variances not assumed			0.961	94.924	0.339	0.308	0.32	-0.328	0.944
c63_7. Imo	Equal variances assumed	5.418	0.021	-1.536	211	0.126	-0.522	0.34	-1.192	0.148
	Equal variances not assumed			-1.455	94.789	0.149	-0.522	0.359	-1.234	0.19
c63_8. Alaap (BTRC App)	Equal variances assumed	15.329	0	2.29	211	0.023	0.683	0.299	0.095	1.272
	Equal variances not assumed			2.006	83.453	0.048	0.683	0.341	0.006	1.361
c63_9. Viber	Equal variances assumed	9.353	0.003	1.827	211	0.069	0.536	0.293	-0.042	1.114
	Equal variances not assumed			1.631	85.908	0.107	0.536	0.329	-0.117	1.189
c63_10. Shareit	Equal variances assumed	0.002	0.967	0.076	211	0.939	0.025	0.333	-0.631	0.682
	Equal variances not assumed			0.076	105.62	0.939	0.025	0.332	-0.633	0.684
c63_11. Instagram	Equal variances assumed	6.096	0.014	1.564	211	0.119	0.498	0.319	-0.13	1.126
	Equal variances not assumed			1.461	92.555	0.147	0.498	0.341	-0.179	1.176
c63_12. BKash/Nagad/Rocket Etc	Equal variances assumed	0.208	0.649	1.659	211	0.099	0.503	0.303	-0.095	1.101
	Equal variances not assumed			1.64	102.647	0.104	0.503	0.307	-0.106	1.112
c63_13. Daraz	Equal variances assumed	15.846	0	2.685	211	0.008	0.784	0.292	0.208	1.36
	Equal variances not assumed			2.384	85.208	0.019	0.784	0.329	0.13	1.438
c63_14. Foodpanda	Equal variances assumed	21.551	0	3.107	211	0.002	0.893	0.287	0.326	1.46
	Equal variances not assumed			2.691	82.029	0.009	0.893	0.332	0.233	1.553
c63_15. Gmail	Equal variances assumed	2.535	0.113	2.219	211	0.028	0.763	0.344	0.085	1.441
	Equal variances not assumed			2.114	95.887	0.037	0.763	0.361	0.047	1.48
c63_16. Digital Health	Equal variances assumed	9.538	0.002	1.764	211	0.079	0.491	0.278	-0.058	1.04
	Equal variances not assumed			1.558	84.473	0.123	0.491	0.315	-0.136	1.118

(Source: SPSS Analysis Output)

Based on the Independent Sample t Test, **the hypothesis that Digital platform usage is independent of location is partially rejected**. The results show that the p value for Levene's test for several platforms, including **Facebook, Messenger, Viber, Alaap, YouTube, Instagram, Imo, Daraz, Foodpanda, and Digital Health, is less than 0.05. This indicates that there is a significant difference in the variance of platform usage between location groups for these platforms.**

However, the p-value for **6 out of 16 platforms, namely WhatsApp, TikTok, ShareIt, Gmail, Likee, bKash/ Nagad/ Rocket, is greater than the chosen significance level α = 0.05, which means that there is no significant difference in platform usage between location groups for these platforms**.

In conclusion, the results indicate that the hypothesis that digital platform usage is independent of location is not entirely supported, as there are significant differences in both variance and mean platform usage between location groups for some platforms. Interestingly, the more penetrated platforms also have similar penetration among urban and rural BoP consumers, which can help us hypothesize that we are gradually heading

towards a situation where the difference in platform penetration is gradually diminishing between the bottom and top of the pyramid for regular use platforms like WhatsApp, TikTok, ShareIt, Gmail, Likee, and MFS (bKash, Nagad, and Rocket).

6.5 Purpose Hypothesis Testing

6.5.1 H11: Purposes of purchasing a new smart phone is independent of gender

Table 6-19: T-test of Purpose of Purchasing Smartphone among Genders

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c34a1. Smartphone has become a requiren	Equal variances assumed	4.162	0.043	-1.913	178	0.057	-0.143	0.074	-0.289	0.004
	Equal variances not assumed			-1.918	171.017	0.057	-0.143	0.074	-0.289	0.004
c34a2. To start using social media	Equal variances assumed	2.009	0.158	0.702	178	0.483	0.032	0.046	-0.059	0.124
	Equal variances not assumed			0.713	176.695	0.477	0.032	0.046	-0.057	0.122
c34a3. To upgrade living standard	Equal variances assumed	51.947	0	-3.561	178	0	-0.242	0.068	-0.377	-0.108
	Equal variances not assumed			-3.654	177.974	0	-0.242	0.066	-0.373	-0.112
c34a4. For entertainment purpose	Equal variances assumed	0.505	0.478	-0.358	178	0.721	-0.025	0.07	-0.163	0.113
	Equal variances not assumed			-0.357	167.703	0.721	-0.025	0.07	-0.163	0.113
c34a5. Recently moved out of family and n	Equal variances assumed	7.217	0.008	-1.31	178	0.192	-0.057	0.044	-0.144	0.029
	Equal variances not assumed			-1.352	177.186	0.178	-0.057	0.043	-0.141	0.026
c34a6. Earned the financial stability to affo	Equal variances assumed	1.242	0.267	-0.554	178	0.58	-0.015	0.027	-0.068	0.038
	Equal variances not assumed			-0.568	178	0.57	-0.015	0.026	-0.067	0.037
c34a7. To utilize smartphone for income ge	Equal variances assumed	2.531	0.113	-0.788	178	0.431	-0.017	0.022	-0.061	0.026
	Equal variances not assumed			-0.825	171.497	0.411	-0.017	0.021	-0.059	0.024

(Source: SPSS Analysis Output)

Based on the findings, Levene's test shows that there are no significant differences between gender groups for the purchase purposes of entertainment, the earned financial ability to afford smartphones, and the utilization of smartphones for income generation. However, the test shows a significant difference between gender groups for the purpose of upgrading living standards.

This means that, in general, the reasons for purchasing a new smartphone do not differ significantly between gender groups, except for the purpose of upgrading living standards. The t-test results suggest that this particular purpose is more important for one gender group than the other.

Therefore, we cannot fully conclude that the purposes of purchasing a new smartphone are independent of gender groups.

Since the p-value of 4 out of 7 purposes is greater than our chosen significance level of = 0.05, we cannot reject the null hypothesis for those purposes, concluding that those purposes, like starting to use social media, for entertainment, earning the financial ability to afford a smartphone, and utilizing a smartphone for income generation, are independent of gender groups.

Since the p-value of 3 out of 7 purposes is less than our chosen significance level of = 0.05, we reject the null hypothesis for those purposes, concluding that there is an association between gender groups and the purposes of using smartphones: smartphone is a requirement, to upgrade living standards and to remain in contact with family.

6.5.2 H12: Purposes of purchasing a new smart phone is independent of location

Table 6-20: T-test of Purpose of Purchasing a new Smartphone among between locations

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c34a1. Smartphone has become a requirement for profe	Equal variances assumed	4.986	0.027	-0.878	178	0.381	-0.083	0.094	-0.269	0.103
	Equal variances not assumed			-0.883	52.015	0.382	-0.083	0.094	-0.271	0.105
c34a2. To start using social media	Equal variances assumed	0.748	0.388	0.423	178	0.672	0.025	0.058	-0.09	0.139
	Equal variances not assumed			0.451	55.931	0.654	0.025	0.055	-0.085	0.134
c34a3. To upgrade living standard	Equal variances assumed	5.101	0.025	1.501	178	0.135	0.132	0.088	-0.042	0.306
	Equal variances not assumed			1.419	48.588	0.162	0.132	0.093	-0.055	0.319
c34a4. For entertainment purpose	Equal variances assumed	2.236	0.137	-0.856	178	0.393	-0.075	0.087	-0.248	0.098
	Equal variances not assumed			-0.821	49.341	0.416	-0.075	0.091	-0.258	0.108
c34a5. Recently moved out of family and need to remair	Equal variances assumed	10.978	0.001	1.74	178	0.084	0.096	0.055	-0.013	0.204
	Equal variances not assumed			1.399	42.251	0.169	0.096	0.068	-0.042	0.233
c34a6. Earned the financial stability to afford smartphor	Equal variances assumed	0.122	0.727	-0.174	178	0.862	-0.006	0.034	-0.073	0.061
	Equal variances not assumed			-0.183	54.946	0.856	-0.006	0.032	-0.071	0.059
c34a7. To utilize smartphone for income generation (rid	Equal variances assumed	4.16	0.043	-0.991	178	0.323	-0.028	0.028	-0.083	0.027
	Equal variances not assumed			-2.021	144	0.045	-0.028	0.014	-0.055	-0.001

(Source: SPSS Analysis Output)

The null hypothesis for this study is that there is no association between location and smartphone purchase purposes, while the alternative hypothesis is that there is an association.

Based on the results of the independent sample test, we can conclude that there is evidence to reject the null hypothesis for 4 out of the 7 smartphone purchase purposes tested. The p-value for these 4 purposes was less than our chosen significance level of = 0.05, indicating that there is a significant association between location and

these purposes. Specifically, the purposes that showed an association with location were when a smartphone has become a requirement, to upgrade living standards, to remain in constant contact with family, and to utilize a smartphone for income generation. **However, for the remaining 3 purposes, the p-value was greater than our chosen significance level of = 0.05, suggesting that we failed to reject the null hypothesis for these purposes.** Therefore, we can conclude that purposes like starting to use social media for entertainment and having the financial ability to afford a smartphone are independent of location.

In summary, based on the findings of the independent sample test, we reject the null hypothesis that there is no association between location and smartphone purchase purposes for 4 out of the 7 purposes tested, concluding that there is a significant association between location and these purposes. On the other hand, we fail to reject the null hypothesis for the remaining 3 purposes, concluding that these purposes are independent of location.

6.6 Package Hypothesis Testing

6.6.1 H13: Spending on internet is independent of location

The independent sample test was conducted between location and types of internet packages, with the null hypothesis being that there is no association between location and internet packages, and the alternative hypothesis being that there is an association.

The results of the Levene's test indicate that the p-value for 3 out of 10 types of internet packages (monthly internet package, broadband, and WIFI at office/public place) were greater than our chosen significance level of $\alpha = 0.05$. Therefore, we cannot reject the null hypothesis for these types of internet packages, concluding that they are independent of location.

Table 6-21: T-test of Spending on Internet among different locations

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c541. Monthly Internet Packages on Mobile	Equal variances assumed	1.314	0.253	0.796	167	0.427	0.069	0.087	-0.103	0.241
	Equal variances not assumed			0.787	73.833	0.434	0.069	0.088	-0.106	0.245
c542. Weekly Internet Packages on Mobile	Equal variances assumed	5.782	0.017	1.07	167	0.286	0.094	0.088	-0.079	0.266
	Equal variances not assumed			1.079	76.588	0.284	0.094	0.087	-0.079	0.266
c543. Daily packages on mobile	Equal variances assumed	7.297	0.008	-1.245	167	0.215	-0.088	0.07	-0.227	0.051
	Equal variances not assumed			-1.362	90.097	0.177	-0.088	0.064	-0.215	0.04
c544. Facebook bundle offer on mobile	Equal variances assumed	7.89	0.006	-1.346	167	0.18	-0.04	0.03	-0.099	0.019
	Equal variances not assumed			-2.273	124	0.025	-0.04	0.018	-0.075	-0.005
c545. YouTube bundle offer on mobile	Equal variances assumed	6.149	0.014	-1.199	167	0.232	-0.032	0.027	-0.085	0.021
	Equal variances not assumed			-2.025	124	0.045	-0.032	0.016	-0.063	-0.001
c546. Imo/Viber/WhatsApp Bundle Offer on Mobile	Equal variances assumed	6.149	0.014	-1.199	167	0.232	-0.032	0.027	-0.085	0.021
	Equal variances not assumed			-2.025	124	0.045	-0.032	0.016	-0.063	-0.001
c548. Broadband Internet	Equal variances assumed	2.922	0.089	-0.841	167	0.402	-0.016	0.019	-0.054	0.022
	Equal variances not assumed			-1.42	124	0.158	-0.016	0.011	-0.038	0.006
c549. WiFi connection from broadband internet	Equal variances assumed	4.054	0.046	1.062	167	0.29	0.074	0.07	-0.064	0.212
	Equal variances not assumed			0.995	67.477	0.323	0.074	0.074	-0.074	0.222
c5410. Package for SIM based modem	Equal variances assumed	12.044	0.001	1.695	167	0.092	0.023	0.013	-0.004	0.049
	Equal variances not assumed			1	43	0.323	0.023	0.023	-0.023	0.069
c5411. WiFi at office/university/public place	Equal variances assumed	1.425	0.234	-0.592	167	0.555	-0.008	0.014	-0.035	0.019
	Equal variances not assumed			-1	124	0.319	-0.008	0.008	-0.024	0.008

(Source: SPSS Analysis Output)

However, for the remaining 7 types of internet packages, the p-value was less than $\alpha = 0.05$, indicating that we reject the null hypothesis and conclude that there is a significant association between location and these internet packages. The 7 types of internet packages that showed an association with location are weekly package, daily package, Facebook bundle, YouTube bundle, Imo/Viber/WhatsApp bundle, WIFI from broadband, and package for modem.

In summary, the results of the independent sample test suggest that location and types of internet packages have varying degrees of association. While monthly internet package, broadband, and WIFI at office/public place are independent of location, the remaining 7 types of internet packages are associated with location. These findings can be useful in designing targeted internet packages for specific locations and demographics.

6.6.2 H14: Spending on internet is independent of gender groups

An independent sample test was conducted between gender and types of internet packages, with the null hypothesis being that there is no association between location and internet packages and the alternative hypothesis being that there is an association.

The results of the Levene's test indicate that the p-value for 5 out of 10 types of internet packages (Facebook bundle, Imo/Viber/WhatsApp bundle, broadband, WIFI from broadband, and modem package) were greater than our chosen significance level of α = 0.05. **Therefore, we do not reject the null hypothesis for these types of internet packages, concluding that they are independent of gender groups.**

Table 6-22: T-test of Purpose of Spending on Internet across Different Location

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval	
									Lower	Upper
c541. Monthly Internet Packages on Mobile	Equal variances assumed	52.037	0	-5.407	167	0	-0.392	0.073	-0.536	-0.249
	Equal variances not assumed			-5.709	158.166	0	-0.392	0.069	-0.528	-0.257
c542. Weekly Internet Packages on Mobile	Equal variances assumed	5.781	0.017	1.466	167	0.145	0.115	0.079	-0.04	0.271
	Equal variances not assumed			1.474	138.505	0.143	0.115	0.078	-0.039	0.27
c543. Daily packages on mobile	Equal variances assumed	5.081	0.025	1.151	167	0.252	0.073	0.064	-0.052	0.198
	Equal variances not assumed			1.116	122.553	0.267	0.073	0.065	-0.057	0.203
c544. Facebook bundle offer on mobile	Equal variances assumed	0.02	0.887	0.071	167	0.943	0.002	0.027	-0.051	0.055
	Equal variances not assumed			0.071	132.472	0.944	0.002	0.027	-0.052	0.056
c545. YouTube bundle offer on mobile	Equal variances assumed	11.151	0.001	-1.603	167	0.111	-0.038	0.024	-0.086	0.009
	Equal variances not assumed			-2.03	103	0.045	-0.038	0.019	-0.076	-0.001
c546. Imo/Viber/WhatsApp Bundle Offer on Mobile	Equal variances assumed	0.912	0.341	0.478	167	0.634	0.012	0.024	-0.036	0.059
	Equal variances not assumed			0.453	113.311	0.651	0.012	0.025	-0.039	0.062
c548. Broadband Internet	Equal variances assumed	0.45	0.503	0.336	167	0.738	0.006	0.017	-0.028	0.04
	Equal variances not assumed			0.318	113.047	0.751	0.006	0.018	-0.03	0.042
c549. WiFi connection from broadband internet	Equal variances assumed	0.306	0.581	-0.275	167	0.784	-0.017	0.063	-0.142	0.107
	Equal variances not assumed			-0.277	139.193	0.783	-0.017	0.063	-0.141	0.106
c5410. Package for SIM based modem	Equal variances assumed	2.544	0.113	-0.79	167	0.431	-0.01	0.012	-0.034	0.014
	Equal variances not assumed			-1	103	0.32	-0.01	0.01	-0.029	0.009
c5411. WiFi at office/university/public place	Equal variances assumed	6.629	0.011	1.267	167	0.207	0.015	0.012	-0.009	0.039
	Equal variances not assumed			1	64	0.321	0.015	0.015	-0.015	0.046

(Source: SPSS Analysis Output)

However, for the remaining 5 types of internet packages, the p-value was less than α = 0.05, indicating that **we reject the null hypothesis and conclude that there is a significant association between gender groups and these internet packages.** The 5 types of internet packages that showed an association with gender groups are monthly internet package, weekly package, daily package, YouTube bundle, and WIFI at office/public places.

In summary, the results of the independent sample test suggest that location and types of internet packages have varying degrees of association. While Facebook bundles, Imo/Viber/WhatsApp bundles, broadband, WIFI from broadband, and modem packages are independent of gender groups, the remaining 5 types of internet packages are associated with gender groups. These findings can be useful in designing targeted internet packages for specific gender groups and demographics.

6.7 Source of Influence Hypothesis Testing

6.7.1 H15: Sources influencing purchase decision are independent of location

Based on the independent sample test conducted between location and sources who influence purchase decision, it was found that 6 out of 9 sources had a p-value greater than the chosen significance level of $\alpha = 0.05$. **Therefore, the null hypothesis was not rejected for these sources, indicating that they were independent of location. These sources included Personal decision, Friends, Parents, Siblings, Relatives, and Employee of the shop.**

Table 6-23: T-test of Sources Influencing Purchase Decision among locations

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence	Interval of the Difference
									Lower	Upper
c901. I make purchase decision by n	Equal variances assumed	0.93	0.335	0.446	419	0.656	0.025	0.056	-0.085	0.135
	Equal variances not assumed			0.447	176.163	0.655	0.025	0.056	-0.085	0.135
c902. Friends	Equal variances assumed	4.679	0.031	-1.027	419	0.305	-0.05	0.049	-0.147	0.046
	Equal variances not assumed			-1.065	186.815	0.288	-0.05	0.047	-0.143	0.043
c903. Parents	Equal variances assumed	3.079	0.08	0.901	419	0.368	0.038	0.042	-0.045	0.12
	Equal variances not assumed			0.861	163.237	0.391	0.038	0.044	-0.049	0.124
c904. Brothers and sister	Equal variances assumed	0.745	0.389	-0.429	419	0.668	-0.009	0.021	-0.05	0.032
	Equal variances not assumed			-0.458	197.249	0.648	-0.009	0.02	-0.048	0.03
c905. Husband/Wife	Equal variances assumed	42.684	0	-2.684	419	0.008	-0.147	0.055	-0.255	-0.039
	Equal variances not assumed			-2.816	191.039	0.005	-0.147	0.052	-0.25	-0.044
c906. Offspring	Equal variances assumed	5.207	0.023	-1.109	419	0.268	-0.037	0.033	-0.102	0.028
	Equal variances not assumed			-1.223	210.794	0.223	-0.037	0.03	-0.096	0.022
c907. Relatives	Equal variances assumed	0.378	0.539	0.308	419	0.758	0.007	0.023	-0.038	0.052
	Equal variances not assumed			0.296	164.573	0.767	0.007	0.024	-0.04	0.054
c908. Known experienced users	Equal variances assumed	8.086	0.005	1.446	419	0.149	0.043	0.03	-0.015	0.101
	Equal variances not assumed			1.284	147.247	0.201	0.043	0.033	-0.023	0.108
c909. Employees of the shop	Equal variances assumed	2.757	0.098	0.83	419	0.407	0.006	0.008	-0.009	0.022
	Equal variances not assumed			0.638	125.89	0.524	0.006	0.01	-0.014	0.026

(Source: SPSS Analysis Output)

However, for the remaining 3 sources, the p-value was less than $\alpha = 0.05$, indicating that there was a significant association between location and these sources. **Therefore, the null hypothesis was rejected for Spouse, Offspring, and Known experienced user sources, concluding that there was a significant association between these sources and location.**

In conclusion, based on the findings of the independent sample test, it can be stated that sources who influence purchase decision such as Personal decision, Friends, Parents, Siblings, Relatives, and Employee of the shop are independent of location, while Spouse, Offspring, and Known experienced user sources are significantly associated with location.

6.7.2 H16: Sources influencing purchase decision is independent of gender

An independent sample test was conducted to investigate the association between location and sources that influence purchase decisions, categorized by gender groups. The results of the Levene's test indicated that 4 out of 9 sources who influence purchase decision had p-values greater than $\alpha = 0.05$, and therefore, we concluded that these sources, namely Personal decision, Friends, Parents, and Siblings, were independent of gender groups.

Table 6-24: T-test of Sources Influencing Purchase Decision among Genders

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c901. I make purchase decision by my own decision.	Equal variances assumed	33.366	0	-6.811	419	0	-0.313	0.046	-0.403	-0.223
	Equal variances not assumed			-6.819	416.667	0	-0.313	0.046	-0.403	-0.223
c902. Friends	Equal variances assumed	90.497	0	-4.638	419	0	-0.191	0.041	-0.272	-0.11
	Equal variances not assumed			-4.623	386.486	0	-0.191	0.041	-0.273	-0.11
c903. Parents	Equal variances assumed	0.329	0.567	0.286	419	0.775	0.01	0.036	-0.061	0.081
	Equal variances not assumed			0.287	418.999	0.775	0.01	0.036	-0.061	0.081
c904. Brothers and sister	Equal variances assumed	0.186	0.666	0.216	419	0.829	0.004	0.018	-0.032	0.04
	Equal variances not assumed			0.216	418.648	0.829	0.004	0.018	-0.032	0.039
c905. Husband/Wife	Equal variances assumed	78.783	0	6.956	419	0	0.314	0.045	0.225	0.403
	Equal variances not assumed			6.97	410.705	0	0.314	0.045	0.225	0.402
c906. Offspring	Equal variances assumed	47.378	0	3.279	419	0.001	0.093	0.028	0.037	0.148
	Equal variances not assumed			3.297	353.692	0.001	0.093	0.028	0.037	0.148
c907. Relatives	Equal variances assumed	3.346	0.068	0.911	419	0.363	0.018	0.02	-0.021	0.057
	Equal variances not assumed			0.913	406.06	0.362	0.018	0.02	-0.021	0.057
c908. Known experienced users	Equal variances assumed	12.575	0	-1.75	419	0.081	-0.045	0.025	-0.094	0.005
	Equal variances not assumed			-1.745	383.964	0.082	-0.045	0.026	-0.095	0.006
c909. Employees of the shop	Equal variances assumed	0.001	0.973	-0.017	419	0.987	0	0.007	-0.013	0.013
	Equal variances not assumed			-0.017	418.467	0.987	0	0.007	-0.013	0.013

(Source: SPSS Analysis Output)

On the other hand, the p-values for 5 out of 9 sources who influence purchase decision were less than $\alpha = 0.05$, and thus, we rejected the null hypothesis for these sources, suggesting that there is a significant association between gender groups and sources like Spouse, Offspring, Known experienced user that influence purchase decisions.

In summary, this study found that sources that influence purchase decisions, namely Personal decision, Friends, Parents, and Siblings, were independent of gender groups, while sources like Spouse, Offspring, and Known experienced user were significantly associated with gender groups.

6.8 Content Hypothesis Testing

6.8.1 H17: Contents enjoyed in digital media are independent of gender groups

Table 6-25: T-test of Contents Enjoyed in Digital Media between Genders

		Independent Samples Test								
		Levene's Test for Equalit		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c64f1. News	Equal variances assumed	0.314	0.576	-5.255	153	0	-0.401	0.076	-0.552	-0.25
	Equal variances not assumed			-5.223	117.748	0	-0.401	0.077	-0.553	-0.249
c64f2. Drama	Equal variances assumed	4.85	0.029	-1.115	153	0.267	-0.066	0.059	-0.183	0.051
	Equal variances not assumed			-1.066	103.92	0.289	-0.066	0.062	-0.189	0.057
c64f3. Movie	Equal variances assumed	0.338	0.562	0.288	153	0.774	0.02	0.069	-0.117	0.156
	Equal variances not assumed			0.29	122.906	0.772	0.02	0.069	-0.116	0.156
c64f4. Sports	Equal variances assumed	50.367	0	-10.63	153	0	-0.673	0.063	-0.798	-0.548
	Equal variances not assumed			-12.055	152.915	0	-0.673	0.056	-0.784	-0.563
c64f5. Latest Digital Devices/Gears	Equal variances assumed	4.792	0.03	-1.068	153	0.287	-0.034	0.032	-0.098	0.029
	Equal variances not assumed			-1.208	152.99	0.229	-0.034	0.028	-0.09	0.022
c64f6. Videos/Vlogs of Influencers	Equal variances assumed	0.177	0.675	-0.21	153	0.834	-0.007	0.032	-0.07	0.057
	Equal variances not assumed			-0.214	127.949	0.831	-0.007	0.032	-0.069	0.056
c64f7. Music and Musical Shows	Equal variances assumed	2.748	0.099	-0.806	153	0.421	-0.054	0.067	-0.188	0.079
	Equal variances not assumed			-0.827	129.574	0.41	-0.054	0.066	-0.185	0.076
c64f8. Health Related contents	Equal variances assumed	2.451	0.12	-0.765	153	0.446	-0.048	0.062	-0.171	0.075
	Equal variances not assumed			-0.787	131.147	0.432	-0.048	0.061	-0.167	0.072
c64f9. Food and Cuisine Related Contents	Equal variances assumed	20.217	0	2.209	153	0.029	0.111	0.05	0.012	0.209
	Equal variances not assumed			1.983	84.912	0.051	0.111	0.056	0	0.221
c64f10. Songs	Equal variances assumed	0.314	0.576	0.284	153	0.777	0.022	0.076	-0.129	0.172
	Equal variances not assumed			0.282	117.748	0.778	0.022	0.077	-0.13	0.174
c64f11. Travel documentaries	Equal variances assumed	5.274	0.023	-1.114	153	0.267	-0.051	0.046	-0.142	0.04
	Equal variances not assumed			-1.203	146.807	0.231	-0.051	0.043	-0.136	0.033
c64f12. Food vlogs	Equal variances assumed	0.271	0.603	-0.259	153	0.796	-0.01	0.039	-0.087	0.067
	Equal variances not assumed			-0.265	127.772	0.792	-0.01	0.038	-0.086	0.066
c64f13. Fashion Related Contents	Equal variances assumed	9.302	0.003	1.507	153	0.134	0.055	0.037	-0.017	0.128
	Equal variances not assumed			1.343	83.142	0.183	0.055	0.041	-0.027	0.137
c64f14. Religious Contents	Equal variances assumed	0.028	0.866	-0.084	153	0.933	-0.006	0.072	-0.148	0.136
	Equal variances not assumed			-0.084	120.522	0.933	-0.006	0.072	-0.148	0.136
c64f15. Documentaries about history, heritag	Equal variances assumed	0.698	0.405	-0.414	153	0.68	-0.024	0.057	-0.137	0.089
	Equal variances not assumed			-0.421	126.986	0.674	-0.024	0.056	-0.135	0.087
c64f16. Educational Videos	Equal variances assumed	2.648	0.106	0.835	153	0.405	0.059	0.071	-0.081	0.2
	Equal variances not assumed			0.818	112.053	0.415	0.059	0.073	-0.084	0.203
c64f17. Contents on legal and civil rights	Equal variances assumed	7.158	0.008	-1.293	153	0.198	-0.045	0.035	-0.113	0.024
	Equal variances not assumed			-1.486	151.805	0.139	-0.045	0.03	-0.104	0.015

(Source: SPSS Analysis Output)

Based on the results of the Independent Sample test, it was found that the p-value for Levene's test for 10 out of 17 contents enjoyed in digital media were greater than 0.05, indicating that there was no significant difference in the variance of these contents between gender groups. These contents include News, Movie, Videos/Vlogs, Music/musical show, Health related contents, Songs, Food vlogs, Religious content, Documentaries, and Educational videos. **However, for the remaining 7 contents, the p-value was less than the chosen significance level α = 0.05, suggesting that there was a significant difference in the means of these contents between gender groups**. These contents include Drama, Sports, Latest digital devices, Food contents, Fashion contents, and contents on legal and civil rights.

Therefore, we can conclude that the hypothesis of contents enjoyed in digital media being independent of gender groups is partially rejected, as there is evidence of a significant difference in some of the contents between gender groups.

6.8.2 H18: Contents enjoyed in digital media are independent of location

Table 6-26: T-test of Contents Enjoyed in Digital Media across different Locations

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c64f1. News	Equal variances assumed	12.618	0.001	1.535	153	0.127	0.141	0.092	-0.04	0.322
	Equal variances not assumed			1.573	68.298	0.12	0.141	0.09	-0.038	0.319
c64f2. Drama	Equal variances assumed	26.024	0	-2.763	153	0.006	-0.179	0.065	-0.306	-0.051
	Equal variances not assumed			-2.28	49.994	0.027	-0.179	0.078	-0.336	-0.021
c64f3. Movie	Equal variances assumed	29.124	0	-3.434	153	0.001	-0.255	0.074	-0.402	-0.108
	Equal variances not assumed			-2.944	52.271	0.005	-0.255	0.087	-0.429	-0.081
c64f4. Sports	Equal variances assumed	0.01	0.922	-0.045	153	0.964	-0.004	0.093	-0.188	0.18
	Equal variances not assumed			-0.045	64.93	0.964	-0.004	0.094	-0.191	0.183
c64f5. Latest Digital Devices/Gears	Equal variances assumed	8.131	0.005	1.43	153	0.155	0.051	0.036	-0.019	0.122
	Equal variances not assumed			1.118	47.218	0.269	0.051	0.046	-0.041	0.143
c64f6. Videos/Vlogs of Influencers	Equal variances assumed	8.131	0.005	1.43	153	0.155	0.051	0.036	-0.019	0.122
	Equal variances not assumed			1.118	47.218	0.269	0.051	0.046	-0.041	0.143
c64f7. Music and Musical Shows	Equal variances assumed	6.182	0.014	1.348	153	0.18	0.101	0.075	-0.047	0.249
	Equal variances not assumed			1.242	57.499	0.219	0.101	0.081	-0.062	0.264
c64f8. Health Related contents	Equal variances assumed	0.293	0.589	-0.267	153	0.79	-0.019	0.07	-0.156	0.119
	Equal variances not assumed			-0.272	67.582	0.787	-0.019	0.068	-0.155	0.118
c64f9. Food and Cuisine Related Conte	Equal variances assumed	5.43	0.021	1.199	153	0.232	0.068	0.056	-0.044	0.179
	Equal variances not assumed			1.055	54.003	0.296	0.068	0.064	-0.061	0.196
c64f10. Songs	Equal variances assumed	3.064	0.082	0.98	153	0.329	0.083	0.085	-0.085	0.251
	Equal variances not assumed			0.942	61.262	0.35	0.083	0.088	-0.093	0.26
c64f11. Travel documentaries	Equal variances assumed	5.085	0.026	1.152	153	0.251	0.059	0.051	-0.042	0.161
	Equal variances not assumed			1.001	53.163	0.321	0.059	0.059	-0.059	0.178
c64f12. Food vlogs	Equal variances assumed	1.314	0.254	0.579	153	0.563	0.025	0.044	-0.061	0.111
	Equal variances not assumed			0.526	56.357	0.601	0.025	0.048	-0.071	0.121
c64f13. Fashion Related Contents	Equal variances assumed	10.979	0.001	1.667	153	0.098	0.068	0.041	-0.013	0.149
	Equal variances not assumed			1.307	47.403	0.197	0.068	0.052	-0.037	0.173
c64f14. Religious Contents	Equal variances assumed	6.902	0.009	1.481	153	0.141	0.118	0.08	-0.039	0.275
	Equal variances not assumed			1.377	58.291	0.174	0.118	0.086	-0.053	0.289
c64f15. Documentaries about history, l	Equal variances assumed	49.957	0	3.773	153	0	0.23	0.061	0.11	0.351
	Equal variances not assumed			2.916	46.715	0.005	0.23	0.079	0.071	0.389
c64f16. Educational Videos	Equal variances assumed	16.72	0	2.505	153	0.013	0.195	0.078	0.041	0.349
	Equal variances not assumed			2.242	55.216	0.029	0.195	0.087	0.021	0.369
c64f17. Contents on legal and civil righ	Equal variances assumed	4.766	0.031	1.101	153	0.272	0.042	0.039	-0.034	0.119
	Equal variances not assumed			0.914	50.288	0.365	0.042	0.046	-0.051	0.136

(Source: SPSS Analysis Output)

Based on the Independent Sample test conducted between contents enjoyed in digital media and location, **we found that 4 out of 17 p values for Levene's test were greater than 0.05, which indicates that the variances for those content categories were not significantly different across the two locations. These categories were Sports, Health-related contents, Songs, and Food vlog.**

However, 13 out of 17 p values for Levene's test were less than 0.05, indicating that the variances for those content categories were significantly different across the two locations. These categories were News, Drama, Movie, Latest digital devices, Videos/vlogs, Music, Food contents, Travel documentaries, Fashion contents, Religious contents, Documentaries about history, Educational videos, contents on legal and civil rights.

Since the p-value of 13 out of 17 contents enjoyed in digital media are less than our chosen significance level $\alpha = 0.05$, we can reject the null hypothesis for those contents concluding that there is significant association between those contents enjoyed in digital media and location.

6.8.3 H19: Contents enjoyed in digital platforms are equal across age groups

Table 6-27: ANOVA of Contents Enjoyed in Digital Media among Age Groups

	ANOVA					
		Sum of Squares	df	Mean Square	F	Sig.
c64f1. News	Between Groups	1.309	8	0.164	0.648	0.736
	Within Groups	36.858	146	0.252		
	Total	38.168	154			
c64f2. Drama	Between Groups	0.61	8	0.076	0.587	0.787
	Within Groups	18.977	146	0.13		
	Total	19.587	154			
c64f3. Movie	Between Groups	2.842	8	0.355	2.189	0.031
	Within Groups	23.7	146	0.162		
	Total	26.542	154			
c64f4. Sports	Between Groups	1.668	8	0.208	0.821	0.585
	Within Groups	37.068	146	0.254		
	Total	38.735	154			
c64f5. Latest Digital Devices/Gears	Between Groups	0.156	8	0.019	0.506	0.85
	Within Groups	5.612	146	0.038		
	Total	5.768	154			
c64f6. Videos/Vlogs of Influencers	Between Groups	0.139	8	0.017	0.45	0.889
	Within Groups	5.629	146	0.039		
	Total	5.768	154			
c64f7. Music and Musical Shows	Between Groups	1.098	8	0.137	0.825	0.582
	Within Groups	24.295	146	0.166		
	Total	25.394	154			
c64f8. Health Related contents	Between Groups	1.797	8	0.225	1.653	0.115
	Within Groups	19.842	146	0.136		
	Total	21.639	154			
c64f9. Food and Cuisine Related Contents	Between Groups	0.744	8	0.093	0.998	0.44
	Within Groups	13.604	146	0.093		
	Total	14.348	154			
c64f10. Songs	Between Groups	1.863	8	0.233	1.115	0.356
	Within Groups	30.485	146	0.209		
	Total	32.348	154			
c64f11. Travel documentaries	Between Groups	0.492	8	0.062	0.787	0.615
	Within Groups	11.417	146	0.078		
	Total	11.91	154			
c64f12. Food vlogs	Between Groups	0.386	8	0.048	0.871	0.543
	Within Groups	8.091	146	0.055		
	Total	8.477	154			
c64f13. Fashion Related Contents	Between Groups	0.471	8	0.059	1.207	0.299
	Within Groups	7.117	146	0.049		
	Total	7.587	154			
c64f14. Religious Contents	Between Groups	2.705	8	0.338	1.9	0.064
	Within Groups	25.979	146	0.178		
	Total	28.684	154			
c64f15. Documentaries about history, heritage and sightseein	Between Groups	0.67	8	0.084	0.699	0.692
	Within Groups	17.485	146	0.12		
	Total	18.155	154			
c64f16. Educational Videos	Between Groups	1.069	8	0.134	0.72	0.674
	Within Groups	27.099	146	0.186		
	Total	28.168	154			
c64f17. Contents on legal and civil rights	Between Groups	0.329	8	0.041	0.946	0.481
	Within Groups	6.354	146	0.044		
	Total	6.684	154			

(Source: SPSS Analysis Output)

Based on the ANOVA results, it was found that there was a significant difference in the mean scores of movie enjoyment across different age groups. However, no significant differences were found for other variables (news, drama, sports, latest digital devices, videos/vlogs, music, health-related contents, food-related contents, songs, travel documentaries, food vlogs, fashion-related contents, religious contents, documentaries about history, educational videos, and contents on legal and civil rights) between different age groups.

Therefore, we reject the null hypothesis for all the contents enjoyed in digital platforms, except for movie enjoyment. The results suggest that age may have an impact on the enjoyment of certain types of digital content.

6.9 Feature Hypothesis Testing

6.9.1 H20: Features are independent of Gender in terms of purchasing a phone

Table 6-28: T-test of Features considered for Purchasing a Phone by Genders

		Independent Samples Test								
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c361. Design	Equal variances assumed	0.326	0.569	-1.3	178	0.195	-0.098	0.075	-0.246	0.051
	Equal variances not assumed			-1.299	169.016	0.196	-0.098	0.075	-0.246	0.051
c362. Durable/Strong	Equal variances assumed	17.406	0	-3.619	178	0	-0.257	0.071	-0.398	-0.117
	Equal variances not assumed			-3.577	160.646	0	-0.257	0.072	-0.4	-0.115
c363. Provides better service	Equal variances assumed	0.48	0.489	0.345	178	0.731	0.022	0.065	-0.106	0.151
	Equal variances not assumed			0.346	171.417	0.73	0.022	0.065	-0.106	0.151
c364. Large screen	Equal variances assumed	6.19	0.014	-1.219	178	0.225	-0.083	0.068	-0.216	0.051
	Equal variances not assumed			-1.231	174.85	0.22	-0.083	0.067	-0.215	0.05
c365. Quality of the speaker	Equal variances assumed	3.225	0.074	-0.885	178	0.378	-0.06	0.068	-0.194	0.074
	Equal variances not assumed			-0.891	173.54	0.374	-0.06	0.067	-0.193	0.073
c366. Large battery (more standby time)	Equal variances assumed	6.048	0.015	-1.211	178	0.228	-0.085	0.07	-0.224	0.054
	Equal variances not assumed			-1.22	173.885	0.224	-0.085	0.07	-0.222	0.052
c367. Highest feature on a low budget	Equal variances assumed	7.669	0.006	2.211	178	0.028	0.162	0.073	0.017	0.308
	Equal variances not assumed			2.199	165.703	0.029	0.162	0.074	0.017	0.308
c368. RAM (RAM)	Equal variances assumed	32.963	0	-3.516	178	0.001	-0.25	0.071	-0.39	-0.11
	Equal variances not assumed			-3.572	176.814	0	-0.25	0.07	-0.388	-0.112
c369. Memory (ROM)	Equal variances assumed	13.652	0	-2.523	178	0.013	-0.185	0.073	-0.33	-0.04
	Equal variances not assumed			-2.541	173.5	0.012	-0.185	0.073	-0.329	-0.041
c3610. Reputation of the brand	Equal variances assumed	26.31	0	-2.527	178	0.012	-0.175	0.069	-0.312	-0.038
	Equal variances not assumed			-2.571	177.23	0.011	-0.175	0.068	-0.309	-0.041
c3611. Camera quality	Equal variances assumed	5.439	0.021	-2.086	178	0.038	-0.155	0.074	-0.302	-0.008
	Equal variances not assumed			-2.093	171.429	0.038	-0.155	0.074	-0.301	-0.009
c3612. EMI facility	Equal variances assumed	6.73	0.01	-1.271	178	0.206	-0.02	0.016	-0.051	0.011
	Equal variances not assumed			-1.421	99	0.158	-0.02	0.014	-0.048	0.008
c3613. Can enhance social status	Equal variances assumed	5.808	0.017	-1.181	178	0.239	-0.042	0.036	-0.114	0.029
	Equal variances not assumed			-1.227	175.167	0.222	-0.042	0.035	-0.111	0.026

(Source: SPSS Analysis Output)

The independent sample test was conducted to investigate whether the features considered while purchasing a phone are independent of gender groups. The Levene's test was used to test for homogeneity of variances. The results show that for 3 out of 13 considered features, the p-value is greater than 0.05, indicating no significant difference between gender groups for these features. However, for the remaining 10 features, the p-value is less than 0.05, indicating a significant difference between gender groups for these features. Additionally, the t-test was performed to examine the mean differences between gender groups for each feature, and the results show that for 6 out of 10 significant features, the p-value is less than 0.05, indicating a significant difference between gender groups for these features.

Therefore, we reject the hypothesis that features are independent of gender groups in terms of purchasing a phone except for the features - Design, Of better service and Quality of speaker. The results suggest that there are significant differences between gender groups in terms of the features considered while purchasing a new phone, with durable/strong, highest feature on a low budget, RAM, ROM (memory), camera quality, and reputation of the brand being the most important features that significantly differ between gender groups.

6.9.2 H21: Features are independent of location in terms of purchasing a phone

Table 6-29: T-test of Features for Purchasing a Phone across different Locations

Independent Samples Test										
		Levene's Test for Equa		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diffe	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
c361. Design	Equal variances assumed	5.93	0.016	1.097	178	0.274	0.103	0.094	-0.083	0.29
	Equal variances not assumed			1.103	52.037	0.275	0.103	0.094	-0.085	0.292
c362. Durable/Strong	Equal variances assumed	0.632	0.428	-0.458	178	0.648	-0.042	0.093	-0.225	0.14
	Equal variances not assumed			-0.45	50.692	0.654	-0.042	0.094	-0.231	0.147
c363. Provides better service	Equal variances assumed	1.049	0.307	-0.541	178	0.589	-0.044	0.082	-0.206	0.117
	Equal variances not assumed			-0.52	49.408	0.606	-0.044	0.085	-0.216	0.127
c364. Large screen	Equal variances assumed	13.502	0	3.018	178	0.003	0.251	0.083	0.087	0.415
	Equal variances not assumed			2.71	46.202	0.009	0.251	0.093	0.065	0.438
c365. Quality of the speaker	Equal variances assumed	4.68	0.032	1.287	178	0.2	0.109	0.085	-0.058	0.277
	Equal variances not assumed			1.207	48.165	0.233	0.109	0.091	-0.073	0.292
c366. Large battery (more standby time)	Equal variances assumed	6.756	0.01	1.912	178	0.058	0.167	0.088	-0.005	0.34
	Equal variances not assumed			1.793	48.179	0.079	0.167	0.093	-0.02	0.355
c367. Highest feature on a low budget	Equal variances assumed	0.027	0.871	0.084	178	0.933	0.008	0.094	-0.177	0.192
	Equal variances not assumed			0.084	51.188	0.934	0.008	0.094	-0.181	0.197
c368. RAM (RAM)	Equal variances assumed	0.689	0.408	3.321	178	0.001	0.298	0.09	0.121	0.474
	Equal variances not assumed			3.246	50.338	0.002	0.298	0.092	0.113	0.482
c369. Memory (ROM)	Equal variances assumed	0.031	0.861	2.715	178	0.007	0.249	0.092	0.068	0.43
	Equal variances not assumed			2.703	51.43	0.009	0.249	0.092	0.064	0.434
c3610. Reputation of the brand	Equal variances assumed	6.756	0.01	1.912	178	0.058	0.167	0.088	-0.005	0.34
	Equal variances not assumed			1.793	48.179	0.079	0.167	0.093	-0.02	0.355
c3611. Camera quality	Equal variances assumed	1.473	0.227	2.233	178	0.027	0.208	0.093	0.024	0.392
	Equal variances not assumed			2.247	52.078	0.029	0.208	0.093	0.022	0.394
c3612. EMI facility	Equal variances assumed	1.992	0.16	-0.696	178	0.487	-0.014	0.02	-0.053	0.025
	Equal variances not assumed			-1.419	144	0.158	-0.014	0.01	-0.033	0.005
c3613. Can enhance social status	Equal variances assumed	1.757	0.187	0.674	178	0.501	0.031	0.045	-0.059	0.12
	Equal variances not assumed			0.591	45.255	0.557	0.031	0.052	-0.073	0.135

(Source: SPSS Analysis Output)

The independent sample test was conducted between considered features in terms of purchasing a new phone and location. The Levene's test show that eight out of thirteen features considered had a p-value greater than 0.05. This implies that there is no significant difference in the means of these features between the groups. The features are Strength, Highest feature on a low budget, RAM, ROM, Camera, EMI facility, and enhance social status. On the other hand, the remaining five features had a p-value less than 0.05. These features are Design, Large battery, Large screen, Brand reputation. This suggests that there is a significant difference in the means of these features between the groups.

Based on the findings, we can conclude that the hypothesis is partially supported. **Since the p-value of 8 out of 13 considered features in terms of purchasing a new phone are greater than our chosen significance level α = 0.05, we cannot reject the null hypothesis for those features in terms of purchasing a new phone concluding that they are independent of location.**

Since the p-value of 5 out of 13 considered features in terms of purchasing a new phone are less than our chosen significance level α = 0.05, we can reject the null hypothesis for those features in terms of purchasing a new phone concluding that there is significant association between those features and location in terms of purchasing a new phone.

6.10 Summary and Interpretation of Hypothesis Results

The following table summarizes the results of the hypothesis testing. It also describes the generalized interpretation of the results and their impact on the thesis topic.

Table 6-30: Summary of Hypothesis Testing and Interpretations

No.	Null Hypothesis	Result	Interpretation of Result
H1	Digital device price is independent of personal income.	Null hypothesis rejected	There is a correlation between personal income and the price of a digital device. Income may play a role in determining the price of the digital device that the BoP purchases.
H2	Preference of brands is independent of after sales service.	Null hypothesis rejected	Customers consider the availability of after-sales support a criterion of preference when choosing the brand that they want to purchase.
H3	There is no difference in impact of language skill on location.	Null hypothesis rejected	There is a significant difference between BoP consumers in rural and urban areas when it comes to their belief that "English knowledge is not needed" to use smartphones. Rural consumers seem to have a stronger belief compared to their urban counterparts that they do not need to know the English language to operate smartphones.
H4	Preferences of purchasing points are equal across locations.	Null hypothesis rejected	There is a clear difference in where people prefer to make their purchases between urban and rural areas. Urban people prefer authorized outlets more, while rural

No.	Null Hypothesis	Result	Interpretation of Result
			consumers prefer familiar shops among other options.
H5	Preference of digital and traditional media are equal across locations.	Null hypothesis not rejected	There is no significant difference in preference for digital and traditional media across different locations.
H6	Preference of digital and traditional media are equal across age groups.	Null hypothesis rejected	There is a noticeable variation in the preference for digital and traditional media among different age groups. Younger age groups have a greater preference for digital media.
H7	There is no difference in impact of language skill on gender groups.	Null hypothesis not rejected	There is no significant difference in the impact of language skill between male and female groups. Both genders equally believe that English language knowledge is not needed to use smartphones.
H8	Phone type is independent of family income.	Null hypothesis not rejected for button phone	The type of phone (a button phone) used is not significantly associated with family income.
		Null hypothesis rejected for smartphone	However, there is a notable correlation between family income and the use of smartphones.
H9	There is no difference in mean platform usage per day by gender or the means are equal.	Null Hypothesis not rejected for 12 out of 16 platforms	Males and females demonstrate similar usage patterns on platforms such as Facebook, Messenger, YouTube, Likee, Imo, Alaap, Viber, Shareit, Daraz, Foodpanda, Gmail, and Digital Health platforms. There are no noticeable variations in how males and females utilize and interact with these platforms.
		Null hypothesis rejected for 4 out of 16 platforms	There is distinction between male and female when it comes to mean platform usage for platforms like WhatsApp, TikTok, Instagram and Mobile Financial Services.
H10	Digital platform usage is independent of location.	Null hypothesis not rejected for 6 out of 16 platforms	There is no significant difference in mean usage between urban and rural areas for platforms like WhatsApp, TikTok, Likee, Shareit, MFS like bKash/ Nagad/ Rocket, and Gmail.
		Null hypothesis rejected for 10 out of 16 platforms	There is difference of usage between urban and rural areas for platforms like Facebook, Messenger, Viber, Alaap, YouTube, Instagram, Imo, Daraz, Foodpanda, and Digital Health.
H11	Purposes of purchasing a new smartphone is independent of gender.	Null hypothesis not rejected for 4 out of 7 purposes	The purposes of using a smartphone, such as starting to use social media, seeking entertainment, achieving financial ability to afford a smartphone, and utilizing it for income generation, are similar among both genders.

No.	Null Hypothesis	Result	Interpretation of Result
		Null hypothesis not rejected for 3 out of 7 purposes	There is a difference between gender groups and the purposes of using a smartphone when it becomes a requirement, upgrading living standards, and maintaining constant contact with family.
H12	Purposes of purchasing a new smartphone is independent of location.	Null hypothesis not rejected for 3 out of 7 purposes	There is no difference between urban and rural BoP users when it comes to purposes such as starting to use social media, seeking entertainment, and being able to afford a smartphone financially.
		Null hypothesis rejected for 4 out of 7 purposes	Purposes related to smartphone usage, such as when a smartphone becomes necessary, upgrading living standards, maintaining constant communication with family, and utilizing a smartphone for income generation, vary between rural and urban users.
H13	Spending on internet is independent of location.	Null hypothesis not rejected for 3 out of 10 types of packages	Internet packages, like monthly internet package, broadband, and WIFI at office/public places, are not influenced by location. This essentially means that people that can access higher priced longer-term packages, their preferences are similar in both urban and rural.
		Null hypothesis not rejected for 7 out of 10 types of packages	On the other hand, packages that are cellular tower dependent, such as weekly packages, daily packages, Facebook bundles, YouTube bundles, Imo/Viber/WhatsApp bundles, WIFI from broadband, and packages for modems, can be affected by location, probably due to availability issues and price sensitivities.
H14	Spending on internet is independent of gender groups.	Null hypothesis not rejected for 5 out of 10 types of packages	Internet packages, such as the Facebook bundle, Imo/Viber/WhatsApp bundle, broadband, WIFI from broadband, and modem package, are not influenced by whether you are male or female.
		Null hypothesis rejected for 5 out of 10 types of packages	However, other packages like the monthly internet package, weekly package, daily package, YouTube bundle, and WIFI at offices or public places can be related to whether you are male or female.
H15	Sources influencing purchase decision is independent of location.	Null hypothesis not rejected for 6 out 9 sources	In terms of purchase decisions, influencers like personal choice, friends, parents, siblings, relatives, and shop employees do not vary between urban and rural locations.
		Null hypothesis rejected for 3 out 9 sources	However, the preferences of sources like spouses, children, and experienced users that they know vary between urban and rural users.

No.	Null Hypothesis	Result	Interpretation of Result
H16	Sources influencing purchase decision is independent of gender.	Null hypothesis not rejected for 5 out of 9 sources	The sources of influence in the purchase decision of mobile phones, such as personal decisions, friends, parents, and siblings, do not vary by gender.
		Null hypothesis rejected for 4 out of 9 sources	However, gender does play a significant role in determining the influence of sources like spouses, offspring, and known experienced users on purchase decisions.
H17	Contents enjoyed in digital media are independent of gender.	Null hypothesis not rejected for 10 out of 17 types of contents	Enjoyment of the digital media content categories, including news, movies, videos/vlogs, music/musical shows, health-related contents, songs, food vlogs, religious content, documentaries, and educational videos, does not vary significantly by gender.
		Null hypothesis rejected for 7 out of 17 types of contents	There is a notable correlation between gender and the enjoyment of drama, sports, the latest digital devices, food contents, fashion contents, and contents on legal and civil rights in the digital media domain.
H18	Contents enjoyed in digital media are independent of location.	Null hypothesis not rejected for 4 out of 17 types of contents	Conversely, the preferences for enjoying Sports, Health-related contents, Songs, and Food vlogs appear to be unaffected by geographical location. These seem to be universal contents across urban and rural areas.
		Null hypothesis rejected for 13 out of 17 types of contents	There exists a notable correlation between the types of digital content enjoyed and the geographical location for certain categories, such as news, drama, movies, the latest digital devices, videos and vlogs, music, food contents, travel documentaries, fashion contents, religious contents, documentaries about history, educational videos, and contents on legal and civil rights.
H19	Contents enjoyed in digital platforms are equal across all age groups.	Null hypothesis not rejected for only 1 out of 17 types of contents.	Age has not had an impact on enjoying “movies” as a content category among the BoP consumer base.
		Null hypothesis rejected for 16 out of 17 types of contents.	Age has an impact on the enjoyment of various digital content categories such as news, drama, sports, the latest digital devices, videos and vlogs, music, health-related content, food-related content, songs, travel documentaries, food vlogs, fashion-related content, religious content, history documentaries, educational videos, and content on legal and civil rights.

No.	Null Hypothesis	Result	Interpretation of Result
H20	Features are independent of Gender groups in terms of purchasing a phone.	Null hypothesis not rejected for 3 out of 13 features	Gender has no influence on preferences for smartphone features like design, better service, or quality of speakers.
		Null hypothesis rejected for 10 out of 13 features	There are variations in feature preferences among the two genders when it comes to durability, Large screen, Large battery, Highest feature on a low budget, RAM, ROM, Brand reputation, Camera, EMI facility, enhance social status etc.
H21	Features are independent of location in terms of purchasing a phone.	Null hypothesis not rejected for 8 out of 13 features	Features such as strength, the best features available at an affordable price, RAM, ROM, camera quality, the availability of an EMI facility, and the potential to enhance social status are universal considerations when buying a new phone, regardless of one's location.
		Null hypothesis not rejected for 5 out of 13 features	However, design, a large battery, a spacious screen, brand reputation, and the quality of the speaker are factors that vary depending on the location and preferences of the individual.

7.0 ANALYSIS OF INTENT TO USE DIGITAL MEDIA

This chapter analyses the impact of the 46 independent trigger-barrier variables on the dependent variable “Intent to Use”.

7.1 Impact on Overall Intent to Use

A regression analysis was conducted on the variables related to intent to use. The model below shows a correlation coefficient R of 0.790 which indicates a positive relationship between the variables.

Table 7-1: Model Summary of Regression analysis on National Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.790[a]	.624	.578	.410	2.028

(Source: SPSS Analysis Output)

Table 7-2: Regression Analysis on National Model

Coefficientsa

		Unstandardized Coeffi		Standardiz t		Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.865	0.281		3.076	0.002		
	c107a_1. Role of age	-0.016	0.02	-0.037	-0.799	0.425	0.464	2.154
	c107a_2. Safety concerns for women	0.047	0.019	0.112	2.423	0.016	0.471	2.125
	c107a_3. Ease of learning	0.086	0.023	0.172	3.76	0	0.478	2.093
	c107a_4. Personality traits	-0.017	0.016	-0.047	-1.066	0.287	0.525	1.906
	c107a_5. Health concern	0.022	0.017	0.053	1.27	0.205	0.585	1.708
	c107a_6. Professional Requirement	0.056	0.035	0.074	1.615	0.107	0.473	2.115
	c107a_7. English Language Knowledge	0.016	0.025	0.03	0.646	0.519	0.478	2.093
	c107a_8. Communication with relatives	0.047	0.041	0.05	1.148	0.252	0.531	1.882
	c107a_9. Getting things done remotely	0.078	0.05	0.083	1.553	0.121	0.35	2.861
	c107a_10. Ease of multi-tasking	-0.069	0.045	-0.078	-1.548	0.122	0.393	2.545
	c107a_11. Not seen as luxury	-0.027	0.022	-0.05	-1.217	0.225	0.594	1.684
	c107a_12. Necessity of use	0.194	0.041	0.227	4.736	0	0.437	2.29
	c107a_13. Access to skill	0.003	0.03	0.005	0.098	0.922	0.412	2.428
	c107a_14. Assisted use for lifestyle	-0.013	0.029	-0.021	-0.441	0.66	0.437	2.288
	c107a_15. Relevance of digital media	0.06	0.019	0.149	3.161	0.002	0.453	2.208
	c107a_16. Choice overshadows necessity	-0.039	0.019	-0.098	-2.098	0.037	0.463	2.159
	c107a_17. Benefits overshadow demerits	0.003	0.025	0.005	0.129	0.898	0.606	1.649
	c107a_19. Reducing Price of internet	0.244	0.038	0.286	6.447	0	0.511	1.957
	c107a_20. Importance of Digital Services	-0.006	0.033	-0.008	-0.17	0.865	0.444	2.252
	c107a_21. Interest due to lifestyle utility	0.028	0.039	0.033	0.718	0.473	0.472	2.118
	c107a_22. Access to digital services through other	-0.015	0.018	-0.032	-0.803	0.423	0.613	1.631
	c107a_23. Becoming Integral part of daily life	0.05	0.027	0.079	1.868	0.063	0.557	1.795
	c107a_24. Must have for households	0.11	0.037	0.144	3.003	0.003	0.439	2.278
	c107a_25. Utility outshines complexity of usage	-0.056	0.028	-0.091	-2.02	0.044	0.497	2.013
	c107a_26. Anxiety to upgrade	0.018	0.02	0.042	0.905	0.366	0.476	2.102
	c107a_27. Fear of complications in life	-0.015	0.02	-0.037	-0.743	0.458	0.403	2.482
	c107a_28. Impact of assistance in using platforms	-0.022	0.022	-0.052	-0.989	0.323	0.359	2.782
	c107a_29. Difficulty of devices	0.031	0.021	0.076	1.461	0.145	0.368	2.715
	c107a_30. Fear of change	0.011	0.022	0.028	0.526	0.599	0.362	2.765
	c107a_31. Complications of the medium	-0.001	0.022	-0.003	-0.063	0.95	0.367	2.724
	c107a_32. Preference for traditional method	-0.018	0.017	-0.04	-1.011	0.313	0.655	1.527
	c107a_33. Inspiration through other's creative exp	-0.013	0.028	-0.022	-0.445	0.657	0.425	2.352
	c107a_34. Urge to express creativity	-0.027	0.036	-0.034	-0.73	0.466	0.464	2.156
	c107a_35. Scope of development	0.054	0.041	0.06	1.326	0.186	0.485	2.064
	c107a_36. Plethora of choice in media	0.026	0.032	0.04	0.826	0.409	0.433	2.312
	c107a_37. Impact of higher speed	0.057	0.047	0.059	1.222	0.222	0.426	2.35
	c107a_38. Opportunity to express views	-0.015	0.037	-0.018	-0.407	0.685	0.49	2.04
	c107a_39. Affordability of devices	0.049	0.041	0.057	1.21	0.227	0.451	2.216
	c107a_40. Access to internet	0.082	0.046	0.082	1.79	0.074	0.481	2.077
	c107a_41. Customized services for user groups	-0.074	0.047	-0.079	-1.59	0.113	0.411	2.434
	c107a_42. Access to broadband internet	0.002	0.022	0.005	0.101	0.919	0.501	1.995
	c107a_43. Time wastage	0.04	0.02	0.096	1.972	0.049	0.423	2.364
	c107a_44. Support services for using digital media	-0.009	0.022	-0.018	-0.387	0.699	0.468	2.137
	c107a_45. Impact of poor network	-0.068	0.023	-0.141	-2.963	0.003	0.446	2.243
	c107a_46. One stop solution for multiple utilities	0.018	0.038	0.022	0.463	0.644	0.465	2.153
	c107a_47. Digitization of local services	-0.027	0.034	-0.036	-0.791	0.43	0.487	2.055

(Source: SPSS Analysis Output)

The value of R square is .624 which means the regression equation for this model accounts for some 62.4% of the variance. Nine b-coefficients for the model are statistically significant.

Intent to use = 0.865
+ 0.244 (Reducing price of internet)
+0.194 (Necessity of use)
+0.110 (Must have for household)
+0.086 (Ease of learning)
+0.060 (Relevance of digital media)
+0.047 (Not safe for women)
-0.039 (Choice overshadows necessity)
-0.056 (Utility outshines complexity of usage)
-0.068 (Impact of poor network)

7.2 Impact of Mental Trigger Model on Intent to Use

A model was developed taking the options that would contribute as mental trigger on participants intent to use digital. Ease of learning, English knowledge not needed, communication with relatives, not seen as luxury, benefits overshadow demerits, Utility outshines complexity of usage, Inspiration through other's creative expressions, Urge to express creativity, Plethora of choice in media were the chosen as the model components.

Table 7-3: Mental Trigger Model

Q No.	Short Form
3	Ease of learning
7	English Knowledge Not Needed
8	Communication with Relatives
11	Not seen as luxury 0.763
17	Benefits overshadows demerits
25	Utility outshines complexity of usage
33	Inspiration through other's creative expressions
34	Urge to express creativity
36	Plethora of choice in media

(Source: SPSS Analysis Output)

Table 7-4: Cronbach's Alpha on Mental Trigger Model

Reliability Statistics (Mental Triggers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.749	.763	9

(Source: SPSS Analysis Output)

To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done on the model. The test tells us how close the set of test items are. The Cronbach's alpha coefficient for the mental trigger scale was 0.749 based on 9 items, indicating good internal consistency among the items.

This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable. Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.763, suggesting that the internal consistency improved after standardizing the scores. These results suggest that the scale has good internal consistency, and that using standardized items may further improve its reliability. If the "not seen as luxury" component was excluded from the model, the calculated Cronbach's alpha coefficient would have increased to 0.763. This means that internal consistency of the model would have improved if this component was not included. In conclusion, the model components were found to have good internal consistency, and the use of standardized items may further enhance its reliability. Additionally, excluding the "not seen as luxury" component may improve the internal consistency of the model.

A regression analysis was conducted on the 9 variables related to Mental Trigger and below model can be formed where correlation coefficient R was 0.631 which indicates a moderate positive relationship.

The value of R square is .398 which means the regression equation for this model accounts for some 39.8% of the variance six among nine of the b-coefficients for the model are statistically significant.

Intent to use in terms of mental access trigger = 2.076

+0.171 (Communication with relatives)

+0.107 (Plethora of choice in media)

+0.104 (Urge to express creativity)

+0.094 (English Knowledge Not Needed)

+0.073 (Ease of learning)

+0.067 (Utility outshines complexity of usage)

Table 7-5: Model Summary of Regression Analysis on Mental Trigger Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.631[a]	.398	.385	.495	1.953

(Source: SPSS Analysis Output)

Table 7-6: Regression Analysis on Mental Trigger Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.076	.235		8.842	.000		
	c107a_3. Ease of learning	.073	.024	.146	3.048	.002	.635	1.574
	c107a_7. English Language Knowledge	.094	.027	.169	3.479	.001	.624	1.603
	c107a_8. Communication with relatives	.171	.042	.183	4.052	.000	.717	1.395
	c107a_11. Not seen as luxury	.000	.022	.000	.005	.996	.876	1.142
	c107a_17. Benefits overshadow demerits	.005	.027	.009	.194	.846	.752	1.329
	c107a_25. Utility outshines complexity of usage	.067	.025	.108	2.655	.008	.893	1.120
	c107a_33. Inspiration through other's creative expressions	.033	.029	.056	1.106	.269	.575	1.740
	c107a_34. Urge to express creativity	.104	.038	.134	2.755	.006	.620	1.612
	c107a_36. Plethora of choice in media	.107	.033	.164	3.281	.001	.589	1.699

(Source: SPSS Analysis Output)

7.3 Impact of Mental Access Barrier Model on Intent to Use

A model was developed taking the options that would contribute as mental access barrier on participants intent to use digital. Role of age, Not unsafe for women, Personality traits, Health concern, Irrelevance of digital media, Access to digital services through others, Anxiety to upgrade, Fear of complications in life, Impact of assistance, Preference for traditional method were the chosen as the model items.

To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done. The test tells us how close the set of test items are.

Table 7-7: Table of Mental Barrier Model

Q No.	Short Form
1	Role of age
2	Not safe for women
4	Personality traits 0.717
5	Health concern
15	Irrelevance of digital media
22	Access to digital services through others
26	Anxiety to upgrade
27	Fear of complications in life
28	Impact of assistance
32	Preference for traditional method 0.723

(Source: SPSS Analysis Output)

Table 7-8: Cronbach's Alpha Reliability Test Result on Mental Barrier Model

Reliability Statistics (Mental Barrier)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.703	.705	10

(Source: SPSS Analysis Output)

The Cronbach's alpha for the mental barrier scale was 0.703 based on 10 items, indicating good internal consistency among the items. This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable. Additionally, Cronbach's alpha based on standardized items was 0.705, suggesting that the internal consistency improved after standardizing the scores.

These results suggest that the scale has good internal consistency, and that using standardized items may further improve its reliability. If Personality traits is taken out from the model item list, then the Calculated Cronbach's alpha would have been 0.717 which indicates improved internal consistency and if Preference for traditional method is also taken out then the Cronbach's alpha would have been 0.723 which suggest further improved internal consistency. But as the internal consistency of the initial model was proven reliable, regression analysis was done on that.

Regression analysis on the 10 variables related to mental barriers that formed the model below shows an R of 0.418, indicating a positive relationship.

The value of R square is 0.175 meaning this model accounts for some 17.5% of the variance, and five of the b-coefficients for the model are statistically significant when ten predictors are added as mental access barriers.

Intent to use in terms of mental barrier = 4.666
+0.067 (Personality traits)
+0.062 (Not unsafe for women)
+0.056 (Anxiety to upgrade)
+0.051 (Health concerns)
-0.123 (Role of Age)

Table 7-9: Model Summary of Regression Analysis on Mental Barrier Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.418[a]	.175	.155	.580	1.583

(Source: SPSS Analysis Output)

Table 7-10: Regression Analysis on Mental Barrier Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.666	.159		29.394	.000		
	c107a_1. Role of age	-.123	.025	-.286	-4.957	.000	.603	1.659
	c107a_2. Safety concerns for women	.062	.025	.148	2.487	.013	.567	1.762
	c107a_4. Personality traits	.067	.018	.180	3.711	.000	.857	1.167
	c107a_5. Health concern	.051	.022	.121	2.360	.019	.762	1.313
	c107a_15. Relevance of digital media	.041	.021	.100	1.958	.051	.773	1.293
	c107a_22. Access to digital services through others	.019	.024	.042	.802	.423	.748	1.338
	c107a_26. Anxiety to upgrade	.056	.026	.128	2.166	.031	.572	1.747
	c107a_27. Fear of complications in life	.025	.027	.061	.932	.352	.472	2.119
	c107a_28. Impact of assistance in using platforms	-.057	.026	-.135	-2.170	.031	.523	1.914
	c107a_32. Preference for traditional method	.011	.021	.026	.560	.576	.937	1.068

(Source: SPSS Analysis Output)

7.4 Impact of Material Access Trigger Model on Intent to Use

A model was developed taking the options that would contribute as material access trigger on participants intent to use digital. Reducing Price of internet, Impact of higher speed, Affordability of devices were the chosen as the model items.

To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done. The test tells us how close the set of test items are. The Cronbach's alpha coefficient for the mental access Trigger scale was 0.688 based on 3 items, indicating good internal consistency among the items. This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable.

Table 7-11: Table of Material Trigger Model

Q No.	Short Form
19	Reducing Price of internet
37	Impact of higher speed
39	Affordability of devices

(Source: SPSS Analysis Output)

Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.694, suggesting that the internal consistency improved after standardizing the scores. These results suggest that the scale has acceptable internal consistency, and that using standardized items may further improve its reliability.

Table 7-12: Cronbach's Alpha Reliability Test Result on Material Trigger Model

Reliability Statistics (Material Triggers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.688	.694	3

(Source: SPSS Analysis Output)

Regression analysis on the 3 variables related to Material Access trigger that formed the model below shows an R of 0.642, indicating a positive relationship.

The value of R square is 0.412 meaning this model accounts for some 41.2% of the variance, and all of the b-coefficients for the model are statistically significant.

Intent to use in terms of material access trigger = 1.698
+ 0.366 (Reducing price of internet)
+ 0.173 (Affordability of devices)
+ 0.166 (Impact of higher speed)

Table 7-13: Model Summary of Regression Analysis on Material Trigger Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.642[a]	.412	.408	.485	1.738

(Source: SPSS Analysis Output)

Table 7-14: Regression on Material Access Trigger Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.698	.225		7.548	.000		
	c107a_19. Reducing Price of internet	.366	.036	.429	10.152	.000	.789	1.268
	c107a_37. Impact of higher speed	.166	.045	.173	3.682	.000	.640	1.563
	c107a_39. Affordability of devices	.173	.038	.201	4.541	.000	.719	1.391

(Source: SPSS Analysis Output)

7.5 Impact of Material Access Barrier Model on Intent to Use

A model was developed taking the options that would contribute as material access barrier on participants intent to use digital. Access to broadband internet, Impact of poor network were the chosen as the model items.

To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done. The test tells us how close the set of test items are. The Cronbach's alpha coefficient for the mental access Trigger scale was 0.601 based on 2 items of the model, indicating good internal consistency among the items. This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable.

Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.601, suggesting that the internal consistency would be the same after standardizing the scores. These results suggest that the scale has acceptable internal consistency, and that using standardized items is not needed for this model.

Table 7-15: Table of Material Barrier Model

Q No.	Short Form
42	Access to broadband internet
45	Impact of poor network

(Source: SPSS Analysis Output)

Table 7-16: Cronbach's Alpha Test Result on Material Barrier Model

Reliability Statistics (Material Triggers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.601	.601	2

(Source: SPSS Analysis Output)

Regression analysis conducted on the 2 variables related to material access barriers formed the model with a correlation coefficient R of 0.306, indicating a positive relationship. The value of R square is .093. the regression equation for this model accounts for some 9.3% of the variance and one of the two b-coefficients for the model are statistically significant.

Intent to use in terms of material access barrier = 4.788
+ 0.161 (Access to broadband)

Table 7-17: Model Summary of Regression on Material Access Barrier Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.306[a]	.093	.089	.602	1.441

(Source: SPSS Analysis Output)

Table 7-18: Regression on Material Access Barrier Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.788	.128		37.420	.000		
	c107a_42. Access to broadband internet	.161	.025	.327	6.342	.000	.816	1.226
	c107a_45. Impact of poor network	-.030	.025	-.061	-1.192	.234	.816	1.226

(Source: SPSS Analysis Output)

7.6 Impact of Skill Trigger Model on Intent to Use

A model was developed taking the options that would contribute as Skill trigger on participants intent to use digital. Scope of individual development, Remote work

access, Scope of multi-tasking, Part of lifestyle despite assistance, Part of lifestyle irrespective of skills were the chosen as the model items.

To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done. The test tells us how close the set of test items are. The Cronbach's alpha coefficient for the mental access Trigger scale was 0.807 based on 5 items, indicating good internal consistency among the items. This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable.

Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.819, suggesting that the internal consistency improved after standardizing the scores. These results suggest that the scale has good internal consistency, and that using standardized items may further improve its reliability.

Table 7-19: Table of Skill Trigger Model

Q No.	Short Form
6	Professional requirement
9	Getting things done remotely
10	Ease of multitasking
14	Assisted use for lifestyle
20	Importance of Digital Services

(Source: SPSS Analysis Output)

Table 7-20: Cronbach's Alpha Reliability Test Result of Skill Trigger Model

Reliability Statistics (Skill Triggers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.807	.819	5

(Source: SPSS Analysis Output)

Regression on the 5 variables of Skill Trigger formed the model with correlation coefficient R of 0.646 which again indicates a moderate positive interaction.

The value of R square is .417 which means the regression equation for this model accounts for some 41.7% of the variance and three of the five b-coefficients for the model are statistically significant.

Intent to use = 1.926
+ 0.315 (Getting things done remotely)
+ 0.143 (Professional requirement)
+ 0.099 (Importance of digital services)

Table 7-21: Model Summary of Regression Analysis on Skill Trigger Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.646[a]	.417	.410	.485	1.878

(Source: SPSS Analysis Output)

Table 7-22: Regression Analysis on Skill Trigger Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.926	.207		9.316	.000		
	c107a_6. Professional Requirement	.143	.035	.190	4.124	.000	.663	1.507
	c107a_9. Getting things done remotely	.315	.049	.338	6.465	.000	.514	1.944
	c107a_10. Ease of multi-tasking	.078	.045	.089	1.743	.082	.544	1.838
	c107a_14. Assisted use for lifestyle	.034	.029	.056	1.202	.230	.642	1.557
	c107a_20. Importance of Digital Services	.099	.032	.143	3.041	.003	.636	1.573

(Source: SPSS Analysis Output)

7.7 Impact of Motivational Trigger Model on Intent to Use

A model was developed taking the options that would contribute as motivational trigger on participants intent to use digital. Opportunity to express views, one stop solution for multiple utilities were the chosen as the model items.

To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done. The test tells us how close the set of test items are. The Cronbach's alpha coefficient for the mental access Trigger scale was 0.668 based on 2 items of the model, indicating good internal consistency among the items. This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable.

Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.668, suggesting that the internal consistency would be the same after standardizing the scores. These results suggest that the scale has acceptable internal consistency, and that using standardized items is not needed for this model.

Table 7-23: Table of Motivational Trigger Model

Q No.	Short Form
38	Opportunity to express views
46	One stop solution for multiple utilities

(Source: SPSS Analysis Output)

Table 7-24: Cronbach's Alpha Reliability Test Result on Motivational Trigger Model

Reliability Statistics (Motivational Triggers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.668	.668	2

(Source: SPSS Analysis Output)

Regression analysis on the 2 variables related to Motivational Trigger, formed the model below, where correlation coefficient R was 0.479indicating a positive interaction.

R square is .230, meaning that the regression equation for this model accounts for some 23% of the variance and both the b-coefficients for the model are statistically significant.

Intent to Use in terms of Motivation Trigger = 3.048

+ 0.214 (Opportunity to express views)

+ 0.237 (One stop solution for multiple utilities)

Table 7-25: Model Summary of Regression Analysis on Motivational Trigger Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.479[a]	.230	.226	.555	1.777

(Source: SPSS Analysis Output)

Table 7-26: Regression Analysis on Motivational Trigger Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.048	.213		14.339	.000		
	c107a_38. Opportunity to express views	.214	.041	.262	5.285	.000	.748	1.337
	c107a_46. One stop solution for multiple utilities	.237	.041	.291	5.855	.000	.748	1.337

(Source: SPSS Analysis Output)

7.8 Impact of Motivational Barrier Model on Intent to Use

A model was developed taking the options that would contribute as Motivational Barrier on participants intent to use digital. Difficulty of devices, Fear of change, Complications of the medium, Having time in hand were the chosen as the model items. To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done. The test tells us how close the set of test items are. The Cronbach's alpha coefficient for the mental access Trigger scale was 0.711 based on 4 items, indicating good internal consistency among the items. This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable.

Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.710, suggesting that the internal consistency slightly improved after standardizing the scores. These results suggest that the scale has good internal consistency, and that using standardized items may further improve its reliability.

Table 7-27: Table of Motivation Barrier Model

Q No.	Short Form
29	Difficulty of devices
30	Fear of change
31	Complications of the medium
43	Having time in hand 0.839

(Source: SPSS Analysis Output)

Table 7-28: Cronbach's Alpha Reliability Test Result on Motivational Barrier Model

Reliability Statistics (Motivational Barriers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.711	.710	4

(Source: SPSS Analysis Output)

Regression analysis on the 4 variables related to Motivational Barrier formed the model below where correlation coefficient R was 0.228 which indicating positive relationship.

The value of R square is .052 meaning the regression equation for this model accounts for some 5.2% of the variance and wo of the b-coefficients for the model are statistically significant.

Intent to use in terms of Motivation Barrier = 5.028
+ 0.059 (Difficulty of devices)
+ 0.079 (Having time in hand)

Table 7-29: Model Summary of Regression analysis on Motivation Barrier Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.228[a]	.052	.043	.617	1.403

(Source: SPSS Analysis Output)

Table 7-30: Regression analysis on Motivation Barrier Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	5.028	.109		46.104	.000		
	c107a_29. Difficulty of devices	.059	.027	.147	2.180	.030	.504	1.986
	c107a_30. Fear of change	-.019	.030	-.046	-.624	.533	.426	2.345
	c107a_31. Complications of the medium	-.030	.028	-.070	-1.080	.281	.540	1.852
	c107a_43.Having time in hand	.079	.020	.191	3.909	.000	.951	1.051

(Source: SPSS Analysis Output)

7.9 Impact of Usage Trigger Model on Intent to Use

A model was developed taking the options that would contribute as Usage trigger on participants intent to use digital. Necessity of use, Access to skill, Interest due to lifestyle utility, Becoming Integral part of daily life, Must have for households, Scope of development, Access to internet, Customized services for user groups, Digitization of local services were the chosen as the model items.

To measure the reliability of the model, Cronbach's Alpha test was done. The Cronbach's alpha coefficient for the mental access Trigger scale was 0.833 based on 9 items, indicating good internal consistency among the items. Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.845, suggesting that the internal consistency improved after standardizing the scores.

Table 7-31: Table of Usage Trigger Model

Q No.	Short Form
12	Necessity of use
13	Access to skill
21	Interest due to lifestyle utility
23	Becoming Integral part of daily life
24	Must have for households
35	Scope of development
40	Access to internet
41	Customized services for user groups
47	Digitization of local services

(Source: SPSS Analysis Output)

Table 7-32: Table of Cronbach's Alpha Reliability Test Result on Usage Trigger Model

Reliability Statistics (Usage Triggers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.833	.845	09

(Source: SPSS Analysis Output)

Regression analysis with the 9 Usage Trigger variables show a correlation coefficient R of 0.688, indicating a moderate positive relationship.

The regression equation for this model accounts for some 47.3% of the variance and four among nine b-coefficients for the model are statistically significant.

Intent to use = 1.242
+ 0.240 (Necessity of use)
+ 0.173 (Access to internet)
+ 0.105 (Must have for household)
+ 0.102 (Interest due to lifestyle utility)

Table 7-33: Model Summary of Regression Analysis on Usage Trigger Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.688[a]	.473	.461	.463	1.819

(Source: SPSS Analysis Output)

Table 7-34: Regression Analysis on Usage Trigger Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.242	.243		5.122	.000		
	c107a_12. Necessity of use	.240	.040	.281	5.942	.000	.574	1.742
	c107a_13. Access to skill	.045	.028	.073	1.607	.109	.617	1.621
	c107a_21. Interest due to lifestyle utility	.102	.040	.121	2.576	.010	.585	1.709
	c107a_23. Becoming Integral part of daily life	.028	.025	.044	1.085	.278	.784	1.276
	c107a_24. Must have for households	.105	.037	.137	2.851	.005	.557	1.797
	c107a_35. Scope of development	.068	.038	.076	1.767	.078	.696	1.436
	c107a_40. Access to internet	.173	.045	.173	3.813	.000	.620	1.612
	c107a_41. Customized services for user groups	.053	.047	.056	1.130	.259	.527	1.897
	c107a_47. Digitization of local services	-.016	.031	-.021	-.528	.598	.788	1.269

(Source: SPSS Analysis Output)

7.10 Impact of Usage Barrier Model on Intent to Use

A model was developed taking the options that would contribute as Usage Barrier on participants intent to use digital. Choice vs Necessity, Requirements for Using Digital Media were the chosen as the model items.

To measure the reliability or internal consistency of the model, Cronbach's Alpha test was done. The test tells us how close the set of test items are. The Cronbach's alpha coefficient for the mental access Trigger scale was 0.833 based on 9 items, indicating good internal consistency among the items. This suggests that the items in the scale are measuring the same construct consistently and that the scale is reliable.

Additionally, Cronbach's alpha based on standardized items was calculated and yielded a coefficient of 0.845, suggesting that the internal consistency improved after standardizing the scores. These results suggest that the scale has good internal consistency, and that using standardized items may further improve its reliability.

Table 7-35: Table of Usage Access Barrier Model

Q No.	Short Form
16	Choice vs Necessity
44	Requirements for Using Digital Media

(Source: SPSS Analysis Output)

Table 7-36: Cronbach's Alpha Reliability Test Result on Usage Access Barrier Model

Reliability Statistics (Usage Barriers)		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.351	.355	2

(Source: SPSS Analysis Output)

Regression on the 2 Usage Trigger variables show a correlation coefficient R was 0.181 which indicates a positive relationship.

The regression equation for this model accounts for some 3.3% of the variance and one of the two b-coefficients for the model is statistically significant.

Intent to use in terms of Usage Access Barrier = 5.034
+ 0.062 (Choice overshadows necessity)

Table 7-37: Model Summary of Regression analysis on Usage Access Barrier Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.181[a]	.033	.028	.622	1.418

(Source: SPSS Analysis Output)

Table 7-38: Regression analysis on Usage Access Barrier Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	5.034	.117		43.167	.000		
	c107a_16. Choice overshadows necessity	.062	.020	.155	3.145	.002	.953	1.049
	c107a_44. Support services for using digital media	.031	.023	.065	1.326	.186	.953	1.049

(Source: SPSS Analysis Output)

8.0 FACTORS THAT INFLUENCE INTENT TO USE

8.1 Principal Component Analysis

46 questions relating to material access, mental access, motivation, skill access and usage access related triggers and barriers for BOP consumers related digital device and platforms were factor analysed using Principal Components Analysis with varimax rotation.

Table 8-1: Kaiser-Meyer-Olkin Measure of Sampling Adequacy on 46 Simple Variables

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.904
Bartlett's Test of Sphericity	Approx. Chi-Square	9673.427
	df	1035
	Sig.	.000

(Source: SPSS Analysis Output)

Kaiser-Meyer-Olkin measure of sampling adequacy, which has a commonly recommended value of .6, was identified to be .904. Additionally, Bartlett's test of sphericity was also significant with ($\chi 2$ (1035) = 9673.427, $p < .001$).

Using both the scree plot and eigen values > 1 to determine the underlying components, the analysis yielded 10 factors explaining a total of 63.525 per cent of the variance in the data.

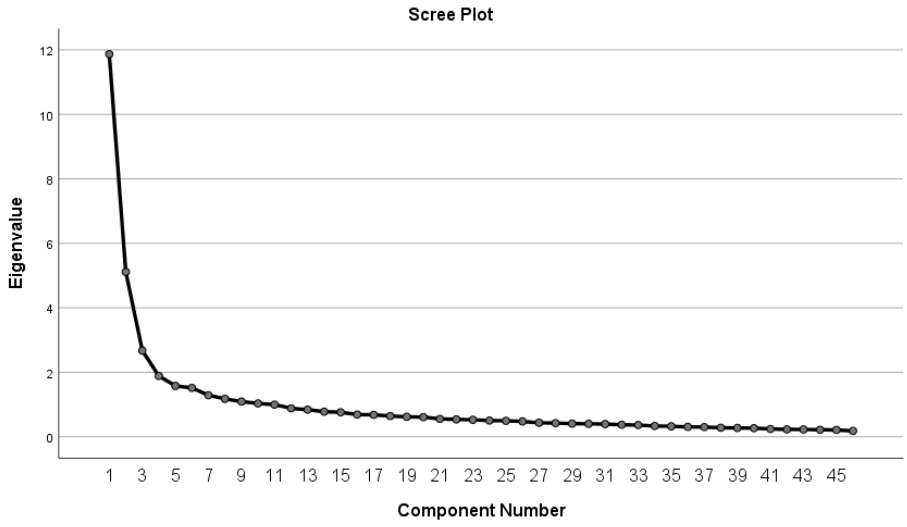


Figure 8-1: Scree Plot for Principal Component Analysis (SPSS)

Table 8-2: Principal Component Analysis on 46 simple variables

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.869	25.803	25.803	11.869	25.803	25.803	8.084	17.575	17.575
2	5.115	11.119	36.922	5.115	11.119	36.922	4.413	9.593	27.168
3	2.672	5.809	42.731	2.672	5.809	42.731	3.202	6.961	34.129
4	1.885	4.097	46.828	1.885	4.097	46.828	2.207	4.799	38.928
5	1.576	3.427	50.255	1.576	3.427	50.255	2.093	4.551	43.479
6	1.516	3.295	53.550	1.516	3.295	53.550	2.088	4.539	48.018
7	1.288	2.799	56.350	1.288	2.799	56.350	1.897	4.123	52.141
8	1.176	2.556	58.905	1.176	2.556	58.905	1.804	3.922	56.063
9	1.091	2.372	61.277	1.091	2.372	61.277	1.768	3.844	59.907
10	1.034	2.248	63.525	1.034	2.248	63.525	1.664	3.618	63.525
11	.995	2.164	65.688						
12	.883	1.920	67.609						
13	.839	1.824	69.433						
14	.777	1.689	71.122						
15	.761	1.654	72.776						
16	.690	1.499	74.275						
17	.679	1.477	75.752						
18	.643	1.397	77.149						
19	.619	1.346	78.495						
20	.610	1.326	79.821						
21	.553	1.203	81.023						
22	.539	1.172	82.196						
23	.526	1.144	83.340						
24	.503	1.093	84.433						
25	.494	1.075	85.508						
26	.476	1.034	86.542						
27	.434	.944	87.486						
28	.424	.922	88.408						
29	.408	.887	89.295						
30	.403	.875	90.170						
31	.393	.853	91.023						
32	.372	.808	91.832						
33	.363	.789	92.620						
34	.335	.729	93.349						
35	.323	.703	94.052						
36	.308	.669	94.721						
37	.300	.651	95.372						
38	.279	.606	95.979						
39	.273	.593	96.572						
40	.267	.581	97.153						
41	.242	.526	97.679						
42	.229	.497	98.176						
43	.228	.495	98.671						
44	.217	.473	99.143						
45	.211	.459	99.603						
46	.183	.397	100.000						

Extraction Method: Principal Component Analysis.

(Source: SPSS Analysis Output)

8.2 Identified Components

8.2.1 Component 1: "Convenience of using Digital"

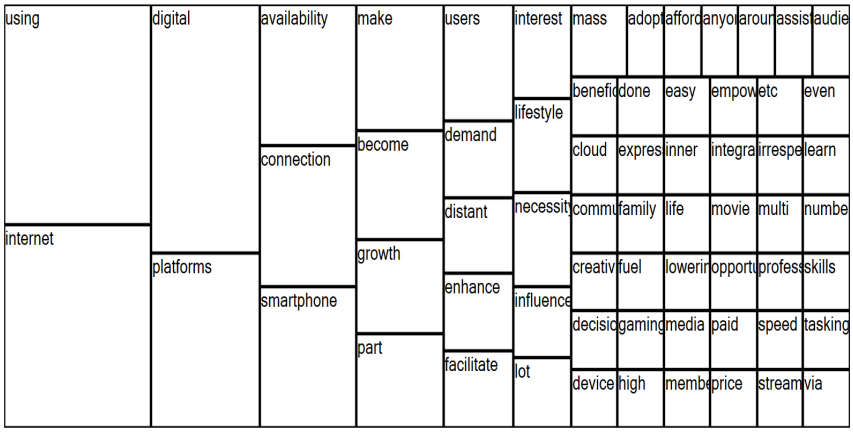


Figure 8-2: Labelling as Convenience of Digital using NVivo Word Cloud and Tree Map

Table 8-3: Details of Component 1- Convenience of Using Digital

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Skill Access Trigger	Ease of multi-tasking	0.791	5.19	0.716	5.18	0.773	0.918
Skill Access Trigger	Getting things done remotely	0.765	5.29	0.676			
Materials Access Trigger	Reducing Price of Internet	0.737	5.23	0.739			
Usage Access Trigger	Interest due to lifestyle utility	0.735	5.12	0.745			
Usage Access Trigger	Customized services for user groups	0.728	5.21	0.667			

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Usage Access Trigger	Necessity of use	0.623	5.19	0.738			
Mental Access Trigger	Communication with relatives	0.614	5.32	0.674			
Materials Access Trigger	Impact of Poor Network	0.597	5.27	0.659			
Usage Access Trigger	Access to skill	0.596	4.96	1.026			
Skill Access Trigger	Assisted use for lifestyle	0.586	4.93	1.029			
Skill Access Trigger	Professional Requirement	0.554	5.12	0.840			
Usage Access Trigger	Access to internet	0.553	5.41	0.632			
Skill Access Trigger	Importance of Digital Services	0.547	5.11	0.914			
Mental Access Trigger	Urge to express creativity	0.531	5.09	0.809			
Materials Access Trigger	Affordability of devices	0.528	5.31	0.733			

(Source: SPSS Analysis Output)

This first factor explained 17.575 per cent of the variance after rotation.

Table 8-4: Reliability Analysis on Component 1- Convenience of Using Digital

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.918	0.923	15

(Source: SPSS Analysis Output)

Cronbach's alpha is a measure of internal consistency, which assesses the degree to which items in a questionnaire are related to each other and measure the same underlying construct. In this case, a reliability analysis was conducted on Component 1, which is labelled "Convenience of Using Digital," and which consists of 15 items.

The value of alpha obtained from the analysis was 0.918, which is considered to be an acceptable level of internal consistency. This means that the 15 items in the questionnaire are highly correlated with each other and can be used as a reliable measure of the construct of "Convenience of Using Digital".

When assessing the individual items in the questionnaire, it was found that all 15 items were important and contributed to the overall reliability of the scale. Removing any of the items would result in a decrease in the value of alpha, indicating that each item was measuring a unique aspect of the construct.

In addition to the initial reliability analysis, a second analysis was conducted on Component 1, "Convenience of Using Digital," using Cronbach's alpha based on standardized items. The result of this analysis was $\alpha = 0.923$, which is slightly higher than the initial result of $\alpha = 0.918$.

Standardized items refer to the items that have been transformed to have a mean of zero and a standard deviation of one. This transformation is often used to compare the relative contributions of individual items to the overall reliability of a scale.

The fact that the Cronbach's alpha based on standardized items is slightly higher than the initial result suggests that the scale is even more reliable than previously thought. This means that the 15 items in the questionnaire are highly correlated with each other and measure the same underlying construct of "Convenience of Using Digital."

Once again, it was found that all 15 items in the questionnaire were important and contributed to the overall reliability of the scale. Removing any of the items would result in a decrease in the value of alpha, indicating that each item was measuring a unique aspect of the construct.

Therefore, it can be concluded that the questionnaire for Component 1, "Convenience of Using Digital," is a highly reliable and valid measure of the construct, and all 15 items should be retained in the questionnaire.

8.2.2 Component 2: "Complexities of Usage"

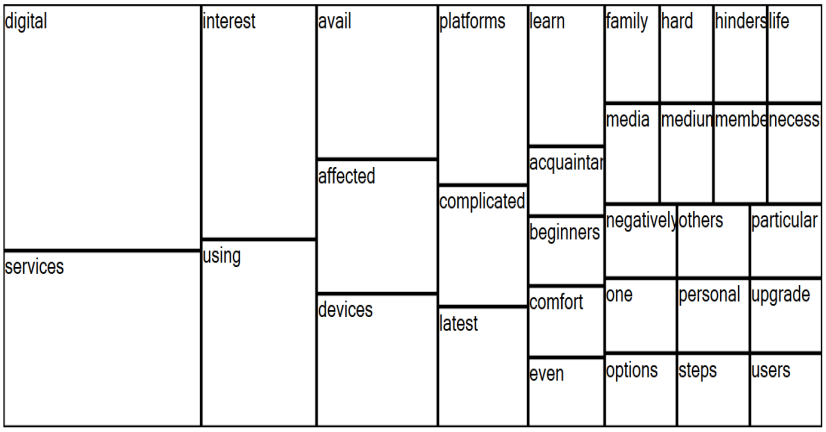


Figure 8-3: Labelling as Complexities of Usage using NVivo Word Cloud and Tree Map

Table 8-5: Details of Component 2- Complexities of Usage

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Mental Access Barrier	Impact of assistance in using platforms	0.823	3.48	1.486	3.51	1.493	0.875
Motivational Barrier	Difficulty of devices	0.809	3.13	1.557			
Motivational Barrier	Fear of change	0.787	3.07	1.544			
Mental Access Barrier	Fear of complications in life	0.761	3.39	1.552			
Motivational Barrier	Complications of the medium	0.750	3.11	1.478			
Mental Access Barrier	Anxiety to upgrade	0.730	4.13	1.443			
Mental Access Barrier	Access to digital services through others [0.886]	0.443	4.24	1.392			

(Source: SPSS Analysis Output)

This factor explained 9.593 per cent of the variance after rotation.

Table 8-6: Reliability Analysis on Component 2- Complexities of Usage

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.875	0.874	7

(Source: SPSS Analysis Output)

A reliability analysis was conducted on Component 2, "Complexities of Usage," which consists of 7 items. The result of the analysis using Cronbach's alpha was $\alpha = 0.81$, indicating an acceptable level of internal consistency.

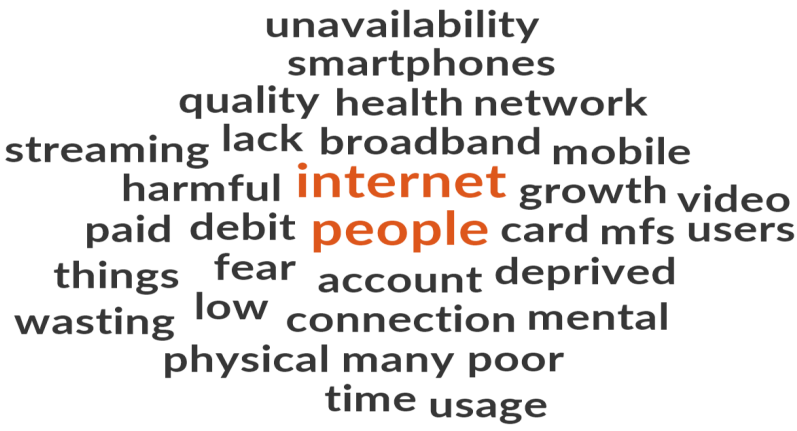
When assessing the individual items in the questionnaire, it was found that most of the items were important and contributed to the overall reliability of the scale. Removing any of these items would result in a decrease in the value of alpha, indicating that each item was measuring a unique aspect of the construct.

However, one item, item 7, "Access to Digital Services through others," appeared to be less important than the other items in the questionnaire. When this item was removed from the questionnaire, the value of alpha increased to $\alpha = 0.886$.

This suggests that item 7 is not as strongly related to the other items in the questionnaire as they are to each other and may be measuring a slightly different aspect of the construct of "Complexities of Usage." Therefore, removal of this item from the questionnaire should be considered.

Overall, it can be concluded that the questionnaire for Component 2, "Complexities of Usage," is a reliable and valid measure of the construct, with the exception of item 7, which may be less important than the other items in the questionnaire. It may be worth further investigating the construct validity of this item to determine if it should be retained in the questionnaire or replaced with another item that is more closely related to the other items in the questionnaire.

8.2.3 Component 3: "Connectivity & Services"



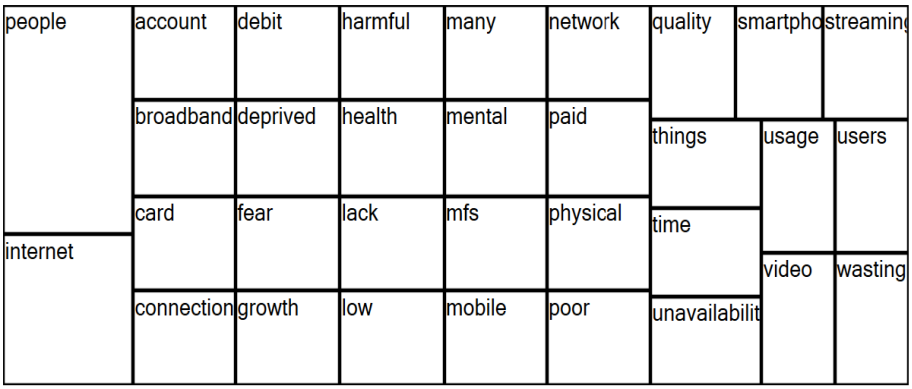


Figure 8-4: Labelling as Connectivity & Services using NVivo Word Cloud and Tree Map

Table 8-7: Details of Component 3- Connectivity & Services

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Motivation Barrier	Having Time in Hand	0.796	4.25	1.521	4.40	1.386	0.799
Usage Access Barrier	Support services for using digital media	0.792	4.38	1.328			
Materials Access Barrier	Impact of Higher Speed	0.767	4.60	1.303			
Materials Access	Access to broadband	0.649	4.67	1.283			

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Barrier	internet						
Mental Access Barrier	Health concern	0.473	4.10	1.495			

(Source: SPSS Analysis Output)

This factor explained 6.961 per cent of the variance after rotation.

Table 8-8: Reliability analysis on Component 3- Connectivity and Services

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.799	0.801	5

(Source: SPSS Analysis Output)

A reliability analysis was conducted on Component 3, "Connectivity and Services," which consists of 5 items. The result of the analysis using Cronbach's alpha was $\alpha = 0.799$, indicating an acceptable level of internal consistency.

When assessing the individual items in the questionnaire, it was found that all five items were important and contributed to the overall reliability of the scale. Removing any of these items would result in a decrease in the value of alpha, indicating that each item was measuring a unique aspect of the construct.

In addition to the initial analysis, a second analysis was conducted using Cronbach's alpha based on standardized items. The result of this analysis was $\alpha = 0.801$, which is consistent with the initial result and indicates that the scale is reliable.

Standardized items refer to the items that have been transformed to have a mean of zero and a standard deviation of one. This transformation is often used to compare the relative contributions of individual items to the overall reliability of a scale.

The fact that the Cronbach's alpha based on standardized items is very similar to the initial result suggests that the scale is reliable and that each item contributes equally to the overall reliability of the scale.

Therefore, it can be concluded that the questionnaire for Component 3, "Connectivity and Services," is a reliable and valid measure of the construct, and all five items should be retained in the questionnaire.

8.2.4 Component 4: “Scope & Choices”

Figure 8-5: Labelling as Scope & Choices using NVivo Word Cloud and Tree Map

Table 8-9: Details of Component 4- Scope & Choices

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Mental Access Barrier	Preference for traditional method [0.729]	0.6776	4.23	1.425	4.91	1.044	0.609
Mental Access Trigger	Inspiration through other's	0.6498	5.01	1.081			

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
	creative expressions						
Mental Access Trigger	Plethora of choice in media	0.5450	5.13	0.962			
Usage Access Trigger	Scope of development	0.4696	5.28	0.709			

(Source: SPSS Analysis Output)

This factor explained 4.799 per cent of the variance after rotation.

Table 8-10: Reliability Analysis on Component 4- Scope & Choices

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.609	0.666	4

(Source: SPSS Analysis Output)

A reliability analysis was conducted on Component 4, "Scope and Choices," which consists of 4 items. The result of the analysis using Cronbach's alpha was $\alpha = 0.609$, which is slightly higher than the minimum acceptable level of internal consistency.

When assessing the individual items in the questionnaire, it was found that most of the items were important and contributed to the overall reliability of the scale. Removing any of these items would result in a decrease in the value of alpha, indicating that each item was measuring a unique aspect of the construct. However, one item, item 1, "Preference for traditional method," appeared to be less important than the other items in the questionnaire. When this item was removed from the questionnaire, the value of alpha increased to $\alpha = 0.729$.

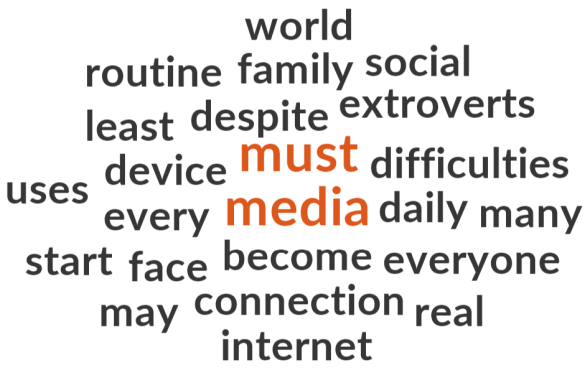
This suggests that item 1 is not as strongly related to the other items in the questionnaire as they are to each other and may be measuring a slightly different aspect of the construct of "Scope and Choices." Therefore, removal of this item from the questionnaire should be considered.

In addition to initial analysis, a second analysis was conducted using Cronbach's alpha. The result of this analysis was $\alpha = 0.666$, which is consistent with the initial result and indicates that the scale is reliable, although slightly lower than desired.

The fact that the Cronbach's alpha based on standardized items is lower than the initial result suggests that there may be some issues with the internal consistency of the scale. This may be due to the fact that the scale only consists of four items, which can make it difficult to achieve a high level of internal consistency.

Therefore, it can be concluded that the questionnaire for Component 4, "Scope and Choices," is a somewhat reliable measure of the construct, but there may be some issues with the internal consistency of the scale. Removing item 1 from the questionnaire should be considered, as it appears to be less important than the other items in the questionnaire. Reliability of the scale can be further improved through research.

8.2.5 Component 5: “Utility & Need”



media	become	despite	every	face	least	real	routine
	connection	device	everyone	family	many	social	uses
must	daily	difficulties	extroverts	internet	may	start	world

Figure 8-6: Labelling as Utility & Need using NVivo Word Cloud and Tree Map

Table 8-11: Details of Component 5- Utility and Need

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Mental Access Trigger	Utility outshines complexity of usage	0.706	4.88	1.015	4.81	1.133	0.657
Usage Access Trigger	Becoming Integral part of daily life	0.659	5.09	1.003			
Usage Access Trigger	Must have for households	0.523	5.17	0.823			
Mental Access Barrier	Personality traits [0.715]	0.419	4.13	1.689			

(Source: SPSS Analysis Output)

This factor explained 4.551 per cent of the variance after rotation.

Table 8-12: Reliability Analysis on Component 5- Utility and Need

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.657	0.713	4

(Source: SPSS Analysis Output)

A reliability analysis was conducted on Component 5, "Utility and Need," which consists of 4 items. The result of the analysis using Cronbach's alpha was $\alpha = 0.657$, which is slightly higher than the minimum acceptable level of internal consistency.

When assessing the individual items in the questionnaire, it was found that most of the items were important and contributed to the overall reliability of the scale. Removing any of these items would result in a decrease in the value of alpha, indicating that each item was measuring a unique aspect of the construct. However, one item, item 4, "Personality traits," appeared to be less important than the other items in the questionnaire. When this item was removed from the questionnaire, the value of alpha increased to $\alpha = 0.715$.

This suggests that item 4 is not as strongly related to the other items in the questionnaire as they are to each other and may be measuring a slightly different aspect of the construct of "Utility and Need." Therefore, removal of this item from the questionnaire should be considered.

In addition to the initial analysis, a second analysis was conducted using Cronbach's alpha based on standardized items. The result of this analysis was $\alpha = 0.713$, which is consistent with the initial result and indicates that the scale is reliable, although slightly lower than desired.

The fact that the Cronbach's alpha based on standardized items is slightly lower than the initial result suggests that there may be some issues with the internal consistency of the scale. This may be due to the fact that the scale only consists of four items, which can make it difficult to achieve a high level of internal consistency.

Therefore, it can be concluded that the questionnaire for Component 5, "Utility and Need," is a somewhat reliable measure of the construct, but there may be some issues with the internal consistency of the scale. Removing item 4 from the questionnaire should be considered, as it appears to be less important than the other items in the questionnaire. Further research may be needed to improve the reliability of the scale.

8.2.6 Component 6: “Enabling Power”

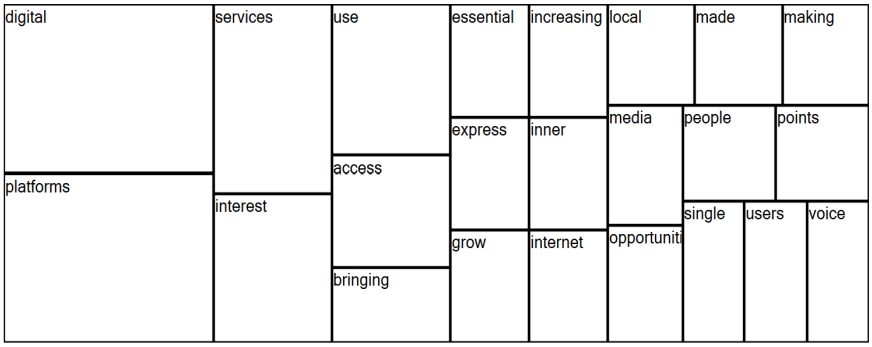


Figure 8-7: Labelling as Enabling Power using NVivo Word Cloud and Tree Map

Table 8-13: Details of Component 6- Enabling Power

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Motivation Trigger	One stop solution for multiple utilities	0.603	5.24	0.773	5.19	0.793	0.71
Usage Access Trigger	Digitization of local services	0.587	5.14	0.833			
Motivation Trigger	Opportunity to express views	0.579	5.18	0.772			

(Source: SPSS Analysis Output)

This factor explained 4.539 per cent of the variance after rotation.

Table 8-14: Reliability Analysis on Component 6- Enabling Power

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.710	0.712	3

(Source: SPSS Analysis Output)

Reliability analysis was carried out on Component 6, "Enabling Power," which consists of 3 items. The Cronbach's alpha for the questionnaire was found to be $\alpha = 0.710$, which indicates acceptable reliability. Upon examining the individual items, it was found that all three items contributed to the overall reliability of the scale. If any of the items were removed, the Cronbach's alpha value would decrease, indicating that each item was measuring a unique aspect of the construct.

A second analysis was conducted using Cronbach's alpha based on standardized items, which yielded a value of α = 0.712. This result is consistent with the initial analysis, further indicating that the questionnaire is a reliable measure of the construct of "Enabling Power."

In conclusion, the reliability analysis indicates that the questionnaire for Component 6, "Enabling Power," is a reliable measure of the construct, with all three items contributing to the overall reliability of the scale. The consistency of the results from the initial analysis and the analysis based on standardized items further support the reliability of the questionnaire.

8.2.7 Component 7: “Adaptability”

Figure 8-8: Labelling as Adaptability using NVivo Word Cloud and Tree Map

(Source: SPSS Analysis Output)

Table 8-15: Details of Component 7- Adaptability

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Mental Access Trigger	Ease of learning	0.757	4.76	1.259	4.88	1.198	0.717
Mental Access Trigger	English Knowledge Not Needed	0.616	5.00	1.137			

(Source: SPSS Analysis Output)

This first factor explained 4.123 per cent of the variance after rotation.

Table 8-16: Reliability Analysis on Component 7- Adaptability

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.717	0.719	2

(Source: SPSS Analysis Output)

A reliability analysis was conducted on Component 7, "Adaptability," which consists of only 2 items. The Cronbach's alpha coefficient for the questionnaire was found to be $\alpha = 0.717$, indicating acceptable reliability. All two items of the questionnaire were found to be important for measuring the construct of "Adaptability." If either of the items were removed, the Cronbach's alpha value would decrease, indicating that both items are measuring a unique aspect of the construct.

A second analysis was conducted using Cronbach's alpha based on standardized items, which yielded a value of $\alpha = 0.719$. This result is consistent with the initial analysis, further indicating that the questionnaire is a reliable measure of the construct of "Adaptability."

In conclusion, the reliability analysis indicates that the questionnaire for Component 7, "Adaptability," is a reliable measure of the construct with both items being important for measuring the construct. The consistency of the results from the initial analysis and the analysis based on standardized items further support the reliability of the questionnaire.

8.2.8 Component 8: "Necessity"

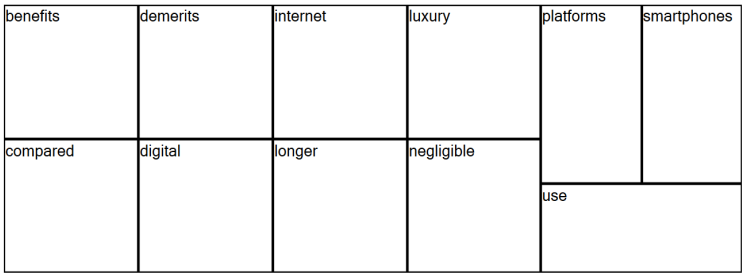


Figure 8-9: Labelling as Necessity using NVivo Word Cloud and Tree Map

Table 8-17: Details of Component 8- Necessity

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Mental Access Trigger	Not seen as luxury	0.737	4.86	1.156	4.83	1.096	0.454
Mental Access Trigger	Benefits overshadow demerits	0.411	4.80	1.037			

(Source: SPSS Analysis Output)

This first factor explained 3.922 per cent of the variance after rotation.

Table 8-18: Details of Component 8- Necessity

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.454	0.456	2

(Source: SPSS Analysis Output)

A reliability analysis was conducted on Component 8, "Necessity," which consists of only 2 items. The Cronbach's alpha coefficient for the questionnaire was found to be α = 0.454, indicating unacceptable reliability.

The low value of Cronbach's alpha suggests that the questionnaire may not be a reliable measure of the construct of "Necessity." The items may not be measuring the same underlying construct, or there may be issues with the wording of the questions or the response options. As such, this component may not be considered a reliable measure of the construct and may need to be revised or further evaluated before use in research or practical applications.

In summary, the reliability analysis indicates that the questionnaire for Component 8, "Necessity," is not a reliable measure of the construct of "Necessity." Further research and evaluation may be needed to improve the questionnaire's reliability.

8.2.9 Component 9: “Compatibility”

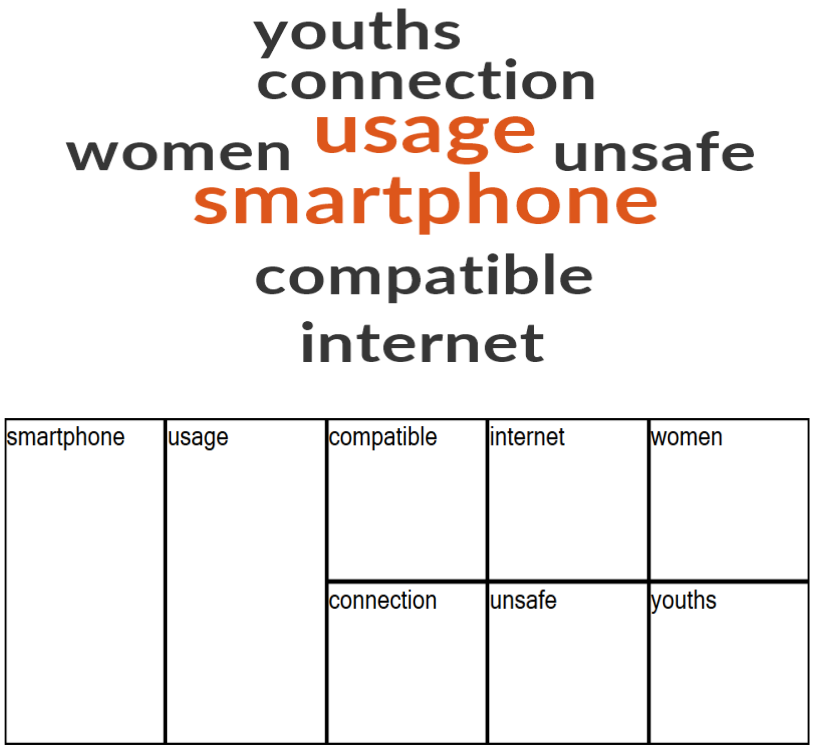


Figure 8-10: Labelling as Compatibility using NVivo Word Cloud and Tree Map

Table 8-19: Details of Component 9- Compatibility

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Mental Access Barrier	Not unsafe for women	0.813	2.64	1.514	2.64	1.491	0.764
Mental Access Barrier	Role of age	0.779	2.65	1.469			

(Source: SPSS Analysis Output)

This first factor explained 3.844 per cent of the variance after rotation.

Table 8-20: Reliability Analysis on Component 9- Compatibility

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.764	0.764	2

(Source: SPSS Analysis Output)

A reliability analysis was conducted on Component 9, "Compatibility," which consists of only 2 items. The Cronbach's alpha coefficient for the questionnaire was found to be $\alpha = 0.764$, indicating acceptable reliability.

The value of Cronbach's alpha suggests that the questionnaire is a reliable measure of the construct of "Compatibility." The two items appear to be measuring the same underlying construct, and the wording of the questions and response options appear to be appropriate.

As such, this component can be considered a reliable measure of the construct of "Compatibility."

In summary, the reliability analysis indicates that the questionnaire for Component 9, "Compatibility," is a reliable measure of the construct of "Compatibility." The two items are worthy of retention, and the questionnaire can be used in research or practical applications to measure this construct.

8.2.10 Component 10: "User Relevance"

digital	choice	matter	one	sort
media	live	necessity	utilizing	without

Figure 8-11: Labelling as User Relevance using NVivo Word Cloud and Tree Map

Table 8-21: Details of Component 10: User Relevance

Triggers and Barriers	Variables	Factor Loading	Variable Mean	Variable Standard Deviation	Component Mean	Component Standard Deviation	Cronbach's Alpha
Mental Access Barrier	Relevance of digital media	0.706	4.08	1.555	3.92	1.570	0.741
Usage Access Barrier	Choice overshadows necessity	0.700	3.76	1.584			

(Source: SPSS Analysis Output)

This first factor explained 3.618 per cent of the variance after rotation

Table 8-22: Reliability Analysis on Component 10- User Relevance

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.741	0.741	2

(Source: SPSS Analysis Output)

A reliability analysis was conducted on a questionnaire that measures the User relevance component, which consists of 2 items. The results showed that the questionnaire achieved acceptable reliability, with Cronbach's alpha coefficient of $\alpha = 0.741$, indicating that the items are internally consistent in measuring the construct of User relevance.

The reliability of the questionnaire would not have increased if any item was removed, indicating that both items are important for measuring User relevance. Additionally, the Cronbach's Alpha Based on Standardized Items is also 0.741, which indicates that the scale items have equal variances and are well-suited for measuring the construct of User relevance.

Overall, the results of the reliability analysis suggest that the questionnaire measuring the User relevance component is reliable and can be used to assess the extent to which a digital service or product is relevant to the user.

8.3 Component Analysis for Intent to Use

8.3.1 Principal Component Regression

A principal component was constructed taking all the identified components - Component 1 "Convenience of use", Component 2 "Complexities of Usage", Component 3 "Connectivity and Services", Component 4 "Scope and Choices", Component 5 "Utility and Need", Component 6 "Enabling Power", Component 6 "Adaptability", Component 7 "Necessity", Component 9 "Compatibility" and Component 10 "User Relevance".

Table 8-23: Model Summary of Regression Analysis on Principal Components

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.704[a]	.496	.483	.454	.496	40.274	10	410	.000	1.940

(Source: SPSS Analysis Output)

Table 8-24: Regression Analysis on Principal Component

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.055	.257		4.101	.000		
	Comp_1 Convenience of Use	.699	.080	.592	8.692	.000	.265	3.774
	Comp_2 Complexities of Usage	.011	.023	.020	.490	.624	.714	1.400
	Comp_3 Connectivity and Services	-.013	.026	-.021	-.493	.622	.679	1.473
	Comp_4 Scope and Choices	.013	.037	.015	.343	.732	.669	1.495
	Comp_5 Utility and Need	.019	.036	.025	.538	.591	.556	1.797
	Comp_6 Enabling Power	.012	.062	.011	.200	.842	.377	2.653
	Comp_7 Adaptability	.083	.026	.139	3.132	.002	.623	1.606
	Comp_8 Necessity	-.010	.029	-.013	-.330	.741	.745	1.341
	Comp_9 Compatibility	.031	.019	.066	1.629	.104	.757	1.321
	comp_10 User Requirements	.021	.019	.047	1.136	.256	.706	1.417

(Source: SPSS Analysis Output)

The correlation coefficient R was 0.704 which indicates a positive relationship.

The value of R square is .496 which means the regression equation for this model accounts for some 49.6% of the variance and two of the ten b-coefficients for the model is statistically significant.

Intent to use in terms of Principal Component = 1.055

+ 0.699 (Convenience of using Digital)

+ 0.083 (Adaptability)

Thus, we can conclude that the two principal components: Convenience of using Digital and Adaptability are the only two major predictors in terms of deciding Intent to Use among the Base of Pyramid Consumers.

Essentially, "Convenience of using Digital" component includes variables like Ease of multi-tasking, getting things done remotely, Reducing Price of Internet, Interest due to lifestyle utility, Customized services for user groups, Necessity of use, Communication with relatives, Impact of Network, Access to skill, Assisted use for lifestyle, Professional Requirement, Access to internet, Importance of Digital Services, Urge to express creativity and Affordability of devices. Interestingly all of these are only **TRIGGER** variables.

Similarly, “Adaptability” component includes variables like Ease of learning and English Language Knowledge which are also **TRIGGER** variables.

None of the **BARRIER** variables have essentially become a significant predictor of Intent to Use Digital Media among Base of Pyramid consumers. This means our Base of Pyramid Consumers are inclined to use this all-significant new platform and marketers can use this as a marketing tool to market mobile handsets.

9.0 SUMMARY OF FINDINGS & FRAMEWORK

9.1 Summary of Findings

The trifecta of triggers and barriers that influence BoP's intent to use digital media, in combination with their digital media usage behaviour and mobile handset usage can now be used to give a concrete shape to the originally conceptualized framework. With the support of our learnings from consumer purchase decision models vis-à-vis digital marketing funnels being at the centre of the framework, a final model can be developed.

From the questionnaire, we did an attribute analysis using the cross-tabulation method in SPSS and found out the specific attributes among the many, as to which of the attributes had significant result and contributed to the decision-making factor of using digital media and the purchase decision making of buying a mobile handset. The attributes were analysis in SPSS using cross tabulation method and then later on finding the percentages in excel. The reliability of the attributes was checked using the Cronbach Alpha test and the hypothesis of our research was tested using 3 different techniques namely Chi Square Test, ANOVA, and sample T-Test. After all the analysis and assessment, the attributes that stood firm were then allocated under the broader categories for each of the specific segment. The framework, as a whole, describes, as to which of the trigger points of our sample population spectrum should be taken into consideration and focused on while trying to find out the extent of intent of using digital media with the contrary of behaviour practice of using mobile handset. The funnel in the middle portrays as to how the communication material should be crafted to reach out to this crowd. It is very important for any marketer to understand the behavioural pattern of the targeted consumers as to how they are reacting to certain communications that comes across them. With the extensive research in hand, results both in form of qualitative and quantitative analysis, it can be deduced that keeping in mind the mobile handset usage pattern and the digital media usage pattern it is possible for mobile phone companies to use Digital Media as a tool for the people at the bottom of the pyramid. While the framework is visualised below in "Figure 8-1: Framework of Using Digital Media to Market Mobile Handsets to BoP", the four key components are summarised in the segments that follow.

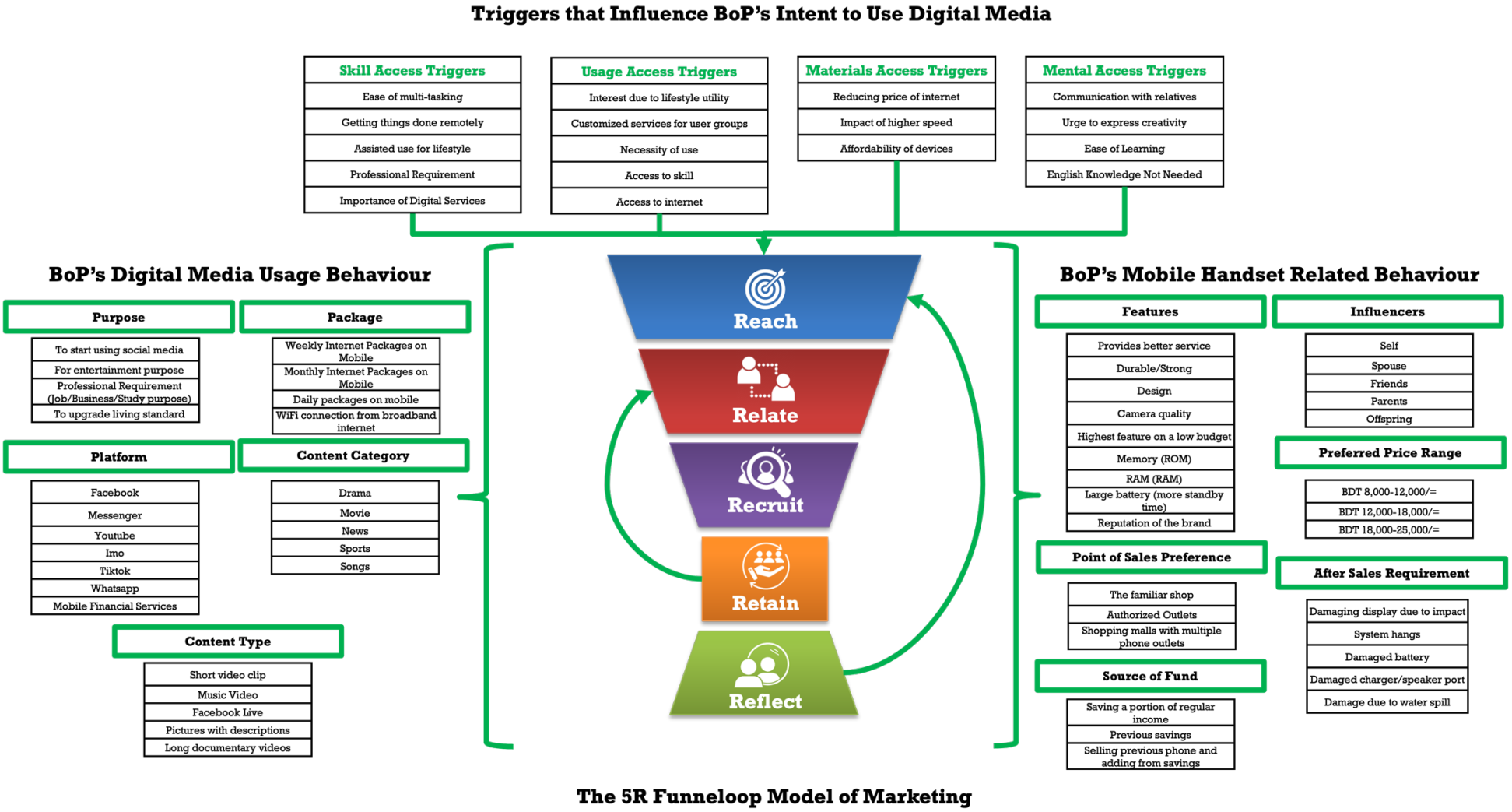


Figure 9-1: Framework of Using Digital Media to Market Mobile Handsets to BoP

9.2 The Triggers that Matter

The mentioned model explains the fact that there is no significant barrier that hinders the intent to use digital media among the BoP consumers of the country. Rather, after a series of analyses and statistical calculations, we have reached a point where we can see that there are only potential trigger points that can be harnessed and capitalized upon among the BoP to promote the mobile phone industry. Putting light on our methodology, which consisted of multi-level qualitative analysis followed by a quantitative analysis with a door-to-door survey questionnaire, we came to the point where we put the 46 simple variables (28 trigger variables and 18 barrier variables) under 9 complex variables using the 5 digital divide parameters, namely mental, material, skill, motivational, and usage. Using a series of descriptive statistical analyses and 46 Likert scale statements for the BoP, consumers' behaviour related to digital devices and platforms was factor analysed using regression analysis and principal components analysis with varimax rotation. The result of these analyses concluded that only 4 trigger points i.e., the complex variables and the 17 simple trigger variables: Skill Access Triggers (Ease of multi-tasking, Getting things done remotely, Assisted use for lifestyle, Professional Requirement, Importance of Digital Services), Usage Access Triggers (Interest due to lifestyle utility, Customized services for user groups, Necessity of use, Access to skill), Materials Access Triggers (Reducing price of internet, Impact of higher speed, Affordability of devices) and Mental Access Triggers (Communication with relatives, Urge to express creativity, Ease of Learning, English Knowledge Not Needed) were the only potential trigger points that should be harnessed to attain desired results. This essentially shows how the base of the pyramid audience is ready for digital transformation if the right framework is applied.

9.3 Digital Media Usage Behaviour

Moreover, the study revealed the usage behaviour of digital platforms among the BoP consumers. Four main purposes of their usage, four major types of internet packages they avail, seven top platforms that they use and five top content categories and five major content types that they consume have been collated for the framework. All these are mentioned in sequence of priority under Digital Media Usage Behaviour on the left side of the model in figure 8-1.

9.4 Mobile Handset Usage Behaviour

On the other hand, the study also identified the mobile handset usage behaviour among base of pyramid users through features they look for in a mobile handset, sources of purchase influences, preferred price range, preferred purchase location for mobile handset, source of money for the purchase and the after sales requirements. Nine major features, five top influencers, top three price ranges, three main sources of fund, top three point of sales preferences and five most critical aftersales requirements have been highlighted on the right side of the model under Mobile Handset Related Behaviour in figure 8-1.

9.5 The 5R Funneloop Model of Marketing

Taking inspiration from all the consumer purchase decision models and marketing funnels from the literature reviews, the global platforms, and the broader marketing industry, the researcher proposes the brand new “5R Funneloop model” at the centre of the framework in figure 8-1. The model is intended to capture the best essence of all available consumer purchase journey models or marketing funnels.

It has been seen from literature reviews that since the era of the traditional marketing model of AIDA to the recent era of digital marketing with an hourglass or bowtie approach, there have been multiple approaches like funnels, tunnels, stages, bowties, loops, and cycles. However, the way all the models essentially function is that with new consumers, they follow the funnel of "reach," "relate," "recruit," and "retain." In order to retain an existing customer or consumer, all models follow a loop or cycle approach to re-relate, re-recruit, and re-retain them. While existing customers and consumers are going through a continuous loop, the modern-day funnel expands towards an hourglass to “reflect” the persona (based on their demography, psychography, and behaviours) of the existing customer base to create a similar or matching audience pool utilizing a data-driven approach. The funnel restarts with these new customers to follow the Reach, Relate, Recruit, and Retain stages once again. Hence, the model proposes combining the ideas of FUNNEL and LOOP to be called FUNNELOOP. Thus, modern-day marketing activities actually run in a perpetual Funneloop approach, following the five broad stages of Reach >> Relate >> Recruit >> Retain >> Reflect.

The same approach can be utilized for BoP consumers in the mobile handset industry. Marketers can capitalize on their platform and handset usage behaviour data to place the right advertisement material or content in the different stages of the funnel and accordingly reach, relate to, recruit, and retain them. From the data of the already retained customer base, they can reflect and expand their customer base to expand their sales and market share with a proper data-driven approach.

The availability of digital media and digital marketing has democratized marketing for all, and as a tool, it can be dominant when utilized in the appropriate way. As a medium, it has enabled instantaneous two-way communication between customer and marketer and opened up an era of brand co-creation. Gone are the days when marketers could establish myths around their brands. Now, customers, consumers, and shoppers make or break brands based on their marketing approach on digital platforms. Adding to that, the attention span of audiences has reduced so much that knowing with precision at which stage of the funnel the audience is at is the most crucial understanding that marketers can develop. They need to plan and execute their activities for each stage based on their understanding of digital media usage behaviour combined with mobile handset usage behaviour. This can assist them in generating the appropriate results at each stage of the framework that has been derived.

9.6 How to Get People to Use more Digital Media?

At the end of each interview with our BoP consumers, they were asked to give their candid feedback on how people can be convinced to use more digital media in order to understand and find out the current thoughts of the targeted sample population about the usage of digital media. It gave us a clear picture as to where they currently stand with their perception of how digital media can be an integral part of their lives in terms of communication, lifestyle, entertainment, and many more. The responses collected were analysed using NVIVO, forming a word cloud highlighting the key takeaways. When asked about what they think should be the necessary steps of action to enable and engage more people with the benefits of digital media, the answers landed mostly on the functional aspect. Some believe that the benefits and value addition that digital media can bring to people's lives are yet to be discovered and experienced by a lot of people. They strongly believe it is awareness that can bring about behavioural change

because a lot of people do not yet know and understand the extent of ease it brings into their lives. They feel like if the benefits of digital media are demonstrated to them, it will be easier for them to understand the in-depth effects of them. On the other hand, some believe that the pricing of the internet should be reduced with an increase in the network coverage provided by the telephone operators. A handful of the sample population perceives the pricing of the internet as beyond their financial capacity to spend on the technological aspect of life.

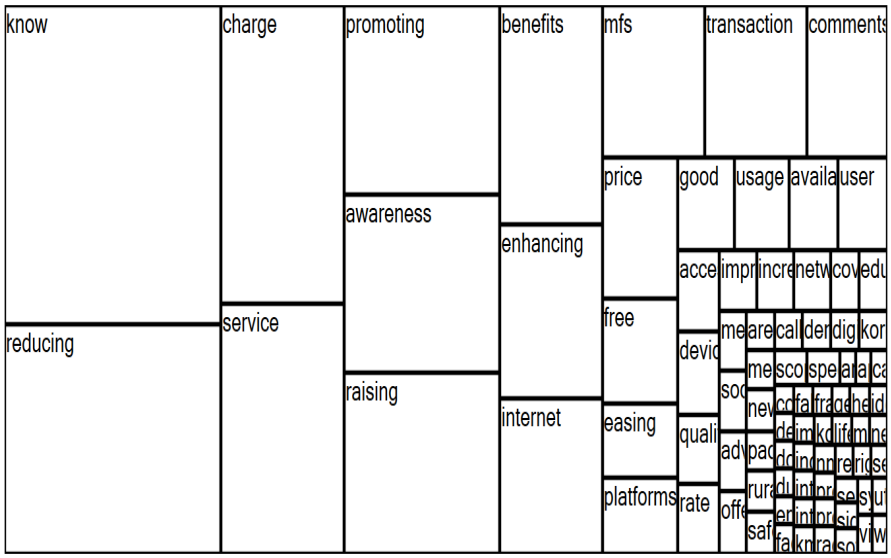


Figure 9-2: Word Cloud and Tree Map of "Increasing Usage of Digital"

Among all the descriptions and answers given by the respondents, three key points popped out as significant:

Reducing price of internet, increasing coverage and Raising Awareness

9.7 How to Advertise Smartphone?

The interview also covered the specific medium of communication they think is most effective in terms of promoting mobile phones, with the objective of increasing the usage percentage of smartphones. The analysis of the responses that were collected revealed the places where they thought promoting would be most effective. There were people who advocated for the usage of digital media consisting of social media platforms like Facebook and YouTube since that is where people are experiencing different forms of advertisements and commercials from different brands. That is the place where people get influenced by any purchase-making decision in their day-to-day lives. Television was another medium of communication that they thought should be used to communicate. Another aspect of this analysis lies in the part about advertisements in newspapers and leaflets, which they think have a direct reach.

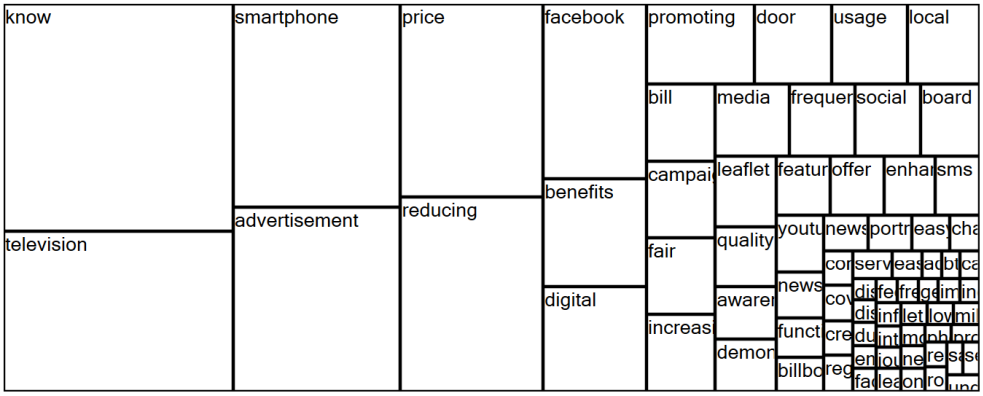


Figure 9-3: Word Cloud and Tree Map of "Source of Mobile Handset Advertisement"

Among all the answers given by the respondents, the significant ones are:

Communicate price, advertise benefits, and demonstrate usage on Facebook along with television.

9.8 How to increase Use of Smartphone?

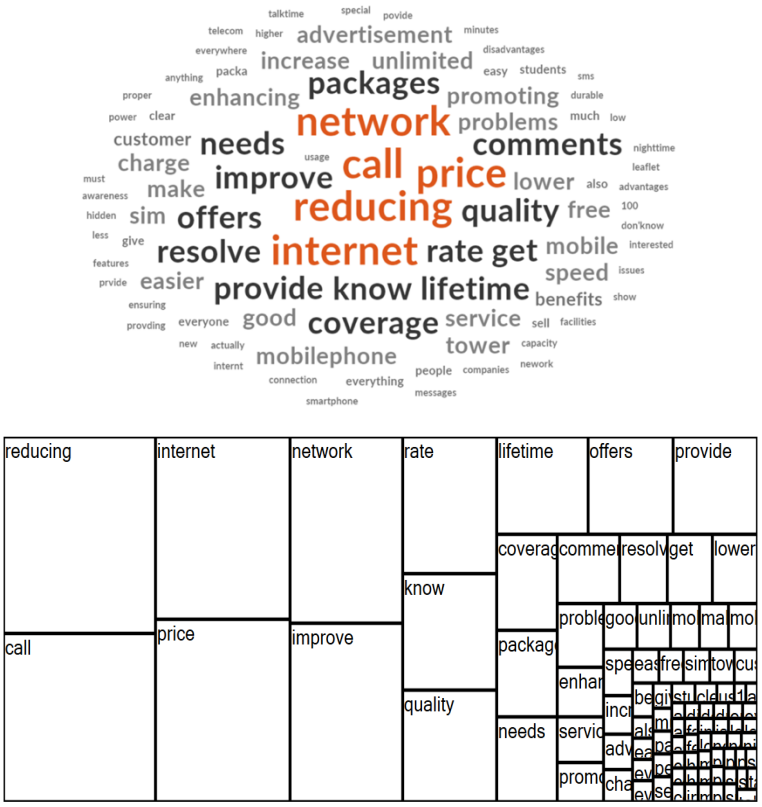


Figure 9-4: Word Cloud and Tree Map of "Increasing Use of Internet and Smartphone"

When asked about how to help increase the usage of the internet as well as smartphones, the analysis showed that people mostly focused on the affordability aspect of the mechanism. The majority of the population perceives and states that the price and validity of the Internet packages should be increased so that they don't have to spend a higher amount of their household income on them. They want a service period that has an extended expiration date, along with the prices they are paying for the service. The network strength and coverage of the mobile network operators were also in the unsatisfactory spectrum for the sample population, which they believe should be stronger and better in order to become regular users. With the awareness level of the benefits of the internet and smartphones among the people at the base of the pyramid at a very bare minimum, the analysis proved that this is also a major part of the concern as a lot of people have not yet explored and discovered the world of digitalization. Thus, the key points are:

Reducing price of mobile handset, increasing network coverage, improving speed, and raising awareness.

10.0 CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusion

Reflecting back on the research problem, research question, broad objective, and the specific objectives of the research, we can conclude that the research contributes to the body of knowledge on using digital media for base of the pyramid consumers. It addresses the issue of a lack of understanding about the digital media consumption behaviour of base of the pyramid consumers in Bangladesh, which is leading to a lack of appropriate utilization of digital media compared to traditional media in the mobile handset industry.

It has generated understanding about the status of digital media as a marketing tool versus traditional media for BoP through extensive use of both qualitative and quantitative research data. It is fair to say that the findings suggest that marketers are not fully utilizing the potential of digital marketing for BoP in the mobile handset industry compared to age-old traditional media like TV, point of sale, etc.

Adding to that, the research identifies the specific triggers and barriers for BoP consumers to consume digital media versus traditional media. It is clear from the research that triggers clearly overshadow the barriers when it comes to the need for digital media, even among the base of the pyramid consumers. 17 out of 28 triggers outshined all of the 18 barriers that influence intent to use digital media among BoP consumers. It has also identified digital media usage behaviour in terms of purpose, package, platforms, and contents.

The research shed light on the usage behaviour of mobile handsets among BoP consumers. The features that they look for—the influencers of purchase, preferred price ranges, sources of funding, preferred purchase points, and aftersales requirements—are the major points identified among others through the research.

The research has clearly identified the potential of digital media as a marketing tool for BoP in the mobile handset industry. It has generated a specific framework that marketers in the mobile handset industry can use for using digital media as a marketing

tool, utilising the newly proposed 5R Funneloop model of Reach, Relate, Recruit, Retain and Reflect. The identified triggers can be harnessed along with a data-driven approach to utilise the digital media usage and mobile handset usage behaviour data. Interestingly, other industries can also use the model to utilize digital media as a marketing tool if they use their own industry's product or service usage behaviours.

10.2 Recommendations

Based on the research analysis and findings, following recommendations can be made for the mobile handset industry and broader marketing industry.

i. Marketers' mindsets need to change when it comes to BoP and the overall mass market as a whole. Along with traditional media, they need to retrain to start utilizing digital media as a marketing tool. They need to consider how they can help make the use of digital media platforms more convenient in order to boost their handset sales.

ii. Marketers can easily use the proposed 5R Funneloop framework to utilize digital media as a marketing tool for the BoP and build further on their own funnel for mobile handset sales and marketing.

iii. Since this research mainly concentrated on the top end of the digital marketing funneloop, i.e., REACH (triggers and barriers) that enable BOP to use digital, further research can be done on the other stages, i.e., RELATE, RECRUIT, RETAIN, and REFLECT stages of the digital marketing funnel for BoP.

iv. Since the research showed a need for improving access to the internet, further research can be done on how access, speed, and price can be brought within acceptable limits for base-of-the-pyramid consumers or if even subsidies should be considered by the government.

v. Research can be done to see whether mobile handset manufacturers or even other industry players should participate in making digital media cheaper, or whether, like in other countries, annual plans, bundles, or packages during mobile handset purchase should be used.

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Appendix A: Interview Questionnaire for Mobile Handset Marketers and Agency Experts

For Brand Managers:

1. What is the socio-economic segmentation of the current handset market of smartphone users in contrast of average annual income of household?
2. What is the gender wise demographic segmentation of smartphone users in BOP Consumer Group?
3. Do you have any age wise demographic segmentation of smartphone users in BOP Consumer Group (Age)
4. According to you, what do you think are the factors for the BOP for using the digital media?
5. What are the media that you use for reaching out BOP consumers?
6. Which media, in your consideration, is more effective to reach BOP consumers?
7. Why do you think that media is more effective?
8. What is the percentage of spending on digital media buying for BOP consumers groups compared to national spending?
9. In your opinion, what are the determining factors for BOP consumers to make up their mind for a particular smartphone?
10. Why do you think the BOP consumers are not using the digital media more effectively in terms of gathering information?
11. Within same price range, do you communicate any particular smartphone to BOP consumer groups? (For instance, compromising on hardware quality to offer maximum features vs a smartphone with sturdy build quality offering basic smartphone features
12. What is your forecast for next 3 years of contribution of BOP consumer group to your business portfolio?

For Category Managers:

1. How much BOP consumers contribute to your business?
2. What is the share of your marketing communication expenses you spend on marketing communication campaign targeted for BOP consumers only?
3. According to you, what do you think are the factors for the BOP for using the digital media?
4. What are the media that you use for reaching out BOP consumers?
5. Which media, in your consideration, is more effective to reach BOP consumers?
6. Why do you think that media is more effective?
7. What is the percentage of spending on digital media buying for BOP consumers groups compared to national spending?
8. In your opinion, what are the determining factors for BOP consumers to make up their mind for a particular smartphone?

9. Why do you think the BOP consumers are not using the digital media more effectively in terms of gathering information?
10. How do you determine which smartphone to be marketed to BOP consumers groups? (Price, Maximum Feature, Battery Durability etc.)
11. Within same price range, do you communicate any particular smartphone to BOP consumer groups? (For instance, compromising on hardware quality to offer maximum features vs a smartphone with sturdy build quality offering basic smartphone features
12. What is your forecast for next 3 years of contribution of BOP consumer group to your business portfolio?

For Owners and Strategic Planners in digital marketing agency:

1. What is the socio-economic segmentation of the current handset market of smartphone users in contrast of average annual income of household?
2. What is the gender wise demographic segmentation of smartphone users in BOP Consumer Group?
3. Do you have any age wise demographic segmentation of smartphone users in BOP Consumer Group (Age)
4. Do you believe the BOP people have the tendency of following offline media more than the digital media?
5. According to you, what do you think are the factors for the BOP for using the digital media?
6. What are the media that you use for reaching out BOP consumers?
7. Which media, in your consideration, is more effective to reach BOP consumers?
8. Why do you think that media is more effective?
9. What is the percentage of spending on digital media buying for BOP consumers groups compared to national spending?
10. Do you develop different contents for BOP consumer groups for similar smartphone?
11. How do you measure ROI on campaign targeted for BOP consumers?
12. What sort of contents/messages are effective for reaching out BOP Consumers?
13. How do you communicate utility (functional and emotional) of a smartphone to BOP consumers?
14. What sort of placement is more effective to communicate to BOP consumer groups?
15. Why do you think the BOP consumers are not using the digital media more effectively in terms of gathering information?
16. Is there any occasion or events when the smartphone sales peak among BOP consumers groups?
17. How do you find the effectiveness of digital marketing communication to attract BOP consumer groups?

Appendix B: Analysis & Findings of the Pilot Study in the Rayer Bazar Slum

Basic Characteristics of Respondents

Education versus Gender Analysis

The following table show the Cross-tabulation of Last Degree Achieved with Gender. After analysis in SPSS, the percentages have been calculated in Microsoft Excel. It is visible from the results that 74% of the respondents was female while 49% of the respondents only had education up to Primary level and 24% were uneducated.

Table 1: Education Versus Gender Cross-Tab

Education	Gender of the respondent					
	Male		Female		Total	
	Number	% of Total	Number	% of Total	Number	% of Total
Uneducated	16	8%	29	15%	45	24%
Primary	22	12%	72	38%	94	49%
SSC	4	2%	18	9%	22	12%
HSC	3	2%	17	9%	20	10%
Graduate	3	2%	5	3%	8	4%
Post-Grad	1	1%	1	1%	2	1%
Total	49	26%	142	74%	191	100%

Education versus Age Analysis

The following table show the Cross-tabulation of Last Degree Achieved with Age. After analysis in SPSS, the percentages have been calculated in Microsoft Excel. It is visible from the results that 50% of the respondents was within the age range of 18-24 while 24% of the respondents within that group had Primary level education only.

Table 2: Education versus Age Crosstab

Education	18-24 Years		25-34 Years		35-49 Years		Total	
	Number	% of Total	Number	% of Total	Number	% of Total	Number	% of Total
Uneducated	13	7%	19	10%	13	7%	45	24%

Primary	46	24%	36	19%	12	6%	94	49%
SSC	15	8%	4	2%	3	2%	22	12%
HSC	16	8%	4	2%	0	0%	20	10%
Graduate	5	3%	3	2%	0	0%	8	4%
Post-Grad	0	0%	1	1%	1	1%	2	1%
Total	95	50%	67	35%	29	15%	191	100 %

Education versus Income Analysis

The following table show the Cross-tabulation of Last Degree Achieved with Family Income. After analysis in SPSS, the percentages have been calculated in Microsoft Excel. It is visible from the results that 22% of the respondents with Primary education had Income below 10,000 takas while 19% of them had below 15,000 takas. OF the total, 40% of the people had below 10,000-taka income with low level of education.

Table 3: Education Versus Income Crosstab

Education	Family Income									
	5001-10000		10001-15000		15001-20000		20001-25000		Total	
	Number	% of Total	Number	% of Total	Number	% of Total	Number	% of Total	Number	% of Total
Uneducated	21	11%	15	8%	5	3%	4	2%	45	24%
Primary	42	22%	36	19%	14	7%	2	1%	94	49%
SSC	6	3%	7	4%	6	3%	3	2%	22	12%
HSC	7	4%	3	2%	8	4%	2	1%	20	10%
Graduate	1	1%	3	2%	4	2%	0	0%	8	4%
Post-Graduate	0	0%	0	0%	1	1%	1	1%	2	1%
	77	40%	64	34%	38	20%	12	6%	191	100 %

Age Group and Profession

Among the respondents, 50% belong to the age group of 28-24 and 35% 24-35 and of the respondents a staggering 50% were housewife followed by 10% students.

Table 4: Age and Profession of Respondents

	18-24 Years		25-34 Years		35-49 Years		
Job Type	Male	Female	Male	Female	Male	Female	Total
Other Blue Collar	3	5	2	0	0	1	11
Business	2	1	2	0	4	0	9
Driver	4	0	3	0	2	0	9
Housewife	0	47	0	40	0	7	94
Maid Servant	0	4	0	5	0	3	12
Private Job	2	5	2	6	2	1	18
Rickshaw Puller	1	0	5	0	6	0	12
Student	5	14	0	0	0	0	19
Tailor	0	0	2	0	1	1	4
No Work	0	2	0	0	1	0	3
	17	78	16	51	16	13	191

Choice of Phones and Reasons

Family Income-Age and Type of Phone

The following table shows type of phone choice i.e., Feature Phone versus Smartphone by Age cross-tabulated with Income Groups:

Table 5: Income-Age vs. Type of Phone

	18-24 Years		25-34 Years		35-49 Years		Total
Family Income	Feature Phone	Smartphone	Feature Phone	Smartphone	Feature Phone	Smartphone	
5001-10000	22	9	25	6	15	0	77
10001-15000	21	18	16	4	5	0	64

15001-20000	10	10	6	7	3	2	38
20001-25000	2	3	2	1	2	2	12
Total	55	40	49	18	25	4	191

It is evident from the data that Smartphone users belong to relatively young population group of 18-24 years' age and income group has a bearing on the type of phone chosen by consumers and relative penetration of feature phone s higher among lower income population. More importantly penetration of smartphone was found to be 32%.

Choice of Brand

Following table shows that feature phone users prefer Symphony as a brand followed by Nokia and Smartphone users prefer Symphony followed by Samsung.

Table 6: Choice of Brand

Brand	Feature Phone	%	Smartphone	%
Others	11	9%	7	11%
Walton	2	2%	3	5%
Okapia	2	2%	2	3%
Chinese Brand	27	21%	1	2%
Samsung	4	3%	16	26%
Nokia	28	22%	1	2%
Symphony	55	43%	32	52%
	129		62	

Factors Influencing Choice of Brand

Findings indicate that feature phone buyers and smartphone buyers get interested to buy a handset by different set of motivations. For a feature phone buyer price and his/her comfort of using the phone gets topmost priority, followed by ease of using the product and some sort of honour in owning the brand.

Table 7: Factors of Feature Phone Brand Choice

Factors for choosing a Handset Brand			
Feature Phone	1	Price	54%
	2	comfort of usage	22%
	3	Prestige	12%

Whereas for smartphone the factors of motivation to own a handset are different. For smartphone owners being able to own a new model of phone is the most important aspect of owning the handset. The next important issue is comfort of using the product around 93% of the owners said that they operate the phone in English and since higher education level is low among the respondent group it explains the importance of ease of using the product to be one of the important factors for choosing a smartphone.

Table 8: Factors of Smartphone Brand Choice

	Factors for choosing a handset		
Smart Phone	1	New Model	43%
	2	Comfortable to Use	18%
	3	Prestige	17%
	3	Price	17%

There are distinct differences when it comes to choosing the model of preferred brand among consumers. Battery capacity followed by Size of Display are top priority for Choice among Feature phone users while Smartphone users look for Camera quality followed by Multimedia function when choosing a specific Model of a Brand.

Table 9: Reasons for Choosing Model

	Feature Phone		Smartphone	
Feature	**Count**	**Percentage**	**Count**	**Percentage**
Outlook	9	7%	5	8%
Multimedia Function	19	15%	18	29%
Battery	49	38%	6	10%
Design	12	9%	7	11%
Size	33	26%	3	5%
Touch/ Smoothness of Phone	18	14%	7	11%
Camera	10	8%	31	50%
Space	0	0%	2	3%
No. of Features	2	2%	1	2%
Speed	3	2%	1	2%
Other Features	2	2%	0	0%
Total Phone Owner	129		62	

Use of Internet and Type of Use

Internet usage behaviour is very low among feature phone owners, but the usage pattern is high for smartphone users. 58% of the smartphone users use internet whereas only 5% of feature phone users have said to use internet. This phenomenon shows that owning a smartphone increases the propensity of using internet.

Table 10: Internet Usage Percentage

	Smart Phone	Mobile Phone
Usage of Internet	58%	5%

But among those who use internet, 50% of them use internet for Facebook browsing and the rest of the users are spread across watching videos, streaming music, chatting with friends & family & online calls. However, the frequency of users using these services are around or less than 10%.

Among the different types of phone owners, a staggering 21% people (Mobile Internet + WIFI) uses internet. More importantly it is clear that conversion to Smartphone leads to more usage of internet.

Table 11: Use of Internet

	Smartphone	Feature Phone	Total
Mobile Internet	28	5	33
%	45%	4%	17%
Home WIFI	8	0	8
%	13%	0%	4%
Do not Use	26	124	150
%	42%	96%	79%
Total	62	129	191

Reasons for using internet seems to be as follows:

Table 12: Reasons for Using Internet

		Feature Phone	Smartphone
Facebook	Yes	4	23
	No	125	39
Browsing	Yes	0	3
	No	129	59
Chatting	Yes	0	4
	No	129	58
Download	Yes	1	4
	No	128	58
Online Calling	Yes	1	9
	No	128	53
Others	Yes	0	5
	No	129	57

The top reason for using internet is Facebook followed by Online calling among both Smartphone and feature phone users. This is an interesting finding given that the expectation was Online Calling could have been a cost saving measure for people calling Non-resident Bangladeshis abroad.

Difference of Mobile Usage between the Genders

In order understand the difference between Genders in terms of the question "How much time you spend with your mobile per day?", Independent Samples T-Test Analysis was used.

The null hypothesis (H_0) and alternative hypothesis (H_1) of the independent samples T test were expressed as follows:

H_0: $\mu_{male} = \mu_{female}$ ("there is no difference in mean mobile usage per day by gender or the means are equal")

H_1: $\mu_{male} \neq \mu_{female}$ ("there is difference in mean mobile usage per by gender or the two-population means are not equal"). The test was done at 95% Confidence level.

The outputs from SPSS appear in two tables. Two sections (boxes) appear in the output: Group Statistics and Independent Samples Test. The first section, Group Statistics, provides basic information about the group comparisons, including the sample size (n), mean, standard deviation, and standard error for mile times by group. In this example, there are 49 Male and 142 Female. The mean USAGE time for Men is 4.27 Hours, and the mean usage time for females is 3.03 Hours. [μ_{male} = 4.27 Hours while μ_{female} = 3.03 Hours].

Table 13: Group Statistics for T-Test

	Gender of the respondent	N	Mean	Std. Deviation	Std. Error Mean
How much time you spend with your mobile per day?	Male	49	4.27	2.991	.427
	Female	142	3.03	3.113	.261

The second section, Independent Samples Test, displays the results most relevant to the Independent Samples t Test. There are two parts that provide different pieces of information: Levene's Test for Equality of Variances and t-test for Equality of Means.

Table 14: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
How much time you spend with your mobile per day?	Equal variances assumed	.447	.505	2.424	189	.016	1.238	.511	.231	2.246
	Equal variances not assumed			2.472	86.469	.015	1.238	.501	.243	2.234

Levene's Test for Equality of Variances: This section has the test results for Levene's Test. From left to right:

F is the test statistic of Levene's test, Sig. is the p-value corresponding to this test statistic. The p-value of Levene's test is printed as ".505", so we do not reject the null of Levene's test and conclude that the variance in usage of males is not significantly different than that of females.

This tells us that we should look at the "Equal variances assumed" row for the t-test (and corresponding confidence interval) results. (If this test result had been significant -- that is, if we had observed $p < \alpha$ -- then we would have used the "Equal variances not assumed" output.)

The t-test for Equality of Means provides the results for the actual Independent Samples t Test. From left to right: t is the computed test statistic, df is the degrees of freedom, Sig (2-tailed) is the p-value corresponding to the given test statistic and degrees of freedom Mean Difference is the difference between the sample means; it also corresponds to the numerator of the test statistic and Std. Error Difference is the standard error; it also corresponds to the denominator of the test statistic.

Since in the first row of the second group, since $p < .016$ is less than our chosen significance level $\alpha = 0.05$, we can reject the null hypothesis, and conclude that the that the mean usage time for Males and Females is significantly different.

Result Interpretation for T-Test

Based on the results, we can state the following:

There was a significant difference in mean usage time between Males and Females.
The average usage time for Males was 1.238 Hours more than the average usage time for females.

Dependency of Phone Type on Family Income

The Chi-Square Test of Independence determines whether there is an association between categorical variables (i.e., whether the variables are independent or related). It is a nonparametric test. This test is also known as: Chi-Square Test of Association. This test utilizes a contingency table to analyse the data. A contingency table (also known as a cross-tabulation, crosstab, or two-way table) is an arrangement in which data is classified according to two categorical variables. The categories for one variable appear in the rows, and the categories for the other variable appear in columns. Each variable must have two or more categories. Each cell reflects the total count of cases for a specific pair of categories. In our case, we used Family Income versus Types of Phones used.

The hypothesis was:

Ho = Phone type is independent of family income

H1 = Phone type is dependent on family income

The SPSS output tables are shown below.

Table15: Family Income versus Type of Phone Cross Tabulation

			Which type of phone do you use?		Total
			Feature Phone	Smartphone	
Family Income	5001-10000	Count	62	15	77
		Expected Count	52.0	25.0	77.0
	10001-15000	Count	42	22	64
		Expected Count	43.2	20.8	64.0
	15001-20000	Count	19	19	38
		Expected Count	25.7	12.3	38.0
	20001-25000	Count	6	6	12
		Expected Count	8.1	3.9	12.0
Total		Count	129	62	191
		Expected Count	129.0	62.0	191.0

Table 16: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13.040[a]	3	.005
Likelihood Ratio	13.151	3	.004
Linear-by-Linear Association	12.212	1	.000
N of Valid Cases	191		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 3.90.

The key result in the Chi-Square Tests table is the Pearson Chi-Square.

The value of the test statistic is 13.040.

The footnote for this statistic pertains to the expected cell count assumption (i.e., expected cell counts are not all greater than 5): 1 cell (12.5%) had an expected count less than 5, so this assumption was not met.

The corresponding p-value of the test statistic is p = 0.005.

Result Interpretation for Chi-Square Test

Since the p-value is less than greater than our chosen significance level ($\alpha = 0.05$), we reject the null hypothesis. Rather, we conclude that there is enough evidence to suggest an association between income and type of phone used.

Income Group Versus Price of Phone

In order to get an understanding of whether Price of Mobile Phone has any association with Income Group, we have the following hypothesis:

H0: $\mu_{5001\text{-}10000} = \mu_{10001\text{-}15000} = \mu_{150001\text{-}20000} = \mu_{20001\text{-}25000}$ ("all 4-population means are equal" or there is no difference in Price of Mobile Phone used among different income groups)

H1: At least one of the 4 μ different ("at least one of the 4 population means is not equal to the others or at least in one of the cases prices of phone is determined by income group").

The SPSS output tables are shown below.

Table 17: ANOVA

Price					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	137357434.700	3	45785811.570	3.446	.018
Within Groups	2484851932.000	187	13287978.240		
Total	2622209366.000	190			

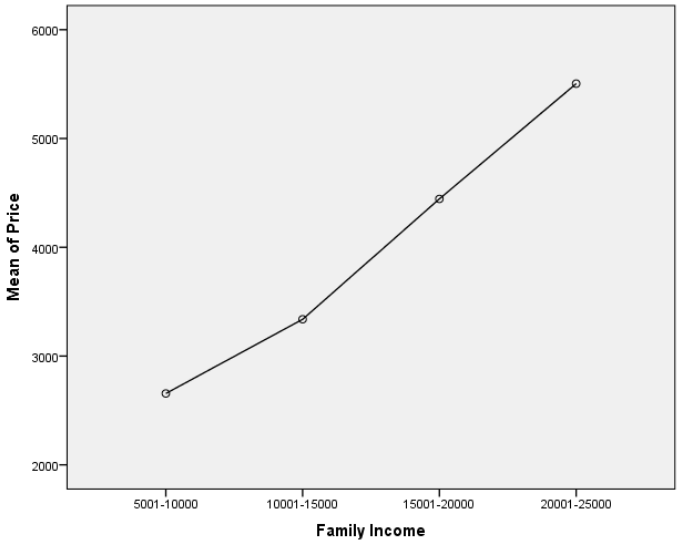

Figure: Means Plot

The Means plot is a visual representation of points on the chart that are the average of each group. It's much easier to see from this graph that the 5001-10000 income group had the lowest phone price, while the non-smokers had the highest mean phone price.

Result Interpretation for One-Way ANOVA

We conclude that the mean price of phone is significantly different for at least one of the income groups ($F_{3, 187} = 3.446$, $p < 0.018$). Note that the ANOVA alone does not tell us specifically which means were different from one another.

Conclusion

To encapsulate, through this Pilot Study, the candidate intended to develop cursory understanding of the Low-Income Group Consumers which will in turn in future enable the researcher to develop a conceptual framework that will enable Marketers to confidently use Digital communication as an effective and efficient Marketing tool to disseminate the right message to the Bottom of the Pyramid consumers who are already exposed to this world but just need a nudge in the right direction. Proper identification of triggers and barriers in this regard, can easily help the Marketing community to reduce their cost and effectively communicate using Digital communication. This in turn will help Bangladesh move faster towards the obvious direction the entire globe is taking when it comes to Marketing.

Questionnaire for Mobile Phone Usage Behaviour of Low-Income Group in Rayer Bazar Slum

- **Do you use a mobile phone?**
  - **YES**
  - **NO: if answer is no, stop interview!**

○ Age: ○ 15-17 years ○ 18 – 24 years ○ 25 – 34 years ○ 35 – 49 years ○ **if not within group, stop interview!**	○ Last Achieved Degree: ○ Primacy ○ SSC ○ HCS ○ Graduate ○ Post-graduate ○ Uneducated	○ Family Income: ○ BDT 5001 – 10000 ○ BDT 10001 – 15000 ○ BDT 15001 – 20000 ○ BDT 20001 – 25000 ○ BDT 25000 + ○ **if not within group, stop interview!**

Personal Information:

Name: _____ Gender: Male ☐ Female ☐

Profession/ Designation: _____ Organization:

Marital Status: Single ☐ Married ☐ Family Member: _____ Family Position:_____

Location_____

Contact:_____

Questions:

Part 1 (Details about Mobile Phone Usage)

1. **Which type of phone do you use?**
   - Smartphone
   - Feature Phone

2. **How long have you been using mobile phone?** _____ years

3. **Which mobile brand are you using?**
   - Apple
   - Blackberry
   - HTC
   - Huawei
   - LG
   - Maximus
   - Micromax
   - Microsoft
   - Nokia
   - OnePlus
   - Samsung
   - Sony
   - Symphony
   - Walton
   - Xiaomi
   - Chinese Brands
   - Others _____

4. **What's the specification:**
   Model _____ Price:_____

5. **Have you used mobiles of any other brands?**
   - Yes
   - No

6. **If yes, which brand?**
   - Apple
   - Blackberry
   - HTC
   - Huawei
   - LG
   - Maximus
   - Micromax
   - Microsoft
   - Nokia
   - OnePlus
   - Samsung
   - Sony
   - Symphony
   - Walton
   - Xiaomi
   - Chinese Brands
   - Others _____

7. **What was the reason for purchasing this phone?**
   - Price
   - New model
   - Amiability
   - Advertisement
   - EMI Offered
   - Offers: ……
   - Comfortable to use
   - Others _____

8. **Which feature of a mobile phone mainly attracts you?**
   - Design
   - Outlook
   - Size
   - Touch / Smoothness of Button
   - Camera
   - Multimedia Function
   - Speed (RAM)
   - Space (ROM)
   - Battery
   - Number of features
   - Other _____

9. **Which are the 3 most important features of an ideal mobile phone?**
    - Design
    - Outlook
    - Size
    - Touch / Smoothness of Button
    - Camera
    - Multimedia Function
    - Speed (RAM)
    - Space (ROM)
    - Battery
    - Number of features
    - Other _____
10. **From which source do you usually seek information about mobile handset?**
    - Family Members
    - Friends
    - Advertisement/commercial
    - Newspaper/Magazine
    - TV
    - Internet
    - Mobile Company Website
    - Other _____
11. **Who chooses the mobile for you?**
    - Myself
    - Friends
    - Relatives
    - Father
    - Mother
    - Brother
    - Sister
    - Spouse
    - Son
    - Daughter
    - Other _____
12. **From which source do you get to know about new arrivals or existing offers?**
    - Family Members
    - Friends
    - Advertisement/commercial
    - Newspaper/Magazine
    - TV
    - Internet
    - Mobile Company Website
    - Other _____
13. **Does any other family member use mobile phone?**
    - Yes
    - No

14. If yes, who else in your family uses mobile phone?

- Father
- Mother
- Sister
- Brother
- Spouse
- Son
- Daughter
- Others ___

15. Which type of phone do they mostly use?

- Smartphone
- Feature Phone

16. Do you share your mobile with any other family member?

- Yes
- No

17. If yes, with whom?

- Father
- Mother
- Sister
- Brother
- Spouse
- Son
- Daughter
- Others Part 2 (Phone Usage)

18. In which language it's easy to use mobile?

- Bengali
- English

19. For what purpose, you use the handset most?

- Talking with Friends and Family
- Watching Video
- Professional Purpose
- Texting / Chatting
- Internet uses
- Listening to FM Radio
- Multimedia Use

20. How much time you spend with your mobile per day?

_____ hours

21. If you don't understand how to use an application, whom do you ask for helping you out?

- o I understand it myself
- o Friends
- o Relatives
- o Father
- o Mother
- o Brother
- o Sister
- o Spouse
- o Son
- o Daughter
- o Internet
- o Other _____

22. Do you use internet in mobile?

- o Yes
- o No

23. If yes, how do you avail internet in mobile?

- o Mobile Internet
- o School Wi-Fi
- o Home Wi-Fi
- o Wi-Fi at Workplace
- o Other …….

24. What is your monthly expense on phone?

Voice _____ BDT
Data …… BDT

25. For what purpose do you use mobile internet?

- o Internet Browsing
- o Facebook
- o Chatting
- o Online call
- o Read news online
- o Download songs & videos
- o Watch Movie/Drama
- o Others_____

26. Do you enjoy multimedia files (songs, audio & videos) in mobile?

- o Yes
- o No

27. If yes, from where do you get these files?

- o Direct mobile download
- o I download these from internet
- o Get from friends or relatives
- o Pay shop to collect files

- Others: …….

28. Have you ever faced any problem (malfunction, breaking) using the mobile?

- Yes
- No

29. If yes, how do you fix it?

- I try to fix it myself
- Ask family members or friends to help
- I take the phone to mobile shop
- I take the phone to customer care centre
- Others _____

30. Have you ever faced unwanted situation (snatching, theft) with the mobile?

- Yes
- No

31. If yes, how did you react to that situation?

- Did nothing
- Complaint to police
- Bought a new phone eventually
- Others _____

Appendix C: Questionnaire for Base of Pyramid Consumer Survey

Basic Information of Survey Enumerator and Location of Survey

জেলার নাম

- ◯ Rajshahi
- ◯ Chittagang
- ◯ Barishal
- ◯ Sylhet
- ◯ Dhaka
- ◯ Mymensingh
- ◯ Khulna
- ◯ Rangpur

উপজেলার নাম

_____

তথ্য সংগ্রহকারীর নাম

- ◯ Royal Saidi
- ◯ Nowshad
- ◯ Sumaiya Akter
- ◯ Towhidul Islam
- ◯ Lukman hossen
- ◯ Al Mamun
- ◯ Alamin
- ◯ Srijon
- ◯ Saidul Islam
- ◯ Raihan Islam
- ◯ Other

Specify other.

_____

তথ্য সংগ্রহকারীর নাম উল্লেখ করুন

_____

প্রিয় উত্তরদাতা, আপনাকে শুভেচ্ছা। এই জরিপ প্রশ্নপত্রটি "বাংলাদেশের বিভিন্ন শ্রেনী পেশার ভোক্তাদের মোবাইল ব্যবহারের ভিত্তিতে মোবাইল হ্যান্ডসেট মার্কেটিংয়ের (বিপননের জন্য) জন্য ডিজিটাল মিডিয়া (ফেসবুক, ইউটিউব, ওয়েবসাইট ইত্যাদি) ব্যবহারের সম্ভাবনা" বোঝার প্রচেষ্টা মাত্র। আপনার ব্যক্তিগত উপলব্ধি এবং মূল্যবান উত্তর এই অধ্যয়নের সাফল্যের জন্য অত্যন্ত গুরুত্বপূর্ণ বলে বিবেচিত হবে। অনুগ্রহপূর্বক সকল প্রশ্নের উত্তর দিন। কোন উত্তর সঠিক বা ভুল বলে বিবেচিত হবে না। আপনার পরিচয় গোপন রাখা হবে। আপনার সময় এবং আগ্রহের জন্য আপনাকে অনেক ধন্যবাদ।

• এই জরিপে অংশগ্রহণকারী সকলের কেবল পূর্ণ সম্মতিতেই তথ্য সংগ্রহ করা হবে
• প্রাপ্ত তথ্যের ব্যবহারিক প্রয়োগের ক্ষেত্রে জরিপে অংশগ্রহণকারী সকলের কেবল প্রবণতা সংক্রান্ত বৈশিষ্ট্যই প্রকাশ করা হবে
• জরিপে পাওয়া তথ্য কেবল শিক্ষামূলক গবেষণার কাজেই ব্যবহৃত হবে
• গবেষণায় কারো ব্যক্তিগত তথ্য কিংবা একার বৈশিষ্ট্যসম্বলিত কোন তথ্যের ব্যবহার করা হবেনা

ব্যক্তিগত তথ্য

C01. আপনার নামঃ

C02. আপনার ঠিকানাঃ

C03. আপনার জেন্ডার

- ◯ নারী
- ◯ পুরুষ
- ◯ তৃতীয় লিঙ্গ
- ◯ প্রকাশে ইচ্ছুক নই

C04. আপনার বসবাসের এলাকার ধরণ

- ◯ সিটি কর্পোরেশন
- ◯ শহর (জেলা সদর)
- ◯ মফস্বল (উপজেলা সদর, পৌরসভা)
- ◯ গ্রাম

C05. আপনার বয়স

- ◯ ১৫-১৯
- ◯ ২০-২৪
- ◯ ২৫-২৯
- ◯ ৩০-৩৪
- ◯ ৩৫-৩৯
- ◯ ৪০-৪৪
- ◯ ৪৫-৪৯
- ◯ ৫০-৫৪
- ◯ ৫৫-৫৯
- ◯ ৬০+

C06. আপনার শিক্ষাগত যোগ্যতা (সর্বশেষ অর্জিত সার্টিফিকেট অনুসারে)

- ◯ প্রাথমিক শিক্ষা সমাপ্ত
- ◯ জেএসসি/ অষ্টম শ্রেণী/ সমমান
- ◯ মাধ্যমিক পাশ (এসএসসি/ সমমান)
- ◯ উচ্চমাধ্যমিক (এইচএসসি/ সমমান)
- ◯ স্নাতক/ সমমান
- ◯ স্নাতকোত্তর/ সমমান
- ◯ বাংলা ও ইংরেজি পড়তে ও লিখতে সক্ষম
- ◯ শুধু বাংলা পড়তে ও লিখতে সক্ষম
- ◯ বাংলা ও ইংরেজি পড়তে ও লিখতে অক্ষম
- ◯ চিহ্ন/রঙ দেখে তথ্য ও নির্দেশনা মনে রাখতে সক্ষম
- ◯ Other

Specify other.

C07. বৈবাহিক অবস্থা

- ◯ অবিবাহিত
- ◯ বিবাহিত
- ◯ স্বামী মৃত
- ◯ স্ত্রী মৃত
- ◯ ডিভোর্সড
- ◯ প্রকাশে ইচ্ছুক নই

C08. পরিবার সংক্রান্ত তথ্য (বিগত অন্তত ছয়মাস যাবত পরিবারের যেসব সদস্যদের সাথে বসবাস করেছেন)

- ◯ একা
- ◯ বাবা-মা সহ একক পরিবার
- ◯ স্বামী/স্ত্রী সহ একক পরিবার
- ◯ স্বামী/স্ত্রী-সন্তানসহ একক পরিবার
- ◯ বাবা-মা, স্বামী/স্ত্রীসহ যৌথ পরিবার
- ◯ বাবা-মা, স্বামী/স্ত্রী, ভাইবোনসহ যৌথ পরিবার
- ◯ বাবা-মা, স্বামী/স্ত্রী, ভাইবোন, সন্তানসহ যৌথ পরিবার
- ◯ Other

Specify other.

C09. আপনার পরিবারের মোট মাসিক আয় (পরিবারের মোট আয় বলতে আপনিসহ পরিবারের উপার্জনকারী (বাবা, মা, স্বামী/স্ত্রী, সন্তান) একত্রে বাস করা সকলের সম্মিলিত মোট আয়- উপবৃত্তি, ভাতা, পেনশন ইত্যাদি সহ)

- ◯ ৬৫০০-৮০০০
- ◯ ৮০০০-৯৫০০
- ◯ ৯৫০০-১১০০০
- ◯ ১১০০০-১২৫০০
- ◯ ১২৫০০-১৩৫০০

C10. আপনার পরিবারের প্রধান উপার্জনকারী ব্যক্তি/পরিবার প্রধান কে

- ◯ আমি নিজে
- ◯ বাবা
- ◯ মা
- ◯ স্বামী
- ◯ স্ত্রী
- ◯ ভাই-বোন
- ◯ সন্তান
- ◯ Other

Specify other.

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C11. পেশা সংক্রান্ত তথ্য (কাজের ধরণের পাশে কি ধরণের কাজ, ব্যবসা হলে দোকান, ওয়ার্কশপ ইত্যাদি, চাকুরী হলে ড্রাইভার, দাড়োয়ান ইত্যাদি এভাবে কাজের ধরণ লিখে নিন)

- ◯ পরিবারের উপর নির্ভরশীল (নিজস্ব আয় নেই)
- ◯ ব্যবসাঃ
- ◯ সরকারী চাকুরীঃ
- ◯ বেসরকারী চাকুরীঃ
- ◯ কৃষিকাজঃ ফসল / গবাদিপশু / পোল্ট্রি/ মৎস চাষ
- ◯ খণ্ডকালীন কর্মসংস্থানঃ
- ◯ দক্ষতানির্ভর পেশা, যেমনঃ ড্রাইভার, কামার, নাপিত) ইত্যাদিঃ
- ◯ দিনমজুর
- ◯ মৌসুমী কর্মসংস্থানঃ
- ◯ গৃহিণী
- ◯ কুটিরশিল্পঃ
- ◯ টিউশন
- ◯ গৃহপরিচারিকা
- ◯ অবসরপ্রাপ্ত পেনশনভোগী
- ◯ অন্যান্যঃ

উল্লেখ করুন

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C12. আপনি নিজে আয় করে থাকলে আপনার ব্যক্তিগত মোট মাসিক আয় (উপবৃত্তি, ভাতা, উত্তরাধিকার পেনশন ইত্যাদি সহ)

- ◯ কোন আয় নেই
- ◯ ৬৫০০ টাকার কম
- ◯ ৬৫০০-৮০০০
- ◯ ৮০০০-৯৫০০
- ◯ ৯৫০০-১১০০০
- ◯ ১১০০০-১২৫০০
- ◯ ১২৫০০-১৩৫০০

C13. আপনি কি কোন উপবৃত্তি, ভাতা, উত্তরাধিকার পেনশন ইত্যাদি পান?

- ◯ হ্যাঁ
- ◯ না

C14. আপনি নিজে আয় না করলে, কিংবা স্বল্প আয় (ছাত্র হলে টিউশনি/উপবৃত্তি, বয়স্ক হলে পেনশন/বয়স্ক ভাতা) আপনার প্রয়োজনীয় খরচ যেমন শিক্ষা, চিকিৎসা, যাতায়াত, হাতখরচ ইত্যাদি কে দেয়?

- ☐ নিজের আয়েই যতটুকু সম্ভব চালিয়ে নেই
- ☐ বাবা
- ☐ মা
- ☐ স্বামী
- ☐ স্ত্রী
- ☐ ভাই-বোন
- ☐ সন্তান
- ☐ Other

Specify other.

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C15. আপনার পরিবারে নিম্নোক্ত কোন প্রকারের ডিজিটাল ডিভাইস রয়েছে এবং এর সংখ্যা কতগুলো? (না থাকলে '০' লিখুন)

বাটন ফোন

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স্মার্টফোন

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ডেস্কটপ কম্পিউটার

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ল্যাপটপ কম্পিউটার

_____

টেলিভিশন

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স্মার্ট টেলিভিশন

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অন্যান্য ডিজিটাল ডিভাইস'এর নাম (যদি থাকে)

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অন্যান্য ডিজিটাল ডিভাইস'এর সংখ্যা

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C16. আপনার পরিবারে নিম্নোক্ত কোন সংযোগগুলো রয়েছে (টিভি দেখার জন্যে ডিশ লাইন, মোবাইল ফোনে ইন্টারনেট ইত্যাদি)

- [ ] ডিশ সংযোগ
- [ ] ইন্টারনেট সংযোগ (ব্রডব্যান্ড-ওয়াইফাই)
- [ ] ইন্টারনেট সংযোগ (মোবাইল ডেটা)
- [ ] ডিটিএইচ (আকাশ)
- [ ] Other

Specify other.

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C17. আপনার স্বাস্থ্যগত তথ্য: (চেষ্টা করতে হবে উত্তরদাতা যেন কোন পর্যায়ের অস্বস্তি বোধ না করেন, সম্ভব হলে প্রশ্নকর্তা নিজ থেকে বুঝে নিয়ে উত্তর লিপিবদ্ধ করতে হবে)

- ◯ শারীরিকভাবে সুস্থ
- ◯ ক্ষীণদৃষ্টি সম্পন্ন
- ◯ শারীরিক প্রতিবন্ধকতা রয়েছে
- ◯ দৃশ্যমান কোন শারীরিক অসুস্থতা রয়েছে
- ◯ Other

Specify other.

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C18. আপনার মতে আপনার ব্যক্তিত্বের ধরণ?

- ◯ অনেক মানুষের সাথে মিশতে পছন্দ করি
- ◯ খুব নির্দিষ্ট কিছু ধরণের মানুষের সাথে মিশতেই স্বাচ্ছন্দ্যবোধ করি
- ◯ পরিচিত চেনাজানার বাইরে নতুন কারো সাথে মিশতে অস্বস্তি বোধ করেন
- ◯ Other

Specify other.

C19. তথ্যদাতার ফোন নম্বরঃ

[১১ সংখ্যার মোবাইল নাম্বার]

ডিজিটাল ডিভাইস ব্যবহার সংক্রান্ত তথ্য

C20. আপনার নিজের দৈনন্দিন প্রয়োজনে কোন কোন ডিজিটাল ডিভাইস ব্যবহার করে থাকেন? (উত্তর একাধিক হতে পারে) (অন্যান্য বলতে ইন্টারনেট সংযোগ প্রয়োজন হয় এমন কোন ডিজিটাল ডিভাইস)

- [ ] বাটন মোবাইল
- [ ] স্মার্টফোন/টাচ মোবাইল
- [ ] ল্যাপটপ কম্পিউটার
- [ ] ডেস্কটপ কম্পিউটার
- [ ] ইউটিউব চলে এমন স্মার্টটিভি
- [ ] ডিশসংযোগসহ টিভি
- [ ] ট্যাব
- [ ] কোনো ডিজিটাল ডিভাইস ব্যবহার করিনা
- [ ] Other

Specify other.

C20A. আপনার দৈনন্দিন ব্যবহারের জন্যে ল্যাপটপ বা কম্পিউটার আছে কি ?

- ◯ হ্যাঁ
- ◯ না

C21. দৈনন্দিন ব্যবহারের জন্য আপনার টি ব্যবহারের সযোগ আছে?

- ◯ ল্যাপটপ
- ◯ ডেস্কটপ
- ◯ দুটোই

ল্যাপটপ বা ডেস্কটপ কম্পিউটার

C22. আপনি ল্যাপটপ/ডেস্কটপ কম্পিউটার সাধারণত কি কাজে ব্যবহার করেন?

- [ ] পেশাগত কাজ
- [ ] শিক্ষাসহায়ক কাজ
- [ ] বিনোদনমূলক কাজ
- [ ] সামাজিক মাধ্যমে যোগাযোগ
- [ ] ডিজিটাল প্ল্যাটফর্ম হতে সেবা নেয়া
- [ ] Other

Specify other.

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C23. আপনার ল্যাপটপ থাকলে মালিকানার ধরণ? (পরিবারের যৌথ মালিকানা বলতে সকলে ব্যবহার করতে পারে, পরিবারের কারো একক অধিকার নেই এমন বোঝাচ্ছে)

- ( ) ব্যক্তিমালিকানা
- ( ) পরিবারের যৌথ মালিকানা
- ( ) ভাই-বোন/আত্মীয় স্বজনের ল্যাপটপ/ডেস্কটপ কম্পিউটার যা আপনি ব্যবহার করতে পারেন
- ( ) কর্মক্ষেত্রে কাজের সূত্রে ব্যবহারের সুযোগ পাই
- ( ) Other

Specify other.

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C24. ল্যাপটপটির আনুমানিক কেমন দামের হতে পারে?

- ( ) ২৫০০০ টাকার এর কম
- ( ) ২৫০০১-৩০০০০
- ( ) ৩০০০১-৩৫০০০
- ( ) ৩৫০০১-৪০০০০
- ( ) ৪০০০১-৪৫০০০
- ( ) ৪৫০০০-৫০০০০
- ( ) ৫০০০১-৫৫০০০
- ( ) ৫৫০০০+

C25. আপনার ডেস্কটপ কম্পিউটার থাকলে মালিকানার ধরণ? (পরিবারের যৌথ মালিকানা বলতে সকলে ব্যবহার করতে পারে, পরিবারের কারো একক অধিকার নেই এমন বোঝাচ্ছে)

- ( ) ব্যক্তিমালিকানা
- ( ) পরিবারের যৌথ মালিকানা
- ( ) ভাই-বোন/আত্মীয় স্বজনের ডেস্কটপ কম্পিউটার যা আপনি ব্যবহার করতে পারেন
- ( ) কর্মক্ষেত্রে কাজের সূত্রে ব্যবহারের সুযোগ পাই
- ( ) Other

Specify other.

C26. আপনার ডেস্কটপটির আনুমানিক কেমন দামের হতে পারে?

- ২৫০০০ টাকার এর কম
- ২৫০০১-৩০০০০
- ৩০০০১-৩৫০০০
- ৩৫০০১-৪০০০০
- ৪০০০১-৪৫০০০
- ৪৫০০০-৫০০০০
- ৫০০০১-৫৫০০০
- ৫৫০০০+

C27. ল্যাপটপ/ডেস্কটপ কম্পিউটার কেনার পেছনে কোন কারণ/ফিচারগুলো আপনার জন্যে গুরুত্বপূর্ণ?

- [ ] দাম
- [ ] মডেল
- [ ] ব্র্যান্ড
- [ ] প্রসেসর
- [ ] মেমোরি স্পেস
- [ ] ব্যাটারি
- [ ] র‍্যাম
- [ ] Other

Specify other.

C28. আপনি কি স্মার্টফোন ব্যবহার করেন?

- ◯ হ্যাঁ
- ◯ না

C29. স্মার্টফোনটির মালিকানার ধরণ?

- ব্যক্তিগত স্মার্টফোন
- পরিবারের মালিকানায় রয়েছে, আমিও ব্যবহার করি
- অফিস/কাজের সূত্রে ব্যবহার করার সুযোগ পাই
- Other

Specify other.

C30. স্মার্টফোনটি /স্মার্টফোনগুলো (একাধিক ফোন থাকার ক্ষেত্রে) কোন কোন ব্র্যান্ডের?

- [ ] স্যামসাং
- [ ] শাওমি
- [ ] অপো
- [ ] ভিভো
- [ ] রিয়েলমি
- [ ] টেকনো
- [ ] আইটেল
- [ ] ইনফিনিক্স
- [ ] ওয়ালটন
- [ ] সিম্ফনি
- [ ] নোকিয়া
- [ ] আইফোন
- [ ] ওয়ানপ্লাস
- [ ] হুয়াওয়ে
- [ ] Other

Specify other.

C31. আপনার মূল বা প্রধান ব্যবহারের স্মার্টফোনটির দাম কতো?

- ( ) ৫০০০ টাকার নিচে
- ( ) ৫০০০-৮০০০
- ( ) ৮০০০-১২০০০
- ( ) ১২০০০-১৮০০০
- ( ) ১৮০০০-২৫০০০
- ( ) ২৫০০০+

C32. আপনি কি বাটনযুক্ত মোবাইল ফোন ব্যবহার করেন?

- ( ) হ্যাঁ
- ( ) না

C33. যদি ব্যবহার করেন, তবে আপনি ফোনটি সাধারণত কি কি কাজে ব্যবহার করেন?

- [ ] ফোনে কথা বলা
- [ ] এসএমএস আদান প্রদান
- [ ] এমপিথ্রি গান শোনা
- [ ] এফএম রেডিও শোনা
- [ ] গেম খেলা
- [ ] Other

Specify other.

C34. আপনার কি সামনে কোন স্মার্টফোন কেনার ইচ্ছে বা পরিকল্পনা রয়েছে?

- ◯ হ্যাঁ
- ◯ না
- ◯ এখনো নিশ্চিত নই

স্মার্টফোন কেনার ইচ্ছে

C34A. আপনি স্মার্টফোন কেনার ইচ্ছে থাকলে সেটি কেন?

- [ ] কোন নির্দিষ্ট প্রয়োজনে (চাকুরী, ব্যবসা, পড়াশোনা ইত্যাদির জন্যে সরাসরি প্রয়োজনে)
- [ ] সামাজিক যোগাযোগ মাধ্যম (ফেসবুক, টিকটক, ইউটিউব ইত্যাদি) ব্যবহারের লক্ষ্যে
- [ ] নিজের ব্যক্তিত্ব/সামাজিক অবস্থানের সাথে মানানশই জীবনযাত্রা নিশ্চিত করতে
- [ ] বিনোদনের প্রয়োজনে
- [ ] চাকুরী/ব্যবসা/ পড়াশোনার উদ্দেশ্যে পরিবার থেকে দূরে অবস্থান করায়
- [ ] আর্থিক সঙ্গতি হয়েছে তাই
- [ ] স্মার্টফোনের ব্যবহারে উপার্জন করার সুযোগ হওয়ায় (রাইড শেয়ারিং এ মোটরসাইকেল চালানো, ডেলিভারি কর্মী হিসেবে কাজের সুযোগ ইত্যাদি)
- [ ] Other

Specify other.

C35. আপনার সাধ্যের মধ্যে কোনো স্মার্টফোন কেনার ইচ্ছে থাকলে কোন ব্র্যান্ডের স্মার্টফোন কিনতে চান?

- ◯ স্যামসাং
- ◯ শাওমি
- ◯ অপো
- ◯ ভিভো
- ◯ রিয়েলমি
- ◯ টেকনো
- ◯ আইটেল
- ◯ ইনফিনিক্স
- ◯ ওয়ালটন
- ◯ সিম্ফনি
- ◯ নোকিয়া
- ◯ আইফোন
- ◯ ওয়ানপ্লাস
- ◯ হুয়াওয়ে
- ◯ Other

Specify other.

C36. আপনি যেই ব্র্যান্ডের ফোন কিনতে চাচ্ছেন, সেটির বিশেষ কি রয়েছে যে জন্যে আপনি কিনতে চান?

- ☐ ডিজাইন
- ☐ টেকসই/মজবুত
- ☐ ভালো সার্ভিস দেয়
- ☐ বড় স্ক্রিণ
- ☐ ভালো স্পিকার
- ☐ বড় ব্যাটারি (স্ট্যান্ডবাই সময় বেশি)
- ☐ স্বল্প বাজেটে সর্বোচ্চ ফিচার
- ☐ র‍্যাম (RAM)
- ☐ মেমোরি (ROM)
- ☐ ব্র্যান্ড এর সুনাম
- ☐ ক্যামেরা (Camera)
- ☐ কিস্তিতে কেনার সুবিধা
- ☐ সামাজিক মর্যাদা বাড়াবে
- ☐ Other

Specify other.

C37. যদি স্মার্টফোন কেনার পরিকল্পনা থেকে থাকে, তবে আপনি কেমন দামে কিনতে চান?

- ◯ ৫০০০ টাকার নিচে
- ◯ ৫০০০-৮০০০
- ◯ ৮০০০-১২০০০
- ◯ ১২০০০-১৮০০০
- ◯ ১৮০০০-২৫০০০
- ◯ ২৫০০০+

C38. আপনি ফোন কেনার জন্যে অর্থসংস্থান করেন কি উপায়ে?

- ☐ কোন সেভিংস/জমানো টাকা থেকে
- ☐ মাসের আয় থেকে কিছু অংশ জমিয়ে
- ☐ ধার করে কিনে পরবর্তীতে ধার শোধ করি
- ☐ পুরনো ফোন বিক্রি করে এর সাথে মাসিক আয় যোগ করে
- ☐ কিস্তি/ ইএমআই দিয়ে
- ☐ Other

Specify other.

মতামত

প্রতিটি বক্তব্যের আলোকে আপনার মতামত জানান	পুরোপুরি ভিন্নমত	ভিন্নমত	মোটামুটি ভিন্নমত	মোটামুটি একমত	একমত	পুরোপুরি একমত
C39. আমার স্মার্টফোন ব্যবহার করবার মতো আর্থিক সঙ্গতি রয়েছে (একটু ঘুরিয়ে জানতে চাইতে পারেন যে উনার হাতে স্মার্টফোন কেনার মতো টাকা থাকলে উনি এখনি কিনতেন কিনা?)	◯	◯	◯	◯	◯	◯
C40. আমার স্মার্টফোন ব্যবহার করবার কোন প্রয়োজন পড়েনা	◯	◯	◯	◯	◯	◯
C41. স্মার্টফোন ব্যবহার করা আমার জন্যে সহজ (উত্তরদাতা বুঝতে না পারলে জানতে চান যে উনি স্মার্টফোন ব্যবহার কঠিন এই আশঙ্কায় ব্যবহার থেকে বিরত আছেন কিনা)	◯	◯	◯	◯	◯	◯
C42. স্মার্টফোনের সকল সুবিধা নিতে ইন্টারনেট ব্যবহারের সঙ্গতি আমার রয়েছে (আলাপে এভাবে তুলে ধরতে পারেন যে ইন্টারনেট ব্যবহারে খরচের সঙ্গতি নেই বিধায় উনি স্মার্টফোন ব্যবহার থেকে বিরত আছেন কিনা)	◯	◯	◯	◯	◯	◯
C43. আমার না থাকলেও আমার পরিবারে একটি স্মার্টফোন ব্যবহারের আর্থিক সঙ্গতি আমাদের রয়েছে (উনি ব্যক্তিগত ভাবে কিনতে না পারুক, উনার পরিবারের সকলের সুবিধার জন্যে একটি স্মার্টফোন কেনার আর্থিক সঙ্গতি রয়েছে কিনা জানতে চাইতে পারেন)	◯	◯	◯	◯	◯	◯
C44. আমি চাইলেই আমার পরিচিতরা তাদের স্মার্টফোনে আমার প্রয়োজনীয় কাজ করে দেয় (রেজাল্ট দেখা, ফর্ম ফিলআপ, কারো কাছে টাকা পাঠানো, বিদেশে ফোন করা ইত্যাদি)	◯	◯	◯	◯	◯	◯

C45. আমার এলাকায় ইন্টারনেট কানেকশন দূর্বল তাই আমি স্মার্টফোন ব্যবহার করিনা

স্মার্টফোন

স্মার্টফোন ব্যবহারকারীদের তথ্য

C46. আপনি স্মার্টফোন কি কি কাজে ব্যবহার করেন?

- [ ] যোগাযোগ (ফেসবুক, ইমো, ম্যাসেঞ্জার)
- [ ] গেমস খেলা
- [ ] বিনোদন (গান, নাটক, সিনেমা)
- [ ] অনলাইন ক্লাস
- [ ] তথ্যসংগ্রহ (খেলা, সংবাদ ইত্যাদি)
- [ ] পেশাগত কাজ (ইমেইল চেক করা, ফাইল প্রেরণ)
- [ ] সামাজিক যোগাযোগ মাধ্যম ব্যবহার
- [ ] ফোন কল করা ও এসএমএস করা
- [ ] রেডিও শোনা
- [ ] Other

Specify other.

C47. আপনার স্মার্টফোনটি কি পরিবারের অন্য সদস্যরাও ব্যবহার করে?

- ◯ হ্যাঁ
- ◯ না

C48. আপনি কতদিন যাবত স্মার্টফোন ব্যবহার করছেন

- ◯ ৬ মাসের কম সময়
- ◯ ৬ মাস থেকে ১ বছর
- ◯ ১-২ বছর
- ◯ ২ বছরের বেশি

C49. আপনি বর্তমানে যেই স্মার্টফোনটি ব্যবহার করছেন, সেটি কেনার ক্ষেত্রে কোন বিষয়গুলো খেয়াল করেছেন?

- [ ] ডিজাইন
- [ ] টেকসই/মজবুত
- [ ] ভালো সার্ভিস দেয়
- [ ] বড় স্ক্রিণ
- [ ] ভালো স্পিকার
- [ ] বড় ব্যাটারি (স্ট্যান্ডবাই সময় বেশি)
- [ ] স্বল্প বাজেটে সর্বোচ্চ ফিচার
- [ ] র‍্যাম (RAM)
- [ ] মেমোরি (ROM)
- [ ] ব্র্যান্ড এর সুনাম
- [ ] ক্যামেরা (Camera)
- [ ] কিস্তিতে কেনার সুবিধা
- [ ] সামাজিক মর্যাদা বাড়াবে
- [ ] Other

Specify other.

C51. আপনি এই বর্তমান ফোনটি ছাড়াও আগে অন্য কোনো ফোন কিনেছেন?

- ◯ হ্যাঁ
- ◯ না

C49. আপনি যদি আগে কোন ফোন কিনে থাকেন, সেটির দাম কত?

- ◯ এই মুহূর্তে বলতে পারছিনা
- ◯ ৩০০০ টাকার কম
- ◯ ৩০০০-৫০০০ টাকা
- ◯ ৫০০০-৭০০০ টাকা
- ◯ ৭০০০-১০০০০ টাকা
- ◯ ১০০০০-২০০০০টাকা
- ◯ ২০০০০ টাকার বেশি

C52. কিনে থাকলে সেটি কোন ব্র্যান্ডের?

- [ ] স্যামসাং
- [ ] শাওমি
- [ ] অপো
- [ ] ভিভো
- [ ] রিয়েলমি
- [ ] টেকনো
- [ ] আইটেল
- [ ] ইনফিনিক্স
- [ ] ওয়ালটন
- [ ] সিম্ফনি
- [ ] নোকিয়া
- [ ] আইফোন
- [ ] ওয়ানপ্লাস
- [ ] হুয়াওয়ে
- [ ] Other

Specify other.

কেবল স্মার্টফোন ও কম্পিউটার ব্যবহারকারী

ইন্টারনেট ব্যবহার সংক্রান্ত তথ্য (কেবল স্মার্টফোন ও কম্পিউটার ব্যবহারকারীদের জন্যে)

C53. আপনি কি ফেসবুক ব্যবহার ছাড়া ভিডিও দেখা বা অন্য কোন কাজে স্মার্টফোন বা কম্পিউটার থেকে ইন্টারনেট ব্যবহার করেন?

- ◯ হ্যাঁ
- ◯ না

C54. আপনি সাধারণত কি কি উপায়ে ইন্টারনেট ব্যবহার করেন? (একাধিক উত্তর হতে পারে)

- [ ] মোবাইলে মাসিক ইন্টারনেট প্যাকেজ
- [ ] মোবাইলে সাপ্তাহিক ইন্টারনেট প্যাকেজ
- [ ] মোবাইলে দৈনিক প্যাকেজ
- [ ] মোবাইলে ফেসবুক বান্ডেল অফার
- [ ] মোবাইলে ইউটিউব বান্ডেল অফার
- [ ] মোবাইলে ইমো/ভাইবার/হোয়াটসঅ্যাপ বান্ডেল অফার
- [ ] মোবাইলে ইউটিউব বান্ডেল অফার
- [ ] ব্রডব্যান্ড ইন্টারনেট
- [ ] ব্রডব্যান্ড ইন্টারনেট থেকে ওয়াইফাই কানেকশন
- [ ] সিম নির্ভর মডেম এর জন্যে প্যাকেজ
- [ ] অফিস/বিশ্ববিদ্যালয়/পাবলিক প্লেসে ওয়াইফাই
- [ ] Other

Specify other.

» C55. ইন্টারনেট ব্যবহারে আপনার মাসিক খরচ কেমন?

C55_1. ব্রডব্যান্ড (ওয়াইফাই): টাকা

_____

C55_2. মোবাইল ইন্টারনেট প্যাকেজ: টাকা

_____

C55*3. মোবাইল ইন্টারনেট বান্ডেল প্যাকঃ* টাকা

_____

ফোন রিপেয়ার সংক্রান্ত তথ্য (ফোন ব্যবহারকারী সকলের জন্যে)

C56. সাধারণত কোন কোন সমস্যার সম্মুখীন হয়ে থাকেন?

- ফোন পড়ে গিয়ে ডিসপ্লে ভেঙ্গে যাওয়া
- স্পিকার নষ্ট হয়ে যাওয়া
- অ্যাপ ডাউনলোড না হওয়া
- ফোন হ্যাং হয়ে যাওয়া
- ব্যাটারি নষ্ট হয়ে যাওয়া
- চার্জার/স্পিকারের পোর্ট নষ্ট হয়ে যাওয়া
- পানি ঢুকে যাওয়া
- সিম কাজ না করা
- Other

Specify other.

C57. আপনি এধরণের সমস্যায় কি কি করে থাকেন?

- নিজে নিজেই ঠিক করার চেষ্টা করা
- সফটওয়্যার সমস্যায় ফোন রিসেট করা
- পরিচিত এক্সপার্ট কারো সহায়তা নেয়া
- ব্র্যান্ডের সার্ভিস সেন্টারে নিয়ে যাওয়া
- নিকটস্থ মেকানিকের দোকানে নিয়ে যাওয়া
- বড় ধরণের ক্ষতির ক্ষেত্রে নতুন ফোন কেনা
- Other

Specify other.

C58. আপনি যেই ব্র্যান্ডের ফোন ব্যবহার করছেন, আপনার নিকটস্থ এলাকায় সেই ব্র্যান্ডের সার্ভিসিং সেন্টার থাকা না থাকার উপর কি আপনার ফোন কেনার সিদ্ধান্তে প্রভাব ফেলে?

- হ্যাঁ
- না

C59. ডিজিটাল মাধ্যম হিসেবে এর কোনটি আপনার পরিচিত? (একাধিক উত্তর হতে পারে)

- [ ] ফেসবুক
- [ ] ইন্সটাগ্রাম
- [ ] ম্যাসেঞ্জার
- [ ] ইউটিউব
- [ ] ইমো
- [ ] টিকটক/লাইকী
- [ ] গুগল
- [ ] ইমেইল (জিমেইল)
- [ ] ইউসি ব্রাউজার
- [ ] শেয়ার-ইট অ্যাপ
- [ ] ভিডিও দেখার মোবাইল অ্যাপ (বায়োস্কোপ, টফি)
- [ ] মোবাইল ফাইন্যান্সিয়াল সার্ভিস বিকাশ/নগদ/রকেট ইত্যাদি
- [ ] সুরক্ষা (করোনা ভ্যাকসিন নিবন্ধন)
- [ ] অনলাইন নিউজ পোর্টাল
- [ ] ফুড ডেলিভারি সার্ভিস (ফুডপ্যান্ডা, হাংরিনাকি)
- [ ] রাইড শেয়ারিং (পাঠাও, উবার)
- [ ] ইকমার্স (দারাজ, আজকের ডিল)
- [ ] Other

Specify other.

C60. আপনি কি ইন্টারনেট ব্যবহার করে কোনো ডিজিটাল মাধ্যম ব্যবহার করেন?

- ◯ হ্যাঁ
- ◯ না

ডিজিটাল মাধ্যম ব্যবহারকারী

C61. 60 নং প্রশ্নের উত্তর হ্যাঁ হলে ডিজিটাল মাধ্যম (সোশ্যাল মিডিয়া, ইউটিউব, গুগল, স্মার্ট টিভি, ইউসি ব্রাউজার) ব্যবহারে আপনার কোন ধরণের প্রয়োজন পূরণ হয়? (একাধিক উত্তর হতে পারে)

- [ ] বিনোদন
- [ ] ই-কমার্সে কেনাকাটা
- [ ] সোশ্যাল মিডিয়ায় পরিচিতদের সাথে যোগাযোগ
- [ ] ইমেইল করা
- [ ] ভিডিও কলিং এর মাধ্যমে যোগাযোগ
- [ ] ফেসবুক স্ট্যাটাস, টিকটকে ভিডিও আপলোড ইত্যাদি
- [ ] অর্থ লেনদেন
- [ ] ওয়ার্কফ্রম হোম বা বাসায় বসেই অফিস করা
- [ ] দূরশিক্ষণ কার্যক্রমে অংশগ্রহণ
- [ ] ব্যবসায়িক কার্যক্রম
- [ ] Other

Specify other.

C62. আপনি ডিজিটাল মাধ্যম ব্যবহার করে নিয়মিত কোন ধরণের কাজ করে থাকেন?

- [ ] পরিচিতদের সাথে ভিডিও কল করা
- [ ] মোবাইলে লেনদেন
- [ ] সরকারী সেবা (ভ্যাকসিন রেজিস্ট্রেশন)
- [ ] পছন্দের বিষয়ে নিয়মিত আপডেট পাওয়া
- [ ] ইমেইল
- [ ] সার্চের মাধ্যমে তথ্য খোজা
- [ ] ভিডিও দেখা (নাটক, সিনেমা, গান)
- [ ] টিকটক/লাইকিতে শর্ট ভিডিও দেখা
- [ ] অনলাইনে ক্লাস কিংবা অফিসের কাজ
- [ ] Other

Specify other.

» ব্যবহারের মাত্রা

C63. নীচের কোন অ্যাপগুলো আপনি ব্যবহার করে থাকেন (ব্যবহারের মাত্রার ভিত্তিতে)	কখনোই ব্যবহার করিনি	দুয়েক বার ব্যবহার করেছি	খুবই অনিয়মিত ব্যবহার	মাসে দু-তিন বার ব্যবহার করি	সপ্তাহে দু-তিন দিন ব্যবহার করি	প্রতিদিন ব্যবহার করি	দিনে অন্তত ১ ঘন্টা ব্যবহার করি
ফেসবুক	◯	◯	◯	◯	◯	◯	◯

ম্যাসেঞ্জার	◯	◯	◯	◯	◯	◯	◯
হোয়াটসঅ্যাপ	◯	◯	◯	◯	◯	◯	◯
ইউটিউব	◯	◯	◯	◯	◯	◯	◯
টিকটক	◯	◯	◯	◯	◯	◯	◯
লাইকি	◯	◯	◯	◯	◯	◯	◯
ইমো	◯	◯	◯	◯	◯	◯	◯
আলাপ	◯	◯	◯	◯	◯	◯	◯
ভাইবার	◯	◯	◯	◯	◯	◯	◯
শেয়ারইট	◯	◯	◯	◯	◯	◯	◯
ইন্সটাগ্রাম	◯	◯	◯	◯	◯	◯	◯
বিকাশ/নগদ/রকেট ইত্যাদি	◯	◯	◯	◯	◯	◯	◯
দারাজ	◯	◯	◯	◯	◯	◯	◯
ফুডপান্ডা	◯	◯	◯	◯	◯	◯	◯
জিমেইল	◯	◯	◯	◯	◯	◯	◯
ডিজিটাল হেলথ	◯	◯	◯	◯	◯	◯	◯

C64. কোন ডিজিটাল মাধ্যমগুলোতে আপনার আইডি বা একাউন্ট রয়েছে? (একাধিক উত্তর হতে পারে)

- ☐ সোশ্যাল মিডিয়া (ফেসবুক, ইন্সটাগ্রাম ইত্যাদি
- ☐ ম্যাসেজিং অ্যাপ (ইমো, হোয়াটসঅ্যাপ, ভাইবার)
- ☐ ভিডিও তৈরির প্ল্যাটফর্ম (লাইকি, টিকটক)
- ☐ ইমেইল (জিমেইল)
- ☐ মোবাইল ফাইন্যান্সিয়াল সার্ভিস (বিকাশ, নগদ, রকেট)
- ☐ রাইড শেয়ারিং
- ☐ ই-কমার্স (দারাজ, আজকের ডিল ইত্যাদি)
- ☐ সার্ভিস প্ল্যাটফর্ম (ফুডপ্যান্ডা, হোম ডেলিভারি কুরিয়ার)
- ☐ কোনোটিই নেই
- ☐ Other

Specify other.

_____

C64A. আপনি কি কন্টেন্ট (নাটক, সিনেমা, গান, সংবাদ, খেলা ইত্যাদি) পড়া, দেখা কিংবা শোনার জন্যে ডিজিটাল প্ল্যাটফর্ম ব্যবহার করেন?

- ◯ হ্যাঁ
- ◯ না

» ডিজিটাল প্ল্যাটফর্ম ব্যবহার

C64B. আপনি নাটক/সিনেমা ইত্যাদি দেখার জন্যে কোন কোন ডিজিটাল মাধ্যম ব্যবহার করেন?

- [ ] কম্পিউটার ব্রাউজারে ইউটিউব
- [ ] কম্পিউটার ব্রাউজারে ভিডিও স্ট্রিমিং সাইট (চরকি, বায়োস্কোপ)
- [ ] মোবাইলে ইউটিউব অ্যাপ
- [ ] ফেসবুক
- [ ] মোবাইলে স্ট্রিমিং অ্যাপ (চরকি, বায়োস্কোপ)
- [ ] টরেন্ট এবং বিভিন্ন ওয়েবসাইট থেকে ডাউনলোড করে
- [ ] নাটক/সিনেমা দেখিনা
- [ ] Other

Specify other.

C64C. আপনি খেলা দেখার জন্যে কোন কোন ডিজিটাল মাধ্যম ব্যবহার করেন?

- [ ] কম্পিউটার ব্রাউজারে ইউটিউবে লাইভ
- [ ] কম্পিউটার ব্রাউজারে টিভি চ্যানেলের ভিডিও স্ট্রিমিং সাইট (জিটিভি লাইভ, র‍্যাবিটহোল ইত্যাদি)
- [ ] মোবাইলে ইউটিউবে লাইভ
- [ ] ফেসবুক
- [ ] মোবাইলে লাইভস্কোর আপডেট (ক্রিকইনফো, ক্রিকবাজ ইত্যাদি)
- [ ] বিভিন্ন নিউজ সাইটে লাইভ আপডেট
- [ ] খেলা দেখিনা
- [ ] Other

Specify other.

C64D. আপনি সংবাদ সংগ্রহের জন্যে কোন কোন ডিজিটাল মাধ্যম ব্যবহার করেন?

- [ ] অনলাইন নিউজ পোর্টাল
- [ ] ইউটিউবে নিউজ পোর্টালের চ্যানেল
- [ ] ফেসবুক
- [ ] হোয়াটসঅ্যাপ/ইমো গ্রুপে শেয়ার করা নিউজ লিংক
- [ ] ইউটিউবে সংবাদ বিশ্লেষণমূলক ভিডিও
- [ ] বিভিন্ন টিভি চ্যানেল স্ট্রিমিং প্ল্যাটফর্ম (র‍্যাবিটহোল, বঙ্গবিডি ইত্যাদি)
- [ ] সংবাদ সংগ্রহের প্রয়োজন হয়না/ (টিভি-সংবাদপত্র ছাড়া সংবাদ দেখিনা/পড়িনা)
- [ ] Other

Specify other.

C64E. আপনি কোন পণ্য বা সেবা কিনবার আগে রিভিউ কিংবা ভ্লগ জাতীয় ভিডিও দেখেন?

- ◯ হ্যাঁ
- ◯ না

C64F. ডিজিটাল মাধ্যমে আপনি সাধারণত কোন কোন বিষয়ের কন্টেন্ট দেখে থাকেন

- ☐ সংবাদ
- ☐ নাটক
- ☐ সিনেমা
- ☐ খেলাধুলা
- ☐ লেটেস্ট ডিজিটাল ডিভাইস/গিয়ার্স
- ☐ ইনফ্লুয়েন্সারদের ভিডিও/ভ্লগ
- ☐ গান ও মিউজিক্যাল শো
- ☐ স্বাস্থ্য বিষয়ক
- ☐ রান্না ও খাবার বিষয়ক
- ☐ গান
- ☐ ভ্রমণ বিষয়ক তথ্যচিত্র
- ☐ খাবার বিষয় তথ্যচিত্র
- ☐ ফ্যাশন
- ☐ ধর্মীয়
- ☐ ইতিহাস, ঐতিহ্য ও দর্শনীয় স্থানসম্পর্কে তথ্যচিত্র
- ☐ শিক্ষামূলক ভিডিও
- ☐ আইন ও অধিকার সংক্রান্ত
- ☐ Other

Specify other.

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C64G. আপনি কি কন্টেন্ট নির্ভর (গান, নাটক, সিনেমা, শিক্ষামূলক ভিডিও প্রভৃতি পাওয়া যায়) কোনো ডিজিটাল প্ল্যাটফর্ম অর্থের বিনিময়ে ব্যবহার করেন?

- ◯ হ্যাঁ
- ◯ না

C64H. কেন অর্থের বিনিময়ে ডিজিটাল প্ল্যাটফর্ম ব্যবহার করেন?

- ☐ বিজ্ঞাপনমুক্ত ফিড
- ☐ পছন্দের কন্টেন্ট এক জায়গায় পাওয়া যায়
- ☐ ভালো কন্টেন্ট পাওয়া যায়
- ☐ চাহিদা অনুযায়ী কন্টেন্ট পাওয়া যায়
- ☐ উন্নত গ্রাহক সেবা
- ☐ Other

Specify other.

C64I. আপনি কোন ধরণের কন্টেন্ট নির্ভর ডিজিটাল প্ল্যাটফর্মের জন্যে অর্থ ব্যয় করে থাকেন? (একাধিক উত্তর হতে পারে)

- [ ] নাটক/সিনেমা স্ট্রিমিং প্ল্যাটফর্ম (বায়োস্কোপ, চরকি ইত্যাদি)
- [ ] ধর্মীয় শিক্ষা
- [ ] খেলাধুলা সংক্রান্ত স্ট্রিমিং প্ল্যাটফর্ম
- [ ] শিক্ষামূলক প্ল্যাটফর্ম (শিখো, টেন মিনিটস স্কুল)
- [ ] ই-পেপার (প্রথমআলো/ডেইলিস্টার)
- [ ] Other

Specify other.

C64J. আপনি কি পড়াশোনা বা কোনো কিছু শেখার জন্যে ডিজিটাল প্ল্যাটফর্ম (টেন মিনিটস স্কুল, শিখো, লাইভসিকিইউ, ফেসবুক শিক্ষা সহায়িকা গ্রুপ/পেজ ইত্যাদি)

- ( ) হ্যাঁ
- ( ) না

C64K. আপনি নীচের কোন কোন ধরণের প্ল্যাটফর্ম ব্যবহার করেন?

- [ ] ফেসবুকে পড়াশোনা ও প্রস্তুতি সম্পর্কিত গ্রুপ/পেজ
- [ ] লার্নিং ওয়েবসাইট (টেনমিনিটস স্কুল, শিখো ইত্যাদি)
- [ ] লার্নিং অ্যাপ (টেনমিনিটস স্কুল, শিখো, ঘুরি লার্নিং অ্যাপ
- [ ] প্রস্তুতি সহায়ক ওয়েবসাইট
- [ ] পরীক্ষার প্রস্তুতি সহায়ক ওয়েবসাইট (লাইভএমসিকিউ)
- [ ] পরিক্ষার প্রস্তুতি সহায়ক মডেল টেষ্ট নির্ভর অ্যাপ
- [ ] বিভিন্ন শিক্ষকের ইউটিউব চ্যানেল/ফেসবুক গ্রুপ/পেজ
- [ ] Other

Specify other.

C65. করোনা মহামারীতে আপনার স্মার্টফোন ব্যবহার করে বিশেষ কোন সুবিধা পেয়েছেন?

- ( ) হ্যাঁ
- ( ) না

C66. উত্তর হ্যাঁ হয়ে থাকলে কি ধরণের সুবিধা?

- [ ] সহজে তথ্য প্রাপ্তি
- [ ] পরিবার, বন্ধু, আত্মীয়-স্বজনদের সাথে সার্বক্ষণিক যোগাযোগ
- [ ] লকডাউনের কারণে ঘরে বসেই অফিসের কাজ কিংবা ক্লাস করা
- [ ] অনলাইনে কেনাকাটা ও হোম ডেলিভারি পাওয়ার সুবিধা
- [ ] স্মার্টফোনেই স্বাস্থ্যসেবা গ্রহণ
- [ ] ঘরে বসেই টাকা পাঠানো বা গ্রহণের সুবিধা
- [ ] Other

Specify other.

C67. করোনা মহামারীতে লকডাউন পরবর্তী সময়ে ডিজিটাল প্ল্যাটফর্ম ব্যবহারে কোন পরিবর্তন এসেছে

- ◯ হ্যাঁ
- ◯ না

C68. কি ধরণের পরিবর্তন? (পরিবারের সকল সদস্যদের ব্যবহারের পরিবর্তনের ভিত্তিতে উত্তর করতে পারেন)

- [ ] অনলাইনে ক্লাস, পরীক্ষা এসবে অংশগ্রহণের অভ্যাস
- [ ] অফিসের কিছু কাজ অনলাইনে করবার মাধ্যমে সময় বাচানো
- [ ] অনলাইনে কেনাকাটা করা
- [ ] মোবাইলে বিল প্রদান, অর্থ লেনদেনের অভ্যাস গড়ে ওঠা
- [ ] নতুন দক্ষতা আয়ত্ব করতে অনলাইন প্ল্যাটফর্মের ব্যবহার
- [ ] বিনোদনের মাধ্যম হিসেবে ডিজিটাল প্ল্যাটফর্ম নির্ভর হয়ে ওঠা
- [ ] ভিডিও কলিং এর অভ্যাস
- [ ] Other

Specify other.

প্রতিটি বক্তব্যের আলোকে আপনার মতামত জানান, একেবারেই ভিন্নমত পোষণ করলে ১, আর পুরোপুরি একমত হলে ৬, এই ক্রমানুসারে আপনার মতামত জানান

C69. আমার কোন কেনাকাটার সিদ্ধান্ত গ্রহণে ডিজিটাল মাধ্যম থেকে জানার চেষ্টা করি

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C70. সামাজিক যোগাযোগ মাধ্যম (ফেসবুক, টিকটক, লাইকি, ইমো) ব্যবহারের জন্যে আমার সময় রয়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C71. আমি সামাজিক যোগাযোগ মাধ্যম (ফেসবুক, টিকটক, লাইকি, ইমো) ব্যবহার করতে পছন্দ করি

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C72. ইন্টারনেট ও ডিজিটাল মাধ্যমের ব্যবহার আমাদের জন্যে উপকারী হতে পারে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C73. ইন্টারনেট ব্যবহারের জন্যে প্রয়োজনীয় খরচের সামর্থ্য আমার রয়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C74. ইন্টারনেটে তথ্য খুঁজতে আমি নিজে থেকেই টাইপ করে বা ভয়েস কমান্ড দিয়ে তথ্য সার্চ করতে পারি

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C75. ডিজিটাল মাধ্যম সমূহ আমি নিজে নিজেই ব্যবহার করতে পারি

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C76. সামাজিক যোগাযোগ মাধ্যমে যোগাযোগ ও আমার ছবি/স্ট্যাটাস পোস্ট করা, কমেন্ট করার কাজটি আমি করতে পারি

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C77. সামাজিক যোগাযোগ মাধ্যমে স্ট্যাটাস লেখা, ভিডিও আপলোড করা, নিউজ শেয়ার করার কাজটি আমি করতে পারি

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C78. আমার প্রয়োজনীয় কাজ (ছাত্র হলে পড়াশোনা সংক্রান্ত, চাকুরীজীবি হলে পেশাগত কাজ, ব্যবসায়ী হলে ব্যবসার কাজ) ডিজিটাল মাধ্যম ব্যবহার করে আমি নিজেই করতে পারি

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C79. মোবাইল ইন্টারনেট এর দাম আমার কাছে সহনীয়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C80. আমার এলাকায় থ্রি-জি/ফোর-জি ইন্টারনেট এর কাভারেজ ভালো

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C81. স্থানীয় ব্রডব্যান্ড ইন্টারনেট এর সংযোগ আমার জন্যে সহনীয়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C82. স্থানীয় ব্রডব্যান্ড কানেকশনের সেবার মান ভালো?

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

ডিজিটাল মাধ্যম ব্যবহারকারী নয়

C83. আপনি নিজে কোনো ডিজিটাল প্ল্যাটফর্ম ব্যবহার না করে থাকলে অন্য কারো মাধ্যমে কোনো ডিজিটাল মাধ্যমের সেবা গ্রহণ করেছেন

- ◯ হ্যাঁ
- ◯ না

C84. উত্তর হ্যাঁ হয়ে থাকলে, কি ধরণের সেবা?

- ☐ দেশে/বিদেশে ভিডিও কল
- ☐ মোবাইলে অর্থ প্রেরণ
- ☐ সরকারী সেবা গ্রহণ (টিকা রেজিস্ট্রেশন, পাসপোর্ট আবেদন ইত্যাদি)
- ☐ ইমেইলের মাধ্যমে ছবি কিংবা ডকুমেন্ট প্রেরণ
- ☐ শিক্ষা প্রতিষ্ঠান/সরকারী চাকুরীর আবেদন
- ☐ সার্চের মাধ্যমে কোন তথ্য খোজা
- ☐ ভিডিও দেখা (নাটক, সিনেমা, গান)
- ☐ অনলাইনে ক্লাস কিংবা অফিসের কাজ
- ☐ Other

Specify other.

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C85. আপনার কি নিয়মিত অন্যকারো সহায়তায় ডিজিটাল সেবা গ্রহণের প্রয়োজন হয়?

- ◯ হ্যাঁ
- ◯ না

C86. সহায়তা নিলে সেটি কিভাবে?

- ◯ আপনার ডিজিটাল ডিভাইসে অন্য কেউ আপনার হয়ে ডিজিটাল সেবা গ্রহণে সহায়তা করে
- ◯ আপনার ডিজিটাইল ডিভাইস নেই বিধায় ডিভাইস রয়েছে এমন কারো সহায়তা নেন
- ◯ সহায়তা করবার মতো কেউ নেই
- ◯ Other

Specify other.

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C87. ডিজিটাল সেবা গ্রহণের মাধ্যম ব্যবহারে আপনার সহায়তা প্রয়োজন হলে সাধারণত কে আপনাকে সাহায্য করে?

- [ ] পরিবারের সদস্যগণ
- [ ] বন্ধুরা
- [ ] সহকর্মীরা
- [ ] অর্থের বিনিয়ে সেবা গ্রহণ (কম্পিউটার কম্পোজ ও রেজিস্ট্রেশনের দোকান
- [ ] ইউনিয়ন তথ্যকেন্দ্র
- [ ] কেউ নয়
- [ ] Other

Specify other.

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C88. অন্যকারো সহায়তায় ডিজিটাল সেবা গ্রহণের সময় কখনো কি মনে হয়েছে আপনি নিজে নিজেই কাজগুলো করতে পারলে আপনার সুবিধা বেশি হতো?

- ( ) হ্যাঁ
- ( ) না

তথ্যপ্রাপ্তির উপায় সংক্রান্ত তথ্য

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C89. আপনি সাধারণত ডিজিটাল ডিভাইস বা বড় অংকের কেনাকাটার জন্যে কোন উৎস থেকে তথ্য সংগ্রহ করে থাকেন?

- [ ] পরিবারের সদস্য
- [ ] বন্ধু-বান্ধব
- [ ] সংবাদপত্র/ম্যাগাজিন
- [ ] অনলাইন পোর্টাল/ব্লগ
- [ ] ইউটিউব
- [ ] ফেসবুক
- [ ] টিভি
- [ ] ইন্টারনেট সার্চ
- [ ] ব্র্যান্ডের বিজ্ঞাপন (বিলবোর্ড, ব্যানার, ব্রোশিয়ার, ডিসপ্লে সেন্টার)
- [ ] দোকানের বিক্রেতা
- [ ] Other

Specify other.

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C90. আপনার ডিজিটাল ডিভাইস/বড় অংকের কেনাকাটার সিদ্ধান্তে সাধারণত কার মতামতকে গুরুত্ব দেন?

- [ ] আমি নিজের সিদ্ধান্তেই কিনি
- [ ] বন্ধুবান্ধব
- [ ] বাবা-মা
- [ ] ভাই-বোন
- [ ] স্বামী/স্ত্রী
- [ ] সন্তান
- [ ] আত্মীয়স্বজন
- [ ] পরিচিত অভিজ্ঞ ব্যবহারকারী
- [ ] দোকানের কর্মী
- [ ] Other

Specify other.

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C91. কোন ব্র্যান্ডে বা দোকানে যদি কোন নতুন মডেলের ডিজিটাল ডিভাইস/পণ্য এসে থাকে, কিংবা কোন অফার থাকে, সেসব সম্পর্কে কিভাবে জানতে পারেন?

- [ ] পরিবারের সদস্য
- [ ] বন্ধু-বান্ধব
- [ ] সংবাদপত্র/ম্যাগাজিন
- [ ] অনলাইন পোর্টাল/ব্লগ
- [ ] ইউটিউব
- [ ] ফেসবুক
- [ ] টিভি
- [ ] ইন্টারনেট সার্চ
- [ ] ব্র্যান্ডের বিজ্ঞাপন (বিলবোর্ড, ব্যানার, ব্রোশিয়ার, ডিসপ্লে সেন্টার)
- [ ] দোকানের বিক্রেতা
- [ ] Other

Specify other.

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C92. আপনার ক্রয়ের সিদ্ধান্তে কোন বিষয়গুলো প্রভাব ফেলে?

- [ ] বিজ্ঞাপন
- [ ] বিশেষ অফার
- [ ] পরিবারের সাথে আলোচনা
- [ ] বন্ধু-বান্ধব ও পরিচিতদের পরামর্শ
- [ ] আপনার আগের ব্র্যান্ডের প্রতি নির্ভরশীলতা
- [ ] বিক্রয়কর্মীদের পরামর্শ
- [ ] বিক্রয়োত্তর সেবা
- [ ] Other

Specify other.

C93. আপনার যদি স্মার্টফোন কেনার সুযোগ থাকে ভবিষ্যতে, তবে কোন উৎস থেকে কেনার ইচ্ছে?

- ◯ অনুমোদিত আউটলেট
- ◯ বিশিষ্ট ডিলার
- ◯ পরিচিত দোকান
- ◯ একাধিক ফোন আউটলেট সহ শপিং মল
- ◯ অনলাইন দোকান
- ◯ পরিচিত ব্যক্তির কাছ থেকে সেকেন্ড হ্যান্ড ডিভাইস
- ◯ সোশ্যাল মিডিয়া গ্রুপ থেকে সেকেন্ড হ্যান্ড ডিভাইস
- ◯ Other

Specify other.

ট্র্যাডিশনাল মিডিয়া ও ডিজিটাল মিডিয়া থেকে তথ্য প্রাপ্তি সংক্রান্ত তথ্য

C94. আপনি সাধারণত কোন ধরণের মিডিয়া বেশি দেখতে অভ্যস্ত/পছন্দ করেন?

- [ ] টিভি
- [ ] রেডিও
- [ ] সংবাদপত্র
- [ ] অনলাইন সংবাদপত্র
- [ ] ম্যাগাজিন
- [ ] ফেসবুক
- [ ] ইউটিউব
- [ ] টিকটক/লাইকি
- [ ] ইমো
- [ ] Other

Specify other.

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C95. বিভিন্ন মিডিয়াতে (টিভি, রেডিও, সংবাদপত্র, অনলাইন পোর্টাল, ফেসবুক, ইউটিউব) আপনি কোন ধরণের অনুষ্ঠান দেখতে পছন্দ করেন?

- [ ] জাতীয় ও স্থানীয় সংবাদ
- [ ] আন্তর্জাতিক সংবাদ
- [ ] খেলাধুলার সংবাদ ও তথ্যচিত্র
- [ ] বিনোদনমূলক প্যাকেজ অনুষ্ঠান
- [ ] সিনেমা
- [ ] নাটক
- [ ] গানের অনুষ্ঠান
- [ ] শিক্ষামূলক অনুষ্ঠান
- [ ] চাকরীর সুযোগ
- [ ] Other

Specify other.

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C96. যেকোনো একটি মিডিয়ার নাম বলুন যেখানে আপনি আপনার আগ্রহের সকল কিছু (তথ্য, বিনোদন, সংবাদ, ধর্মীয় বিষয়, খেলাধুলা) সংক্রান্ত তথ্য পেতে পারেন?

- ◯ ফেসবুক
- ◯ ইউটিউব
- ◯ টিভি
- ◯ সংবাদপত্র
- ◯ অনলাইন নিউজ পেপার
- ◯ রেডিও
- ◯ অন্যান্য

অন্যান্য উল্লেখ করুন

কোন অ্যাপঃ

কোন ওয়েবসাইটঃ

C97. আপনি কেমন ধরণের কন্টেন্ট দেখতে পছন্দ করেন?

- [ ] আর্টিকেল/ফিচার/ব্লগ
- [ ] বড় ধরণের ডকুমেন্টারি ভিডিও
- [ ] ছোট ছোট ভিডিও ক্লিপ (নাটক, সিনেমার অংশ)
- [ ] মিউজিক ভিডিও
- [ ] ফেসবুক লাইভ
- [ ] বর্ননাসহ ছবি
- [ ] টিকটক ভিডিও
- [ ] Other

Specify other.

C98. আপনি কোন ধরণের বিজ্ঞাপন সবচেয়ে বেশি খেয়াল করে থাকেন?

- [ ] টিভি বিজ্ঞাপন
- [ ] রেডিও বিজ্ঞাপন
- [ ] সংবাদপত্রে ছাপা বিজ্ঞাপন
- [ ] ওয়েবসাইটে থাকা ব্যানার বিজ্ঞাপন
- [ ] বিলবোর্ড/ব্যানার/দেয়ালচিত্র
- [ ] লিফলেট/ব্রোশিয়ার
- [ ] ফেসবুকে থাকা বিজ্ঞাপন
- [ ] ইউটিউব ভিডিওর শুরুতে বা মাঝে থাকা ভিডিও বিজ্ঞাপন
- [ ] ইমো-তে থাকা বিজ্ঞাপন
- [ ] মোবাইল গেমসের পর্দার আসা বিজ্ঞাপন
- [ ] বিভিন্ন অ্যাপের স্ক্রিনে চলে আসা বিজ্ঞাপন
- [ ] Other

Specify other.

C99. আপনি কেন এই মাধ্যমগুলোর বিজ্ঞাপন খেয়াল করে থাকেন?

- [ ] আমি অনেক সময় নিয়ে টিভি দেখি
- [ ] আমি প্রচুর সময় রেডিও শুনি
- [ ] আমার পত্রিকা পড়ার অভ্যাস রয়েছে
- [ ] বিলবোর্ড আছে এমন রাস্তায় আমার নিয়মিত যাতায়াত
- [ ] আমি হাতে লিফলেট/ব্রোশিয়ার পেলে পড়ে দেখি
- [ ] আমি ফেসবুক/ম্যাসেঞ্জার নিয়মিত ব্যবহার করি
- [ ] আমি মোবাইলে অনেক গেম খেলি
- [ ] আমি অনলাইনে পত্রিকা পড়তে পছন্দ করি
- [ ] আমি ইউটিউবে প্রচুর ভিডিও দেখি
- [ ] আমি কোন নির্দিষ্ট মাধ্যম থেকে নিয়মিত তথ্য খুঁজি
- [ ] আমি নিয়মিত ইকমার্স সাইট ভিজিট করি
- [ ] Other

Specify other.

C100. আপনি সাধারণত কোন কোন ধরণের বিজ্ঞাপনে প্রভাবিত হন?

- [ ] টিভি
- [ ] রেডিও
- [ ] সংবাদপত্র
- [ ] অনলাইন নিউজ পেপার
- [ ] শপিং মলে মাইক/লাউড স্পিকারে বাজানো বিজ্ঞাপন
- [ ] ফেসবুক
- [ ] ইউটিউব
- [ ] কোন ইনফ্লুয়েন্সার/তারকার কথায়
- [ ] বিভিন্ন মিডিয়ায় বিশেষজ্ঞদের কথায়
- [ ] বিভিন্ন মাধ্যমে রিভিউ দেখে
- [ ] অন্যান্য

অন্যান্য উল্লেখ করুন

কোন অ্যাপঃ

কোন ওয়েবসাইটঃ

C101. করোনা মহামারীতে করোনা ভাইরাস সংক্রান্ত তথ্য সংগ্রহে কোন মাধ্যমটি সবচেয়ে বেশি ব্যবহার করেন?

- [ ] টিভি
- [ ] রেডিও
- [ ] সামাজিক যোগাযোগ মাধ্যম
- [ ] অনলাইন নিউজ পোর্টাল
- [ ] সংবাদপত্র
- [ ] স্বাস্থ্যতথ্য পাওয়া যায় এমন ওয়েবসাইট
- [ ] স্বাস্থ্যতথ্য পাওয়া যায় এমন অ্যাপ
- [ ] ইউটিউব
- [ ] সচেতনতামূলক বিলবোর্ড
- [ ] পোষ্টার, ব্যানার, লিফলেট
- [ ] এসএমএস
- [ ] মোবাইলে সচেতনতা বার্তাপূর্ণ কলারটিউন
- [ ] Other

Specify other.

C102. করোনা মহামারীতে কোন প্ল্যাটফর্মকে আপনার সবচেয়ে বিশ্বাসযোগ্য মনে হয়েছে

- ◯ টিভি সংবাদ ও স্বাস্থ্যবিষয়ক অনুষ্ঠানে বিশেষজ্ঞদের বিশ্লেষণ ও সচেতনতামূলক প্রোগ্রাম
- ◯ অনলাইন পোর্টালের আর্টিকেল
- ◯ সোশ্যাল মিডিয়ায় শেয়ার হওয়া লেখা/ভিডিও
- ◯ সোশ্যাল মিডিয়ায় কোন পেজ বা ব্যক্তির কাছ থেকে পাওয়া তথ্য (যেমন ডাঃ তাসনিম জারা, ডাঃ জাহাঙ্গীর কবির)
- ◯ সরকার এবং এনজিওর লিফলেট, বিলবোর্ড, ব্যানার ইত্যাদি
- ◯ Other

Specify other.

C103. করোনা মহামারীতে অনেক সেবার ডিজিটাল মাধ্যম নির্ভর ছিলো (মোবাইলে লেনদেন, অনলাইনে ক্লাস, অনলাইনে স্বাস্থ্য সেবা ইত্যাদি)। এসব সুবিধা কি পরিবারের সদস্যের দৈনন্দিন অভ্যাসে কতোটা পরিবর্তন এনেছে বলে মনে করেন?

- ◯ অনেক পরিবর্তন এনেছে
- ◯ কিছুটা পরিবর্তন
- ◯ কোন পরিবর্তন আনেনি
- ◯ না

স্মার্টফোনের বিজ্ঞাপন সংক্রান্ত তথ্য

C104. আপনি কোন মাধ্যমে স্মার্টফোন নিয়ে সবচেয়ে বেশি বিজ্ঞাপন দেখেছেন?

- [ ] টিভি
- [ ] রেডিও
- [ ] সংবাদপত্র
- [ ] অনলাইন সংবাদপত্র
- [ ] বিলবোর্ড/ব্যানার/দেয়ালচিত্র
- [ ] ম্যাগাজিন
- [ ] লিফলেট/ব্রোশিয়ার
- [ ] ফেসবুক/ম্যাসেঞ্জার
- [ ] ইউটিউব
- [ ] ওয়েবসাইট
- [ ] মোবাইল গেমস
- [ ] বিভিন্ন অ্যাপ (শেয়ারইট, ট্রুকলার ইত্যাদি)
- [ ] কোনটিই নয়
- [ ] Other

Specify other.

C105. কোন মোবাইল ব্র্যান্ডের বিজ্ঞাপন সবচেয়ে বেশি মনে পড়ে?

- [ ] স্যামসাং
- [ ] শাওমি
- [ ] অপো
- [ ] ভিভো
- [ ] রিয়েলমি
- [ ] টেকনো
- [ ] আইটেল
- [ ] ইনফিনিক্স
- [ ] ওয়ালটন
- [ ] সিম্ফনি
- [ ] নোকিয়া
- [ ] আইফোন
- [ ] ওয়ানপ্লাস
- [ ] হুয়াওয়ে
- [ ] Other

Specify other.

C106. স্মার্টফোন নিয়ে দেখা সবচেয়ে বেশি মনে থাকা/সবচেয়ে ভালোলাগা বিজ্ঞাপনগুলো কোন কোন মাধ্যমে দেখেছেন?

- [ ] টিভি
- [ ] রেডিও
- [ ] সংবাদপত্র
- [ ] অনলাইন নিউজ পেপার
- [ ] রেডিও
- [ ] ইউটিউব
- [ ] টিকটক
- [ ] বিলবোর্ড/ব্যানার
- [ ] Other

Specify other.

C107. কখনো এমন হয়েছে যে ফোন কিনতে দোকানে গিয়েছেন, আর সে দোকানের কোন সেলসম্যান আপনাকে তার স্মার্টফোনে বিজ্ঞাপন কিংবা রিভিউ ভিডিও দেখিয়েছে?

- ◯ হ্যাঁ
- ◯ না
- ◯ মনে করতে পারছিনা
- ◯ কখনো এমন হয়নি
- ◯ Other

Specify other.

পরবর্তী বিষয় সমূহে (C107A*1 থেকে C107A*47) সকলের কাছ থেকেই অভিমত জানতে চান। প্রতিটি বিষয়ের সাথে উত্তরদাতা কতোটা একমত কিংবা কতোটা ভিন্নমত সে বিষয়ে জানতে চেষ্টা করুন।

C107A_1. স্মার্টফোন ব্যবহার কেবল তরুণদের সাথেই মানানসই

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_2. নারীদের জন্যে স্মার্টফোন ও ইন্টারনেট ব্যবহার অনিরাপদ

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_3. স্মার্টফোন ও ইন্টারনেট এর ব্যবহার আগে থেকে না জানলেও সেটির ব্যবহার দ্রুত শিখে নেয়া যায়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_4. কেবল বাস্তবে মিশ্রুক মানুষেরাই সামাজিক যোগাযোগ মাধ্যম (ফেসবুক, টিকটক, ইমো) ব্যবহার করে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_5. স্মার্টফোন ও ইন্টারনেট শারীরিক ও মানসিক স্বাস্থ্যের জন্যে ক্ষতিকর

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_6. পেশাগত প্রয়োজনে স্মার্টফোন ও ইন্টারনেট ব্যবহারের সুফল রয়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_7. ইংরেজি জানা না থাকলেও স্মার্টফোন ও ইন্টারনেট ব্যবহার করা যায়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_8. পরিবারের কেউ দূরে থাকলে ইন্টারনেটের কল্যাণে সারাক্ষণ যোগাযোগ রক্ষা করা যায়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_9. স্মার্টফোন ও ইন্টারনেট সংযোগ থাকলে ঘরে বসে দৈনন্দিন অনেক কাজ সম্পন্ন করা যায়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_10. যেকোনো সময়ে বা স্থানে ব্যবহার করা যায় বলে অন্যান্য কাজের ফাকেও ডিজিটাল মাধ্যম ব্যবহারের সুফল পাওয়া যায়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_11. স্মার্টফোন ও ইন্টারনেট ব্যবহার এখন আর বিলাসিতা নয়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_12. স্মার্টফোন ও ইন্টারনেটের ব্যবহার এখন দৈনন্দিন প্রয়োজনে পরিণত হয়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_13. চাইলে আশপাশের পরিচিতদের কাছ থেকে ইন্টারনেট নির্ভর ডিজিটাল মাধ্যম ব্যবহার শেখার সুযোগ রয়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_14. প্রয়োজনে অন্যের সহায়তায় হলেও ডিজিটাল মাধ্যম ব্যবহার করা জীবন যাত্রার অপরিহার্য অংশ

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_15. কোনো প্রকার ডিজিটাল মাধ্যম ব্যবহার না করেও চলা সম্ভব

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_16. ডিজিটাল মাধ্যম ব্যবহার করা কোনো প্রয়োজন নয়, বরং পছন্দ অপছন্দের বিষয়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_17. ডিজিটাল মাধ্যম ব্যবহারের উপকারের তুলনায় ক্ষতির দিক নগন্য

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_18. স্মার্টফোন ও ইন্টারনেট ব্যবহারের প্রয়োজনীয়তা দিন দিন বাড়ছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_19. ইন্টারনেট ব্যবহারের খরচ নাগালের মধ্যে থাকলে ইন্টারনেট নির্ভর ডিজিটাল প্ল্যাটফর্ম ব্যবহার দিন দিন বৃদ্ধি পাবে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_20. ডিজিটাল মাধ্যম ব্যবহারের দক্ষতা না থাকলেও ইন্টারনেট নির্ভর ডিজিটাল সেবা গ্রহণ অপরিহার্য

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_21. ইন্টারনেট নির্ভর ডিজিটাল মাধ্যম ব্যবহার করে জীবনযাপন সহজ হয় বলে ইন্টারনেট ও স্মার্টফোন ব্যবহারের আগ্রহ বাড়ছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_22. ভিজিটাল প্ল্যাটফর্ম ব্যবহারে পরিচিত অন্যকারো সহায়তা পাওয়া যায় বলে ব্যক্তিগত ভাবে স্মার্টফোন বা ইন্টারনেট ব্যবহারের আগ্রহ কম

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_23. ভিজিটাল মাধ্যম ব্যবহার অনেকের জন্যেই দৈনন্দিন রুটিনে পরিণত হয়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_24. প্রতি পরিবারেই অন্তত একটি ইন্টারনেট সংযোগসহ ভিজিটাল মাধ্যম ব্যবহারের সুযোগ থাকা উচিৎ

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_25. ভিজিটাল মাধ্যমের উপযোগীতার এতো বেশি যে ব্যবহার শুরুতে জটিল হলেও এর ব্যবহার শুরু করা উচিৎ

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_26. কোন ডিজিটাল ডিভাইস বা মাধ্যমে অভ্যস্ততা চলে আসলে নতুন মাধ্যম ব্যবহারে আগ্রহ কমে যায়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_27. ডিজিটাল মাধ্যম ও ডিভাইস ব্যবহারে জীবনযাত্রা জটিল হয়ে যায়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_28. পরিবার বা পরিচিত কারো মাধ্যমে ডিজিটাল সেবা নেয়া যায় বলে ব্যক্তিগত ভাবে ডিজিটাল মাধ্যম ব্যবহারের আগ্রহ কম থাকে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_29. বর্তমানের ডিজিটাল ডিভাইস ও মাধ্যমের ব্যবহার একেবারে নতুন কারো জন্যে ব্যবহার শেখার উপযুক্ত নয়

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_30. প্রয়োজন মনে করলেও ডিজিটাল মাধ্যম নির্ভর নতুন কিছু শেখার আগ্রহ নেই

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_31. একাধিক ধাপ অনুসরণ করে ডিজিটাল মাধ্যমে সেবা গ্রহণের জটিলতার কারণে ডিজিটাল মাধ্যম ব্যবহারের কোন আগ্রহ নেই

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_32. ডিজিটাল মাধ্যমে কোন কিছু খুঁজে নেবার চেয়ে বরং নিশ্চিত জেনে কোন নির্দিষ্ট স্থান থেকে সেটি খুঁজে পাওয়াই সহজ (যেমন ইন্টারনেটে সংবাদ না খুঁজে টিভি কিংবা পত্রিকা থেকে সেটি জানা, ই-কমার্সে কেনাকাটা না করে শপিং মলে যেয়ে দোকান থেকে কেনা ইত্যাদি)

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_33. ইন্টারনেটে অন্যের ক্রিয়েটিভ লেখা, ছবি কিংবা ভিডিও প্রকাশের বিষয়টি অনেককেই ইন্টারনেট ও ডিজিটাল মাধ্যমে আগ্রহী করে তুলছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_34. ডিজিটাল মাধ্যমে নিজের সৃষ্টিশীল কাজ তৈরির সুযোগ বা মানুষকে সেসব জানানোর/দেখানোর সুযোগ থাকলে সেই সুযোগ নিতে আগ্রহী

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_35. পেশাগত ক্ষেত্রে কিংবা ছাত্রদের পড়াশোনার ক্ষেত্রে ডিজিটাল মাধ্যম ব্যবহারে উন্নতি করা সম্ভব

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_36. ডিজিটাল মাধ্যমে যার যেমন ইচ্ছে তেমন সব মাধ্যম ব্যবহার করার সুযোগ রয়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_37. দ্রুতগতির ইন্টারনেট সংযোগ থাকলেই ডিজিটাল মাধ্যম ব্যবহার অনেক আকর্ষণীয় হয়ে উঠবে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_38. ক্রিয়েটিভিটি বা মনের ভাব প্রকাশের সুবিধা থাকায় ডিজিটাল মাধ্যম ব্যবহারের প্রতি আগ্রহী মানুষের সংখ্যা বাড়ছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_39. স্মার্টফোনসহ ডিজিটাল ডিভাইস কেনা সহজ হলে (দাম কমানো, কিস্তিতে কেনার সুবিধা) এসবের ব্যবহার বাড়বে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_40. ইন্টারনেট সংযোগ সহজলভ্য হলে ডিজিটাল মাধ্যম ব্যবহার বাড়বে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_41. পেইড ডিজিটাল সেবা (অনলাইন স্বাস্থ্যসেবা, ক্লাস লেকচার, ধর্মীয় শিক্ষা) গ্রহণের সুবিধা থাকায় ডিজিটাল মাধ্যমের চাহিদা বেড়েছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_42. স্থানীয় ভাবে সহজলভ্য ব্রডব্যান্ড সংযোগ না থাকায় অনেকেই ডিজিটাল ডিভাইস ও মাধ্যম ব্যবহার করেনা

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_43. ব্যস্ততার কারণে সময় নষ্ট হবার ভয়েই ডিজিটাল মাধ্যম ব্যবহারের প্রতি আগ্রহ কাজ করেনা

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_44. ডিজিটাল মাধ্যমে অর্থ প্রদান করে কোন সেবা নেবার উপায় না থাকায় অনেকেই সেই সেবা থেকে বঞ্চিত (অনলাইনে স্বাস্থ্যসেবা কিংবা কেনাকাটার জন্যে বিকাশ/নগদ অ্যাকাউন্ট না থাকা, ডেবিট কার্ড না থাকা ইত্যাদি)

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_45. স্থানীয় ভাবে মোবাইল নেটওয়ার্ক দুর্বল থাকায় ডিজিটাল মাধ্যমের ব্যবহার কম

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

Figure: Number Mapping by Division of Survey Respondents

C107A_46. ডিজিটাল মাধ্যমে বহুবিধ সেবা এক সাথে পাওয়া যায় বলে এর ব্যবহার বাড়ছে

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C107A_47. স্থানীয় পর্যায়ের সেবা সমূহ ডিজিটাল মাধ্যমে পাওয়া গেলে ডিজিটাল মাধ্যম ব্যবহার বাড়বে (যেমন জেলা পর্যায়ের দোকান থেকে অনলাইনে কেনাকাটা, মেয়র/চেয়ারম্যান অফিস থেকে সনদ সংগ্রহ ইত্যাদি)

- ◯ পুরোপুরি ভিন্নমত
- ◯ ভিন্নমত
- ◯ মোটামুটি ভিন্নমত
- ◯ মোটামুটি একমত
- ◯ একমত
- ◯ পুরোপুরি একমত

C108. এখন তো অনেকেই ডিজিটাল প্ল্যাটফর্ম যেমন ফেসবুক, ইউটিউব, বিকাশ, নগদ ইত্যাদি। কিভাবে আরও মানুষকে ডিজিটাল সেবার আওতায় আনা যায় সে বিষয়ে আপনার মতামত শেয়ার করুন?

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C109. আপনার মতে স্মার্টফোন ব্যবহার বাড়াতে কিভাবে বিজ্ঞাপন দিলে আরো বেশি মানুষের কাছে পৌঁছাবে বলে মনে করেন?

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C110. স্মার্টফোন ব্যবহারের হার বৃদ্ধিতে ফোন ব্র্যান্ড, মোবাইল অপারেটর (গ্রামীণফোন, রবি) এদের কার কি করা উচিৎ বলে পরামর্শ দেবেন?

_____

এলাকার জিপিএস নিন

_____

latitude (x.y °)

_____

longitude (x.y °)

_____

altitude (m)

_____

accuracy (m)

_____

এই অংশে তথ্য সংগ্রাহকের জন্যে বরাদ্দ থাকছে। যদি আপনার নিজের মনে হয় প্রশ্নে জানতে চাওয়া হয়নি এমন কোন তথ্য পেয়েছেন যা এই সার্ভের সাথে সঙ্গতিপূর্ণ, সেই তথ্যসমূহ এখানে উপস্থাপন করুন

ধন্যবাদ

Appendix D: Heat Map of Survey Respondents and Numbers Mapping by Location

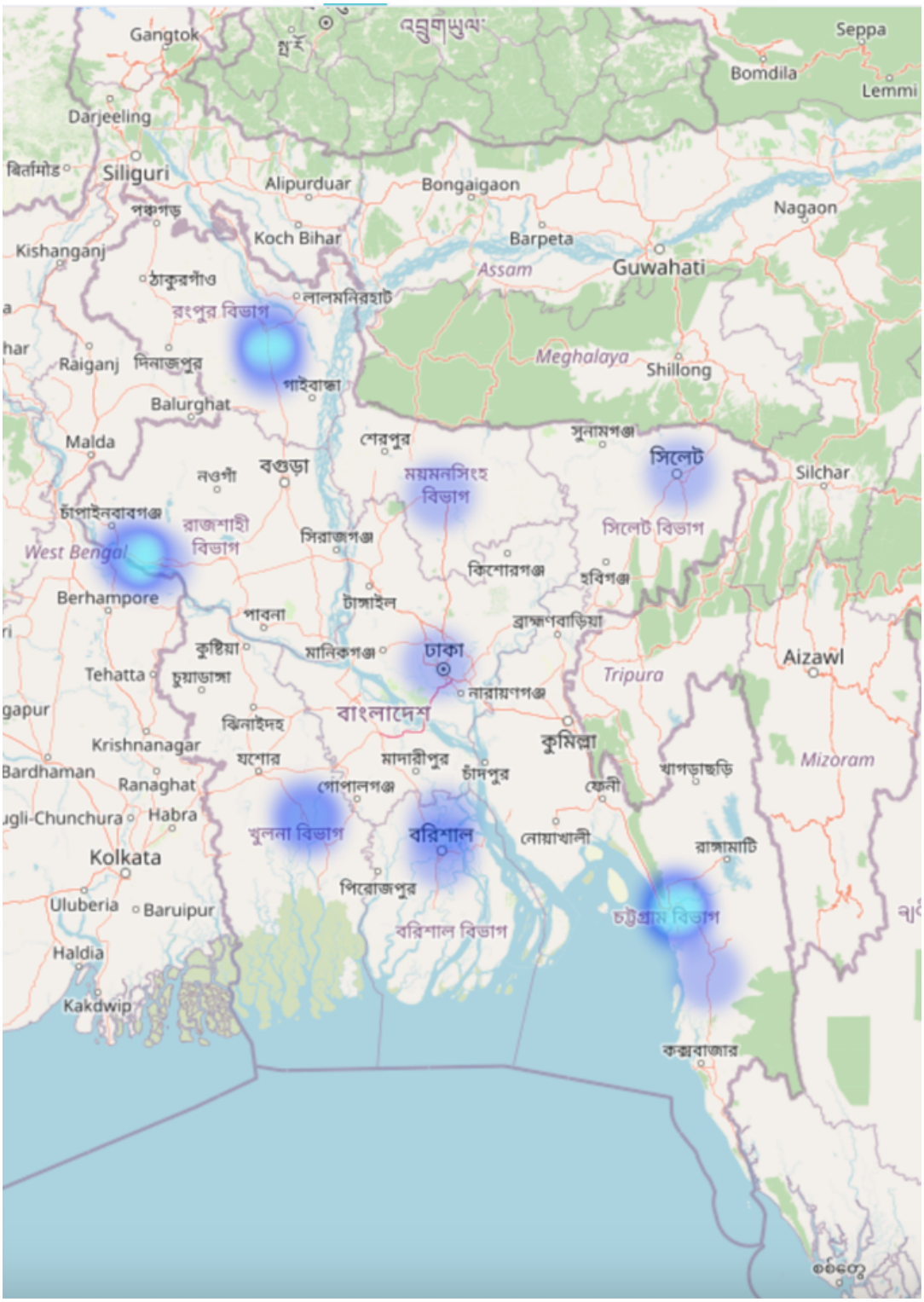

Figure: Heat Map of Survey Respondents from Kobo Toolbox

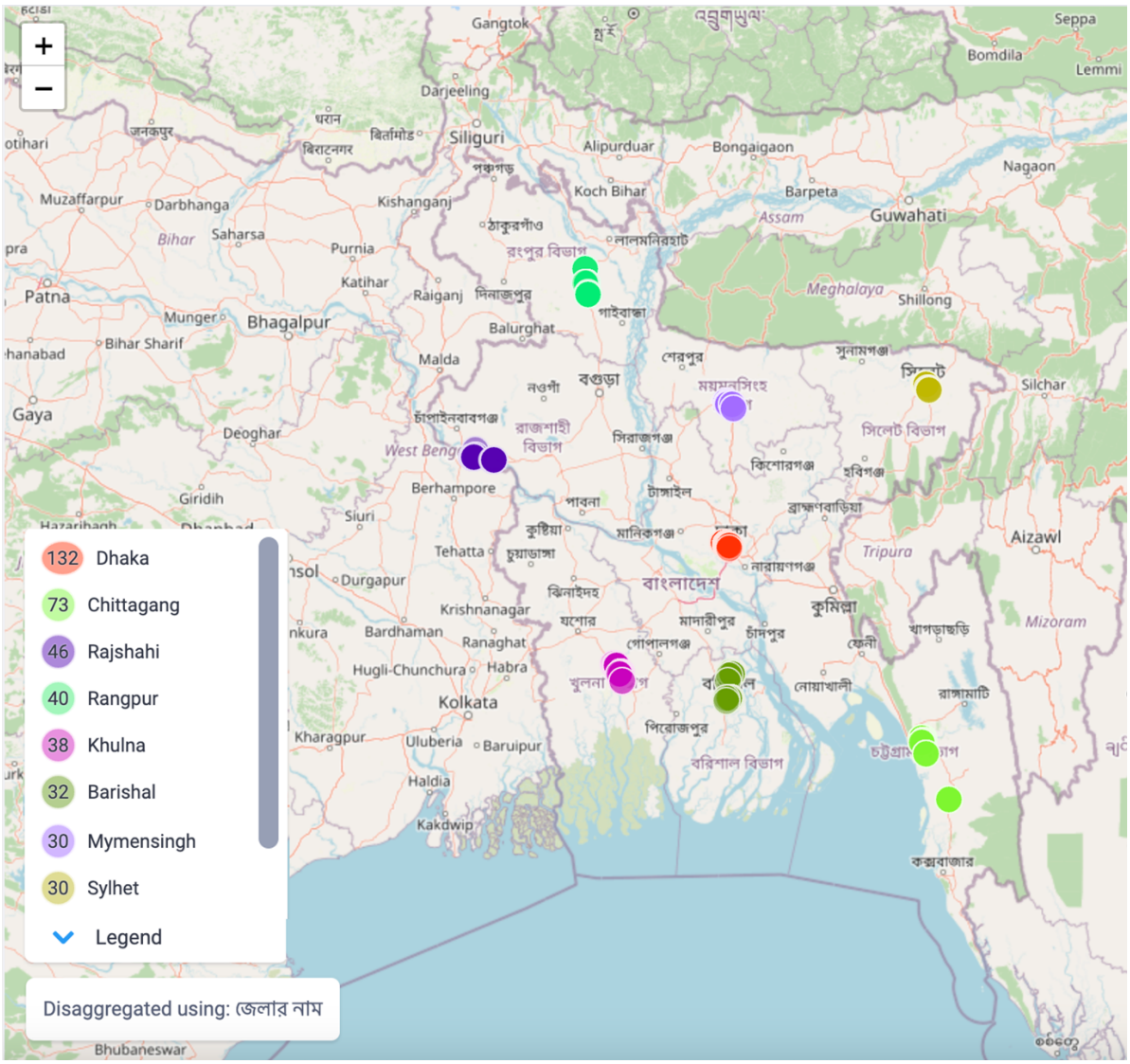

Figure: Number Mapping by Division of Survey Respondents from Kobo Toolbox

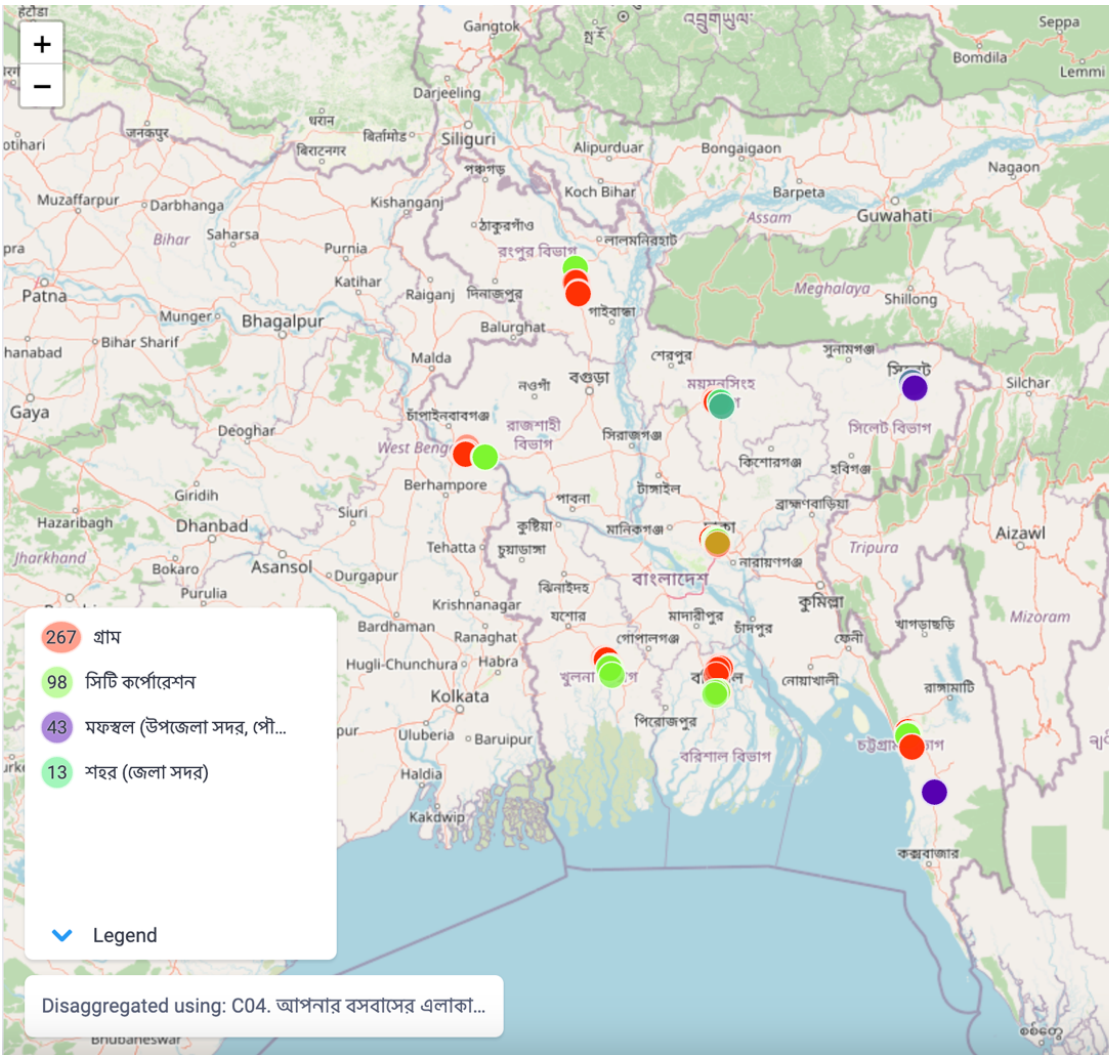

Figure: Number Mapping by Geographic Location of Survey Respondents from Kobo Toolbox