CHAPTER- ONE

AN OVERALL REVIEW & CONCEPTUALFRAMEWORK OF MOBILE COMMERCE AND MOBILE SHOPPING

DETAILED CONTENT

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EXECUTIVE SUMMARY OF CHAPTER ONE:

The chapter one discusses in brief about the overview and conceptual framework of mobile commerce and mobile shopping. It gives clear view on the concept of mobile commerce and other various aspects that related to the evolution and growth of mobile commerce. Since mobile shopping is a result of wireless technology, innovative smartphones, and development of mobile shopping applications, the researcher had made an effort to collect the information related to the technical advancements in the area of mobile commerce. The introduction of affordable mobile data had brought huge change in the way consumers shop online especially on the mobile devices. It makes it to mandatory to understand the Internet availability to the Indian shoppers who are willing to shop using their mobile phone. The first chapter framed in such a way that helps to understand the Internet penetration in India and worldwide. Apart from the regular and traditional wired Internet connectivity, this chapter provides the information on mobile device and its usage for shopping purpose. This chapter briefly analyses the migration of e-commerce to m-commerce. Smartphones are the future for any business development. Considering this fact, the researcher has made an attempt to understand the usage of Smartphones among Indian consumers. It is important to understand the business activities that are carried out using mobile phone applications instead searching for a wired device. Mobile shopping application is a software program that is designed to work on Smartphones. This chapter also provides a brief description about the leading mobile marketers and the shopping applications developed by them. This chapter gives an overview on the e-commerce activities carried out in India and mobile shopper's behaviour in handling Smartphones especially searching new products in the Smartphones, and ordering them for home delivery. The chapter one analyses the key drivers of adoption of mobile commerce such as simplicity and adoptability. The new marketing trend of human centric to a digital market 4.0 was also studied in chapter one. The new marketing mix of "4 C" was briefly touched upon viz., currency, co-creation, conversation, and communal activation. The futuristic idea of artificial intelligence, programmatic advertising, chatbots, personalization, video marketing, influence marketing, social messaging applications, visual search, micro moments, voice search, and social media stories are also discussed in this chapter.

CHAPTER-ONE

AN OVERALL REVIEW & CONCEPTUALFRAMEWORK OF MOBILE COMMERCE AND MOBILE SHOPPING

1.0: A BRIEF OUTLINE OF EVOLUTION, RISE AND USE OF INTERNET:

Telecommunication had grown by leaps and bounds over the past decades. The Stanford University Network was the first Local Area Network (LAN) connecting distant workstations, as the first message was sent over the ARPANET in the year 1969 from the University of California, Los Angeles (UCLA) to the second Network node at Stanford Research Institute (SRI) The technology was further developed by the scientists Robert Kahn and Vinton Cerf in 1970s with the use of Transmission Control Protocol (TCP) and Internet Protocol (IP). The new communication model allowed transmission of data among the multiple networks. TCP/IP was adopted by ARPANET on January 1, 1983. From that time researchers from all around the world started to develop and assemble the "Network of Networks" that gave birth to the Internet technology. Hypertext Transfer Protocol (HTTP) was further technical development in Internet Technology which gave various computer platforms, the capability to access the same Internet web sites. Hypertext Transfer Protocol (HTTP) was widely known as the World Wide Web (www).

Computer scientist Tim Berners-Lee of the European Organization for Nuclear Research (CERN) in the year 1989, created the Hypertext Transfer Protocol (HTTP) which gave different computer platforms the facility to access the same Internet sites (Science Node, n.d.)[1]. "Hypertext Project" was called "Worldwide Web" in which a "Web" of "Hypertext Documents" could be viewed by "Browsers". The first browser developed by the scientist run on the NeXT computer and thus provided access to very few users. The first Web Server, that provided access to a greater number of Internet users, was designed by Paul Kunz and Louise Addis in December 1991. Thereafter, several computer scientists wrote browsers that were generally for the X-Window System on the request of Berners-Lee. Contribution of Tony Johnson from SLAC was examined to be significant in designing of web browser. He designed the browser named 'MIDAS' (CERN, n.d.)[2]. The first version of Mosaic browser was released by the National Centre for Supercomputing Applications (NCSA) at the University of Illinois in early 1993 (CERN, n.d.)[2]. Mosaic browser was the first in itself to show images with text. It also offered users with different graphical interface norms (Sciencenode)[1]. The web was originally conceived and established for the information-sharing between scientists of universities and institutes around the world. Thus, invention on the World Wide Web (WWW) brought Internet services to be operated by many users of the Internet. 'WWW' provided ease in access to information, knowledge, and culture. People around the world started adopting the Internet as a new source of information, knowledge generation, making connections, marketing of product and service, doing business, etc (Internetworldstats, n.d.) [3].

According to the Global Report Digital 2020 by Hootsuite, more than 67 percent of the world population were using mobile phones almost two-thirds of the population in 2020. Internet users were almost sixty percent of the entire global people's count.

Social media users had gone fifty-three percent of the world population. Nine out of ten Internet users were accessing the network through mobile data itself. However, still, two-thirds of the population used desktops to access the Internet. According to Kemp (2020)[4], "99 percent of the social media users preferred mobile device to view the social applications". One in five users accessed social media on desktops or laptops (KEMP, 2020)[4]. China had the highest number of Internet users (854,000,000) followed by India (560,000,000), and USA bagged the third place (313,322,868) by 2020 Q1. 5.15 Billion people were using mobile phones, and 4.57 Billion people were Internet users (Internet World Stats, 2020)[5].

Table Number: 1.1: Top 20 Countries with the Highest Number of Internet Users

Top 20 Countries With Highest Number of Internet Users - 2020 Q1						
Number	Country or Region	Internet Users 2020 Q1	Internet Users 2000 Q4	Population 2020 Est.	Population 2000 Est.	Internet Growth 2000 -2020
1	China	854000000	22500000	1439062022	1283198970	3796%
2	India	560000000	5000000	1368737513	1053050912	11200%
3	United States	313322868	95354000	331002651	281982778	328%
4	Indonesia	171260000	2000000	273526615	211540429	8560%
5	Brazil	149057635	5000000	212392717	175287587	2980%
6	Nigeria	126078999	200000	206139589	123486615	63000%
7	Japan	118626672	47080000	126854745	127533934	252%
8	Russia	116353942	3100000	145934462	146396514	3751%
9	Bangladesh	94199000	100000	164689383	131581243	94199%
10	Mexico	88000000	2712400	132328035	2712400	3144%
11	Germany	79127551	24000000	83783942	81487757	329%
12	Phillippines	79000000	2000000	109581078	77991569	3950%
13	Turkey	69107183	2000000	84339067	63240121	3455%
14	Vietnem	68541344	200000	68541344	200000	34250%
15	United Kingdom	63544106	15400000	67886011	58950848	413%
16	Iran	67602731	250000	83992949	66131854	27040%
17	France	60421689	8500000	65273511	59608201	710%
18	Thailand	57000000	2300000	69799978	62958021	2478%
19	Italy	54798299	13200000	60461826	57293721	415%
20	Egypt	49231493	450000	102331404	69905988	10940%
Top 20 Countries		3241273512	251346400	5233377837	4312497691	1289%
Rest of the world		1332876622	109639092	2563237873	1832509298	1216%
Total World		4574150134	360985492	7796615710	6145006989	1267%

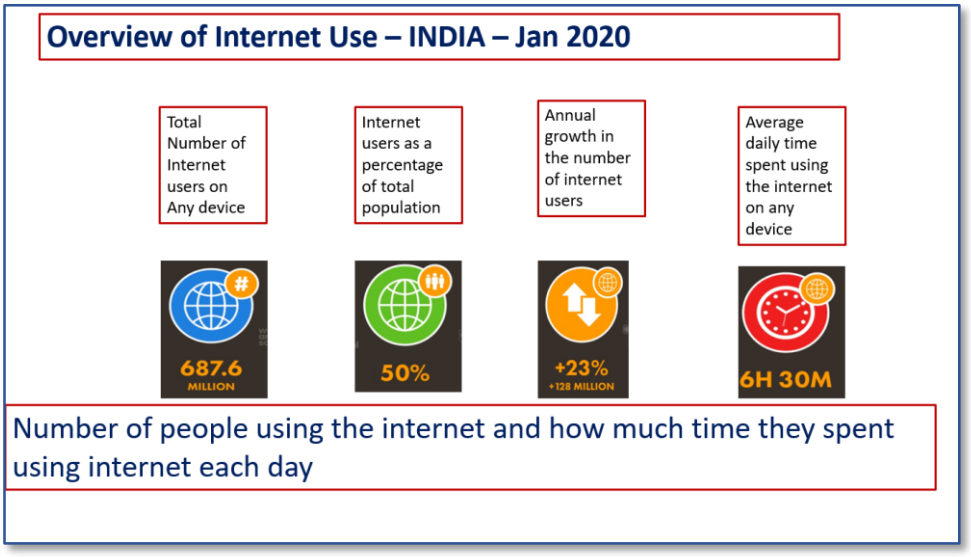
Source: (Internet World Stats, 2020)[5]

Internet users accounted for about 4.66 Billion around the globe and were rising at a speed of more than 11 new users per second, which showed that a remarkable total of one Million unique users each day (Simon Kemp, 2020)[4].

The number of global Internet users was at 4,346,561,853, while the global population was estimated at 7,753,483,209. It was estimated that above 50 percent of the world population will have access to the Internet.

Internet user had shown a drastic growth from 2018, it was 478 Million approx., which had reached to 560 Million in April 2019 (Agarwal, 2018)[6]. The estimated population of India was 1.37 Billion in 2020. 78 percent of the Indian population had mobile phone connections. There were approximately 687.6 Million Internet users in India by 2020 which was almost 50 percent of the total population in India.

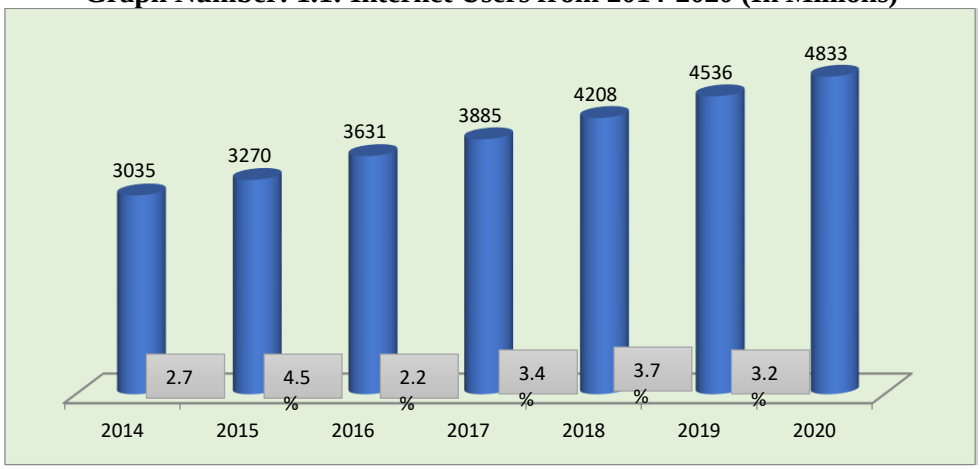
Figure Number:1.1: Overview of Internet Use - India, Jan 2020



Source: (Data Reportal, 2020)[7]

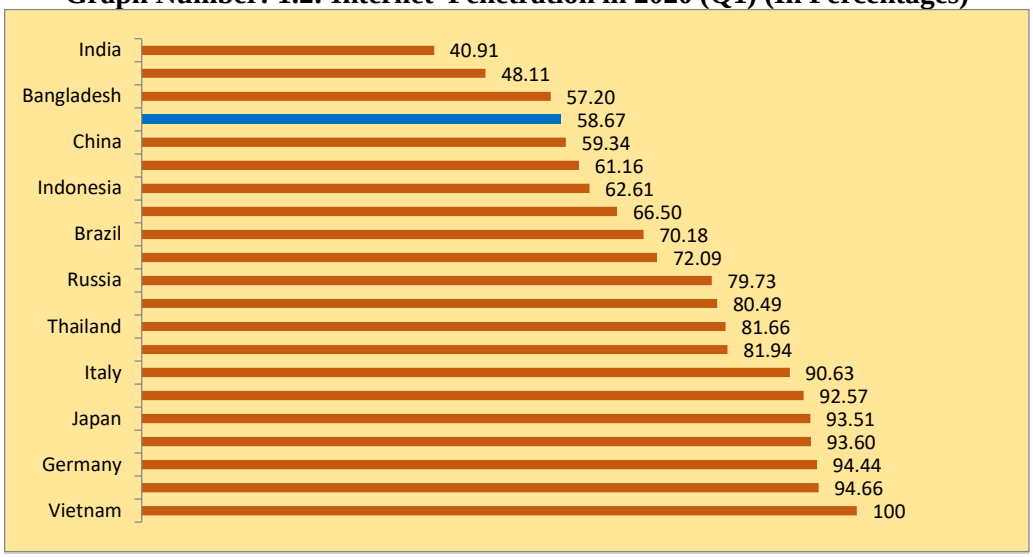
The following figures provides information on Internet users and penetration of Internet in year 2020.

Graph Number: 1.1: Internet Users from 2014-2020 (In Millions)



Source: (Internet World Stats, 2020)[5]

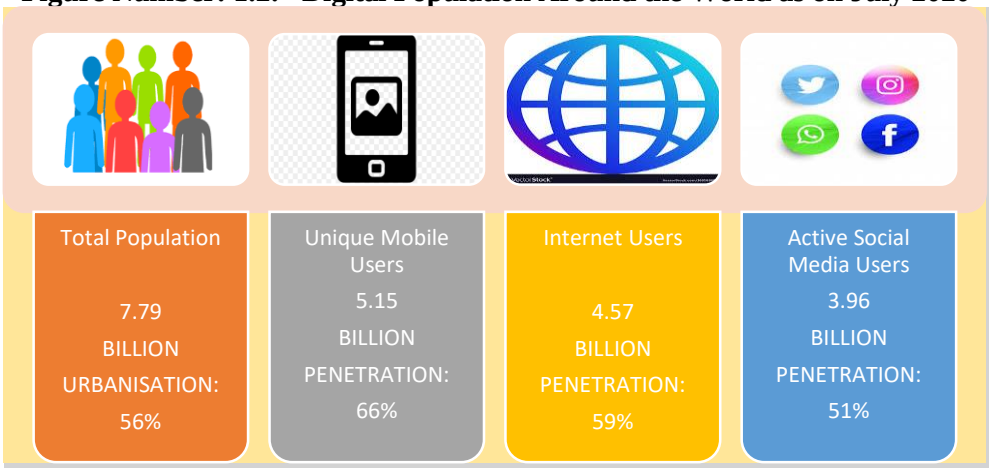
Graph Number: 1.2: Internet Penetration in 2020 (Q1) (In Percentages)



Source: (Internet World Stats, 2020)[5]

Accordingly, 58.67 per cent of the world population had an Internet connection. In case of India, 40.91 per cent of people living in India were found having an Internet connection accessed through different devices viz., Computer, Smartphone, Laptop, Tablet that were required to be connected with the cable for accessing different applications of Internet. But, with the passage of time, with the development of the wireless technology and Internet connectivity with use of wireless Wi-Fi Network, Internet has now become accessible at any place wherever mobile service provider signals are available. The following figure number 1.2 provides the details of total population and the number of active Internet users in the year 2020.

Figure Number: 1.2: Digital Population Around the World as on July 2020

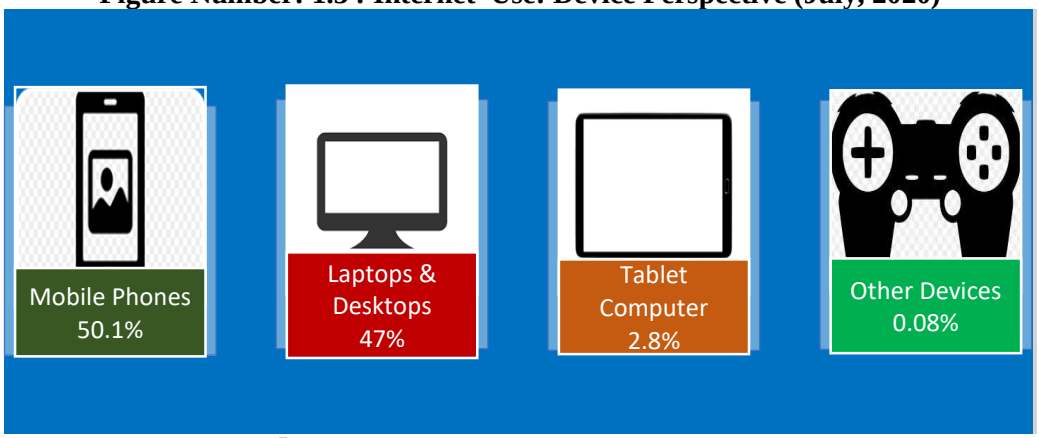


Source: (Data Reportal, 2020)[7]

Accordingly, 7.79 Billion world population in July 2020, 4.57 Billion, 59 per cent of people used Internet. 3.96 Billion Internet users were found using Internet to access different social applications.

Among the total population, 66 per cent of people had access to Internet application through their mobile phones (smartphones). The figure number 1.3 offers data on different devices that were used for accessing Internet used by the Internet users in the July 2020 (Data Reportal, 2020)[7].

Figure Number: 1.3 : Internet Use: Device Perspective (July, 2020)



Source: (Data Reportal, 2020)[7]

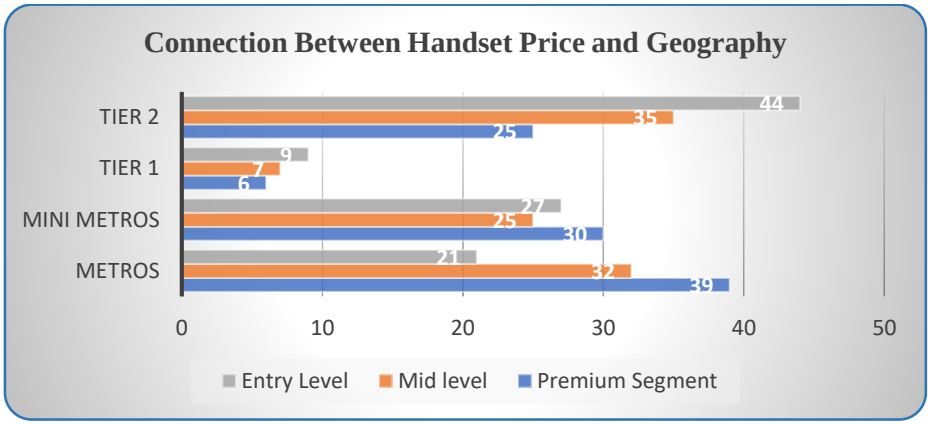
1.1: A BRIEF ABOUT INFORMATION TECHNOLOGY ADOPTION IN INDIA:

The new proclamations by the Government of India such as "Make in India", "Digital India", "Skill India", "Innovation fund" and "Start-up India" has helped people in India to access Internet and adopt digital transformation.

The Government of Indian had funded Rs. 153.5 Crores. (USD 23.8 Million) to benefit one Million consumers for adopting the digital payments with the help of the schemes of "Lucky Grahak Yojana" and "Digi-Dhan Vyapar Yojana". The Government of India has also lifted the limit of Foreign Direct Investments (FDI) to boost the involvement of foreign investors in the e-commerce market in B2B models (Privacy Shield, 2020)[8].

According to Nielsen, 2018 study, the entry-level users in India were between the age group of 15 and 24, mainly students. The sixty percent of premium smartphone users were above 24 years old self-employed or working professionals with good access to the Internet. The cities with more than ten lakh population had a greater number of costly smartphone users than the rural areas. In the towns of less than 10 lakh population had a greater number of entry-level smartphone users. The consumers in the eastern part of India preferred entry-level phones compared to the rest of the people in India (Nielsen, 2018)[9].

Graph Number: 1.3: The Connection Between Handset Price and Geography



Source: (Nielsen Smartphone Panel, 2018)[9]

The Nielsen study on behavior of the smartphone users in India related to the segments of entry-level smartphones, mid-range and high-end premium smartphones had revealed that the proportion of women smartphone users were more than male users in the premium segment. Average Indian smartphone user had spent four times, the amount of time which they had spent on online activities than offline activities. The per-day Internet usage had increased due to cheaper data plans. Smartphone users were spending almost fifty percent of their screen time in Video Streaming, Chat, Image Applications, Social Networking and Browsing. There were segments of new users like Homemakers and Elders, School Going Kids, and Elders. The market was emerging from the 2 tier and 3 tier cities and the rural areas to meet the need of these new consumer segments (Nielsen Press Release, 2018)[9].

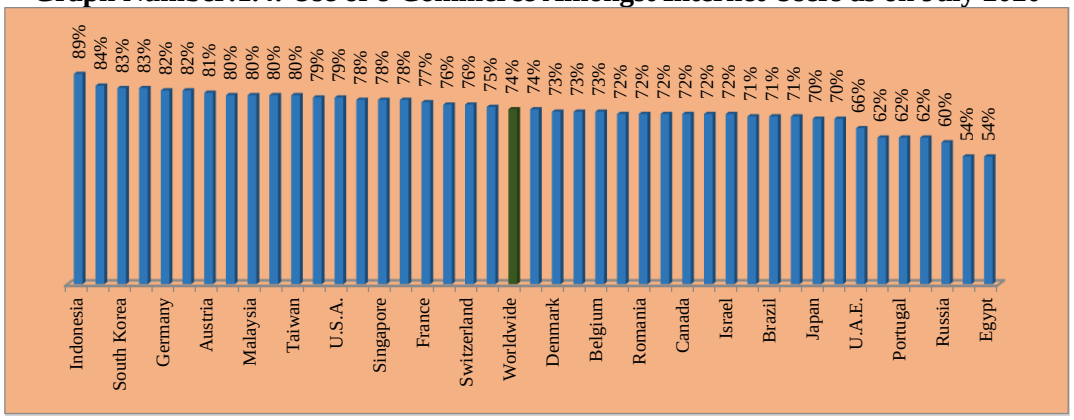
Even though the increment in the Internet usage and smartphone in India had increased compared to the previous years, still it lagged back compared to the other growing economies as per Pew research. Compared to countries like Malaysia, China and Brazil, Internet usage in India is very much lower (Ananth, 2016)[10].

1.2: A BRIEF OVERVIEW OF RISE AND GROWTH OF ELECTRONIC COMMERCE AND MOBILE COMMERCE IN INDIA:

Due to ease in accessibility and connectivity of Internet coupled with rise in number of Internet users, companies too have gradually started using Information Technology (IT) for improving and developing their businesses using two modes of carrying out business transactions called as Electronic Commerce (e-Commerce) and Mobile Commerce (m-Commerce) respectively Datareportal (n.d.)[7]. Zwass (1996)[11] has defined e-Commerce as "the sharing of business information, maintaining business relationships and conducting business transactions by means of Telecommunications Networks".

Durlacher Research (2000)[12] has defined m-Commerce transactions as "any transaction with a monetary value that is conducted using a Mobile Telecommunications Network." Sadeh (2002)[13] has defined it as "as the emerging set of applications and services people can access from their Internet -enabled mobile devices." The graph number 1.4 shares information on use of e-commerce amongst internet users.

Graph Number:1.4: Use of e-Commerce Amongst Internet Users as on July 2020



Source: (Data Reportal, 2020) [7]

It can be observed from the above figure that nearly 74 per cent of the world Internet users had used e-Commerce transactions through use of different devices in Q1 of the year 2020. While. 76 per cent of Internet users in India had engaged into e-Commerce activities. The figure number 1.4 provides details about selective activities that were undertaken on e-Commerce by the Internet users in Q1 in the year 2020.

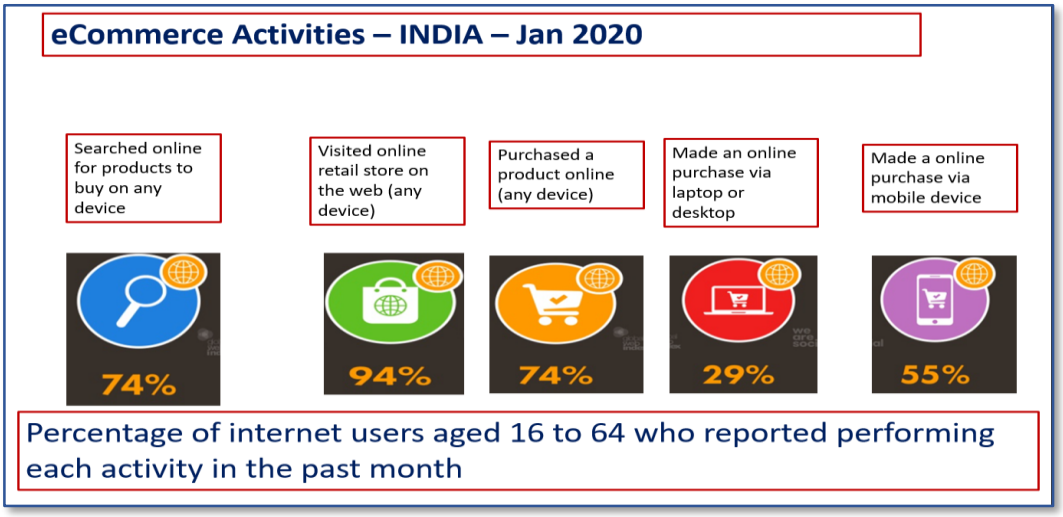
Accordingly, It was found that 81 per cent of Global Internet users had used Internet to search for products and services to buy them, 90 per cent had used Internet to visit online store or any web page, and 74 per cent of them had made online shopping /purchasing of products and services. Among 74 per cent of the world Internet users who had performed e-Commerce transaction in Q1 of the year 2020, 52 per cent of the Internet users had used mobile phones for online shopping. And, 58 per cent of 76 per cent of e-Commerce transaction in India were carried out using smartphones (Data Reportal, 2020)[7]. India has always been a heaven for retailers with a high population and youth comprising of 560 Million Active Internet Users as of April 2019. 74 percent of total active Internet users had made online shopping using any electronic device (Economic Times, 2019)[14].

Figure Number:1.4: e-Commerce Activities

Source: (Data Reportal, 2020)[7]

The leading research firm, eMarketer has predicted, mobile commerce would have a share of 53.3 percent in total retail e-commerce sales in the USA in 2021. 39.6 percent of retail trade was on a smartphone in 2018, and that figure leaped to 44.7 percent by 2019 (eMarketer, 2019)[15]. According to the Scandit Retail Consumer Survey, Smartphone applications were the leading m-Commerce tools in mobile shopping. 83 percent of the mobile shoppers had used shopping applications in 2019. The shopping application use was considerably below amongst Tablet users, only 14 percent of them had used shopping applications on the tablets. Only a few mobile shoppers (3 percent) had used Wearable technology. Compared to any other mobile devices, smartphone users were found active in the mobile shopping activities. According to Mobile Phone Statistics from Kaspersky Cybersecurity Index, almost 50 percent of mobile device owners had used their devices for online shopping activities (Scandit, 2018)[16].

Figure Number:1.5: E-Commerce Activities in India, Jan 2020



Source: (Hootsuite, 2020)[17]

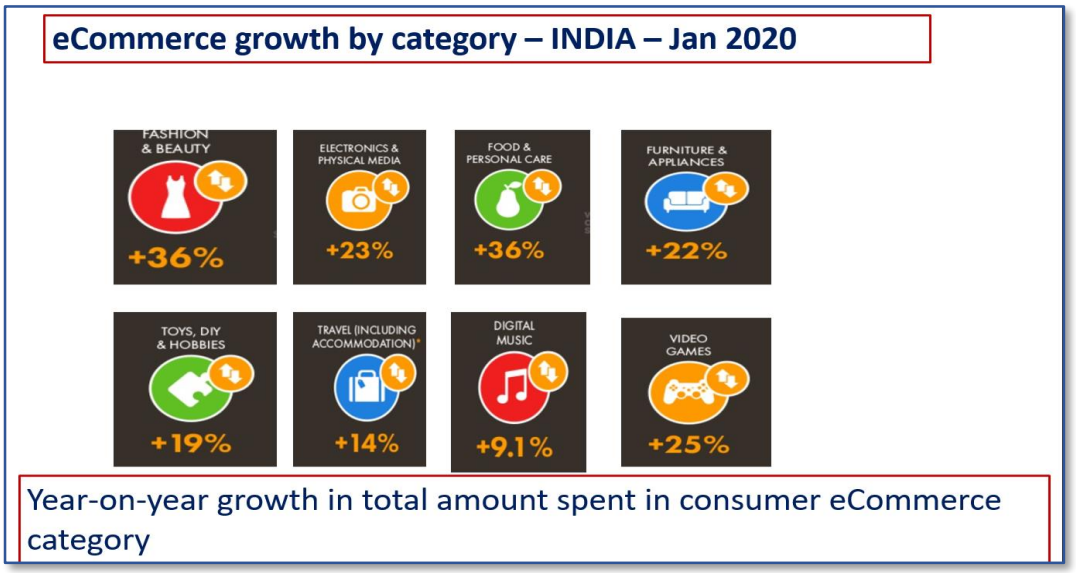
The figure number 1.5 above depicted the e-Commerce activities in India. 94 percent of the Internet users aged 16 to 64 years visited an online retail store on the web via any device. 55 percent of the mobile shoppers had made a purchase via a mobile device, whereas only 29 percent of the online shopping was carried out in desktop or laptop (Data Reportal, 2020)[7].

Figure Number: 1.6: Overview of E-Commerce Activities

Source: (Hootsuite, 2020)[17]

It can be inferred from the above figure number 1.6 that 82 percent Internet users were in the age group of 16 to 64 years who had used any device to search a product online to purchase. 66 percent of them had used any of the mobile shopping applications to shop on a mobile phone or on a tablet. 52 percent mobile shoppers ended up shopping via mobile phones which was considerable improvement when compared to the previous years (KEMP, 2020)[4].

Figure Number:1.7: Category wise Growth of E-Commerce Activities in India As on Jan 2020



Source: (Hootsuite, 2020)[17]

It was found from the above figure number 1.7 that from amongst Indian mobile shoppers, Fashion & beauty along with food & personal care had seen a growth percentage of 36 percent due to the online

presence of the younger generations. Electronics and physical media had seen growth rate of 23 percent among the mobile shoppers of India (Data Reportal, 2020)[7].

Shopping on smartphones was a game changer and contributed to the 70 percent of the total revenues generated. Traffic in mobile commerce had surpassed the traffic in the wired computers. India had a huge potential for m-Commerce because it had many smartphones in the world. e-Commerce companies made business strategies that would match and adopt the growing usage of smartphones, and social media. They have focused on improving the experience of the customers across platforms and touchpoints. The marketing giant Amazon reported 40 percent of its sales came from mobile devices (PTI, 2014)[18].

In the year 2014, the number of mobile Internet users were 120 Million compared to the year 2013 when the number was only 100 Million in India. Snapdeal announced that approximately 60 percent of their online orders originated from mobile phones. It had fast growth. The traffic in the sales orders of Snapdeal mostly came from smartphones than personal computers.

Fashion portal retailer Myntra.Com had expected close to 70 percent of its revenue coming through mobiles Myntra was a fashion retailer stated that 70 percent were driven by mobile shoppers. It was considered that shopping on smartphones was the favorite mode of fashion shoppers. (Gadget Show, 2014)[19].

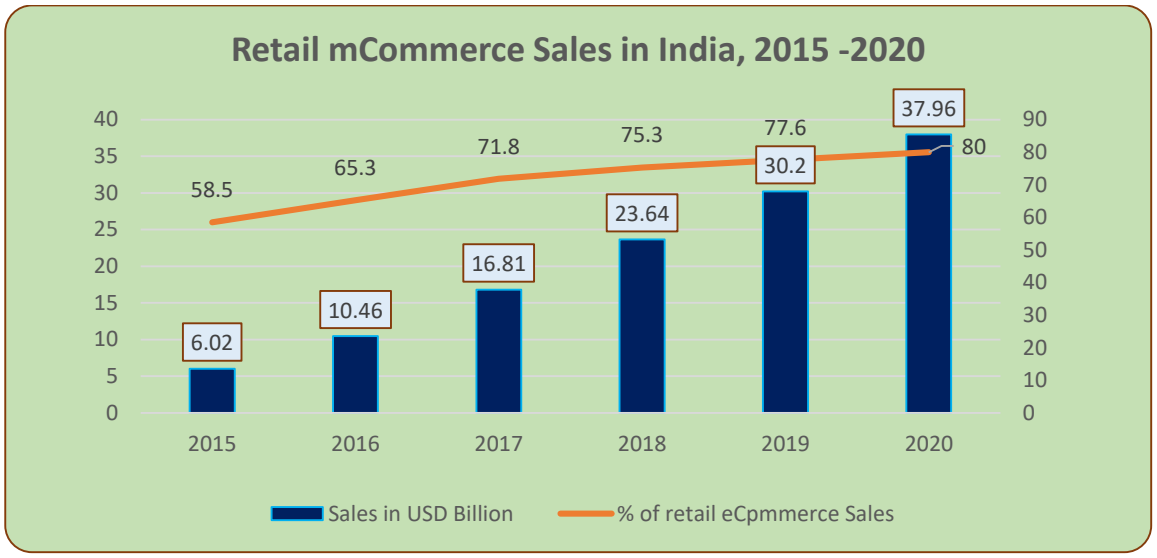
Indian mobile commerce market grew at the speed of 71.06 percent between the period of 2012-2016. The mobile commerce market in India made use of the collaboration of online banking and service providers. Most cellular service operators had a partnership with leading banking service providers to implement the payment facilities in the mobile phone.

Debit cards had always been a favored way of payment of the majority over 52 percent of mobile shoppers. Above 25 percent of the mobile shoppers bought products above the price range of Rs 10,000. 68 percent mobile shoppers preferred the Android operating system for m-commerce, and the iOS operating system in second place (Shiprocket, 2017)[20].

According to a Forrester, mobile shopping had contributed nearly 50 percent of total $12 Billion online sales in 2016 (Ghana Talks Business, 2016)[21]. On the other hand, in China and the US, the contribution of m-Commerce was 48 percent and 34 percent respectively. A surge in the adoption of Smartphone adoption, faster and secured Internet, and the development of mobile quality applications had resulted in the growth of mobile commerce in India. It was expected m-Commerce to capture the 80 percent of e-commerce sales by 2020 (Jain, 2018)[22].

Buying through mobile applications had surged in India (India Retailer, 2018)[23]. Since, India posed a high number of active young age people and having the second-largest country with a greater number of smartphone users in the world (Internet World Stats, 2019)[3] , it had tapped the new marketing evolution of M-Commerce. The huge number of Smartphone adoption, faster, secure Internet, and development of mobile quality applications had resulted in the growth of mobile commerce in India.

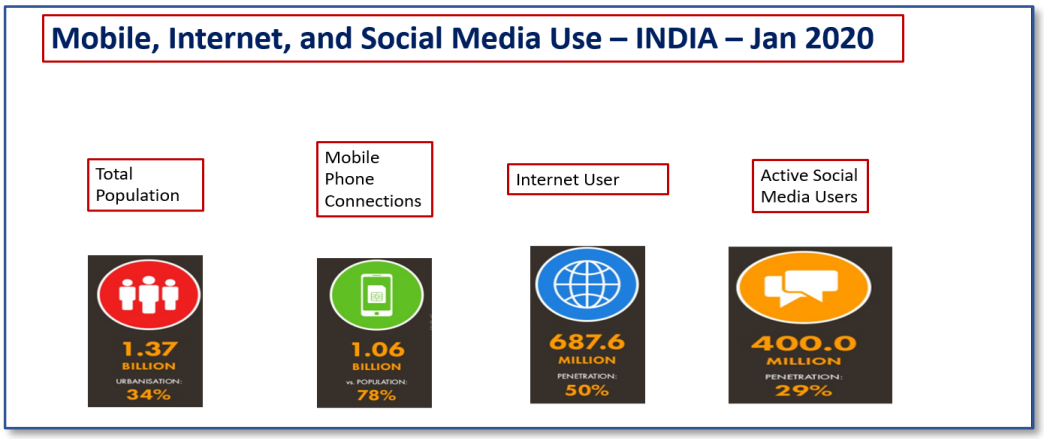
Graph Number:1.5: Retail M-Commerce Sales in India, 2015-2020



Source: (Poddar, 2016)[24]

The above chart number 1.5 shows the trend of increase in m-commerce in India from 2015 to 2020. It was projected that the m-commerce sales would reach 37.96 Billion in India by 2020 (Poddar, 2016)[24].

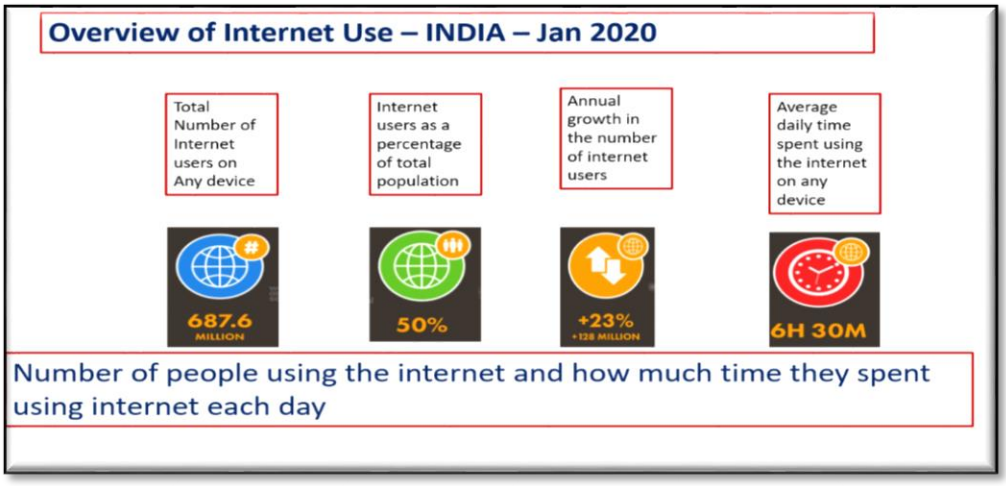
Figure Number:1.8: Use of Mobile, Internet, & Social Media in India As on Jan 2020



Source: (Hootsuite, 2020)[17]

The above figure number 1.8 reveals that the estimated Indian population was 1.37 Billion and the total mobile phone connections was1.06 Billion. The total Internet users were 687.6 Million. It could be inferred that India had more number mobile phone users and had huge potential for mobile shopping. Internet user had shown a drastic growth from 2018, it was 478 Million which had reached to 560 Million in April 2019 (Agarwal, 2018)[6]. The estimated population of India was approximately 1.37 Billion in 2020. It implies that 78 percent of the Indian population had mobile phone connections. There were approximately 687.6 Million Internet users in India by 2020 which was almost 50 percent of the total population in India. Technopark estimated that the e-tailing industry would grow up to 32 Billion by the end of the year 2020.

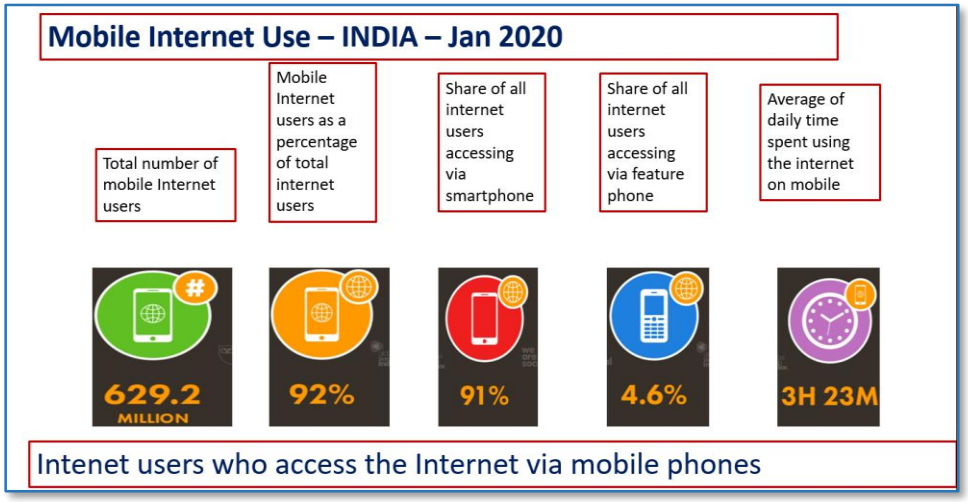
Figure Number:1.9: Overview of Internet Use - India, Jan 2020



Source: (Hootsuite, 2020)[17]

The figure number 1.9 shows that India had estimation of 687.6 Million total number of Internet users on any device. India had seen a 23 percent annual growth in the number of Internet users. There was surge in the average daily time spent using the Internet on any device by each Internet user had increased 6 hours and 30 minutes.

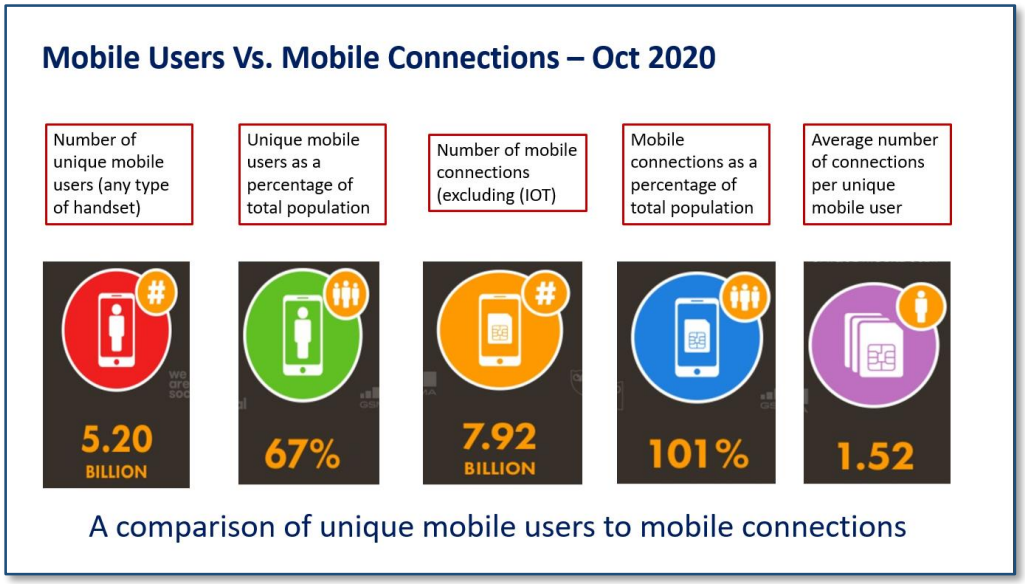
Figure Number:1.10: Mobile Internet Use - India, Jan 2020:



Source: (Hootsuite, 2020)[17]

India had a total number of 629.2 Million mobile Internet users. 91 percent of the Internet users accessed the Internet via smartphones. India's new generation had increased its presence in the smartphone Internet (Data Reportal, 2020)[7]

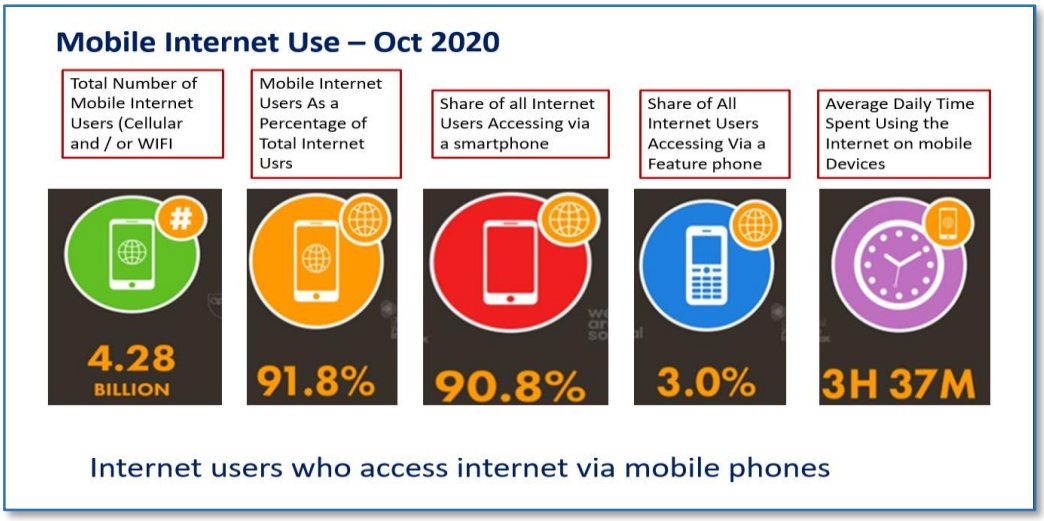
Figure Number: 1.11: Mobile Users Vs. Mobile Connections



Source: (Hootsuite, 2020)[17]

According to Report of 'Hootsuite', there were 5.20 Billion unique mobile users using any type of handset, however, 7.92 mobile connections were there which was 101 percent of total mobile users. Usage of the Internet among people evolved quickly too with mobile accounting for an ever-increasing share of online activities. It is important to mention that mobile phones accounted for almost half the time that people spent on Internet (Simon Kemp, 2020)[25].

Figure Number: 1.12 : Mobile Internet Use

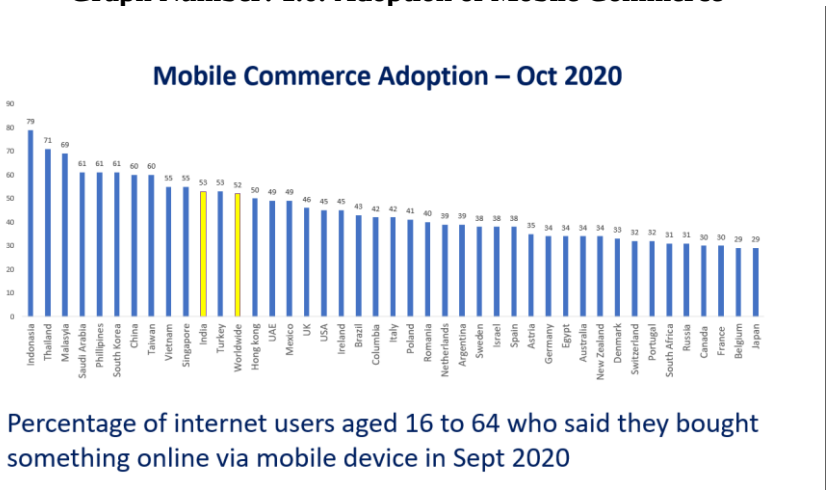


Source: (Hootsuite, 2020)[17]

The world's average daily time spent using the Internet on mobile devices was 3 hours and 37 minutes online each day. There was 90.8 percent of Internet users who were accessing Internet using smartphones. There were a minimal 3 percent Internet users who were accessing Internet on feature

phones. Most of the Internet users were comfortable accessing Internet on their smartphones rather than the wired desktops (KEMP, 2020)[4]. The data from Statista's Digital Market Outlook studies had revealed that e-Commerce spending had grown by 14 percent on year-on-year basis with the company which had expected that full-year 2018 spend on consumer goods alone topped US$1.78 trillion (Islas, 2019)[26].

Graph Number: 1.6: Adoption of Mobile Commerce



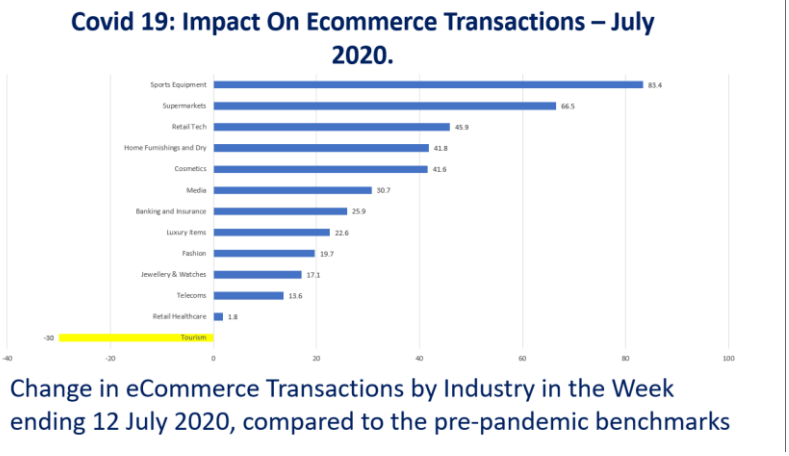
Source: (Hootsuite, 2020)[17]

It can be found from above figure that globally, there was an increasing trend in the adoption of mobile commerce. Any mobile shoppers can complete an online purchase with just a few taps on his or her smartphones.

India had the mobile commerce adoption of 53 percent among the Internet users who were grouped into the age of 16 to 64 years, whereas the global average was 52 percent. India was among the countries that had experienced more growth in the adoption of mobile commerce (KEMP, 2020)[4].

With the ever-increasing number of mobile users and services like Google Pay and Apple Pay, digital shoppers had widely adopted mobile commerce. On the other end, mobile commerce had large potential from retailers' point of view, as it empowered them to reach their prospective target customers anytime and anywhere (99 Firms, 2019)[27].

Graph Number: 1.7: Covid 19 – Impact on E-Commerce Transactions

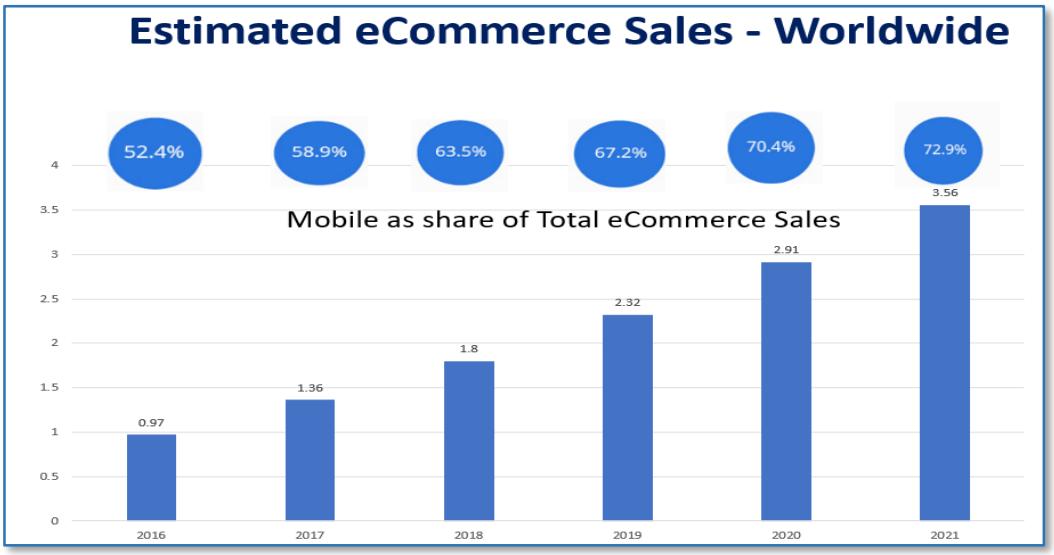


Source: (Hootsuite, 2020)[17]

It can be seen from above figure electronic commerce transactions have risen across almost every category, especially sports equipment brands. Supermarkets had seen substantial gains compared to pre-Coronavirus levels. Media stories about connected tech often center on the device and platforms, but how people handle these technologies is far more critical. However, many of these behavioral trends developed over time. To make things even more complicated, these behaviors were evolving all the time, so there was no 'quick fix' that could deliver a permanent advantage. Consequently, as marketers started to think about 2021, it was worth spending in tech stacks and plans that could flex and adapt over time – particularly given the uncertainty around the evolution of COVID-19.

According to Report of Miniwatts Marketing Group (2019)[28], there were 5.1 Billion unique mobile users worldwide, and 49 percent of website traffic comes from mobile devices. Out of 5.1 Billion mobile users, 49 percent of customers had used mobile phones for shopping. 30 percent of Americans had favoured mobile banking compared to other banking approaches. 61 percent of US customers had compared the prices in stores using their mobile device. A superior screen resolution resulted in a $1.18 more order. In 2019, Smartphones had made up 34 percent of overall US e-commerce sales. According to Internet World Stats, it was estimated that M-commerce sales would contribute more than 50 percent of total e-commerce sales by end of the year 2021 (Internet World Stats, 2019)[3]. Since m-commerce required two things – specifically having a mobile device and Internet access and, it became necessary to know about these two essential aspects of m-commerce.

Graph Number: 1.8: Growth Prediction of Mobile e-Commerce



Source: (Statistica, 2018)[29]

1.3: SOME ASPECTS OF CONCEPTULISATION AND ADOPTION OF MOBILE COMMERCE:

An attempt has been made in this part to bring out various aspects of mobile commerce.

1.3.0: An Introduction:

The human race had seen and come across multiple stages of evolution in trading. Mobile Commerce is the result of the development of the age-old concept of commerce, which went through enormous changes in business and technology revolution. It has attributed to the emerging arena within which commercial transactions can be carried out using mobile devices connected with wireless networks". It facilitates conduct of businesses anytime anywhere (Kristoffersen and Ljungberg, 2000)[30]. M-Commerce is the abbreviation of mobile commerce, through which, a person could buy or sell goods, avail services, transfer rights or ownership, to the cash transfer or other banking, solely with the help of mobile phone without any wired connection. M-commerce is the succeeding generation to e-commerce.

The word m-commerce or mobile commerce was initially coined in the year 1997 by Kevin Duffey to indicate that the delivery of electronic commerce capacities directly into the customer's hand, anywhere, via the technology of wireless. Mobile commerce refers to doing business or availing service with the help of handheld devices like smartphones or tablets. M-Commerce was the abbreviation of mobile commerce, through which, a person could buy or sell goods, avail services, transfer rights or ownership, do cash transfer or other banking, solely with the help of a mobile phone without any wired connection (Juha Korhonen, 2014)[31].

1.3.1: Some Conceptual Definitions of Mobile Commerce:

Several scholars had given various definitions of mobile commerce. The term mobile commerce has been stated as "The business of buying and selling goods and services on the Internet using a mobile phone. M-commerce is short for mobile commerce." (Cambridge Dictionary, 2020)[32].

"Mobile commerce refers to doing the business or availing service with the help of handheld devices like Smartphone or Tablets". "Moreover, there are three varying types of mobile commerce, including Mobile Banking, Mobile Shopping, and Mobile Payments. Each of the three characters of mobile commerce relies on mobile devices for handling financial transactions and purchasing products and services online" (Business Jargons, 2020)[33] Mobile commerce is a combination of mobile communications with existing e-commerce services" (Rajabion, 2015)[34].

"It includes all activities containing a commercial transaction conducted through communication networks that interface with wireless devices". Mobile commerce includes various set of activities such as viz., Mobile Banking, Mobile Ticketing, Mobile Coupons, and Mobile Shopping and or Purchasing or Buying of products and services" (Copeland, 2016)[35]. "It is similar to e-commerce except that the transactions are conducted in a mobile environment" (Gunasekaran & Ngai, 2007)[36]. "It has a capability to follow commerce with the help of a handheld device like a Personal Digital Assistant (PDA), a Mobile Phone, a Smartphone, or any other mobile devices" (Patil & Awate, 2017)[37]. "It includes Mobile Banking Services, M-Payments, and Mobile Purchases" (Samudra & Phadtare, 2012)[38]. "It

enables buying and selling of goods and services through wireless handheld devices and makes it convenient for speedy quality and quantity of transactions" (Khurana, 2016)[39].

"By keeping in mind, the growth of m-commerce, mobile manufacturing companies have already begun to manufacture smartphones that were WAP-enabled with 4G adaptability, easy to browse, install web apps, meeting the requirement of the personal and official needs of the businesses" (Juha Korhonen, 2014)[31]. "E-commerce has enabled mobile shoppers to shop at any moment, that was a huge business transformation to the traditional way of doing business. Whereas, mobile commerce has eliminated all the challenges related to the place constraints" (Clarke, 2001)[40]. "It has enabled carrying out of transactions using a wireless device and data connection to result in the transfer of value in exchange for services, information, or goods" (Turban, et al.)[41]. "It is a branch of e-commerce using wireless networks, wireless operating systems, and mobile devices to conduct monetary transactions". "Without the support of personal computers, people can buy the product that they wanted in mobile commerce" (Jr., Eusebio Scornavacca, and Stuart J. Barnes, 2008)[42].

"An m-commerce transaction was any type of transaction of an economic value, which was conducted on a mobile device that had Internet connectivity through wireless telecommunications network for communication with the e-commerce infrastructure.

However, due to the attention on consumer shopping using mobile devices, it can be said that m-commerce is a monetary transaction for consumer goods and services conducted via a cell phone or PDA" (A. Anot Ozok, 2010)[43].

"Mobile commerce is the ability to buy the goods anywhere at any time by using the Internet -enabled device, without the help of a personal computer". It is also referred as "any monetary transaction done using the mobile phone. The novel technological advancements empowered e-commerce to broaden the range of its applications and smartphone owners to an innovative method of commerce recognized as "Mobile Electronic Commerce".

It has been defined as any activity related to a commercial transaction or a potential one a transaction that includes a monetary value and is conducted via wireless and mobile communication networks and uses wireless and mobile devices as user interface" (Benou Poulcheria, Vassilakis Costas, 2012)[44]

1.4: REVIEWING MOBILE COMMERCE INDUSTRY OF INDIA:

Mobile Commerce is part of electronic commerce because both shares the data of electronic data transmission. M-Commerce drew the attention of mobile shoppers and marketers due to the acceptance of the Business to Consumer e-commerce shopping. The usefulness of e-commerce has been described differently than m-commerce because it enables carrying out transactions using mobile devices and its functionalities are different. In e-commerce, transactions are primarily based on cash transactions. Mobile commerce required the functions of viewing the product details, seeing the product image, transferring the information of the buyers, and remitting the payment for the order made using the mobile phone. So, the functionalities in e-commerce were different from the functionality of mobile

commerce. M-commerce has progressed as an enhancement to e-commerce (Siau, Sheng, and Nah (2004)[45].

M-Commerce is an extension of e-commerce and is neither synonymous with e-commerce, nor is it just another e-commerce channel". Haghirian, Conversely, Madlberger and Tanuskova (2005)[46] had viewed “m-commerce as a marketing and advertisement channel easily rivalling e-commerce”. Pedersen (2002)[47] had intimated “adoption of m-commerce depends on factors relating to the Technology Acceptance Model with behavioural factors also affecting the intention to use m-commerce tools" (A. Ant Ozok, 2010)[43].

The quick increase in the usage of the smartphone has created the opportunity for m-commerce. Siau et al. (2004)[45] has described "mobile commerce as a new type of e-commerce transaction conducted through mobile devices using wireless telecommunication networks and other wired e-commerce technologies" (Süleyman Barutçu , 2007)[48]. Clarke, I. (2001)[40] has explained, "mobile commerce as the application of wireless communications networks and devices to the execution of transactions with monetary value". Frolick and Chen (2004)[49] has shared that "mobile commerce as any form of mobile communication between a business and its customer". Bai et al. (2015)[50] has identified "mobile commerce as the transaction conducted over a wireless telecommunication network, either directly or indirectly".

In a nutshell, comparing to e-commerce, mobile commerce has more payment gateways, wider reach, and higher levels of mobility.

Mobile commerce is the result of the development of the age-old concept of commerce, which went through enormous changes in the business and technology revolution. The viral spread of this new technological advancement had changed the way of shopping and retailing and advertising. The sellers who wanted the mobile presence adapted the latest Mobile Technology, Mobile Marketing, and m-Commerce (Palgrave, 2020)[51].

The m-commerce service providers should understand that mobile shoppers would be less reluctant to surf their product information on a non-user-friendly wireless device that is having weak Internet connection. Wireless users would be delighted to use data this more personalized than the very general data. Thus, technology-cantered wireless Internet business models would be substituted by models which most beneficial integrated the exclusive attributes of wireless m-commerce. In the long run, the development of e-commerce might be somewhat reliant upon the productive growth of robust consumer-focused m-commerce policies. "Mobile commerce is per se not included in the usual e-commerce market models. M-commerce would be able to increase the overall e-commerce market, because of its unique value proposition of giving easily personalised, local goods and services anytime and everywhere" (Durlacher, 2000)[12]

Mobile commerce should increase the ease of Operation, Mobile Website Quality, Bandwidth, Billing Services, Uniform Standards, Display Type, Minimum Screen Size, and Security for transactions. "Due to current technological challenges, limited-service availability, and varying mobile shopper

behaviour patterns, business strategies developed for m-commerce applications would find it necessary to emphasise differing characteristics than traditional e-commerce strategies" (Barnett, Hodges, & Wilshire, 2000)[13]

Moreover, India's bad logistics infrastructure creates difficulty for e-retailers to give quick delivery services. Even though India is having huge potential for mobile commerce services, it is having a very weak infrastructure of logistics. That delayed the prompt delivery to the mobile shoppers. Not only with logistics, but the network connectivity in India also is not stable and the interruptions were in the remote villages or small towns. India has one of the fastest-growing retail industries but the smallest market in e-commerce in the area of Asia Pacific. Implementing Cash On Delivery (COD) was a challenge for the sellers in e-commerce. The restrictions that were put on the FDI would create another challenging environment for the growth of the e-commerce industry in India (Tang & Ann, 2015)[52].

The Reserve Bank of India (RBI) gave licenses to few businesses such as UK Telecommunications group Vodafone in the initial stage (B. Mahapatra, 2013)[53]. The Government of India allowed Airtel customers to transfer money and deposits with a limit of Rs. 1,00,000 using a smartphone that was a significant movement in the financial sector in the past. The Government of India approved banking licenses for online mobile transactions (The Hindu, 2017)[54].

M-commerce is essential for both individual customers and commercial organizations. Further, businesses that are in old e-commerce should realize that adoption of mobile commerce would not require extreme changes to the current information structures.

M-commerce not only comprised existing e-commerce applications compatible with mobile devices and wireless networks but it also consists of numerous fresh applications that has made it possible because of the unique capacities of the wireless environment and user mobility (Varshney and Vetter, 2002)[55].

The growing technologies in handheld devices included the capacity to Voice, Mobile Data, and Video support along with the advancement of technology in the system of location tracking provided by wireless network service providers and the unparalleled progress in the use of several mobile instruments has led to the execution of a unique range of services built on locations under mobile commerce (Matthew, Sarker, & Varshney, 2004)[56]

There are hyperlocal delivery startups offering anything from groceries such as Big Basket, Pepper Tap, Zopnow to home services viz., Local Oye, House Joy to medicine such as 1 mg. In most cases, these businesses have developed desktop websites alongside mobile applications (apps.), as customers get accustomed to navigating mobile discovery and payment platforms. To illustrate, Grofers for Groceries and Faasos for preparation of meals. In many cases, these companies have put efforts to enhance customer experience in the real world by bridging gap between online and offline shopping experiences. Fashion marketers too have begun to use mobile communities and social sharing to curate personalized recommendations of offline clothing brands and venues nearby.(www.cnbc.com). The growth in mobile commerce was very much evident as well as competition in the industry. There are new service-based

firms like Urban Clap in which customers can make choice of their own to engage a service professional to their homes.

Several other developments including the business of cruise liners and airlines installing wireless LANs access points that could connect the rest of the world with the help of satellite networks created a new business venture of vehicular mobile commerce.

In the year of 2017, the Indian e-commerce industry had witnessed several private equities and venture capital deal estimated to US$ 2.1 Billion. There were successful six deals worth of $226 Million happened in between January to April in the year of 2018. Flipkart, that was attained by Walmart for US$16 Billion, Walmart that bought Flipkart had planned to launch a greater number of offline retail outlets to increase private labels in selected segments of electronic and fashion. Paytm had launched a wallet program like banking service to meet the demand for online transactions. Consumers could have zero balance to maintain the Paytm wallet (Abidi, 2018)[57].

Omni-channeling was all about reaching out to consumers through all the channels available. Reaching out to the consumers in all the possible ways ensured the opportunity to purchase. Omni-channeling promised a personalized experience for individual consumers.

M-commerce could be an enormous breakthrough to the market of India, considering the fulfilling the need of full ecosystem, allies must be synchronised so that the best advantages go to buyers, and the trust was secured. While the m-commerce market in India was in the evolving phase, m-payment and m-banking sectors had displayed a prominent growth over the times (Shiprocket, 2017)[20].

Major food suppliers and restaurant owners had launched mobile applications which enabled users to view the menus, receive and preserve rewards, and get new offers.

Consumers and businesses could make choices between many payment options that are habituated to mobile commerce, like cards both debit and credit, “premium-rate telephone numbers”, stored-value cards, and costs included to the consumer's phone bill (Chopra, Economic Times, 2014)[58].

1.5: KEY PLAYERS OF MOBILE COMMERCE:

The key driving forces behind the explosive growth were viz., low-cost smartphones, affordable data plans considering the fact that India has one of the lowest data prices, more 4G connections than 2G & 3G combined, a Government push for digital payments, aggressive competition between players, limited availability for offline shops in smaller towns, the largest unconquered market , Cash on Delivery payment option which accounts for around 75 percent of e-tail orders in rural areas, improved logistics network which enables efficient deliveries in remotest villages and vibrant ecosystem respectively.

An attempt has been made by the researcher to describe in brief major payers in mobile commerce as follows:

1.5.1: Flipkart:

Flipkart is an Indian electronic commerce provider started in Bangalore, India. Initially, it focused on selling books before spreading its wings into the other product categories such as Lifestyle, Fashion, Consumer Electronics, and many more.

It acquired PhonePe that enabled the options in mobile payment that was built on the "Unified Payment Interface" known as UPI. Walmart, a U.S. based retail chain, had acquired Flipkart by purchasing 77 percent stakes in August 2018 (Geeks of Geek, 2018)[59].

1.5.2: Snapdeal:

Snapdeal was an e-commerce giant based out New Delhi in India. Kunal Bahl and Rohit Bansal started the company in February 2010. Snapdeal was founded as a "Daily Deals Platform". However, it has grown up to be a successful e-market place by 2011. It was designed to be a wonderful marketplace for Clothing of both men and women along with children. It also sold may other items such as home kitchen essentials, fashion products, electronic items, gadgets and other domestic products (Wikipedia, n.d.)[60].

1.5.3: Shopclues:

Clues Network Pvt. Ltd own the online marketplace of Shopclues. In the year of 2011, Sanjay Sethi, Sandeep Aggarwal and Radhika Aggarwal established Shopclues and provided ways to the consumers to get access to deals and exclusive app-only offers (Tricks Bom, 2018)[61].

1.5.4: Paytm:

Paytm is wallet and payment app. with over more than 300 Million day-today users. It offers various service to its customers including recharging pre-paid mobile for making bill payments viz., Post-Paid Mobile Connections, Electricity Bills, and DTH Recharging as well as payment of LIC premium and online booking for train, bus, flight, and movie tickets.

It has provided easier ways of money transfers and UPI payments. It even offered services on. Daily commuters are able to recharge Metro Card with the help of Paytm.

It has gone to the extent of even buying gold on its platform. It offers quick payment option of loan payment. Customers can download the app. and by using QR scanner they can make the payment. Money can be transferred from one back to another bank account.

1.5.5: Natures Basket:

Natures Basket is the online grocery shopping app. Aimed at delivery of fresh foods and gourmet from across the globe. Godrej Group started Nature's Basket as its retail venture (Indiamart, 2005)[62].

1.5.6: Big Basket:

Big basket is an online supermarket shopping app. that offers wide range of delivery products including Groceries, Fresh Fruits and Vegetables across 25+ cities in India including Ahmedabad, Gandhi Nagar, Surat and Vadodara in Gujarat.

1.5.7: Zomato:

It is an international company with the presence of the USA, UK, and UAE. Apart from these countries, it offers services in Europe, North America including Canada.

Zomato helps consumers to explore various restaurants and their menus either to eat out or to order for its delivery at home. it from.

It helps the consumers to have a quick view of the restaurants and its locations with map facility supported with its Photos, and review of other diners. It helps them to save their time in the physical search of the restaurants. It has a rich coverage with above10,000 towns and cities across India.

1.5.8: Book My Show:

It helps the mobile shoppers to find the entertainment spots or activities on a fingertip. Mobile shoppers can book tickets and search for a range of entertainment options like Plays, Cinemas, Music Concerts, and Sports. It has also created exposure to the mobile shoppers to know about the Exhibitions and Events happenings in and around his or her town. It offers platforms to them to post their reviews on movies or on any other shows. It keeps them posted on the show timings as well as news.

1.5.9: Make My Trip:

Make my trip helps customers to online book Flight Tickets, Train Ticket, Bus Ticket, IRCTC, Outstation Cabs, Holiday Bookings, Hotel Booking and check PNR status as per Google Play store.

1.6: REVIEWING ADOPTION OF MOBILE COMMERCE IN INDIA:

According to the Report and analysis of App Annie, India has taken over the total number of mobile application downloads than the USA. There were 12.1 Billion mobile application downloads in India on their Tablets and Phones while 11.3 Billion downloads by smartphone users in the USA in 2017. The launch of low cost 4G network plan of Reliance Jio in 2016 has led to the threefold hike in the use of mobile data in India.

Indian smartphone users had increased the number of application downloads by three times compared with a five percent drop in downloading of mobile applications in the USA during 2015 to 2017. Chinese smartphone users downloaded half of the total global download of 175 Billion in 2017.

The USA smartphone users bagged the second spot by downloading mobile applications, half of what Chinese users had spent. Whereas in India, smartphone users had spent $210 Million only, placing it at a lower spot of 30th position. 97 percent of the Indian smartphone users had downloaded mobile applications(Apps.) from Google play. Indian smartphone users had spent an average of three hours on the applications daily. Indian smartphone users had downloaded free mobile applications might not get converted to the paid version of the same application. (G Seetharaman, 2018)[63].

The center of attention of m-Commerce remains creation of innovative cashless payment through use of a mobile device and delivering of the products that are ordered online through mobile devices under m-commerce. More than 80 percent smartphone users both in Metro and Non-Metro had visited e-commerce applications on smartphones. Overall, mobile shoppers had spent about 120 minutes average in a month on e-commerce applications. Cash on hand delivery type had a share of 75 percent

on an average of e-tail orders. The spread acceptance and adoption of electronic and or mobile commerce was in the rural areas too despite of high delivery costs in rural areas of India (The New Indian Express, 2018)[64].

In 2017, a study revealed that as many as 108 Million customers did online shopping using mobile phones which has emerged as the preferred choice of device for e-commerce sales.

There were almost 108 Million smartphone users who had made online shopping using smartphones in year 2017. The following categories had a high number of frequent sales, Accessories, and Apparels (54 percent), Personal Care and Beauty (43 percent) Items, compared to Electronics Goods (33 percent). Online ticket buyers were more comfortable using debit cards (23 percent) and credit cards (17 percent) as well as cash on delivery (COD) (58 percent). A large number of Internet users (74 percent) had preferred COD as their favorite way of payment other than the use of debit card (18 percent) and credit card (5 percent) respectively. The consumers stated a few driving factors to do online shopping such as cashback guarantee, speedy delivery, access to branded items, and great deals. However, the consumers came up with drawback that they were unable to touch and feel the product before they buy. Consumers were also concerned about the faulty products getting delivered. Consumers felt reluctant to make online shopping due to the increase in Internet and technical fraudulent, and necessity to enter the bank and personal details on online portals. Consumers also lacked the facility of bargaining online. The study revealed that there was an increase in shopping using a smartphone from the consumers of tier two and three cities in India (The New Indian Express, 2018)[65].

Those consumers who are having the habit of looking for any savings or discounts in the purchase prefers to go for online deals that offer considerable savings to them. The online offerings have led the consumers to spend more on m-commerce.

ASSOCHAM-Resurgent had conducted a joint study that predicted growth of 115 percent in online shopping due to the improved speed in the mobile Internet connection, availability of special offers only on the online platforms, and developed logistics across India.

1.6.1: Key Drivers of Adoption of Mobile Commerce:

An attempt has been made by the researcher to describe in brief key drivers responsible for adoption of mobile commerce as follows:

1.6.1.1: Simplicity & Usability:

The m-payment applications should consider an ergonomic GUI – "Graphical User Interface" easy handling to the purchaser. The designer should personalise mobile applications as per the satisfaction of end-users (Toma, 2012)[66].

1.6.1.2: Universality:

M-payments service should be made available even for the "low-value micro-payments" along with "high-value macro-payments". It might include domestic, regional, as well as worldwide market.

1.6.1.3: Interoperability:

The m-payments service should be competent in interacting with other systems, and it should be based on technologies, security, privacy, open standards, and trust. As an intention, payments through mobile phones had to be as hidden as money transactions. A customer always wants know how his or her data is being protected. M-Commerce must be "Bullet-proof", protection against inside or outside intrusions.

The solution should be to accept specialised crypto-chips external or embedded on the mobile device and "public key infrastructure security Biometrics" and pass-words combined into the "mobile payment solution architectures".

1.6.1.4: Cost:

From the point of micro and macro systems, the costs associated with deployment and usability for m-payments systems must be lower than the current payment options.

1.6.1.5: Speed:

The speed of the execution of mobile payments should be acceptable to consumers and merchants (Toma, 2012)[66].

1.7.: REVIEWING MOBILE COMMERCE AND MOBILE MARKETING BUSINESS PRACTICES:

Mobile marketing involves e-mails, promotions, Short Messaging Services(SMS), and any other marketing content conveyed "on-the-go" customers on their smartphone devices. The digital marketers make use of mobile marketing to involve customers anywhere, anytime for mobile shopping, as well as relationship-building methods (CourseHero, 2018)[67].

The growing number of smart devices and the increased rush in mobile web traffic had made digital mobile marketing a necessity for well-known brands.

Smartphones, Mobile Phones, Tablets, and Personal Digital Assistants (PDA) had increased over 100 percent in the USA and most customers owned more than a single mobile plan. Nearly, 70 percent of customers in the USA held a smartphone, and almost half of all U.S. households were mobile-only families with no wired phone. The market of the mobile application has erupted globally.

There are more than 3 Million apps available, and the average Smartphone has eleven to twenty applications installed on it. Most customers loved their phones and relied intensely on their devices. Almost 90 percent of customers who kept mobile phones, smartphones, iPads or Tablets, Computers, and TVs were willing to give up all of those other screens before giving up their smartphones (Ghaffar, 2019)[68]. Average Americans checked their phones 46 times in a day, 74 times by 18 to 24-year-old and killed 3 hours and 40 minutes in a day using mobile applications, texting, talking, and surfing the web content. To most mobile shoppers, a tablet or smartphone is a convenient shopping mate. It gave "On-The-Go" product data, guidance and reviews from other customers, price comparisons, and easy access to digital coupons and hot deals. 90 percent of smartphone users had utilised their phone while shopping (Powell & Stringham, 2004)[69]. More than 42 percent of all e-commerce shopping were done

on mobile devices. Smartphone has provided a rich platform to engage customers more intensely as they pass through the buying and or shopping activities with the options ranging from coupons, mobile ads, mobile websites, and texts to apps (Armstrong & Kotler, 2018)[70].

India is in the process of leapfrogging two global trends from a channel and device viewpoints in the past decade. Brick and Mortar modern trade players are increasingly developing their online presence, whereas, interestingly, online players are also planning to enter offline delivery centres. However, with the sheer size of possible customers ready to explore e-Commerce, mobile commerce offers a bundle of enormous opportunities for players in this field (Philip Kotler, Hermawan Kartajaya, Iwan Setiawan,2017)[71]. Even though advanced digital marketing has delivered some pleasurable experience, it is still challenging task to follow the smartphone users in his or use of multiple devices and channels. It has become also difficult to identify an effective mode of advertising and marketing.

1.8.: REVIEWING MOBILE COMMERCE AND DIGITAL MARKETING TRENDS:2019:

Marketing has evolved significantly over time, as driven by technological advances. It has shifted from Product-Driven (1. 0) to Customer-Centric (2. 0) to Human-Centric Marketing (3. 0) to a Digital Marketing (4. 0). The latest approach to digital marketing took into consideration of convergence of the online world of businesses and shoppers for total customer experience while keeping brands' authentic characters of style and substance. Marketing has changed over time. It is converging online, business world, and customer for a total experience. Marketing 4.0 has leveraged Machine-To-Machine Connectivity, Artificial Intelligence. Human-to-Human Connectivity and strengthening Customer Engagement (Kartajaya, Kotler, & Setiawan, 2017)[71].

Marketing is a business activity in which a product or service is promoted to the intended customers to avail the benefit of it while the manufacturer or retailer got their share as profit (Prasad, 2005)[72]. It could be summarized as an organizational process that helped the marketers to make decisions related to the four dimensions of the marketing, widely known as “4P” i.e., product, price, place, and promotion (Evans & Berman, 2004)[73]. Marketing was regarded as an essential, key, and profit-earning part of any business which no one can ignore (Shiram, 2017)[74].

From the traditional "4 Ps"; which talked about product, price, place, and promotion, a new set of marketing mix called "4 C s" viz., currency, co-creation, conversation, and communal activation. Co-creation was a novel product development approach in the digital economy (Singh, 2019)[75]. Co-creation also permitted consumers to personalize and customize services and products, thus generating superior value ideas (Kotler, Kartajaya, & Setiawan, 2017)[71].

A significant number of Internet users uses smartphone transactions has forced traditional marketers to adopt the digital marketing. In this digital era, marketers had to engage with the new socially engaging customers by interpreting their lifestyle, pains and passion, know their tools and consumption choices, recognize and connect with those who inspired them, and connecting the dots between the brands and customers with social content. Mobile shoppers are now able to experience personalized customer

service because of this era of information technology revolution which has disrupted the traditional way of marketing to replace it with paradigm shift in form of digital marketing (DMI, 2020)[76].

Digital marketing has an edge over traditional marketing as not only one could interact with the targeted audience in real-time but can also make prompt and fruitful steps based on their quick feedbacks. The targeted customers can be engaged in chats and online discussions for registering better brand presence and gain passive advice to improve product or service.

Thus, digital marketing measuring efforts have become easy and quick. The online advertisement has the ability to approach a widespread population, even the whole of the world (DMI, 2020)[76]

In the e-commerce world, online retailers gather a vast amount of data that has empowered the marketers to make big-data analytics to offer a different selling price for the specific customers. The idea of a "channel" has shifted in the digital economy.

The most significant distribution notion was peer-to-peer spreading in the shared economy. It advocates offering to customers user-friendly access to the products and services that are even owned by other customers too. Customers related to each other by providing shared access to the products and services almost instantly which was the basis of communal activation. Traditionally, the "promotion" had always been a single case in which companies conveying messages to consumers considering them as audiences. At present, the impact of social media enabled customers to react and acknowledge the comments about products and services. It has also enabled customers to initiate a conversation with other customers and continue to share messages and opinions, feedback with others. Most online digital platforms have developed community forums in which customers start to build conversations with each other. Mobile shoppers are associated with each other horizontally in the digital economy through the online communities. It has opened the discussion forums to the customers to connect with other customers who are interested in similar type products or services.

Online communities have a very significant influence in building brand awareness. It has also helped customers to make a choice of buying a product or not with the influence of word of mouth of other customers. A single comment about a product could change the sales trend of a product.

Digital marketing is witnessing a significant change due to technological advancements. Artificial intelligence and visual search caused a shift in consumer behaviour and digital marketing. The digital marketers need to display new strategies to make use of the latest high evolving technology because what worked in the previous year might not work now (Teamconnect18, 2018)[77].

An attempt has been made by the researcher to outline in brief emergent trends of digital marketing as follows.

1.8.1: Artificial Intelligence:

"Artificial intelligence" (AI) is likely to overtake the typical easy jobs. AI could help to analyze the behaviour of consumers and search patterns. It can utilize the information available in social media, posts in Blogs, and online shopping websites to understand the behavior of consumers in finding the products or any other services (Digital Marketing, 2019)[78].

1.8. 2: Programmatic Advertising:

The meaning of programmatic advertising is using artificial intelligence to automate advertisement purchasing so the seller could reach out more precise audiences. Auctions or "Real-time bidding" is a form of programmatic advertisement purchasing. It is very fast and efficient automation that meant it would convert higher consumers with lower cost in the process of consumer acquisition.

The Artificial intelligence make use of the instant messaging platform to communicate with existing customers who visit the websites in real time either day or night. By 2020, approximately 90 percent of digital display advertising would be based on programmatic advertisements as per the speculation of e-marketers.

1.8. 3: Chatbots:

Chatbots plays an essential role in digital marketing. The estimation is that $8Billion would be saved per annum using chatbots by the year 2022. The expected savings could happen In Health Care and Banking. Since chatbots are artificial intelligence, customers are more likely to interact with them. It has the qualities of providing accurate information, responsive, prompt answering, the ability to track the consumers' previous shopping or buying history. Virtual assistants provide excellent customer services and it could also execute repetitive task automatically that allows e-marketers to focus on other important tasks. To illustrate, Chatbot technology in Uber helps to communicate with the customers.

This technology has made it easier for Uber to hire cabs in "Facebook Messenger" too via connecting "Google Maps". Travelers could make a request, ride type, location tracking of the car etc. are able to know the estimation of the car arrival and payment for the ride.

1.8.4: Personalization:

It is important for e-marketers wanted to personalize the marketing tactics such as personalized content, e-mails, products and many more such other features and support services. With the help of tracking purchase history, links clicked, and consumer behavior, and customizing content has become much easier with leverage of customer relationships. Monks (Marketing Head of e-mails) stated that "The future of e-mail is real-time, behaviour-based personalization. It has been found that personalized, triggered e-mails based on behaviour are three times better than Batch-and-Blast e-mails." Netflix and Amazon Prime, who are in the same type of business are already making use of the power of personalization. Signing into to the Netflix account instantly shows that the carousels, artwork, banner, order, text, and search are all personalized to the consumers. According to Netflix, personalization helped to maximize enjoyment with minimum search time (Digital Marketing Powershow, 2019)[79].

1.8. 5: Video Marketing:

Another way to reach out to the mobile shopper is by creating presence in the video broadcasting by creating video contents. Businesses are making use of the live video by conducting interviews, giving demo of a product, "Behind the Scenes" of an event, glimpses of office and how things are made. To improve higher involvement with the Video Marketing, a marketer can broadcast a Video of a product or service either live or pre-recorded on the social medias such as LinkedIn, Instagram and

Facebook. According to Audiovisual Marketing Statistics-2016, 70 percent people shared brand's promotion video, if they found it exciting and 72 percent of businesses endorsed that such Video had enhanced its conversion rate. 52 percent of customers had conveyed that viewing Videos of products made them more self-confident while making decisions of online shopping (www.invodo.com). According to Forbes, 65 percent of shoppers had visited the marketer's website and 39 percent had made a call to e-marketers after watching a Video.

With ever decreasing costs of film equipment and the increasingly high-quality smartphone cameras, businesses and marketers are heading for Personalized Video Messages rather than Phone Calls or e-Mails, called as 1:1 Video Approach. Smartphones with high definition Video making facilities are available for both the mobile shoppers and marketers. Businesses make use of this rapidly growing industry by making personalized Videos rather than approaching the mobile shoppers via e-mail or phone calls, this new way of approach has created made more possibilities to connect with mobile shoppers 1:1. YouTube and many other Videos are pulled out in the search engines.

1.8.6: Influencer Marketing:

Influencer marketing is word-of-mouth a type of marketing that focuses on using key leaders to drive company's brand's message to the broader market. In addition to reaching out to the larger audience, the marketers create a consumer base in which they spread the message about the product with their peers and friends to influence them who in turn would spread the word about the product or services. Influencers would function as a best marketing tool than any other strategy used to market a product or service to attract the mobile shoppers.

In addition to the consumer base, marketers also use social media such as YouTube and Instagram. Other than mainstream media, there are famous YouTubers, Bloggers or journalists who are also useful in promoting influencer-marketing.

To illustrate, Amazon India worked hard at inculcating e-reading behaviors in India, from the time it introduced the Kindle Paperwhite in India.

It followed a strategy called "Crazy For Reading" as promotional campaign. Amazon tied a contract with Ashwin Sanghi and Amish Tripathi, well-known authors, to enhance the e-reading habits among Indians. Two films captured the authors' reading habits on the e-reader, taking the viewer through their journey of reading books to now reading on their Kindle, while the two shared the helpful features of the device. There are Videos made on the authors reading using the Kindle device and sharing the wonderful features in the device that are helpful to the e-readers.

1.8. 7: Social Messaging Applications:

Mobile shoppers use social media platforms of WhatsApp, Viber, "Facebook Messenger" and many other social applications to reach out to their families, friends, relatives, and colleagues by sharing Videos, Photos, and messages with them. This social media usage had skyrocketed in 2018. The majority of messaging apps. led by the WhatsApp Business API and Apple Business Chat are offering business opportunities for both marketing and customer service. Many social media developers

provide business opportunities to the marketers and Customer Support Centers to contact their target customers at their comfort zones. The primary reasons for "Professional Messenger Communication" saw a such leap was its ability to reach out to the global audience.

Followed by Facebook and Youtube, WhatsApp was the 3rd most used social media applications among the consumers worldwide in the year 2018. The communication that was done through WhatsApp was more direct than that of Facebook and YouTube. Though traditional social media has been affected by concerns in privacy and algorithms along with festering number of users, usage of messaging app is growing rapidly (Steup, 2018)[80].

WeChat in China has allowed the business owners to track, manage, and update the stock through the mobile applications. Meanwhile, users in LINE could pay for products through the applications of LINE Pay service. Gartner recognized a particular e-Commerce store in Japan experiencing an increase to 50 percent from 30 percent in income as an outcome of sales promotion via online (Maden, 2019)[81].

Kimra Luna was the founder of Freedom Hackers. She was an online business and personal branding strategist and helped entrepreneurs that were freedom-seeking to stand out, capture the attention of the audience, and create monetary value to their authentic online brands.

There were 1.3 Billion active users who were passing 2 Billion messages between business and people on monthly basis. On WhatsApp, there were about 1.3 Billion monthly users who were sending 55 Billion messages on daily basis. "Facebook Messenger", WhatsApp, and "WeChat" have more integrated active handlers than YouTube and Facebook. Thus, it makes sense that marketers are making their path and space into numerous marketing strategies.

Messaging applications in social media can be very beneficial in communicating with consumers directly by adding personalization and adding value to the experience to the users (Graham, 2019)[82].

1.8.8: Visual Search:

Visual search took the user experience to a completely subsequent level as users can upload an image to conduct a search and get more specific results. It can help the mobile shoppers to upload or use an image to undertake a search online to get more specific result.

To illustrate, CamFind is a visual-search mobile application, which enables its users to search for anything from their mobile phones simply by snapping a picture and this application would convey to them about it. The mobile shoppers can compare products and prices online using the visual search facility. It could also help them to book movie tickets by simply clicking the poster of the movie, it would display information on showtimes and local theatre information too. Marketers can make use of the trend available in Visual search to seize the mobile shoppers and provide the products or services that they look for in their shopping activities (Teamconnect18, 2018)[77]. Pinterest has also entered on the visual search segment and a customer can find details and reviews of a book with a help of a photo in Visual search. In a similar way, a photo of a business-card can also help to store the address, contact numbers and any other details found in card.

An excellent example of an AI-driven visual search application is Google Lens. It is a "set of vision-based computing capabilities that allows the smartphones to understand what is going on in a Photo, Video or Live Feed". To illustrate, if a smartphone user aims at a flower, the Google lens would share what type of flower that on the screen was.

Similarly, it would point the smartphone camera at a restaurant sign, it would show pull the information, and review of the restaurant. Google is making use of the AI system in Google Assistant and Google Photos. Another great function available in Google Lens is to connect the network automatically by merely pointing at the setting sticker on the router.

In connection with Assistant, Google Lens has the facility to schedule an event in the calendar by pointing out at a sign for a music concert, or any other programmers and a consumer can buy a ticket too. It can also provide details of the photos available in Google photos (Rahamani, 2017)[83].

1.8.9: Micro-Moments:

Micro-moments are an intent-rich part of the customer journey that helps to make decisions when there are multiple preferences. It offers chances for brands to interact with and influence customers at a key point in the buying cycle (Wordtracker, 2019)[84]. Micro-moments occur when customers reflexively turn increasingly towards use of a smartphone to act on a need to learn something, do something, discover something, watch something, or buy something (Ramaswamy, 2015)[85]. Google helps mobile shoppers to know more information about a product or a service that s/he wishes to buy instantly and it can be considered as micro moment. It helps brands to capitalize the moment when the mobile shoppers are struggling to make a choice and shape and make his or her shopping decisions.

The mobile shoppers who has shifted to use smartphones to make shopping and spends an average of 3 hours and 35 minutes on their smartphones each day get influenced by offering of brands, enables marketers to get closer to their target customers at the precise moments of intent.

Mobile shoppers screen time helps the marketers to stay closer to the shoppers in their crucial times of having intention to make mobile shopping. It helps the marketers that really care for the mobile shoppers by understanding their needs and change in their buying habits and shopping behaviour. A deep understanding in micro-moments are winning moment for the marketers.

In general, mobile shoppers make decisions instantly on “what to eat”, “which restaurant to choose”, “what to purchase”, or “where to go”, so micro-moments are crucial that each and every marketer should be willing to understand the mobile shoppers need and capitalize it (Allen, 2019)[86].

Since smartphones are handy and connected to the Internet, mobile shoppers are turning to smartphones to learn a piece of new information about a product or services, especially for a particular moment. Micro-moments are the times when mobile shopper or customers seek the help of a smartphone to gather more online information about anything and they usually turn to Google Search, Google Maps, and YouTube or any shopping websites or anywhere else to search for information for that moment. Thus, many brands have now started to use the micro-moments for its marketing activities (Hallam, 2019)[87].

1.8.10: Voice Search & Smart Speakers:

Voice Search plays a significant role in offering all the related data, that customers look for and information through audio search (Hegarty , 2020)[88].

It is a voice activated technically advanced world of "Google Home", "Amazon's Alexa", "Apple's Siri", and "Microsoft's Cortana" that has made ways into the mobile shoppers' home, not only in their homes as well as to their pockets too. A survey showed that by 2020, 50 percent of all search would become voice searches. At present, 20 percent of mobile queries on Google and 25 percent of Bing searches are voice searches.

The growing number of voice search has made it vital for companies to reimagine or rethink the digital marketing strategies (Mehlinger, 2019)[89]. Artificial Intelligence have become smarter. The number of blunders made by "Voice Assistants" like Alexa, Siri and Google has reduced dramatically. Many brands have encompassed voice search in their digital marketing strategies to bring value-based content efficiently to the users. In 2019, Domino's Pizza used voice search technology to upsurge the sales, that allowed Alexa to order pizzas for its users (Teamconnect18, 2018)[77]. In the future, there would be more companies that would make use of audio content to create brand awareness. Alexa can provide answers to the questions, also state that word from her sponsor that would create a space for voice ad like "Google AdWords", exclusively for home speakers.

1.8.11: Social Media Stories:

Content developing and storytelling especially in social medias are becoming more prominent in the digital marketing strategies. Marketers even make help of "Live Videos", that is the most lucrative societal rollouts till date, to encourage engagement and awareness on brands.

The first Snapchat emanated the idea of "My Story," followed by Instagram and Facebook stories got rolled out, and YouTube revealed their unique story format, "Reels." Stories used to disappear after a set period, this I s a boundless chance for marketers to make decent usage of Fear of Missing Out (FOMO). A manufacturer can share stores of employees with behind the making of a product concept. A manufacturer or marketer could make stores on customer reviews about the products and services. One of good example of creative tactic known as "BarkBox" in which they created a Instagram story. It consisted the interviews of dogs known as "Doggie Interview".

In the monthly subscription of BarkBox, they made consumers aware of the services or products of treats, goodies, and toys for dogs. It also included an interview of a happy pug with an employee containing of multiple video clippings. (Digital Fix, 2019)[90]. With the grown up digital, the customer experience with the future would be of personalized information, automated shopping suggestions, and technology that powered with Artificial Intelligence technology. To increase the interaction with the mobile shoppers, a marketer should have a rich and creative Audio and Video content to reach out to the specific targeted audience (Swanson , 2020)[91].

1.9.: FUTURE TRENDS IN M-COMMERCE:

Keeping track of fast and continuous development in technology, few trends have been identified, which are as follows:

1.9.1.: Increase in importance of Voice control:

Developing markets would see the next phase of Internet growth. However, it has the challenge of a lower level of literacy when compared with the developed countries where the literacy rate it more. To handle this problem, global podiums like Google, Amazon, and Facebook would look for increased interfaces that are user-friendly to address and help the newly onboarded users. Voice control would govern shortly. It is not about the growth of "Smart Speakers" in Africa.

Instead, it is about the complete ground-breaking change in the methods of people interacting in a device and content available through it.

1.9.2. Evolving of "Social Landscape":

Even though the social platforms are the trend, there have been a situation in which top social platforms lost its users over some time. To survive this attrition, it should have a combined platform in the upcoming years. If the downward trend in social media continues, investors would pressurize the acquisition of social platforms and provide a broader service. It seems that "The Next Big Innovation" is already overdue. The increased privacy concerns in social media would drive the new social platforms in the near future. The smartphone users can have control over their data and would be able to permit any other platforms as per their preferences. It would alter the fabric of the online businesses.

1.9.3. Marketing as A Service:

The companies that have seen the most significant success on Internet marketing have one thing in common that they treated marketing as a service.

Instead of investing money and time in the big corporate propaganda, and high budget advertising, these brands divert the budget into creating value to the audiences. Whether it is a simple "How-To-Do" video on YouTube or huge scale customer-centric events, the "Marketing As Service" concept would be a solution to the ongoing media inflation and would certainly shift the consumer attention from newsfeed to the stories (Kemp, 2019)[92].

1.10: REVIEWING GROWTH OF SMARTPHONE USERS:

As per Statistica, India is expected to reach figure of 973.89 Million smartphone users by the year 2025. In case of China, it had 38 percent of its population using smartphones in 2015 which had surged to 50 percent with figure of 675 Million smartphone users in the year 2019 (Staistica, 2020)[29]

According to the estimation of Technopark (2019)[93], smartphone invasion in India was projected to upsurge from 6 to 33 percent in 2020. It was estimated that the usage of the smartphone by 2020 was 80 percent from the ordinary feature phone. Global population started using smartphones not just for conversation, nevertheless for surfing the information using mobile data, playing, Google map for directions, and shopping (Technopak, 2019)[93] As per McKinsey's prediction, India's number of mobile

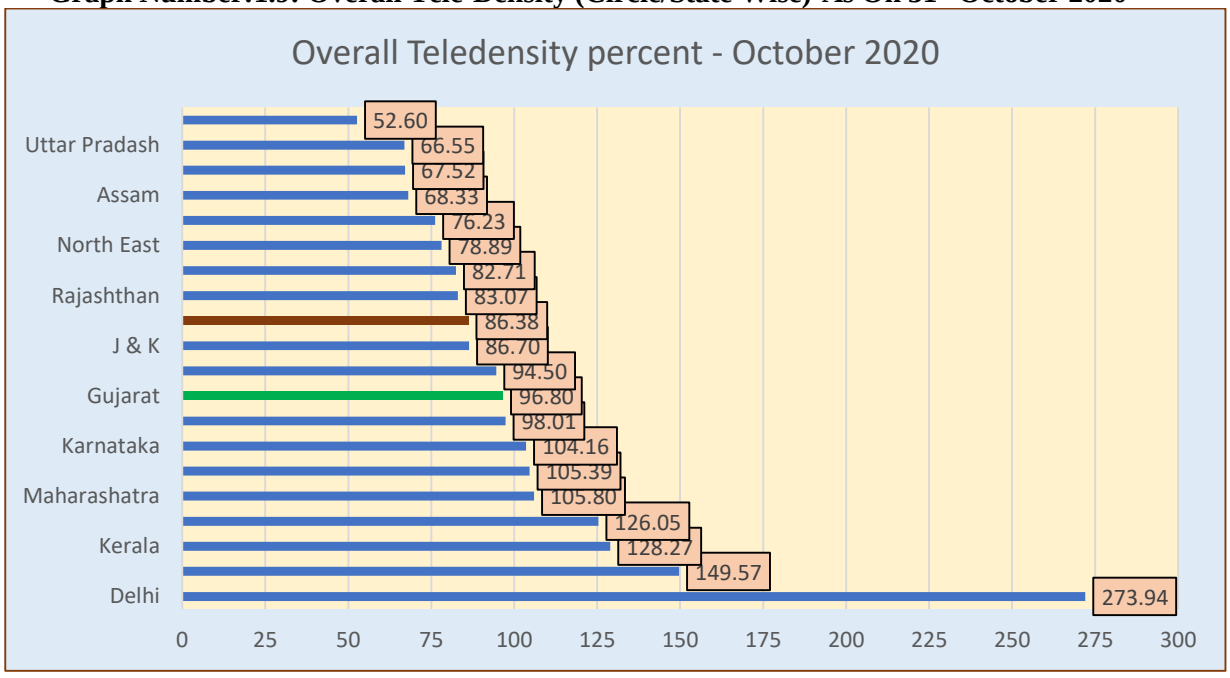
subscribers would double in 2023 to that of 560 Million subscribers that were by 2018. (Hariharan, 2019)[94].

Table Number:1.2: Highlights of Telecom Subscription

TELECOM REGULATORY AUTHORITY OF INDIA			
New Delhi, 28th January, 2021			
Press Release No. 03/2021 (www.trai.gov.in)			
Particulars	**Wireless**	**Wireline**	**Total (Wirless + Wireline)**
Total telephone subscribers (Million)	**1155.2**	**20.07**	**1175.27**
Net Addition in November, 2020 (Million)	3.39	0.08	3.47
Monthly Growth Rate	0.29%	0.40%	0.30%
Urban Telephone Subcribers (Million)	**630.4**	**18.20**	**648.6**

Source: (TRAI, 2021)[95]

Graph Number:1.9: Overall Tele-Density (Circle/State Wise)-As On 31st October 2020



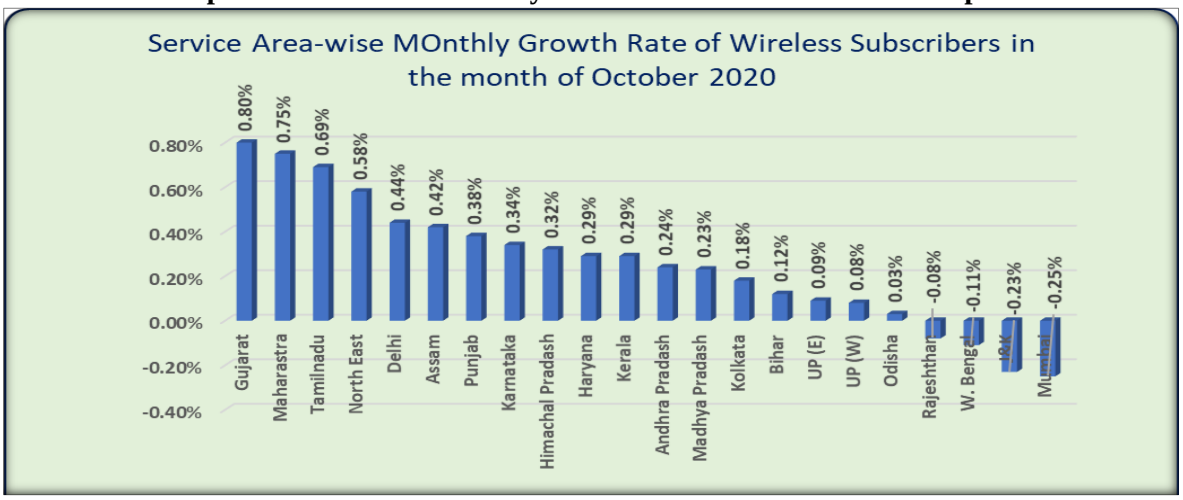
Source: (TRAI, 2020)[96]

The estimated population of Gujarat was 6.68 Crores in the year 2018-2019. However, the State had 6.92 Crore cellular connections. 64 percent people of Gujarat were using Internet. 42 percent people of Gujarat were having an Internet connection in September 2019, but it skyrocketed to 64 percent in a month (Himanshu Kaushik, 2020)[97]. Gujarat was higher than the national average. Apart from Kerala and Gujarat, Punjab, Maharashtra, Delhi, Himachal Pradesh, and Tamilnadu had smartphone penetration at over 50 percent (Taneja, 2018)[98].

Ritu Sharma (2020)[99] had conducted a study among the 91.58 students which had revealed that more

households held smartphone phones than a Television set and only 4 percent had unlimited Internet access. 24 percent of them had a normal mobile phone and only 3 percent household had owned laptop or desktop (Ritu Sharma, 2020)[99].

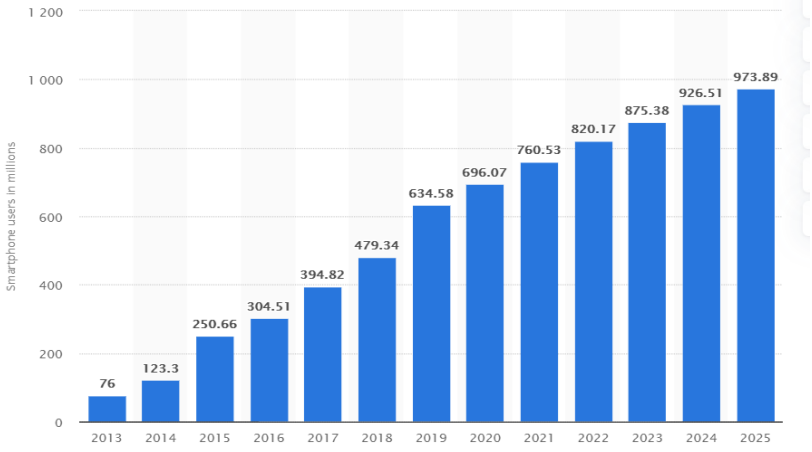
Graph Number:1.10: Monthly Growth Rate of Wireless Subscription



Source: TRAI (2020)[96]

The above graph showed that the growth rate of wireless subscribers in Gujarat was 0.80 percent that was a maximum growth in India during the month of October 2020.

Graph Number:1.11: Forecasting of Smartphone Users:



Source: (Statistica, 2018)[29]

1.11: REVIEWING USE OF SMARTPHONES OR MOBILES IN ONLINE SHOPPING ACTIVIITIES:

The researcher has put efforts in this part of the chapter to offer discussion in brief on use of smartphones in shopping and or mobile shopping in India as well as in the State of Gujarat and worldwide.

1.11.1: Reviewing Use of Smartphones in Online Shopping:

For many Indians, smartphones are the only option to access the Internet. There is a huge growth in the retail e-commerce industry of India. It was approximately USD 2.3 Billion in early stage to US$ 32

Billion in 2020 that only 3 percent of the retail industry in India (Chopra, How mobile commerce is increasingly becoming important for E-tailing, 2019)[93]

According to 2019 Report on State of Mobile of App Annie's, 43 percent of mobile shoppers had used smartphones primarily for online shopping activities17 percent of Tablet owners had used it for online shopping.

Total sessions of mobile shoppers had increased to 18 Billion hours in mobile shopping applications in the year 2018 which was 45 percent more compared with the figure of 2016 (Gartner, 2015)[100].

According to Adobe's Mobile-First World Report, 2018, a higher screen resolution had resulted in a huge number of $1.18 reflective of a significant association with an average value of an order. Adobe had expected the growth of order value by $1.18 on each additional 10,000 pixels on smartphones (Adobe Digital Insight, 2018)[101]. A study of 99 firms had predicted smartphones to become a key player in the overall growth of mobile commerce approximately to reach figure of 82 percent by end of 2021 (99 Firms, 2019)[27].

A study conducted by Dr. Barutcu (2008)[102] had revealed that marketers must make use of the natural segmentations that are offered by the different categories to increase the performance in the sales.

The growth and technological advancements in mobile commerce would change the way shoppers have been making online shopping and smartphones had moved out of the luxury segment to the necessity of the general population which is responsible for the rapid growth of mobile commerce. The use of smartphones anywhere and at any time have become easier because of improved Internet connectivity and its perceived usefulness as life style product and perceived value amongst smartphone users and mobile shoppers. For the business people, use of smartphones have created huge opportunities in form of Mobile Commerce, Mobile Marketing, and Online Gaming activities (Dr. Barutcu, 2008)[102].

According to Pew Research Centre Report (2019)[103], 8 out of 10 Americans are online shoppers, and almost half of them use any mobile device for online shopping., 79 percent of USA adults had made an online purchase, & amongst them, 51 percent of them had used any mobile device such as smartphone or tablets for online shopping online. According to Mobile Marketer, mobile commerce sales was expected to take over e-commerce sales in the year 2020 (Pew Reserach Center, 2019)[103].

1.11.2: Reviewing Use of Smartphones in Online Shopping in India:

As smartphones are interactive, brands have started to engage online shoppers with its products by mobile apps. It was found that nine out of ten shoppers did research before they had made online shopping. 80 percent of the web traffic has come from the mobile phones in India, which is the second largest in the world. Mobile had occupied 37 percent more space than TV in Indian households. It is estimated that India is expected to reach figure of 781 Million smartphone users in the year 2021 among which 75 percent of them would be the young individuals below the age group of 35 years. India accounts 12 percent of mobile app downloads and 88 percent of them had downloaded mobile apps. Retail and travel apps are the most downloaded mobile applications by Indians due to induced in-app offers and discounts (Fortune India, 2019)[104].

1.11.3: Reviewing Influences of Smartphones on Indian Shoppers:

India had seen an expanded number of smartphone users consuming their time on the mobile screen because of its universal connectivity, affordability, and personalization. Mobile devices had shifted much more than just entertainment handsets.

Notably, e-commerce has harnessed the power of wireless computing to develop mobile commerce that also accommodates commercial services just on the go. Mobile commerce is very much open to the customer input for the improvement of new services offered. The mobile device created meaningful opportunities for e-commerce, information services, entertainment, and payment services. Marketers and service providers need to learn what influenced the customer, which is very crucial with the speedy growth of mobile users. As customer opinion of services would affect the level of satisfaction, companies should pay attention to the attributes that are perceived as necessary by the customers for making choices (Dr. Haque, 2004)[105].

The development and use of mobile commerce as an emerging technology has the potential to change the way mobile shoppers conduct transactions dramatically.

This study also suggested several practical ideas. First, e-tailers should pay close consideration to both extrinsic and intrinsic factors perceived mobile service quality and flow in mobile services because both significantly affect customers' behavioral intention. E-tailers should be aware of the critical role of evaluation of source because evaluation of previous web service quality has a significant cross-environment influence on shoppers' evaluation of the extended mobile services. Then, they could leverage their existing web service quality to produce a similar favorable assessment of the extended mobile services (Kotler, Kartajaya, & Setiawan, 2017)[71]

1.12: REVIEWING LITERATURE OF SELECTED ASPECTS OF SMARTPHONE OR MOBILE SHOPPING APPLICATIONS:

1.12.1: Reviewing Quality of Mobile Shopping Applications:

The quality of mobile shopping applications is based on its capacity to integrate information through interfaces and deliver relevant information to the users by connecting with other databases or information fed by the developers on it.

The interoperability characteristic of mobile applications was shown according to the usage of the output of the application by another application. Mobile applications can be used with less data, minimum learning efforts, less cost to switch and a moderate level of interdependence amidst similar applications. Adoption of mobile apps. is dependent on two critical aspects like product quality and visibility (Lica, 2010)[106].

Smartphone users from different background behaved differently across different type of mobile applications. The shoppers that browsed on regular Internet websites did not show much dramatic

difference in their shopping or buying behaviour. Mobile shopping applications related to both an instant and constant improvement as per the market trend.

The data also did not endorse that mobile application purchases were kind of a purchases that would had been carried out else on the normal Internet web portals (Einav, Levin, Popov, & Sundaresan, 2014)[107].

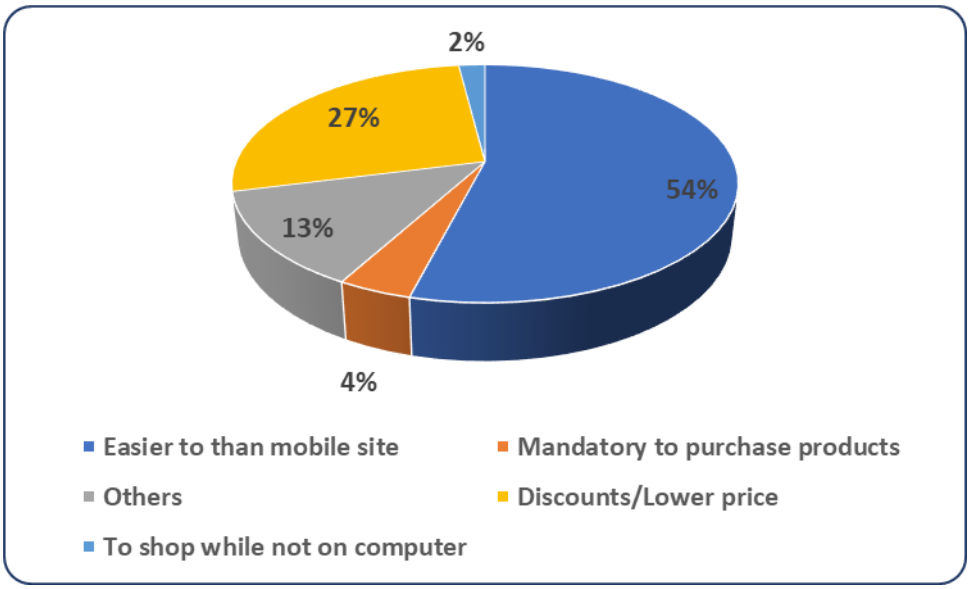
1.12.2: Reviewing Advantages of Using Mobile Applications:

Mobile applications, as popularly known, consume fewer data also they helped to make shopping even more quickly than on a mobile website. A greater number of online retailers in India are not yet to ready to recognise and embrace applications. However, weighing the greater functionality that mobile shopping applications provided, there would be a significant increase in the number of online retailers using mobile applications. The growth of the mobile device industry is inseparably associated with the growth of the number of mobile shopping applications. An application should not and do not overlook the popularity of social networks and therefore combine various social-driven functions (Baijulal, 2016)[108].

1.12.3: Reviewing Drivers for Downloading of the Smartphone Shopping Applications:

It was found that one in two millennials had downloaded mobile shopping applications. Due to limitations in mobile websites, most marketers had started to develop mobile applications. Downloading of Mobile shopping app had increased compared to any other apps being downloaded. Multi-branded retailers dominate most of the shopping apps. Most millennials had downloaded the mobile applications because of ease of use (Baijulal, 2016)[108].

Graph Number 1.12: Drivers for downloading the Mobile Applications



Source: Forbes (2019)[109]

The above figure shows the analysis of the drivers of downloading mobile applications. 54 percent of the mobile shoppers had stated that it was easier to make shopping on mobile applications. 27 percent

of them had stated that they had downloaded the mobile applications for the purpose of availing discounts and other offers. It implied that most of them were induced to shop on their smartphones for better shopping experiences and for availing the benefits of cash savings through the offers and discounts. Those innovators and early adopters who had adopted mobile commerce applications were also heavy Internet users (Forbes, 2019)[109].

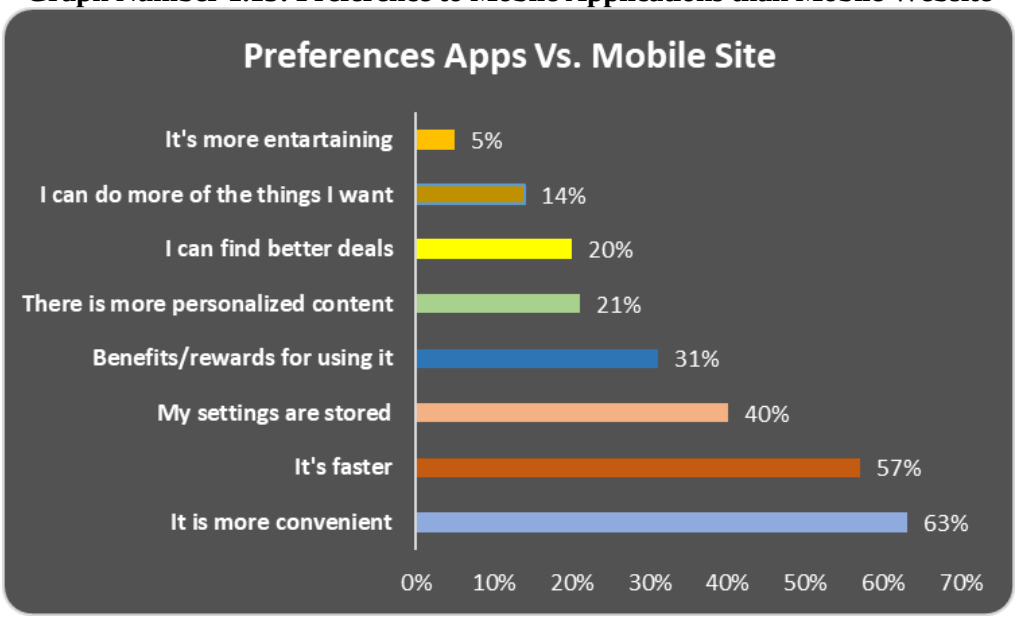
1.12.4: Differences Between Shopping Through Mobile Browser and Mobile Applications:

Shopping through mobile browser and mobile application had some variances in it. Mobile shoppers viewed approximately four times more products in shopping applications and added items to their shopping cart at approximately twice to that of mobile shopping websites. One hundred thirty percent higher on mobile shopping applications, because Apps were just more comfortable and very expedient to use. With higher comparison prices, mobile apps also had a fewer abandonment ratio from shopping cart than its counterpart of mobile browsers and desktop websites. Mobile apps simplified the checkout process. Buying something from a mobile website takes much longer than a mobile application because a lot of information is required to provide on a smaller screen.

Consumers were ready to go through the process of typing the information on normal websites; they had to do this activity frequently because shopping websites do not have some facilities of mobile shopping applications. While in the case of mobile application, all the information was stored, which reduces the friction. A mobile shopping application user could check out in just fewer clicks.

In case they left anything in their shopping cart, there was a better chance of getting that smartphone user to shop soon. Other than alerting the cart abandonment e-mails, mobile shoppers could be reminded with a push notification about shopping items half-left in their cart. Moreover, mobile shoppers also employed more than three times browsing on mobile applications compared to the time they used spent earlier on mobile websites and desktops. There had been a tendency the more time they utilise in web browsing, the higher possibilities of spending more money. It seemed that mobile shoppers were the most loyal customers.

Graph Number 1.13: Preference to Mobile Applications than Mobile Website



Source: Forbes (2018)[109]

Graph number 1.13 shows the reasons why mobile shoppers preferred shopping on mobile applications rather than on mobile websites. The majority (63 percent) preferred mobile shopping applications because it was very much convenient to shop using apps.

Followed by convenience, 57 percent said they preferred mobile shopping applications because it was faster. The other reasons for using mobile shopping applications were settings getting stored (40 percent), benefits and rewards (31 percent), more personalized content (21 percent), finding better deals (20 percent), could do more things (14 percent), and entertaining (5 percent). The mobile device was used not only for comparing prices between two sellers, but it could also do much more than that. Apps helped the buyers by having their data and previous purchase history and showed the relevant materials. When a customer entered into a perimeter that was close by the retail store, it sent compelling push messages to the buyers and induce them to buy by saying that limited offers were going only on today or anything like that (Localytics, 2010)[110].

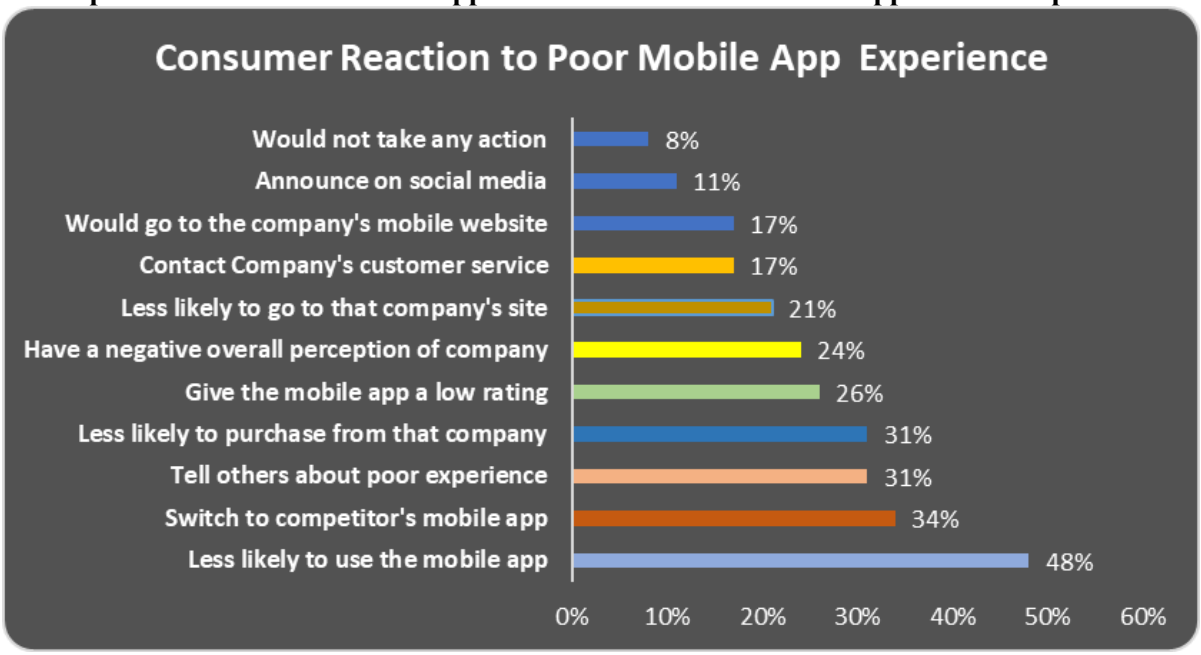
Mobile shoppers who had downloaded the mobile shopping apps tend to do purchasing more frequently spent less per session and returned the goods often. Mobile shoppers who had downloaded mobile shopping apps did more purchasing because of the special offers or deals that were pushed onto their screen and loyalty reward programs. Some mobile shoppers spent less per purchase because of the discount-laden interactive features.

Easy accessibility of the products through apps also contributed a significant number of more sales rather than standing in line and paying for the purchase (Hyde & Sheppard, 2019)[111].

Mobile shopping sites were used for selling the best-selling products and the latest collections. Whereas, the app could be used to recommend loyal mobile shoppers based on their purchase history and preferences. A mobile web shopper could locate the shop that was closer to him but on the mobile shopping app, he could track down store-specific inventory and traffic (Johnson, 2017)[112].

Mobile shopping apps helped mobile shoppers to understand or receive updates about their interested products by receiving push or add-in notifications (Bushnell, 2020)[113].

Graph Number 1.14: Mobile Shoppers' Reaction to Poor Mobile Applications Experiences



Source: (Y Media Labs, 2020)[114]

Graph number 1.14 has 1.17 analysed the mobile shoppers' reaction to the mobile shopping applications that were poor in quality. 48 percent said that they would not use the application, followed by them, 34 percent mobile shoppers said that they would switch to the competitors' application, 31 percent stated that they would tell their friends about the quality of the applications. The above figure implied that if the mobile shopping application's quality was poor, the mobile shoppers would abandon it and spread the word about the poor quality with their peers too. Few (17 percent) stated that they would reach out to customer care. It was comparatively lower than the mobile shoppers abandoning the mobile applications.

The above information warned the mobile shopping application developer to be cautious and produce applications that were good in quality. Otherwise, mobile shoppers were never hesitant to switch to the competitors.

Mobile commerce tended to have an exciting future ahead. A fast-changing business model, urban phenomenon, shortage in mobile shoppers' loyalty and manpower, demonetization, decrease in cash transaction, and improved network accompanying with banking facility created good opportunity for mobile commerce to explode. A study showed that today's mobile shoppers were doing on-the-go shopping and had a presence in all the browsing environments. There was a shift happened between desktop shopping to mobile shopping and retailer websites to apps. mobile shoppers were searching for multiple screens that influence the buying decisions. When a seller adopted the apps option for selling, it opened the door for multichannel marketing. Retailers had to prioritize the mobile app development otherwise they might lose the opportunity of generating revenue.

Mobile transactions were not only restricted to mobile websites only and it had extended to mobile apps with the collaboration of online and offline activities. Shopping through app contributed to two-third of transactions in North America, it was almost the same all around the world. The in-app transaction had increased globally by 22 percent year over year. mobile shoppers ended up buying things was more than three times higher in mobile apps than mobile websites (Criteo, 2019)[115]

1.12.5: Reviewing Literature of Downloading and Use of Mobile Shopping Applications:

Mobile applications (apps.) are programs that can be downloaded on mobile phones, whereas websites are designed in a way that can be adapted to mobile phones or tablets. Operating mobile shopping apps. do not require an Internet connection all the time. Mobile apps. are used for frequent shopping and repeated visits to the sellers, therefore it can increase the loyalty of the customers (Unitag, 2010)[116]. Marketers should understand the preference of the mobile shoppers, especially what they like and what they do not like while developing the shopping applications. Companies use mobile applications as one of the smart platforms and channels to communicate with mobile shoppers better (Rao, 2019)[117].

According to Sydow App Annie Report (2019)[118], consumer spending in apps. stores would exceed beyond $120 Billion. There is nothing more critical to business than a mobile device. It was found that 194 Billion applications were downloaded in year 2018. Mobile shoppers had spent $101 Billion in app stores. They had utilized their time on an average of three hours per day on mobile.

The spending time in mobile applications had grown by 50 percent more in 2018 compared to 2016. The downloads were up to 35 percent more during the same time (Sydow, 2019)[118].

As mobile shoppers' opinion of services would have an impact on the overall satisfaction, marketers should give attention to the attributes of smartphones and the quality of the mobile applications that were perceived as vital by the mobile shoppers (Dr. Haque, 2004)[105].

"Mobile applications markets with app stores have introduced an innovative approach to define and sell mobile shopping applications with access to a considerable body of heterogeneous consumer population" (Santanam & Lee, 2014)[119].

It had remarkable growth. Moreover, the effect of review rating was reduced in the initial sample version, or when the mobile apps. was hedonic because mobile shoppers experienced the app themselves before purchasing it (Liu, Au, & Choi, 2015)[120].

An international conference, named, "App. India 2015" was held to discuss the current and future trends of mobile applications. It had served as a platform of convergence of industry giants IBM, Junglee Games and Google. It provided opportunity to foresee the trends of mobile applications with the integration of functions that are socially-driven. The growth of the mobile device industry is inseparably linked to the development of the number of mobile shopping applications. Such an application should not and did not overlook the prevalence of social networks and, therefore, integrate various social-driven functions. As social networks now advance into an era of maturity, the researcher must take a sharp look at what were the robust enactments of social sharing capacities into mobile apps. and which are the wrong ones.

Social networking websites should be treated seriously while thinking of using it for mobile commerce. A mobile application developer must distinguish himself among the numerous applications available in the market to the reach of smartphone users. The objectives of this study were to learn the different types of people and their preferences while selecting the mobile shopping applications. It further helped to understand why certain type of people tended to select certain types of mobile applications over other applications. A detailed study would help the marketers to develop applications that would attract the mobile shoppers and place advertisements in the mobile applications.

A test version of mobile application with high user review tend to increase the sales when it was moved to the paid version. In contrast, a free version with high visibility with low product rank, did not yield high sales when it was converted into paid version. When a developer offered free a trial version with good quality and user rating, it would increase the sales of the mobile applications when it was moved to paid version. The user rating had significant influence in the sales of the mobile applications. Furthermore, the influence of review rating is reduced in the free version. These discoveries provide more information of the freemium strategy to embrace a market characterised by contemporary intra-market. The demand to get suggestions to improve the mobile applications is necessary and in need of fast growth in the importance of both social networks and mobile applications (Liu, Au, & Choi, 2015)[120].

The important aspects of mobile commerce applications are anytime and anywhere paradigm, and flexible.

Mobile commerce applications have the ability to accommodate the services, user interface, and required contents towards a particular context. There are numerous suggestions to the definition of context that has been previously proposed including various aspects in relationship with mobile commerce. Thus, a combined, proper & procedural approach to the portrayal of context and its benefits, related to the particular dimension of mobile commerce applications, has not been insofar obtainable. There is a difficulty, through a theoretical model that comprised: 1) a formal and precise description of context, 2) the portrayal of its particular attributes as metadata, 3) a procedure for its objectives, and 4) the demonstration of an extension of class diagrams of UML for its depiction, all of them custom-made to the unique qualities of mobile commerce applications.

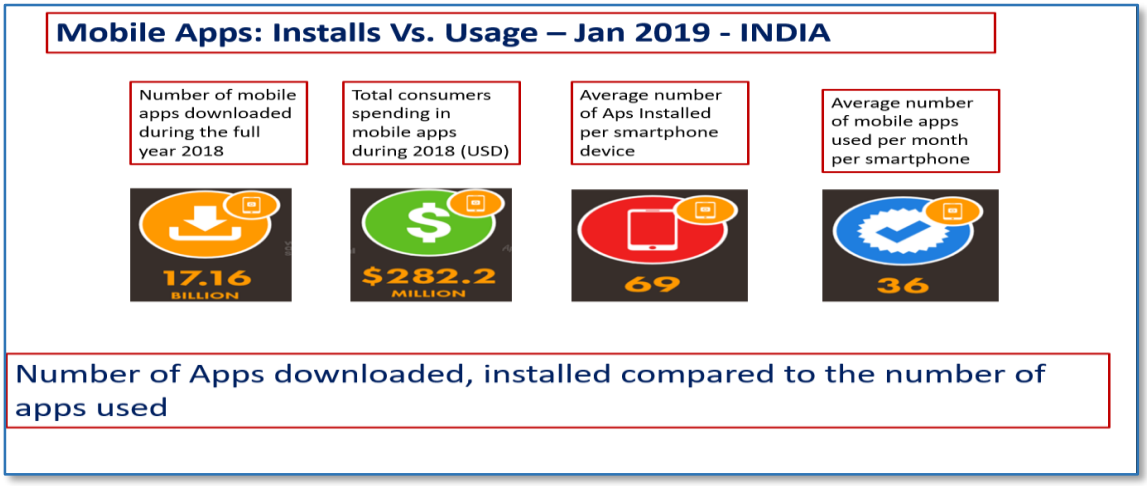
Innovativeness, weak longing for social interaction, and lack of confidence in technology interface with demographics decided whether customers require mobile Internet services over alternatives. Activities that are dependent on technology and gender directly influence choice behaviour. The ease of use of mobile shopping applications is downgraded as consumers spend more time using the mobile Internet. The App store provided the developers of the shopping applications considerable income made by the applications. It made the development of applications successful and gainful. Numerous retail sellers and non-profit organisations had built applications to inform clients of possible buying prospects and to benefit the client's communication to the organisation. Smartphone applications had intensely generated income in smartphone marketing.

As per BIA/Kelsey, total spending on mobile advertisements in the USA increased from $790 Million to $4 Billion between 2010 to 2015. The major growth was in advertising on local content, which rose to $2.8 Billion from $404 Million. While broadcast media continue to cope up the growth of rapid technology change and print media become more broken, spending on mobile advertising appeared to be more profitable and with an increase in the development of smartphone applications and the variety of organisations using smartphone applications to communicate with their clients grows, the mobile application developers must know why some people were more inclined to use a particular type of apps and what they needed from an application (Lane & Manner, 2012)[121].

The much-grown fame of new smartphone and wireless communication technologies had widened the application arenas of computing. It has grown up from the state of fixed desktop personal computers to anywhere accessible devices such as Shopping Malls, Vehicles, any Entertainment Zones, Home, Corridors, and Office. Handheld equipment like PDAs (Personal Digital Assistants) and smartphones of differing capacities and facilities let anytime and anywhere access to information, knowledge, and medium of electronic transactions. M-commerce applications are furthermore reached out to audiences with significantly divergent qualities with their attributes, preferences, services, requirements, and needs.

Figure Number 1.13: Mobile Applications: Installations Versus Its Usage

Mobile Applications: Installations Versus Its Usage



Source: (Hootsuite, 2020)[17]

The above figure showed the mobile applications downloaded by Indians in the year 2018. 17.16 Billion applications were downloaded in India. Smartphone users spent $282.2 Million on mobile applications. The Manifest, a famous data analysis company, surveyed 511 smartphone owners who had used at least three applications daily. This data shared insights on the reasons on "why people might underreport the recurrence they use applications and what drove people to open or delete an application". This study was useful to the marketers to understand and develop the mobile applications

to the targeted audiences. The study had revealed that social media applications are the most (39 percent) among smartphone users.

Followed by social media applications, gaming or communication application bagged the 2nd spot with 10 percent smartphone users were using it regularly. 32 percent of smartphone users had agreed that they had been accessing any mobile applications 1 to10 times in any given day but it was getting underreported. Nevertheless, 21 percent of smartphone users who were millennials stated that they access any app. more than fifty times in a day, half (51 percent) of the respondents had agreed that they deleted a minimum of one application in the past week. A quarter of the respondents said that they have been deleting the mobile applications due to the shortage of space in their smartphones.

The older generation had agreed that they had picked up their smartphones less frequently but they opened up a number of applications in each session. Millennials had agreed that they deleted the applications frequently and they never seemed bothering about it (Rao, 2019)[117].

Panko (2018)[122] had conducted a research study about millennials that grew up in the technically advanced and smartphones dominated world. It had revealed that most millennials tend to use smartphones more than their previous generations. There was another research conducted on the habits of people deleting mobile applications. Most respondents stated that they had deleted the applications just because of the simple reason of not using the applications for a long time or the applications were not meeting the expectations or demands of the users.

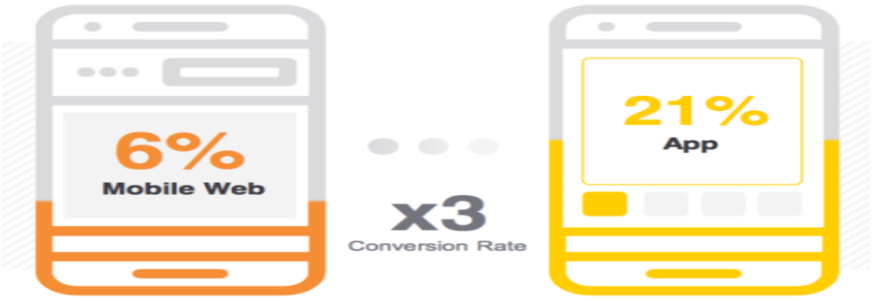
However, a part of the respondents (25 percent) had the intention to delete the application just because their smartphone was not having enough memory space to keep the applications. Only 6 percent of respondents had never deleted an app (Panko, 2018)[122].

Smartphone users killed their time on an average of 3 hours and 40 minutes on smartphone devices each day, out of which only just 10 percent of that time was spent on a mobile Web browser. 51 percent of smart phone users had opened a mobile application up to ten times in a day as well as 25 percent of smartphone users had opened a single application between 11 and 20 times each day. An additional 16 percent of smartphone users had opened the same app 21 to 50 times daily.

With several open, it had also increased the possibilities of the user performing a purchase. Shopping applications had seen a considerable growth rate in total sessions annually. The mobile shopping apps. use was 48 percent above average than ever before. It was a wonderful opportunity for any firm that sold online products and services (Panko, 2018)[122].

The below given picture shows the increase in sales done through mobile apps. which had showed the growth of sales done on mobile applications which had increased triple times in the year 2018 (Sterling, 2018)[123].

Figure Number. 1.14: Mobile Web Versus Applications



Source: (Sterling, 2018)[123]

1.12.6: Limitations of Smartphones & Smartphone Applications:

Even though the smartphone is easy to handle, it has some limitations too while shopping. The small screen may hinder the full view of the products, slow Internet connection could cause frustration to the smartphone users, and heavy applications may slow down the mobile device. To overcome that, e-marketers need to find innovative ways to overcome the hurdles to stay in the competitive market. Internet connectivity differs from area to area that can trouble the smartphone users while making the online shopping decisions. Smartphone users would not be able to see more items in a single-window due to the small screen of the smartphone device. Also, e-marketers cannot show eye-catching images. Flash Videos and Plug-ins may cause the slowness of the system. So, the smartphone users have to remove the add-on functionalities in the mobile websites or applications. Mobile security is regularly improving. However, some smartphone users did not have the trust to make the transactions on a smartphone device.

Moreover, mobile device networks provide more significant opportunities for hackers than the Internet. So, the transactions conducted on a mobile device must be secured transactions. Mobile phone configuration must be compatible with the mobile application. The configuration restricts the installation and hence use of the mobile applications. The followers of smart-phones were massively entering Indian land with the increase of Mobile Commerce. The biggest concern raised was whether the online cash transactions are secured or not. To take the worry away from the consumers, Government of India and TRAI has advised numerous stern guidelines. An effort is made to create awareness to identify the fraud and hacking that happened in mobile applications and the online world. The phone and data connectivity technologies of 2.5 G, 3G, 4G are ruling and prevailing in many areas of business including Telecommunications, Retailing, Information Technology, Finance, and in many other fields in recent times. They are currently accessible throughout 24x7x365.

The new trend of Internet connectivity and online availability of sales portals are accessible to mobile shoppers anytime throughout the year. The retailers are seeing new opportunities in the retailing industry due to the huge growth in mobile commerce (Rath, 2016)[124].

Developing mobile shopping applications is much more complex than the old computer programs. This is due to the operational aspects of mobile shopping applications.

It functions in all the environment that is mobile commerce was used for anytime and anywhere shopping. While developing mobile applications, the developer must consider the various aspects of the activities and environments involved in them. A smartphone has a varying component such as Battery Life, Screen Size, Speed of the RAM, Processing Power, Memory Space, and Stability needed to be considered while developing a smartphone application. Apart from the components of the smartphones, networking infrastructure has to be considered such as the Connectivity Speed, Bandwidth, and any frequent disconnections in the Internet connections. Other than these two aspects, external factors like Noise, the Brightness of the sun, and temperature were to be taken into consideration while developing a smartphone application. There are a lot of compromises had been made while developing a smartphone application. For example, downloading an image and displaying the pictures could be compromised to save the battery life and the cost of Internet data expense. If the bandwidth was low and the smartphone ran out of batteries, a smaller size image can be considered. Unlike desktops, the input to the shopping applications should be limited due to the challenges in typing on the small screen of the smartphones. Efforts have to be made to minimize the efforts in scrolling a page and the functions should be accessible with fewer clicks and navigations. Another key aspect to be considered is unlike desktop computers, smartphones are used as part of multi-tasking. Mobile shoppers can use the shopping applications while watching TV or on traveling or waiting in a queue. In such scenarios, the mobile applications' developers cannot assume that mobile shoppers paying full attention to the smartphones while operating them. Since mobile shopping applications functioned as a connecting point to the mobile shoppers, sellers, and Banking Services, building a shopping application have been done very carefully (Benou Poulcheria, Vassilakis Costas, 2012)[44].

1.13: REVIEWING LITERATURE OF MOBILE SHOPPERS' BEHAVIOUR AND MOBILE COMMERCE:

Smartphone users' or consumers are enticed to transact, with the so called 'Strategic Concentrated' toil of every e-Commerce player, application developer, or well-funded startup, consumers did transactions for discounts, percentage off, or something else which is more enticing. Mobile Shoppers who ordered groceries through an App, which used a big supermarket logistic and system to handle the supply chain of products and inventories. On discounted value, consumers got cash back and top of it, also got a free delivery through which s/he could save half of the cost, fuel, hassle in going to the market, parking cost and time. Similarly, Mobile wallet transactions are much trickier than the grocery purchases. Smartphone users' make use of wallet money to get free cab ride for free and then used another mobile and keep getting free rides one after another.

This synchronization of mobile and electronic commerce would change the behaviour of consumers and create innovative business opportunities. It would synergies mobile and online multi-channel venders had recommended that the multiple service channels interact with each other that would affect the intention of consumers' behaviour. Thus, the consumers' loyalty is based upon exposure to the quality of multi-channel in mobile and e-Commerce. However, there are few studies available on the

study of the relationships between the performance of multi-channel services and consumers' behaviour. Therefore, there is a scope for research to study impact of quality of multi-channel services of the consumers' loyalty in a mobile and online retail framework (Birgelen, Jong, & Ruyter, 2006)[125]. Consumers seemed to be greedy and look forward for quicker and faster services, and turn towards the loyalty service providers based on his or her experience. The previous studies had revealed that the fear of entering into mobile shopping could be overcome with the peers' positive feedback about the services. Consumers can also be attracted to faster delivery and lower costs. Word of mouth of fellow consumers in social network websites can have a tremendous influence on consumers' decision on buying and using mobile applications. The offers on m-coupon shared through the social network has a greater number of m-coupon redemption that would be helpful in promoting m-coupon. Consumers trust the recommendations from other consumers, friends, and peers, rather than advertisements from traders. A combination of couponing offers, and social networks would motivate the usage of m-coupon (Juniper-Research, 2012)[126]. Hence, examining the factors of the purpose of users to share m-coupons via social network websites is a significant research idea.

The nature of individual consumer's characters such as novelty, adaptability, and attraction too certainly influence mobile shoppers' desire to practice shopping on mobile phones. Yang (2012)[127] had examined the influences of consumer technology based on the theory of planned behaviour attributes in acceptance of mobile shopping. Customer technology characteristics were comprised of three aspects viz., consumer technology, self-efficacy, and level of user experience, and innovativeness.

Lai et al. (2012)[128] had undertook study to examine consumer converting behaviour to mobile shopping based on the Push-Pull-Mooring framework and concluded that peer influence, alternative attractiveness, inconvenience, trust, security, and switching expense influences mobile shopping shifting ideas. Zhou (2011a, b)[129, 130] had also revealed that trust, perceived ease of use, and flow affect the desire to follow mobile shopping. San-Martin and Lopez-Catalan (2013)[131] had inferred that trust, innovativeness, and involvement are vital factors that influence consumers' mobile shopping gratification. Now, various web services are introduced through channels on mobile phones. The practical challenges in mobile services acceptance in the multi-channel context has fascinated more considerable research initiatives. To illustrate, built on the "Trust Transfer Theory", Lu et al. (2011)[132] had studied mobile payment adoption in the multi-channel (web-cum-mobile) context. They had found that conviction in web payment mainly affected the confidence in the initial stage, however, continuous practice of mobile payments resulted in the increasing desire of mobile payment facilities.

In the same way, with the help of "Electronic Word-of-Mouth" services as research background, Wang et al. (2013)[133] too had found that trust in web services primarily affected confidence in the similar mobile services, which further affected desire to make use of the services offered on mobile services (Yang, 2015)[134].

1.13.1: Benefits Gained by Mobile Shoppers in Mobile Commerce:

Mobile Commerce or m-Commerce has many noteworthy benefits over its other rivals due to its unique integral features viz., suppleness, personalization, and spreading. It has ensured outstanding trade, higher efficiency, and market possibilities. Even though it is similar to Electronic Commerce based on the online platform, there are significant differences in the way they function and operate (Shiprocket, 2017)[20].

The retailers and mobile shoppers, both are getting attracted to online shopping on a smartphone because it is easy to use. Mobile shoppers are happy that they need not make any extra efforts of going to any physical stores to purchase or buy or shop and s/he does not need to carry a heavy device or laptop to make mobile shopping. Retailers are happy that they can reach out to the targeted audience in the platform of mobile commerce. All they needed to have are smartphones and good Internet connectivity.

India has seen a sharp increase in the use of smartphones. It is attracting mobile shoppers towards online shopping. Mobile shoppers are given the opportunity to online browse the products, compare the best competitive products, and look for the best deals available online, everything right from the browsing of the products, and getting them home delivered could be carried out online using the smartphone itself. (eBusiness India, 2015)[135].

Mobile Commerce is accessible at any location and at any time. Although, mobile hardware has little memory capability, the software could facilitate a more excellent level of categorization as well as sorting to match the mobile phone users' requirements.

The smartphones allow the mobile shoppers to carry out online shopping activities or obtain data even when they were involved in other activities like working or else travelling (Süleyman Barutçu , 2007)[48].

Local retailers can make use of the wireless network of m-commerce to pass any specific information to the consumers. Mobile shoppers can operate smartphones and make the online transactions within their comfort zone. The marketer can easily reach out to the targeted mobile shoppers to create a community to promote their products and services. It has also created a two-way communication so that online discussions can be initiated for the better product development and qualitative customer services.

Location-based product and information can be delivered using electronic service (e-service) or Mobile service (m-service) with the help of smartphones, palm-sized otherwise handheld computers, or vehicle-mounted interfaces.

The wireless telecommunications networks have become an important subject in the Information Systems (IS) and the marketing research community. The possibilities of m-service applications are directing many companies to invest in vast amounts of cash on these technologies.

M-service offers benefits that were unavailable in old commerce such as personalization, omnipresence, dissemination, and elasticity respectively (Siau et al., 2001)[45]. Providing value-improved, location-based and interactive facilities in the services of mobile commerce viz., content download, banking, wireless coupon, and roadside assistance/emergency to mobile shoppers appears to have become

increasingly essential to gain a viable advantage in the mobile market by establishing strong associations with important and critical clients.

There exists a lot of academic research available regarding the future popularity of m-commerce and its volume based on the empirical evidence (Varshney& Vetter, 2000; Vetter, 2001; Anckar & D'Incau, 2002)[55, 136, 137]. Though, many research firms and authors believe that the need for m-offers would rise steeply, others had been very traditional in the forecasts. Anckar & D'Incau (2002)[137] had claimed that the prevalence of mobile devices could not estimate the acceptance of m-service, just like the influence of computers could not measure the prevalence of wired e-commerce. Additionally, the failure of considerable numbers of dot-com companies have challenged the Directors to relearn that profits certainly do matter to them.

Multiple researchers have emphasized upon the key elements of m-commerce but are unable to provide sufficient empirical evidences for it (Clarke, 2001[40]; Anckar & D'Incau, 2002)[137]. The customers' primary motive for adopting m-commerce and desire to get into m-services stayed unclear. Pedersen & Ling (2003)[138] had stated that traditional Internet services and mobile commerce services should converge into one to provide many more opportunities in the arena of mobile commerce.

However, drawing a successful ploy to create a marketplace for mobile shopping would begin by understanding the real intentions of the mobile shoppers that would influence them to adopt mobile commerce and the various services offered within it.

Among Taiwan mobile shoppers, although all the efforts were made at promoting a more efficient and better m-service system, mobile shoppers failed to make use of the facilities to the full potential that were available to them. M-service providers should understand the mobile shoppers' intention to adopt m-commerce by effectively using wireless-based services. In the initial stage of m-commerce, the money invested in the customer relationship was unprofitable. Without the successful adoption of the crowd, a well-designed m-service might not be able to sustain.

1.13.2: Reach, Engage and Measure Todays' Empowered Mobile Shoppers:

Consumers are having access to various sources to learn more about the products and the marketers in the era of information. With the help of the information available, consumers can make better and smarter shopping decisions. Marketers are flooded with a vast quantity of information about the customers.

Technology has altered numerous businesses but nothing as compared to changes that happened in the marketing field. Google had launched a search engine in the year 1998 that had brought considerable change in marketing and incredible reach to the consumers.

After that, Facebook, LinkedIn, and Twitter had transformed the ecosystem in social medias. In the past two decades, the incredible improvement in technology has changed the way people lead their lives, the way of working and making shopping.

Consumers used to do a little research before buying or shopping a product. Online shoppers had checked five resources on an average before making a shopping decision in the year 2010, but it surged

to an average of 12 resources in the year 2013. With the help of increased Internet speed and affordable cost, consumers had spent 23 hours in a week on mobile applications, watching a video, listening to music, and spending time on social medias. Almost 83 percent of adults were using a smartphone to connect to the Internet. An estimated 59 percent of families with TV had owned a minimum of one device with Internet facilities such as Roku, "Apple TV", "Google Amazon Fire TV", Chromecast, personal computers, smartphone, tablet, or laptop.

Consumers' interaction with brands have drastically changed due to the development in the digital industry. The increase in new channels and devices have produced a mixed environment and new possibilities. Marketers can monitor the consumers' behaviour with their shopping history and the transactions they made in the past.

The prominent market players could reach out to their target consumers through various channels, platforms, and devices using different tools and technologies such as "Content Marketing", "Search Engine Marketing" (SEM), "Search Engine Optimization" (SEO), Pay-Per-Click advertising (PPC), Video or e-Mail Marketing, peer to peer marketing, and social media marketing.

Advancement of these techniques have helped marketers to identify the targeted consumers with accuracy to suggest the relevant products that would eventually lead to purchase. All the Internet users leave some digital footprints of their personal choices with regard to what they like, how they behave, who they are, and where they visited.

These Internet footprints helps marketers to engage their target consumers. This Internet footprint can be considered as an addressable track that has given an innovative avenue to the new generation of consumer-based marketing, and it has given significant experiences with customers. To illustrate, retailers could develop consistent user experiences in display advertising, in-store visits, and mobile applications. At the same time, B2B Businesses can engage with the prospect business partners at several levels of an institution via e-mail, content marketing and online events.

1.14: ACCEPTANCE AND ADOPTION OF PREVALENT SMARTPHONE APPLICATIONS FOR MOBILE SHOPPING BY INDIAN CONSUMERS:

A lot of e-tailers have realized the untapped potential of mobile commerce to increase the sales. They have speedily adopted the necessary tools, with encouraging results. Several of them have established e-commerce companies that have begun to acquire delivery startups or invested in their own hyperlocal initiatives.

To illustrate, Snapdeal has invested in grocery delivery startup, PepperTap and logistics firm GoJavas. Similarly, Paytm has invested in logistics company Loginext and acquired hyperlocal service marketplace. Amazon India has started offering same-day delivery from local shops through KiranaNow, and Flipkart has rolled out its grocery delivery service called Flipkart Nearby. Snapdeal.com got over half of its sales from consumers using smartphones, whereas the share of mobile purchases was 5 percent only (Jasminmobilev, 2018)[139]. Flipkart, received 20 percent of e-commerce

shopping or buying from mobile shoppers using mobile devices (Chopra, Economic Times, 2014)[58]. Not only online retailers, even the Domino's Pizza and American Pizza chain receives more than 10 percent of all online transactions through customers using mobile devices. Shoppers Stop has also realized the significance of mobile devices as a podium and has expanded the first citizen facilities and announced on promotion to mobile shoppers as well.

Mobile Wallet operators like Paytm, Airtel Money, M-Paisa, Mobiquik, Ezetap, Oxigen, ITZcash, Paycash, Ycash, and Icash among others are the players having larger share towards Mobile payments market. India's mobile wallet marketplace is anticipated to nurture from about $ 16 Billion to $ 184 Billion between 2018 to 2024, displaying progress at an astounding Compound Annual Growth Rate (CAGR) of 44 percent during 2019-2024 (Techscirearch, 2020)[140].

In the current Biome, players like Flipkart, Snapdeal, Amazon, Paytm etc. in the e-Commerce market are having a clear ambition and roadmap for mobile commerce. Any product that follows the traditional FMCG root is perfect to be rooted moreover growth is preordained through M-Commerce. To become successful, a brand or service provider will have to think of a long-term engagement plan after the acquisition.

This can be only planned when profits are made during the first transaction. Uber, Ola, Paytm, Drupal development services and Triveni are some of the titans who plays a big role in human evolution and culture through applications. e-Commerce players including the leaders Flipkart, Snapdeal and Amazon are focusing on increasing mobile shopping experience for mobile shoppers.

To illustrate, Amazon is known to be a multinational technology company focusing on e-Commerce, Artificial Intelligence(AI), and Cloud Computing. It is having one of the largest e-Commerce cloud computing platform and marketplace in the world as measured by revenue and market capitalization. It has 17 Crore original products. (Cards Offer, 2019)[141]. Amazon offers free online shopping application that has ensured a wide selection of product categories to choose from for the mobile shoppers to feel the great shopping experience with a lighter application, fast and easy to download. It offers user friendly access to the mobile shoppers to search for the desired products with the help of product or brand name or category. Amazon India provides convenient payment options, a good 24x7 customer support, quick delivery, policies on easy return of the dissatisfactory products, COD (Cash on Delivery), and moreover cent percent purchase protection on delivery with “A to Z Guarantee” of Amazon.

With Amazon India, it offers guarantees, convenient payment options, 24x7 customer service support, faster delivery, easy returns inclusive of COD and cent percent purchase protection to its online shoppers (Harsh, 2018)[142].

1.15: CONCLUDING REMARKS:

In this chapter of “Overall Review and Conceptual Framework of M-commerce and Shopping”, the researcher had reviewed various key concepts of m-commerce and m-shopping by going through numerous articles. Even though m-commerce is a developing concept in India, it has its own challenges

like poor telecom network connectivity, and constantly changing technologies. The mobile application developers are spending enormously in developing shopping applications that are lighter to load up quickly in a fraction of second in the lower network of 2G & 3G. A lot of technology investments need to be made, but the growth has seen a moderately exponential increase from mobile commerce. In this new scenario, where users cannot trust reliable connections, it has created high importance for how to trust the counterpart in a business transaction and how to avoid disconnection. The possible disconnection in a wireless connection might encourage users to cheat (CNBC, 2019)[143].

Marketers should understand the preference of the mobile shoppers, especially what they like and what they do not like while developing the shopping applications.

Electronic commerce would not replace all physical stores, but behaviour of people are changing, and it is essential to learn how these changes would influence demand for a brand's products and services, as well as how a marketer need to adapt new marketing activities to obtain maximum effectiveness and efficiency. As mobile shoppers' opinion of services would have an impact on the overall satisfaction, marketers should give attention to the attributes of smartphones and the quality of the mobile applications that were perceived as vital by the mobile shoppers (Dr. Haque, 2004)[105].

Mobile marketers are in the verge of winning the hearts of the mobile shoppers by enhancing experience of user interface with the applications. They need to constantly understand the changing mindset of the people to stay par with their expectation. Smartphones are coming up with new technologies that would improve the quality of the pictures displayed on the screen.

Since mobile shopping lacks the core aspect of seeing the products with real eyes and feeling products by touching them, the reality experience should be brought into the quality of the mobile shopping. Mobile application developers, marketers, manufacturers, and mobile shoppers should collaborate to come up with a technology that would meet the upcoming expectations of the online world, and internet savvy younger generation.

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