A Study of Paradigm Shift of E- retailing from Website to Mobile Application in India

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Prof. (Dr.) P.K. Sharma
School of Commerce and
Management

Submitted by
Ranu Gupta
(Research Scholar)
Reg. No. VMOU/Research/Ph.D./MA/2015/84

School of Commerce and Management
Vardhman Mahaveer Open University, Kota (Rajasthan) - 324010

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This is to certify that the Thesis entitled '**A Study of Paradigm Shift of E- retailing from Website to Mobile Application in India'** submitted for the degree of Doctor of Philosophy under the faculty of School of Commerce and Management, VMOU Kota, is his original piece of work and other sources wherever used for the purpose have been duly acknowledged. She has completed this study under my supervision and guidance.

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Date:

Prof. (Dr.) P.K. Sharma
(Research Supervisor)
School of Commerce and Management
Vardhman Mahaveer Open University, Kota

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Date:

(Research Scholar)
Ranu Gupta
(VMOU/Research/Ph.D./MA/2015/84)
School of Commerce and Management
Vardhman Mahaveer Open University, Kota

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Date: April , 2022 **Ranu Gupta**

List of Abbreviations

IMF	International Monetary Fund
GST	Goods and Service Tax
FDI	Foreign Direct Investment
ROI	Return of Investment
B2B	Business to Business
B2C	Business to Customer
O2O	Online to Offline
SIM	Subscriber Identity Module
E-RETAIL	Electronic Retail
M-RETAIL	Mobile Retail
PC	Personal Computer
TPB	Theory of Planned Behavior
URL	Uniform Resource Locator
SPSS	Statistical Package for Social Science
ANOVA	Analysis of Variance
IAMAI	Internet and Mobile Association of India
COD	Cash on Delivery

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Preface

With the growth of internet and globalization retail market has become dynamic and competitive. Invention of web or internet technology has affected business tremendously and revolutionized the business activities like shopping, retailing, marketing, advertising etc.

Today e-commerce has completely changed the conventional thought of business and entirely changed the business scenario. This revolution in business can be attributed to advent of internet. Internet has completely revolutionized the entire business scenario of the world and how India can be left behind. Ecommerce in India is also witnessing remarkable growth for last several years.

E-commerce has come a long way and it is becoming advanced day by day. As the technology is changing day-by-day, so is the e-commerce. Retailers are adopting and innovating in new technology so that buying and selling experience of buyers and sellers can become pleasant and their e-commerce experience become fast, smooth and comfortable so that they can buy and sell online effectively with ease and safety.

The objective is to study shifting behaviour of e-retailers from e-commerce to m-commerce, to investigate the reasons for shifting by e-retailers, to assess the perception and buying behaviour of indian consumers towards websites and mobile applications. This study also tests the hypothesis. This research is divided into chapters, which are described as follows.**Chapter first** discusses the current scenario of e-commerce in India. **Chapter second** elaborates the review of work on e-retailing and m-retailing around the globe. Various research papers, books, dissertations, doctoral thesis are reviewed in this chapter. **Chapter third** for research design of the study where the selection of proper methodology, selection of sample using appropriate sampling technique, development and construction of research tool (s), the process of data collection, coding and its interpretation has been discussed. **Fourth**

Chapter describes the objective wise analysis of shifting behavior of e-retailers and e-shoppers from website to mobile application in India through self-designed questionnaire. **This chapter also analyses** the percentage analysis of shifting behavior on the basis of age, occupation, income group, gender. Reasons for shifting towards m-commerce from e-commerce and challenges faced in m-commerce by e-retailers. **Last Chapter** is about findings**,** implications of the study, Conclusive Discussion and suggestions for future research.

CHAPTER – 1

INTRODUCTION

1 E-Commerce

With the rapid growth of the Internet and globalization of the market, the retail sector has become an increasingly competitive and dynamic business environment. Business and marketing activities are affected by invent of Internet technologies, and the Internet is revolutionizing commerce, marketing, retailing, shopping and advertising activities of products and services. There are several attractive attributes of the Internet to not only e-customers but also companies on time and money saving, communicate, convenience, easy accessibility, a selection from a wide range of alternatives, and the availability of information for making decisions, and all marketing activities can be performed via the Internet efficiently. In the era of globalization, companies are using Internet technologies to reach out to valued customers and to provide a point of contact 24 hours a day, seven days a week. E-retail and M-retail are the two important terms in the new Internet-based business domain. E-commerce can be defined as a way of conducting business by companies and customers performing electronic transactions through the Internet.

E-retail in India can grow from USD 2.3 billion at present to nearly USD 32 billion by 2022, thus comprising more than 3% of the total retail in the country. Given the nuanced characteristics of Indian Internet users, it can be estimated that the share of mobile commerce will rise sharply with the increase in the number of people not using personal computers and instead of making online purchases through their mobiles.

According to the **Internet and Mobile Association of India (IAMAI)**, out of the 354 million internet users in India, 213 million are **mobile-only**. Mobile phones, especially smartphones, are increasingly used by people of all genders,

origins, and ages, for both personal and business purposes. As per **Technopak's** estimates, smartphone penetration in India is expected to grow from the current 6% to 33%, by 2022. It is also estimated that, by 2022, 80% of the mobile devices used in the country will be smartphones. For a large percentage of the Indian population, however, smartphones are the first and only point of access to the Internet. As per **Telecom Regulatory Authority of India (TRAI)** data released in December 2013, of the total 237 million Internet subscribers in the country, 92% are mobile wireless subscribers, which fact highlights the importance of mobile Internet services.

There is a mobile revolution happening in India. Flipkart, India's largest online retailer, reported that a year ago, 6% of their traffic came from mobile and in the last 18 months this number has increased tenfold. This not only shows that there is a huge pie of traffic coming from mobiles but also that this pie is growing very rapidly.

India is a huge E-Commerce marketplace now with every age group transacting online – more often preferring shopping online instead of visiting offline stores for a large chunk of choices and offers. India has the world's 2nd largest number of smartphones and growing.

The Indian eCommerce industry has witnessed relentless, expansive growth over the past year. It is expected to evolve and grow worth to $79.4B by 2022, according to eMarketer. This is to be supplemented by the fact that the Indian digital population is estimated to grow by a staggering 50 million annually by 2022.

Beyond the obviously popular categories responsible for this growth like apparel, electronics and cosmetics, we see significant traction on product lines that drove several sceptics earlier, including furniture, jewellery and even gourmet food. With the user experience being provided getting richer by the day, with given conveniences like price comparison, hassle-free returns and cash or card-on-delivery, online purchasing has become the primary mode of shopping for millions of Indian shoppers already.

The internet has changed many aspects of society from business to recreation, from culture to communication and technology, as well as shopping and travelling. This new form of communication has provided new ways of doing business with the help of technological development. E-commerce is a new way of shopping and doing business. Technology has allowed companies to promote and sell their products on new markets, overcoming geographical borders as never before.

According to reports published by International Monetary Fund (IMF) and Central Statistics Office (CSO), India is among the fastest growing economies of the world. Among several factors, a conscious patronization of online commerce, and an emergence of retail as a dominant market segment have contributed to the unprecedented growth of eCommerce in India. For the financial year 2016-17, eCommerce sales reached the US $16 billion with a projection of a seven-fold growth within the next two fiscals as estimated by Morgan Stanley. By 2022 online commerce sales is expected to cross $120 billion.

1.1 Three Principal Driving Factors for the Growth of E-commerce Sector in India

1.1.1 Participation of Niche Companies in Online Trading

1.1.2 Unmatched FDI (Foreign Direct Investment)

1.1.3 Uniform GST (Goods and Services Tax)

1.1.1 Participation of Niche Companies in Online Trading

With the increase in awareness about the benefits of online trading, there has been a significant rise in investment in an eCommerce business. Hand in hand with offline trading, many established business houses have setup online transaction channels. Online retailing is the ‘in-thing’ in today’s commerce. Every other day a new company is being set in the online retail segment.

Specialization and customization are the underlining features of online trading. eCommerce companies are specializing in exclusive items and have consciously moved away from the ‘one for all’ concept. Every new company is

focusing on a definite item or targeting a particular demographic segment. So instead of addressing universally, it is better to concentrate on a single area and execute it to your best ability. Consumers prefer this kind of preferential treatment and personalized attention.

India, being a land full of diversity, offers ample scope for new companies to join in this eCommerce business tirade. Business opportunities are limitless considering the innumerable clothing, food, and cultural habits of Indian communities.

1.1.2 Unmatched FDI (Foreign Direct Investment)

Foreign direct investments (FDIs) until lately was not allowed in eCommerce for the single brand or multi-brand retail companies. It was only allowed for B2B businesses. Now, FDI is allowed in cases of wholesale trading or in cases where involvement is limited to the use of technology platform. The ever-expanding Indian eCommerce market has attracted companies from Europe and the United States who are joining as conglomerates.Though FDI has been successful in lending variety to the online market of India, their full participation is limited by government laws.

1.1.3 Uniform GST (Goods and Services Tax)

A uniform taxation structure, which GST (Goods and Services Tax) purports to achieve, would contribute to the success of eCommerce business in India. Online business is carried out pan-India, and a uniform tax structure makes calculations easier and uniform. Same tax for same product or service across Indian Territory would certainly help in maintaining price uniformity. For online business operators, differential tax structure was a deterrent.

Myntra, the online fashion retailer that Flipkart acquired a few years ago will completely shut down its web operations and will go the mobile app only route from 1st May 2015. The company will not even operate a mobile website. Today most of the traffic for the site is coming through its mobile app.

Ola, India's largest taxi-hailing company, saw cab bookings through its mobile app double in the past 12 months. In contrast, its website as a source of bookings has been negligible, as 80% of the bookings come through the app and around 20% through the call centre.

The E-tailing sites like Flipkart.com, Snapdeal.com, Myntra.com, Jabong.com, Junglee.com, e-kart.com, Amazon. In, healthkart.com, Yebhi.com, caratlane.com etc. have mushroomed in India and have been offering a plethora of goods to suite the Indian palette.

E-retail brands are spending their way through this mobile wave to capture the market. India seems to be the leader in the switch to mobile for e-commerce companies, with mobile platform accounting for 41% total e-commerce sales in 2014. The report notes that Indian e-commerce leaders are also more mobile-centric as compared to global leaders. Mobile accounts for around 75% of Snapdeal's orders and around 70% of Flipkart's orders. This has probably incentivised e-tailers like Myntra to chuck the desktop site and adopt an app-only model. (Seth ,2015) These stats are moving further up.

The mobile app usage has grown over 131% according to the panellists from firms like **PricewaterhouseCoopers (PwC)**, **Vserv, Mindbowser** and **(x)cube Labs**, the shift from e-commerce to m-commerce and more engagement with mobile shopping, news and personalized apps are factors responsible for the growth.

The further development of mobile commerce offers great opportunities for E- retailers in India. Besides the fact that mobile commerce in India will grow significantly over the next few years, the content available on mobile devices will be personalized to suit individual customers to a greater degree, using information about their previous purchases, social networks, etc. Although screen sizes and data speeds limit the user experience on smartphones, companies will have to continue to find innovative ways to present their products in ways that are competitive for e-commerce stores over personal computers. Moreover, the connection between social networks and mobile commerce will have to be leveraged to escalate sales.

2 Mobile Commerce

Mobile commerce, also called m-commerce or m-commerce, includes any monetary transaction completed using a mobile device. It is an advancement of e-commerce, enabling people to buy and sell goods or services from almost anywhere, simply using a mobile phone or tablet device. But mobile commerce is more than just a simple evolution of e-commerce.

M-commerce has been defined as a special branch of e-commerce, in which mobile devices and their network connection medium are used to buy, sell, and promote products, services, and information. Consumers have access to a wider market of products when they use wireless and internet technologies. Mobile devices with wide access to the Internet have allowed companies to reach consumers in more diverse ways, thus ensuring deep market penetration.

2.1 Types of Mobile Transactions in M-retail

- Mobile Money Transfers.
- Electronic Tickets and Boarding Pass.
- Digital Content Purchases and Delivery.
- Mobile Banking.
- Contactless Payments and in-App Payments.
- Location-Based Services.
- Mobile Marketing, Coupons, and Loyalty Cards.

While m-commerce covers a wide variety of transactions, they all can be categorized as one of three types:

2.1.1 Mobile Shopping

Mostly similar to e-commerce, but accessible through a mobile device. Mobile shopping is now possible through mobile-optimized websites, dedicated apps, and social media platforms.

2.1.2 Mobile Banking

Not too different from online banking, though you may find some transaction types are limited or restricted on mobile devices. Mobile banking usually involves a dedicated app, though some banks have started experimenting with the use of chatbots and messaging apps

2.1.3 Mobile Payments

There are so many diverse mobile payment options. As a business owner, and user of BigCommerce, exposure and interest in mobile commerce would mostly relate to shopping and payments.

2.2 Common Benefits of Mobile Commerce

2.2.1 Better Overall Experience for Customers

E-commerce already made shopping more convenient. Consumers are given access to:

- A wider variety of products.
- More competitive pricing.
- All without ever having to step away from their computer.

With mobile commerce, they still have these benefits, but now netizen doesn't even need a desktop computer. As far as consumers have a smartphone, they can shop whenever they want, wherever they are. New mobile commerce applications that enhance the customer experience even further include:

- **Augmented Reality**, with Ikea and Sephora among top retailers using augmented reality apps to complement their mobile commerce business

- Chatbot and messenger apps**,** which makes easier for businesses to interact with their customers using apps and services their customers already use and like.

2.2.2 Phenomenal Growth Potential

E-Marketer expects global e-commerce sales to reach $4.058 trillion by 2020, 15% of total retail sales. The percentage of that belonging to m-commerce will also continue to grow, as more than 50% of traffic coming from mobile devices. This suggests that retailers investing more in mobile commerce can ultimately expect a higher conversion rate and ROI.

2.2.3 A True Omni Channel Experience

An omnichannel experience is when stores sell both online and offline, likely also selling through multiple online channels (i.e. on Amazon, eBay, Facebook, B2B). There is the importance of listing your product wherever consumers are already spending their time. This is increasingly known as contextual commerce, a more strategic take on the overarching omnichannel term.Omni-channel is about being where your customers are and making it possible for them to buy what they want, And mobile commerce makes this easier than any other form of multi-channel marketing and selling.

M-commerce will represent nearly half of all global e-commerce by 2022, according to a report released by Goldman Sachs. The analyst firm also concluded in a recent report that purchases made with mobile and tablet devices will total $626 billion by 2022, more than four-and-a half times the 2013 total of $133 billion. Mobile ecommerce sales account for 34.5% of total ecommerce sales in 2017, and that number is growing. By 2023, m-commerce sales are expected to account for 54% of total ecommerce sales. According to Dynamic Yield, only 12% of consumers find shopping on the mobile web convenient results in a huge scope for improvement.

To take advantage of this growing market, retailers need to pay attention to their mobile experiences. Currently, desktop traffic is in the minority, and it

continues to shrink. Mobile conversion rates tend to be lower than on the desktop, according to "The State of Retailing Online," a recent report from Forrester Research. But although fewer visits result in sales, mobile devices provide other valuable services. "There are many micro conversions on a Web site," McMillan says. "We have people who leave reviews for our store immediately after visiting. If a user were to look at a store locator, any retailer would say it's a valuable thing."

Many retailers started out with separate mobile sites, but the current trend is for responsive design, which will adjust to the size of the user's screen. 53 percent of retailers listed mobile optimization or responsive design as a top priority for 2014, making it the most popular area of focus. Responsive design also ensures a customer has a consistent and clearer experience across devices. "Responsive design strips out all the clutter, because the screen has to be suitable for the smartphone. That has a big impact on encouraging people to buy things," notes David Moth, deputy editor of digital marketing research firm eConsultancy. When consumers want to buy on their mobile phones or tablets, they often have trouble entering information into the mobile app. The most creative vendors get around that. Major retailers such as Amazon require users to enter minimal information after logging in for the first time and store credit card information a user has entered on the desktop.

2.3 Inclusion of Food and Grocery in Online Retail

Earlier food and grocery were never thought of as items for online trading. However, with the change of working habits, and consumers opting for adaptability and convenience, there are now innumerable small and large eCommerce companies selling provisions and food items. The Indian eCommerce industry is in a position to sustain itself as a viable business opportunity not only for established names but even for start-ups.

E-commerce players like Amazon and Flipkart will be able to make airborne delivery of products to customers in India using drones enabled by technology being developed by the country's aviation sector, a minister announced on 2 November.

Indian e-commerce platform Flipkart has launched a smartphone under the brand name 'Billion'. The smartphone named Billion Capture Plus has also been launched. PhonePe receives major investment commitment of $500 million from Flipkart. SoftBank-backed Flipkart said it would invest USD 500 million in PhonePe to scale up operations of its payments arm. Flipkart has infused USD 75 million in PhonePe since the acquisition in 2015. This is one of the largest single investment commitments in the Indian fintech payments space and "is reflective of the opportunities" in the segment.

He added that the investment would be used to scale up PhonePe's technology platforms and expand merchant network and consumer base rapidly. He also noted that PhonePe has been growing at over 100 percent every two months this year.

According to Flipkart Group CEO Binny Bansal, Fintech and e-commerce are among the most visible faces of a new digital India that is powered by the youth and technology, and both are set for outstanding growth. PhonePe is a critical part of the overall strategy at Flipkart to build a comprehensive ecosystem for its customers. Flipkart is keen to rapid scale up the technology, reach and offerings of PhonePe. Formerly known as FX Mart Private Ltd, PhonePe competes with the likes of Amazon Pay, Paytm, and Mobikwik.

Amazon has also been ramping up efforts to strengthen its digital payments platform, Amazon Pay. Earlier this month, it increased the authorised share capital of the company by five times to Rs 2,000 crore. Also, earlier in the year, Amazon Corporate Holdings and Amazon.com Inc's had pumped in Rs 130 crore into Amazon Pay India.

The fintech ecosystem in India, especially payments, is undergoing a paradigm shift with booming mobile Internet usage and increasing adoption of digital platforms by people.Estimates suggest that India's digital payment sector is estimated to grow to USD 500 billion by 2020, representing around 15 percent of GDP, up from around USD 50 billion last year. PhonePe, which claims to be a leader in UPI payments space, said it registered over 16 million transactions in

September 2017. PhonePe's annual run rate touched a new high of USD 3.5 billion in terms of Total Payments Volume (TPV) in September.

3 India's Mobile Commerce Revolution

According to an article in the Times of India on April 6th 2015, Myntra wants to shut its website from May 1st 2015. In the mobile technology industry, it describes a profound, perhaps, watershed moment in the history of e-commerce.

Myntra, one of the top fashion e-commerce companies in India, previously shut down its website in a move to become a mobile app-only etailer. It had also shut down in the past its mobile website. More prominently, Myntra's parent company, Flipkart, has also shut down its mobile site. It was considering closing its website if the experiment worked with Myntra well.

The rapid deployment of mobile infrastructure and the plummeting costs of connectivity and smartphones are leading to "mobile only" internet usage in developing countries. The Internet and Mobile Association of India (2015) estimates 354 million internet users in India, 213 million of which are mobile users. But it is not just that the majority of users in India are on mobile, it's how far they have come, and how fast. Consider that as recently as June 2012, there were only 48 million mobile users in India. In three years, the mobile user base in India has quadrupled in size. More surprisingly, this number represents only 15% of the population of India. For some perspective, E-marketer estimates that by next year, over 200 million people in India will have smartphones, replacing the United States as the second largest smartphone market in the world.

3.1 E-Commerce to M-Commerce

Mobile revolution affected e-commerce in a dramatic way. The Times of India article stated that "Most leading Indian e-commerce players have seen mobile contribute to greater than 50-60% of transactions today from under 5% a year ago as smartphone penetration has risen exponentially." An article on Medianama in May 2014 described how Snapdeal, the second largest e-retailer in India behind

Flipkart, had seen its mobile sales increase 25 times in one year. In the fierce competitive world of E-tailing where the price is king and switching costs are non-existent, the players know that a mobile app can create a more personalized, higher-touch shopping experience than the mobile web. E-retailers estimates that by shifting to an app-only strategy now, they will capture a greater share of the massive market opportunity to come. This leads to all of the multi-billion dollar e-commerce companies in India to bet on an app-only strategy. As the other 900 million people in India who are still not internet users come online for the first time, most of them will be doing so on a mobile device.

4 Mobile Applications in E-retailing

4.1 The Rise of Mobile Apps

"There's an app for that!" A phrase that was trademark by Apple in 2010 and incorporates the idea that there are thousands of apps there, that can perform mostly function. Back in 2008, when the Apple App Store started, there were only 800 apps available for download. In 2017, we had a surprising 2,200,000 App Store apps. Before the availability of Apps, mobile phones replied on built-in software like Pocket Office, an MP3/MP4 player, and voice memo, a PDF and PPT viewer, need not to mention SMS and e-mail functions. Games were usually limited to Snake and Solitaire, and mobile web browsers were the only means of connecting to the Internet.

When mobile phones converted into smartphones, upshot the rise of mobile apps as we know them: dedicated software for a specific function. Some are for entertainment purposes, some are for personalizing one's device, and some are for more educational or work-related tasks. Businesses came up with apps of their own so that their products and services could be accessed in just a few taps. In the Apple Store alone, there are more than 1,000 apps submitted daily. Undeniable, it is the era of mobile apps, and although mobile websites still exist, it's just simple to use an app.

4.2 Preference of Mobile Apps over Mobile Websites

With the hike of mobile apps, mobile websites have been hypothesized useless to a certain degree. The 2016 U.S. Cross-Platform Future in Focus shows that mobile usage influences the desktop, with mobile app usage as the preferred medium of mobile browsing.

4.2.1 Few Reasons for Mobile Apps Replacing Mobile Websites:

- **Apps are dedicated** : they make it simpler for users to do what they need to do as compared to doing it on a mobile web-browser or on desktop.

- **Apps can utilize the features of its platform device**: This includes Camera, GPS and Bluetooth. With mobile apps, many of processes have been made automatic, especially with checkout and payments. You can also easily scan your credit card with your phone's camera instead of manually feeding key numbers. E-commerce apps are being integrated to wearable devices, and this will further make mobile websites outdated.

- **Some apps can be used offline**: Although some resources fill space in your storage (including the app itself), it's more convenient this way rather than having to connect to the Internet for everything.

- **Apps load quickly:** Users do not have to go through the burdensome process of opening the web browser, typing in the URL, and waiting for the page to load. It is certainly easier to just click the app's icon.

- **Easy to Navigate:** Some mobile websites are not compatible with mobile web browsers and can be difficult to use. It is also very easy to navigate using mobile apps.

4.3 E-commerce and Mobile Apps: a Perfect Match

Mobile apps have surged the world. There is an app for nearly everything, and e-commerce is not one overlooked. Many and more e-commerce businesses are developing apps of their own and it appears that this is a good step for the industry.

E-commerce itself has ament the way that people shop. Prior to online retail, people had to get ready to shop. Traffic is slow, malls are jam-packed, and that's not the worst part. Many times, after all that inconvenience, people go home empty handed because they could not find what they needed.

Then came online shopping. Customer can find completely what they want and within a relatively little time, the item will be delivered to their home. Above the convenience, there are many good deals and promos, that can make online purchasing cheaper than going to a brick-and-mortar store to shop. The time and money saved by online shopping has made it an attractive alternative.

Mobile apps for e-commerce businesses are once again changing shopping more convenient. With a single tap and a little scroll will lead to find the desired product for the customer.

4.4 Mobile Apps: Reshaping the E-commerce Industry

Studies have shown that up to 91% of netizens are using mobile retail apps rather than going to mobile websites. E-commerce businesses are presenting in their data that an average of two-thirds of all traffic to online stores are coming from mobile phones or tablets. This number itself shows that how dramatic the shift has been. Users are finding mobile apps more useful.

With sales figures continuing to be on the hike, this development surprising the industry. In 2015, revenues from mobile retailer apps reached $80.94 billion. In 2018, that number is expected to reach $206.53 billion, a 155% increase in just three years.

Mobile apps have helped small businesses to stand with established competitors, companies, and even industry leaders. It seems that mobile apps are giving new comers a backbone to stand.

In the past, mobile apps were difficult to create. Nowadays, for e-retailers, creating its own mobile app is easier, simpler and more affordable. Mobile app development software has made it possible for small businesses to create and publish their own mobile apps without the hassle of knowing how to code the app itself. Because of this innovation, even small businesses can afford mobile app instead of paying large amount to develop their own e-commerce app.

According to Kenneth Sytian, Mobile Apps are reshaping the E-commerce Industry. Mobile apps are being used by a wide range of businesses. Although dominated by the gaming and entertainment industries, the world of apps is now open for many different functionalities. There are apps for social networking sites, educational purposes, banking transactions, food industry etc.

Google's '*Win Every Micro-Moment With a Better Mobile Strategy'* says that people check their phones 150 times a day and on average, they spend around three and half hours on mobile apps. Furthermore, 70% of brands are adapting their business to the rise in mobile usage. Moreover, according to a 2016 study by Flurry Analytics, people spend more time using daily habit apps (news, sports, stock market reports, etc.) and social apps, with statistics showing 11% increase in mobile usage and a massive 69% increase in time spent on mobile apps compared to 2015's data.

5 Top Five E-retailersin India

5.1 Amazon:

Introduction

Amazon is the largest internet-based company in the United States. Amazon.com incorporated as an online bookstore, but soon diversified into selling Dvd's, Cds, video and mp3downloads or streaming software, videos games,

electronics, apparel, furniture, food, toys, and jewellery. The company also assembles consumer electronics mainly, kindle, fire tablets, and phone and majorly provide cloud-computing services. Amazon has separate retail websites for United States, United Kingdom & Ireland, France, Canada, Germany, the Netherlands, Italy, Spain, Australia, Brazil, Japan, China, India and Mexico, with websites for Sri Lanka and South-east, Asian countries coming soon. Amazon also provides international shipping to certain other countries for some of its products. In June 2013, Amazon.com had launched its Amazon India marketplace without any marketing campaigns. In July, 2013, Amazon had announced to invest $2 billion (Rs 12,000 crores) in India to expand the business, after its largest Indian rival, Flipkart too had announced to invest$1 billion.

Amazon.com, Inc. (Amazon.com), incorporated on May 28, 1996, serves consumers through Its retail websites and focus on selection, price, and convenience. The Company offers programs that enable sellers to sell their products on its website and their own branded websites and to fulfill orders through them, The Company operates in two segments: North America and International.
The Company serves consumers through its retail websites, and focus on selection, price, and convenience. The Company designs its websites to enable millions of products to be sold by the Company And by third parties across dozens of product categories. Customers access its websites directly and through its mobile websites and apps. It also manufactures and sells Kindle devices.

In May 2012, the Company acquired Kiva Systems, Inc. (Kiva). In October 2013, Amazon.com Inc acquired Ten Marks Education Inc. Effective February 5, 2014, Amazon.com Inc acquired Double Helix Games LLC. Effective May 6, 2014, the Company Acquired Iconology Inc. The Company offers its customers the lowest prices possible through low everyday product pricing and shipping offers, including through membership in Amazon Prime, and to improve its operating efficiencies so that it can continue to lower prices for its customers.

The Company also provides easy-to-use functionality, fast and reliable fulfilment, and timely Customer service. It offers programs that enable sellers to sell their products on its websites and their own branded websites and to fulfil orders through them. The Company serves developers and enterprises of all sizes through Amazon Web Services (AWS), which provides access to technology infrastructure that enables virtually any type of Business. The Company serves several authors and independent publishers with Kindle Direct Publishing.

In 2013, Amazon launched its site in India, Amazon.in. It has started with electronic goods and plans to expand into fashion apparel, beauty, home essentials, and healthcare categories by the end of 2013.

5.1.1 Exclusive Products

The Amazon Kindle is a series of e-readers designed and marketed by Amazon.com. Amazon Kindle devices enable users to browse, buy, download and read e-books, newspapers, magazines and other digital media via wireless networking to the Kindle store. The hardware platform, developed by Amazon subsidiary lab126, began as a single device and now comprises a range of devices, including e-readers with e ink electronic paper displays, and Android-based tablets with colour LCD screens. All Kindle devices integrate with the Kindle store to acquire content, and as of February 2016, the store has over 4.3 million e-books available in the US. The Oneplus one launched as an Amazon exclusive in India and the device is available for purchase on rival e-commerce store Flipkart. Moto g (gen 4) and moto g plus (gen 4) were available exclusively on Amazon.

5.1.2 Mobile App Front of Amazon

Amazon had the rapid growing app download rate in 2015. In October only, downloads increased 200 per cent. Amazon web traffic was the highest in October as per ComScore data, at 30 million visitors. Amazon active customers have gone up 230 percent every year. The "path-breaking debut of the year" award went to Amazon.in in detailing India's flagship conference and exhibition 2014, an event

that brought together major stakeholders in the retail and e-commerce business in the country.

The company also allowed merchants to set up their own branded pre-paid debit cards and mobile payments. To differentiate itself, the company acquired many it & e-commerce start-ups like pets.com, audible.com, junglee.com, imbd.com, zappos.com, woot etc.

Amazon India, the company received 65 per cent orders from tier ii and iii cities in 2015. To establish rural distribution centers in rural India, Amazon was training teams in checking, packaging, shipment, tracking deliveries on a mobile app, planning to make deliveries on time etc. Amazon has a 'service partner' program too for last-mile delivery in remote areas. Rising entrepreneurs in these areas act as Amazon.in's local distribution network providers and create the last-mile delivery footprint. This program now covers more than 100 satellite towns and tier ii, tier iii towns and villages.

Cloudtail India Pvt. Ltd, a joint venture between Amazon.com Inc. and N.R. Narayana Murthy's, became the biggest seller merchant on Amazon India's platform. Amazon.com, the world's largest online retailer has used loopholes in the law to deploy a mix of the marketplace and the direct-selling business model in India. Cloudtail has become the key growth driver for Amazon India by generating approximate 40% of the company's sales in some months.

5.1.3 Procedure

Amazon has started a logistics company in India to deliver products directly to consumers in the country's fast-growing online retail industry. Amazon transportation services private limited, a subsidiary of us-based Amazon, ship goods from sellers who transact on the company's online marketplace in India. Such a service is already being provided from Flipkart through logistics company ekart, and Snapdeal, which took a stake in delivery firm Gojavas. Amazon operates nine fulfilment centres (warehouses) in eight Indian states. It was the first online marketplace to offer two-day and one-day guaranteed delivery in India. Amazon

India launched Easyship, an assisted shipping platform for 12,000 out of its 20,000 sellers. With Easyship, sellers can choose their courier partners and ship on the same day. More than 60% of our customers are eligible for next-day shipping on products fulfilled by Amazon. Amazon has tussled with deliveries in cities where traffic jam is frequent and road signs are unreliable. In response, firms have set up logistics networks and use motorbikes instead of trucks. Another service introduced in India and considered for export to other markets, seller flex, provides sellers to have the flexibility to store goods and ship them to customers on their own, instead of routing them through Amazon. Amazon provides technology and training to confirm that goods are packed, labelled and delivered as the company want.

5.1.4 Technology Used

Amazon.com Inc had acquired Indian payments processor advantage payments Pvt Ltd and localizing its technology operations in India by launching new features in smartphone app for shoppers. These changes have improved both the company's user addition and retention rates. Downloads of Amazon India's shopping app tripled in the key shopping month of October, 2015 compared to the year-ago period. These numbers are important as a majority of online shopping in India and are expecting with smartphones over the next five years. Already, Amazon and its rivals Flipkart ltd and snapdeal (jasper infotech Pvt. Ltd) get more than 70% of their traffic from smartphones. Amazon's tech competency in consumer-facing products, predictive analytics, supply chain, among other areas are strengths for competing with Flipkart and snapdeal. Another change was the sign-up process for mobile customers. The previous sign-up process required to enter the email, then password, then netizen has verify it, etc., that was too time consuming. Now sign up page pre-detect the mobile number and the new user only has to enter a password. netizen get an OTP, which is read and entered automatically. Overall, the goal was to understand where there was resistance for the customer and then eliminate that. Initially, Amazon adopted most of the features of its global app in India. Those features included things such as barcode scanning, which were of no use to Indian shoppers. Apart from infuriating customers, the features also caused the app to become very heavy in terms of taking up space on

smartphones. This was majorly problematic as mostly of Amazon's current and future customers own low-end smartphones that offer limited storage space. Clumsy apps also do not tend to work best on cheap smartphones.

5.1.5 Segmentation

E-commerce giants like Amazon use demographic & psychographics segmentation to segment the markets. Amazon's segmentation is based on actual purchase behaviour: not what people might have expressed interest in, but what they actually did. Amazon's micro-level segmentation targets each customer individually, allowing the company to convert visitors into long-term, high-value customers. Customer segmentation often involves creating personas who will buy in a certain way & certain products.

Similarly, Amazon targets the middle class & upper-class people who have got hands-on experience in the basic technology but don't have time or prefer convenience over shopping from the physical outlets. Amazon has successfully positioned itself as a glocal (go global act local) e-commerce giant where one can buy anything & get it delivered at any remote locations. Using the catchphrase #aurdikhao in its campaign in India, it has further helped them carve a distinct space in the consumer's mind.

5.1.6 Marketing Strategies

To differentiate itself, the company acquired many it & e-commerce start-ups like pets.com, audible.com, junglee.com, imbd.com, zappos.com, woot etc. which helped them in providing high value to their customers using existing technology of the acquired partners at low cost. Amazon has also achieved economies of scale through extensive product offerings, which include electronics, toys and games, apparels and many more. These offerings help Amazon to keep its prices low thereon passing on the benefits to the consumers. Amazon's robust customer-centric approach to analyse the customer buying behaviour based upon preferences has helped them to have a competitive edge over their competitors. More than 50% of the consumers are the repeat buyers at Amazon.com.

Amazon.com has steadily increased its spending on advertising and promotion to make it's brand stronger and have higher brand equity. By April 2015, the brand of Amazon.com was worth us$ 176 billion. “a brand for a company is like a reputation for a person. You earn reputation by trying to do hard things. With more than 55% repeat buyers, the numbers tell everything about the brand. It is among 13 world’s most valuable brand” (Forbes list).

In developing countries as well as in developed, there are many local portals which give tough competition to Amazon. For example, – snapdeal, Flipkart is some of the competitors of Amazon. Similarly, Groupon, the first cry are specialized e-commerce portals which take away traffic from Amazon. Thus, these local competitors of each country also react strongly to Amazon’s presence. Market analysis in the marketing strategy of Amazon- the global e-commerce market is still in the evolving phase. With the adaptation of technology in developing economies, customers are now becoming more comfortable with online shopping.

Amazon customers consist of upper & middle-class social groups who have an inclination towards using e-commerce portals and are comfortable with online shopping. Majority of the customers are professionals or businesspersons who are busy with their business/job & find it convenient to purchase anything online rather than visiting the physical outlet to save time & money. Furthermore, customers might also be the ones who are searching for deals. Due to this, the portal is known to have specific days where they give massive discounts to their buyers.

5.2 Flipkart:

Introduction

Flipkart is an electronic commerce company founded in 2007, by Sachin Bansal and Binny Bansal, who were former Amazon employees. They had been working for Amazon.com previously. The company was formally incorporated in October 2008 as Flipkart Online Services Pvt. Ltd. During its early years, Flipkart dealt with only books and stepped into the consumer electronics category with the launch of mobile phones in 2010. Today, Flipkart is present across various

categories including movies, music, games, cameras, mobiles, computers, healthcare, personal products, home appliances and perfumes, apparels, toys, shoes and other products like electronic goods, air conditioners, air coolers, stationery supplies and life style products and e-books. Flipkart engages more than 9000 people. Flipkart allows payment methods such as cash on delivery, credit or debit card transactions, net banking, e-gift voucher and card swipe on delivery. It operates majorly in India, where it is headquartered in Bangalore, Karnataka.

Flipkart.com is an emerging Indian online mega-store. Flipkart has followed the same business model as of Amazon.com i.e. starting from selling books. Therefore, we can call it "Flipkart-the Amazon of India". However, Flipkart is now regional based e-Business that is only targeting the Indian market.

Flipkart delivers within two days where the first few e-commerce web sites were not able to gain trust of many Indian customers by not delivering the product on time. Flipkart comprehended this problem, and started delivering the products in two days for bringing back the customer to online shopping, and if there is a delay, then the customer is paid interest on the value of the product.

Flipkart initiated the idea of providing thirty- days return policy, to satisfy the Indian netizens after the product is delivered. This ensure the customers that the product delivered is not faulty.

Flipkart realized that most of the Indian netizens are not comfortable in sharing their credit card details online, as there is always a risk of fraud. For solving this problem, it provided the facility of card swipe on delivery. The delivery person brings the card swipe machine so that all the transaction happens in the presence of the customer.

It is now leading e-Commerce company in India, ranks at the top 20 websites in India, spread in 37 cities with 11.5 million book titles, 14 different categories, 3 million plus registered users and sale of 45000 items per day.

The company was initially self-funded by both of its co-founders spending Rs.4,00,000 to set up the business. They later raised funds from Private Equity Investors, i.e. Accel Partners and Tiger Global Management of $31 million. In the year 2010, the company acquired WeRead, a social book discovery tool. In 2011, Mime360, a digital content platform company and Chakpak.com a Bollywood news site, and its most recent acquisition Letsbuy.com which is second largest e-retailer in India in electronics.

- Flipkart employees 45000+ people.
- Two million sales unit and 4 million visitors per month.
- 11.5 million titles, Flipkart is India's largest online book retailer.
- Registered user base of 4 million customers.
- Dispatches as many as 45000 items per day, clocking daily sales of approximately Rs25 Cr.
- Flipkart is now expanding its network of distribution centres, procurement operations, to reach more and more Indian cities.
- The company is even setting up its own delivery network, which were in 37 cities, by which company can save cost associated to the outsourced shipping and logistic function.

Thus Flipkart has been successful by providing customers with great services like cash on delivery, 30-day replacements etc. Flipkart reported sales were 40 million in FY 2008–2009, 200 million in FY 2009– 2010 and 750 million for FY 2010–2011. In FY 2011–2012, Flipkart crossed the 5 billion (US$100 million) mark as Internet usage in the country increases and people got accustomed to making purchases online. Flipkart projects its sales to reach 10 billion by the end of the year 2014. Flipkart is aiming at generating a revenue of 50 billion (US$0.81 billion) by 2015.

On November 2012, Flipkart became one of the companies being probed for alleged violations of FDI regulations of the Foreign Exchange Management Act, 1999. In July 2013, Flipkart raised USD 160 million from private equity investors. In October 2013, Flipkart had raised an additional $160 million from new investors Dragoneer Investment Group, Morgan Stanley Wealth Management, Sofina SA and Vulcan Inc. with participation from existing investor Tiger Global. On 26 May 2014, Flipkart announced that it had raised $210 million from Yuri Milner's DST Global and its existing investors Tiger Global, Naspers and Iconiq Capital. In early July 2014, it was also highly speculated that Flipkart was in negotiations to raise at least $500 million, for a likely listing in the US for 2016. On 29 July 2014, Flipkart announced that it raised $1 billion from Tiger Global Management LLC, Accel Partners, and Morgan Stanley Investment Management and a new investor Singapore sovereign-wealth fund GIC. On 6 October 2014, Flipkart sold products worth INR 650Crore in 10 hours in a special one day event - "The Big Billion Day", claiming they had created e-commerce history, but their hard-won reputation for good customer service suffered because of technical problems, and angry reactions on social media from buyers disappointed with the pricing and availability of products. It claimed to sell a whopping 5 lakh mobile handsets, five-lakh clothes and shoes and 25,000 television sets within hours of opening its discounted sale at 8 AM.

5.2.1 Acquisitions by Flipkart

- 2010: weread, a social book discovery tool.
- 2011: mime360, a digital content platform company.
- 2011: chakpak.com, a Bollywood news site that offers updates, news, photos and videos. Flipkart acquired the rights to chakpak's digital catalogue which includes 40,000 filmographies, 10,000 movies and close to 50,000 ratings. Flipkart was not using its brand name.

- 2012: letsbuy.com, an Indian e-retailer in electronics. Flipkart has bought the company for an estimated us$25 million. Letsbuy.com was closed down, and all traffic of letsbuy has been diverted to Flipkart.

- 2014: acquired myntra.com in an estimated ₹ 20 billion (2,000 crores, about us$319 million) deal.

- 2015: Flipkart acquired a mobile marketing start-up appiterate as to strengthen its mobile platform.

Legally, Flipkart is not an Indian company since it is registered in Singapore and the majority of its stakeholders are foreigners. Because foreign companies are not allowed to do multi-brand e-retailing in India, Flipkart sells goods in India through a company called WS Retail. Other third-party sellers or companies can also sell goods through the Flipkart platform

Flipkart now employs more than 15000 people. Flipkart allows payment methods such as cash on delivery, credit or debit card transactions, net banking, e-gift voucher and card swipe on delivery. Flipkart present across more than 14 product categories & with a reach in around 150 cities and delivering 5 million shipments per month in India.

According to Flipkart Group CEO Binny Bansal, PhonePe is a critical part of the overall strategy at Flipkart to build a comprehensive ecosystem for their customers. Flipkart is keen to rapid scale up the technology, reach and offerings of PhonePe. Formerly known as FX Mart Private Ltd, PhonePe competes with the likes of Amazon Pay, Paytm, and Mobikwik.

5.2.2 Exclusive Products

Motorola mobility, previously owned by Google now sold to Lenovo, in an exclusive tie-up with Flipkart, launched its budget smartphone moto g in India on 5 February 2014. They also launched their Android smartphone, the moto x, on 19 March 2014. The sale of high-end smartphone xiaomi mi3 produced by xiaomi tech was launched on Flipkart platform only in India. In July 2014 Flipkart launched its

own set of the tablet, mobile phones & tablet. The first among these series of tablet phones was digiflip pro xt 712 tablet. On 2 September 2014, Flipkart held a flash sale of the xiaomi redmi 1s budget Android smartphone, which was launched in India in July 2014. Redmi note in India exclusively through Flipkart. In July 2014 Flipkart launched its first networking router, under its own brand name named digiflip wr001 300 mbit/s wireless n router. In september 2014 Flipkart launched its in-house home appliances and personal healthcare brand citron. The label includes a wide range of cooking utilities and grooming products.

5.2.3 Achievements

In September 2015, Sachin Bansal and binny Bansal entered Forbes India rich list debuting at the 86th position with a net worth of $1.3 billion each. Co-founder of Flipkart, Sachin Bansal, got entrepreneur of the year award 2012-2013 from Economic Times, Indian daily economic newspaper. Flipkart.com was awarded young Turk of the year at CNBC tv 18's 'India business leader awards 2012' (ibla). Flipkart.com- got nominated for Indiamart leaders of tomorrow awards 2011.

5.2.4 Logistic Partners

E-kart provides logistic solutions for Indian e-commerce leader Flipkart. Flipkart today has three companies: ws retail, which is the primary retailer on Flipkart.com, ekart logistics, the shipping partner for ws retail and others, and Flipkart itself, which builds, maintains and runs the marketplace. Flipkart tied up with partner stores that act as alternative delivery channels (such as ecom express, blue dart, gatti etc), so that customers can pick up their shipments at their convenience. Flipkart has started implementing the automation technology to pick and move packages to designated picking station, among several other applications that make warehouse processes quicker and smoother by bringing together core capabilities of iot, devices, data and automation.

5.2.5 Procedure

Flipkart team frame their supply chain end to end and know exactly how much time (hours and minutes) would it take for delivery from step by step. Then they proceed a thorough analysis and optimization to achieve the best-possible timelines for each step. In logistics, they need to know transport time and reliability. They have to work closely with vendors/airlines to ensure reliable connection and delivery of in-a-day packages without any offloading. In fact, there are some airline partners who are piloting their express delivery capabilities along with their pilot in-a-day. Airlines are even helping their partners grow. In the last mile logistics, they ensure that the delivery is attempted within the promised time without fail and have dedicated field executives to guarantee the delivery.

5.2.6 Technology Used

To promise in-a-day delivery guarantee to the customers, Flipkart developed a new product called promise engine. This engine know all about fulfilment capabilities and thus the location exactly where the item will be shipped from (depending on seller's inventory location). Hence, it can calculate an accurate promise date for the customer. This engine also able to provide multiple delivery speed options to customers to choose from. Once an order is placed, the fulfilment system can give an exact hour and minute's deadline to FCS to process the item. This deadline also accounts for the transport connection between the source and the destination. The deadline feature helps us to ensure seamless processing of both in-a-day and regular orders. Flipkart claims that its algorithm on routing makes delivery and pick-up more accurate and faster than anyone else in this business. Flipkart's investment in mapmyIndia has helped the company too. The accurate address data for both sellers and buyers allow delivery partner to better schedule deliveries and pickups.

5.2.7 Advertising Strategy

Happy, creative services, which has been the brand's advertising agency since 2010. Myntra, the fashion e-commerce major which Flipkart had acquired in May 2014, will be handled by Lowe Lintas, which had already been the brand's creative agency since March 2014. Flipkart and Myntra continue to operate as

separate entities, and the founder of Myntra, Mukesh Bansal is the head the fashion business for Flipkart and join the Flipkart board. Flipkart's first tv commercial for the e-retailer, 'fairytale', was an elaborate 100-second effort. Created in the old English style of fairytales, it was the story of an old woman, a voracious reader, who lives in a cottage and orders her daily read by clicking on a live mouse. The rest of the ads including 'no kidding', 'shopping ka Naya address' and the most recent one, 'Flipkart it', have been etched in TV viewers' minds owing to the unique approach of using child actors to communicate the ease of shopping on Flipkart. In 2013, the e-commerce portal announced its entry into the kingdom of fashion and lifestyle with a new TV campaign titled 'fashion has a new address' - an extension of its previous punchline, 'shopping has a new address'.

5.3 Snapdeal:

Introduction

Snapdeal.com was launched in February 2010, headquartered in Delhi. The company was founded by Kunal Bahl (Wharton graduate) and Rohit Bansal (an alumnus of IIT Delhi), are school friends. It is a daily deals platform inspired by Groupon.com but expanded in September 2011 to become an e-commerce company via a marketplace model after watching Flipkart's success in the local market. With 20 million registered users, Snapdeal is one of the first and largest online market places in India offering 4 million+ products across diverse categories 20,000 sellers, shipping to 4,000 towns and cities in India. It has been top rated e-commerce site in India by Dataquest/ Sapient E-commerce Survey 2011.

Snapdeal is an online marketplace offering best-priced deals on branded products such as Mobiles, electronics, apparel and accessories. featuring a wide assortment of products across categories like Mobiles, Electronics, Apparel and Footwear, Kids, Home and Kitchen, Fashion accessories, Sports, Books and services like Restaurants, Spas & Entertainment. A dynamic and vibrant company, Snapdeal provides a fun working environment to its Employees and is currently 1000+ people strength. Snapdeal.com gets the best offer possible from the merchants from around 65 cities across India and then deducts a small amount for

commission. Snapdeal.com aims at showing at least 40-90% off in the deals from what actually one has to pay. Depending upon how good the offer is Snapdeal deducts their commission starting from Rs.99 going up to Rs.299.

5.3.1 Funding in Six Rounds:

I. In January 2011, Snapdeal raised a funding of $12 million from Nexus Venture Partners and Indo-US Venture Partners.

II. In July 2011, the company got a further $45 million from Bessemer Venture Partners, along with existing investors Nexus Venture Partners and Indo-US Venture Partners.

III. Snapdeal then received the 3rd round of funding worth $50 million from eBay and received participation from existing investors i.e. Bessemer Venture Partners, Nexus Venture and Indo-US Venture Partners.

IV. Snapdeal raised its 4th round of funding of $133 million on Feb-2014. EBay led it with all the current institutional investors i.e. Kalaari Capital, Nexus Venture Partners, Bessemer Venture Partners, Intel Capital and Saama Capital all participating.

V. Snapdeal got its 5th round of funding of $105 million in May-2014. It included investments by Blackrock, Temasek Holdings, PremjiInvest and others.

VI. Snapdeal received its 6th round of funding in Oct-2014 from Softbank with investments worth $627 million in fresh capital. This makes SoftBank the largest investor in Snapdeal.

VII. In the year 2012-13 Snapdeal expected to collect revenues of about 600 crores (US$97 million). On the growth of mobile commerce, Kunal Bahl, the CEO of Snapdeal confirmed present 15-20 per cent of the sales on Snapdeal comes through M-commerce.

In June 2014, Snapdeal announced that it had achieved the milestone of 1000 sellers on its Platform getting sales of over Rs 1 crore. In the 3rd round of funding of $50 million, eBay came out as the largest investor in Snapdeal. The investment also includes a commercial partnership under which eBay will get access to Snapdeal's 20 million registered users, logistics software and distribution network. Snapdeal co-founder Kunal Bahl told that Snapdeal will offer a limited number of products on eBay India and eBay too will list its merchandise on Snapdeal, following the partnership.

5.3.2 Acquisitions

- June 2010, Snapdeal bought Bangalore-based group buying site, Grabbon.com.
- April 2012, Snapdeal took over esportsbuy.com, an online sports goods retailer
  based out of Delhi.
- In May 2013, Snapdeal bought Shopo.in, an online marketplace for Indian handicraft products.

5.4 Paytm Mall:

Introduction

Vijay Shekhar Sharma in Noida launched Paytm Mall in February 2017. It is inspired by the model of China's largest business-to-consumer (B2C) retail platform, Taobao Mall. **It raised funding in 2017** $200 million and o**verall funding raised since starting up**- $200 million. Paytm Mall is focused on keeping its cash reserved for expansion by gravitating increasingly towards the online to offline (O2O) model. The model is expected to save the new company the hassle and the cost of fulfilling orders by laying that responsibility on the retailers and the brands directly. The company is short on cash - Paytm Mall raised a whopping $200 million from Alibaba Group and SAIF Partners in March 2019.

PayTM, as its abbreviation states, Pay Through Mobile was launched in 2010 by One97 communications as a prepaid mobile and DTH recharge company. Gradually, it made its way into the e-commerce market in the year 2014 and further added bus ticketing to its kitty in 2015. PayTM now offers multiple products ranging from primary mobile recharges to buying apparels or electronics, enabling customers to get everything at one place. Thus, over some time, it has become both a payment platform as well as the marketplace. This strategy not only enables PayTM to serve multiple needs of the customers, giving them a holistic experience by saving their time and efforts but is also expected to be helpful in cross-selling and up-selling and thus increasing the overall profitability of the organization. It has even obtained the license from Reserve Bank of India to run a Payments Bank. As a result, PayTM is amongst the top 7 e-commerce companies in India to have billion-dollar valuation and transformed the business model of PayTM from a recharge web site to a payment cum e-commerce marketplace. It has 100 million Paytm Wallet users that carry out over 75 million transactions every month.

The Paytm Mall is a new version of its three years old e-commerce arm (PAYTM) and offers a combination of the mall and bazaar concepts to Indian consumers. With the help of Paytm Mall, c onsumers are now able to shop from 1.4 Lakh sellers for millions of products across categories like fashion, electronics, consumer durables and home furnishings, among others at their convenience. Currently available on Android, the Paytm Mall will also launch an upgraded version of the Paytm Seller app. The latest version will be available in seven regional languages and would allow anyone with a smartphone to set up an online shop on Paytm Mall. There is strict quality guidelines and qualification criteria, which sellers have to pass to use the platform. All products listed on the mall will also go through a Paytm-certified warehouse and shipping channels ensuring guaranteed consumer trust. With over 17 fulfilment centres across India, the platform also plans to offer sellers the widest reach through its vast network of over 40 courier partners.

Alibaba-backed Indian e-commerce firm Paytm Mall has lost steam faster than expected even as the company plans to change its business model. The

company has been scaling down its B2C (business to consumer) business, shutting down the fulfilment centres and has almost stopped giving cashbacks. This has also resulted in a massive drop in traffic to the Paytm Mall's website. According to SimilarWeb, a New York-based website that provides web analytics for businesses, the traffic to Paytm Mall has come down to 5 million per month in January 2019, a whopping 88 per cent decline from 45 million visitors a month in October 2018.

Paytm Mall, which was started in 2017, raised more than ₹2,900 crore in funding in 2018 and has been incurring huge losses. As per its filings with the Registrar of Companies sourced from Tofler, Paytm E-commerce Private Ltd reported a 100 per cent growth in its revenues for FY18 at ₹775 crore. During the fiscal, the company's losses grew a whopping 150 times to ₹1,800 crore.

According to the founder, the company's GMV (gross merchandise value) has grown, and it is pushing the inventory of offline stores nearer to customers for faster delivery. Experts attribute the restructuring at Paytm Mall to the cut-throat competition in the e-commerce market where Flipkart and Amazon have clearly established their dominance.

Noida-based Paytm started out as a Mobile Payments and recharge business. But over the years, the Alibaba-backed company has built its e-commerce marketplace by selling apparel, footwear, smartphones, bus tickets, and movie tickets. It has created a web of payments in the offline and online channels where consumers can transact via the Paytm wallet.

In April 2015, One97 Communication's flagship brand Paytm had launched an app called Paytm Zip to connect users to both local offline as well as online grocers. In December 2016 it had announced a toll-free number 1800-1800-1234 which allowed users to pay and receive money instantly without an Internet connection. The feature was aimed at feature phone users and non-smartphone users. In January 2017, Paytm finally received permission from the Reserve Bank of India to formally launch the Paytm Payments Bank.

Recently, co-founder Vijay Shekhar Sharma posted on its Facebook Page that Paytm has crossed the first milestone for this year by having 20 Cr. Paytm customers and claims that platform will witness 50 Cr Indians on Paytm by 2020.

Paytm Mall's O2O model is already live in over 30 cities, and the management is working towards making it a substantial portion of its online commerce business. "I believe in the long term this will be about how we helped Indian retailers win against large monolithic online retailers," the CEO at Paytm Mall, Amit Sinha, told the Economic Times in a recent story.

Unlike Flipkart (Ekart) and Amazon India (Amazon Transport Services), Paytm Mall does not have its own logistics division or fulfilment centres and is giving all the indications of not even moving in this direction.

While the model takes away the control on the delivery and the quality of the value chain, it will help the platform to help escape the money gobbling loop of storing and delivering products.

5.4.1 Strategies

Controlled Cost but Quality-Focussed

It is apparent that Paytm Mall wants to avoid the regular pitfalls of e-commerce, but its recent actions also ensure that profits come at the cost of quality. Just before launching its O2O platform, the company had delisted 85,000 sellers from its platform.

"From now on, merchants who want to sell their products through Paytm Mall will have to furnish brand authorisation letters, besides running strict quality and service audits. They will also have to submit their registration number, shop location and photos, and goods and services tax identification number to list their products on the platform," Paytm had said in a statement released at the time.

A couple of weeks later, Paytm Ecommerce, the parent company of Paytm Mall, conducted an audit in July, which led to the company delisting six of its 14

logistics partners and ten courier aggregation services. The drastic move limited the month's old company's delivery abilities to 17,000 pin codes, down from 26,000 it serviced earlier.

The reasons provided were the inability of the vendors to meet service standards, and customer experience and Sinha stated that the move was to ensure a "superior customer experience" over "rapid expansion".

While not spending on building its own support infrastructure, Paytm Mall has announced its initiative to enable the multiple merchants on its platform to set up their own fulfilment abilities. One of its initiatives is to help vendors set up QR codes, which will enable the customers to get access to the stores' inventory on Paytm Mall. Like QR stickers in physical stores enable a customer to pay digitally through Paytm, the customers will be able to scan the code using their smartphones to shop at the store of their choosing.

Grocery and food segment currently commands a sizeable portion ($275 billion) of the $630 billion retail in the country. The category will be highly contested because of its potential to drive repeat purchase. Amazon has already made its play after getting the government's approval to invest $500 million under foreign direct investment in the business, which will enable it to sell directly to the consumers.

Paytm Mall it seems is not likely to be left behind as recent reports suggest its interest in putting $200 million in the Bengaluru-based Big Basket for picking a significant minority stake. The reports, although, have not been confirmed by either of the two parties. If the deal comes through it will give Paytm Mall more than a foot in an increasingly important category.

With an Internet user base in India reaching 450 million by the end of June 2017 and Internet and Mobile Association of India (IAMAI) reporting that the internet users in India grew 7% from January to June 2017, the emergence and future growth of e-commerce and m-commerce is a foregone conclusion. This is evident from the billion-dollar valuation that the top seven Indian eCommerce

companies, including Flipkart and PayTM, have reached in the early years of their inception. Although the signs with respect to global e-commerce as well as a number of users transacting online are encouraging, yet the strategic framework in the online sphere is still emerging.

5.4.2 Business Model:

PayTM's revenues are sourced from multiple avenues: interest received from Paytm escrow account, advertising other products on its websites, annual subscription fees from different sellers, who list their products on its website, a commission from the seller for their products listed at paytm websites, Paytm Wallet, etc. Its consumer base is 170 Million, employee base is 13000, and offline merchandise is 3 Million. A total number of transactions in 2016 is 1 Billion, and App Downloads is 1 Billion. The percentage of users from the web is 14% %, and users from smartphones are 86%. The total fund raised 492 Billion INR, and estimated Value of Paytm is 388 Billion INR.

The app downloaded on various platforms has touched the mark of 7 million. The additional features added like Bargain power, which is not currently available at any other marketplace and the unified dashboard has made the selling and buying more interesting. Monthly order of over 15 million is completed over here.

5.4.3 Post-Demonetisation Effect:

India's largest digital payments startup, Paytm, has registered over five million new users within two weeks of demonetization in India, said by a company press release. This means it attracted more new users in two weeks than the population of countries such as Ireland, Oman, and New Zealand. They said that over 45 million people had used its e-wallet in these fifteen days, translating to more users in 10 days than the entire population of countries such as Canada, Malaysia, Argentina, Sudan, Iraq, or Nepal.

Paytm is the leading digital payment gateway and digital wallet in India, providing a host of payment services to consumers and businesses. Paytm offers varied payment services such as mobile recharges, utility bill payments, movie tickets, bus, train, and flight tickets, loan payments, insurance, forex, etc. Consumers can link their bank accounts and credit cards to Paytm to enjoy seamless payments at various retail markets and online avenues.

A subsidiary of parent company One97 Communications Paytm has been credited with launching QR based mobile payments in the country. It provides payment solutions to more than 7 million merchants and has millions of registered users. Paytm has emerged as a significant contributor in achieving the Digital India dream that is being pursued aggressively by the Indian government.

5.4.4 Funding:

Paytm has received multi-million dollar funding from top investors such as Alibaba Group, Softbank, Ant Financial, SAIF Partners, and Mountain Capital.

5.4.5 Acquisitions:

Paytm has made various acquisitions over the years, such as Near. In, Shifu, EduKart, Shopsity, Insider. In, Little, nearby, TicketNew, Cube26, NightStay, and Balance.

5.4.6 Competition:

Paytm competes with other digital payment service providers such as MobiKwik, Freecharge, Payumoney, Oxigen, Rechargeitnow, etc. All other digital wallets introduced by various businesses are also actively competing with Paytm.

Paytm in February 2014 launched its mobile-based marketplace and now recently has launched a seller dedicated app with zero commission model. Besides, Paytm has also contracted with IRCTC to make Paytm wallet as one of the online payment options while booking a ticket. IRCTC processes around 180 million transactions every year; and Paytm has a strong base of 60 million wallet users who

can use their wallet instead of using plastic card details. These wallet holders have access to shop over the app and pay with Paytm wallet across 21,000 merchants.

Vijay Shekhar said that 400,000 orders per day they are dealing with, which is second highest in the country after IRCTC. Over 50% of the orders are from the mobile app making use of the largest mobile commerce platform. An amount of INR 500crore is allocated for marketing in the year 2015.

5.5 Shopclues:

Introduction

ShopClues.com is an online marketplace, headquartered in Gurgaon, India. The company was founded in California's Silicon Valley in 2011. It has over 12,000 registered merchants, retail 2,00,000+ products on the platform to over 42 million visitors every year across 9500 locations in the country. The e-commerce company is incorporated in Delaware. ShopClues joined as the 35th entrant in the Indian e-commerce in 2011. The company employs about 700 people across different locations, and headquarter is in Gurgaon. ShopClues is the subsidiary of Clues Network Inc., a US Corporation and started its operations in November 2011 by Radhika Aggarwal, her husband, Wall Street internet analyst Sandeep Aggarwal and Sanjay Sethi. With Series E, ShopClues is now valued at more than $1.1 billion (Rs 7,300 crore) following undisclosed funding led by Singapore's sovereign wealth funds. ShopClues is an online marketplace that allows users to shop for electronics, home appliances, apparels and personal care products. ShopClues was founded with the goal of providing the best bargains to people of India. It is common knowledge that buyers in the country will visit multiple stores to get the best deals. This is the primary need that ShopClues fulfilled by launching the country’s first and largest fully managed marketplace.

In 2011 Shopclues launched the beta version in India via social media only with a team of 10 members only. In 2012 Shopclues raised Series A funding and ability to deliver products to more than 4000 Pin Codes within a year, and total seller registration crossed over 5000. In 2013 after one year of its public launch Shopclues launched a National Retail Heritage featuring iconic marketplaces of

India and company also appointed Sanjay Sethi as new CEO of the company. By the end of 2013, the team size increased from 10 members in 2011 to 400 members. In 2014

Shopclues launched India's first wholesale marketplace TVC and launched its window app. In 2015 Shop Clues hosted a competition called "The Next Big e-Preneur" with more than 1000 entries from a merchant across India. In 2016 Shop clues crossed 100 million monthly visits and more half a million merchants and acquired a payment gateway Momoe.

5.5.1 Products:

Shopclues sell products under nine different categories including Mobile and Tablets, Electronics, Men, Automotive, Computer, and Cameras etc. with more than 5 lakh sellers across India, Shopclue has around 5.3 crores products worth more than 50,000 crores. Shopclues deliver products to 30,000 cities in India with the help of its logistic partners. ShopClues currently offers a wide range of products and services, spread across various categories such as mobile & tablets, computers, laptops, appliances, home & kitchen, fashion, footwear, travel & luggage, automotive, jewelry & watches, toys, baby & kids, gourmet & daily needs, sports and health, and beauty & perfumes. ShopClues is popular for delivering the cheapest deals in the market via its merchants. ShopClues gets 100 million visits every month, has more than 8.5 million products. Shopclues has three fulfilment centres in India.

5.5.2 Mobile App Launch:

Considering the increasing trend of internet user base moving to mobile, Shopclues launched their Android mobile application in 2014 then launched windows and Ios app in 2015. Today Shopclues more than 60% of traffics is coming from mobile only.

5.5.3 Funding:

Shopclues has managed to raise its funds from one of the biggest investors in the world like Tiger Global, Helion and Nexus. In March 2013 the company raised close to 10 million dollars from Helion Venture Partners and Nexus Venture Partners. Shopclue raised around 100 million dollars from Tiger Global. With the series of funding, Shopclues is now valued at more than 1.1 billion dollars.

5.5.4 Business Model:

Shopclues business model is the same as many of the online marketplace. It is a business to consumer shopping platform. They charge 12% selling service fee on every successful transaction. Shopclues does not charge any setup fee to the sellers. Shopclues targets small businesses like retailers and shopkeepers and encourages them to sell their stuff online. The transaction process is so smooth that people with no technical knowledge can sell online through Shopclues. Shopclues also provides support to the sellers through helpline and emails. Shopclues provides an ultimate platform to small sellers to showcase and sell their product all over India. Shopclue deliver products to over 30000 pin codes. Shopclues welcomes manufacturer, a brand owner, a retailer/reseller, a franchise holder, a distributor, a professional artist/artisan or a trader on their platform.

5.5.5 Marketing Strategies:

Shopclues spends heavily on its Tv commercials for awareness and branding ppose. Shopclue's Sunday flea market and Wednesday Super Saver Bazar are two main traffic pullers for Shopclues. They also have huge social media presence with more than 4 million likes on Facebook and more than 2 million Twitter followers. Shopclues engages with their audience regularly and also handle queries through these two platforms. After a humble start in 201, Shopclues has become a big brand in the E-commerce market in India. With 100 Million visits every year more than 5 lakh sellers and millions of product Shopclue have come a long way with team size increase from 5 to 1000 plus in the last six years

5.5.6 History:

ShopClues started operations in 2011 via Facebook with a team size of 5 members. The plan was to provide the best deals to buyers, knowing quite well that people in India are always looking for the best bargains. The company launched its app and the country's first Wholesale Marketplace (TVC) in 2014. In 2016, ShopClues came to be listed amongst the top e-commerce companies in India, as it crossed 100 million visits per month. In the same year, ShopClues increased its merchant base to more than half a million.

5.5.7 Funding:

ShopClues has received funding worth $139 million (approx.) from various sources. Top investors include GIC, Helion Venture Partners, InnoVen Capital, LionBird, Nexus Venture Partners, and Tiger Global Management. The company is now a 'Unicorn', which is the title given to a company whose valuation crosses $1 billion. ShopClues is also planning to launch its Initial Public Offering (IPO) soon.

5.5.8 Acquisitions:

ShopClues acquired Momoe in 2016 for around $12 million. Momoe is a Bengaluru-based startup focused on the mobile payments system.

5.5.9 Competition:

ShopClues competes with other e-commerce companies in India, such as Amazon India, Flipkart, Snapdeal, etc.

With online sales slowing down, Shopclues now plans to increase its offline footprint in India. The plan is to open around 100 franchise stores in the fiscal 2019-20 spread across Tier II and III cities of West Bengal, Orissa, UP, Bihar, Assam, Meghalaya, and Sikkim. The Gurgaon-based company entered the offline market in 2018. There are stores in UP and West Bengal. The strategy behind opening

offline stores is to address local needs with local products and in the local language. The idea is to have an omnichannel presence, especially in Tier II and III locations where buyers still have a preference for brick and mortar stores. Shopclues expects offline to contribute 15 per cent to its overall orders for the ongoing fiscal.

With the offline expansion, Shopclues is aiming to be profitable by the end of the 2018-2019 fiscal. It posted revenues of Rs 273 crores for the financial year 2017-18 and also managed to narrow its losses by 40 per cent. Shopclues, which largely sells unbranded products, generates 50 to 55 per cent of its revenue from categories such as fashion and lifestyle and home and kitchen, while mobile electronics accessories contribute 35 per cent to the top line.

Clues Network Pvt Ltd that owns and operates the e-commerce marketplace platform Shopclues has now revealed EzoNow, its first social reseller platform. The company revealed an EzoNow in the month of January 2019 and has also been since garnered a significant following the growing reseller community of India.

According to Sanjay Sethi, CEO & Co-Founder, Clues Network, EzoNow empowers the community to earn from their homes with zero investment. As part of this initiative, they provide their vendors and the reseller community with additional avenues to enable them to earn more. Every seller can manage their own website, products, orders, and commissions, entirely through the app. This launch is in sync with their brand strategy to reach out to, and empower the Real Bharat.

According to Ritika Taneja, Head Category Management at ShopClues, Customers in Tier III and IV still prefer to shop in stores. Despite increasing Internet penetration, customers in small towns are still not as comfortable shopping online as they are visiting stores. Their physical presence gives an assurance to the consumer and builds trust for the brand. They also act as a points-of-service, points-of-return, delivery centres and mini-warehouses in these areas. An online-offline hybrid model is the best concept for penetrating the Tier III, IV and rural markets in India. ShopClues, the brand which has always believed in the marketplace model, is India's first online firm to set up an offline store using the FOFO (Franchisee-owned Franchisee-operated) model in rural markets. A FOFO

model enables them to partner with multiple SMBs and helps to grow along with them. This model works best because the owners of stores are people from that area and they understand the requirements, culture and purchase patterns of the region. This then helps in building a long-term and successful business. Currently, ShopClues has a total of 13 stores, out of which eight stores are direct franchisees of ShopClues and five are through an affiliate partner network. ShopClues plans to pursue both routes – direct franchisee and affiliate partner network – aggressively. Direct franchisee stores reduce Shopclues dependence on other players and help build the overall retail ecosystem. Affiliate partners also give access to geographies and areas where their offline stores may not reach immediately. It's all about reaching the customer first. The brand is targeting Orissa and North-Eastern states for further offline expansion in phase II. ShopClues is planning to venture further into the refurbished segment, expanding the assortment from just mobiles into other categories as well. Their future plans are to continue expanding into areas where their target audience is present.

CHAPTER – 2

REVIEW OF RELATED LITERATURE

It has been recognized globally that no work can be meaningfully conceptualized and achieved without studying what already exists in reference to it. The knowledge of already established research areas enables us to clearly understand what is already illuminated in that area and what more research in that area identified is still being unexplored. As India is new and an emerging country in E-retailing and M-retailing, there are very few studies conducted in this area.

The existing related literatures are very useful in getting an understanding the main objectives of the research and in finalizing the methodology. E-retailing and Mobile retailing in India is in a very nascent stage and fewer studies have been conducted on Netigens' behavior. Although there have been the scarcity of m-retail related studies in India, Internationally in other countries various studies carried out on e-consumer behavior. In India the online shopper/ consumer market is witnessing an unprecedented consumption boom. At the same time, technology enhancement has increased capacity of e-retailers to collect, store, maintain, transfer and analyze huge amounts of data of their web visitors. The improvements in income dynamics along with factors like favorable demographics and spending patterns are driving the consumption demand.

E-commerce/Electronic Commerce is often referred to as "E-Commerce" or "eCommerce", which has been found much more attention in the literature than Electronic Business, owing to its proximity to the consumer. McIvor, Paul & Huang (2000) stated that the ecommerce is considered as a process of doing business electronically, which involves automation of various business-to-business (B2B) and business-to-consumer (B2C) transaction. Electronic commerce includes the handling of transactions and different transfers over the net.

The chapter has been classified into four sections looking into the objectives:

- **Conceptual Framework and Growth and Challenges of E-commerce**
- **E-retailing: Advantages and challenges**
- **M-commerce: Growth and challenges**
- **Consumer behavior towards E-retailing and M-retailing**

1. Conceptual Framework and Growth and Challenges of E-commerce

Barnes (2013) questions the reasoning why online shopping has become so popular. Many authors (Chaing and Dholakia, 2003, Monsuwé *et al.*, 2004 and Poulter, 2013) believe one of the key reasons is convenience. Shopping online offers pronounced convenience (Chaing and Dholakia, 2003) some consumers favour online shopping is also due to price comparisons (Monsuwé *et al.*, 2004; Palmer, 2013). 85% of consumers compares price information online (Chaing & Dholakia, 2003), although it is not evident whether these consumers continue and purchase the products online or on the high street. Another apparent reason the internet is preferable, is avoiding long queues (Poulter, 2013), yet it could be argued, the time spent in checking out, paying and waiting for deliveries is more time consuming and more inconvenient than queuing. Moreover, Fitterman (2013) believes, purchasing a product in-store is instantly gratifying; there is no need to wait. Nevertheless, consumers can shop online anywhere, anytime including when exercising, cooking or cleaning (Chaing & Dholakia, 2003), and they get another boost when the parcel arrives (Eckler, 2013).

With busy lifestyle consumers can still get their products without leaving their desk, slightly in contrast, it was also found one third of consumers shop in bed, with 46% of people asked to make purchases between 7pm and 1am (Poulter, 2013), but also consumers are keen to take advantage of the ability to shop 24 hours, seven days a week. On the other hand, more than half (55%) of respondents studied by Rackspace (2013) admitted to receive dissatisfaction and annoyance when purchasing online. 44% of those dissatisfied consumers abandoned their shopping, this could be viewed as a positive statistic for the unorganised retail, if consumers

shop with them instead. The top annoyances named as complicated check out procedures (Rackspace, 2013). Check out must be simple, if there are too many forms, consumers tend to abandon their shopping and go elsewhere (Adeshara, 2013). High shipping costs are also frustrating, if the delivery cost equates to more than the savings they have received consumers are likely to leave their often impulse purchases. However, shipping costs can often be eliminated using voucher code websites (Palmer, 2013). Lack of product information, unawareness of security features and few payment options are all cited as recurring frustrations regarding online shopping (Adeshara, 2013). Shim *et al.* (2004) identify how previous online shopping experiences can have an impact on internet shopping. In the case of a positive outcome, consumers are likely to shop again, however, those experiencing frustrations may disregard the internet as a successful shopping channel.

Lee and Turban (2001) pointed out that navigating websites can prove to be tricky for consumers who are unfamiliar with shopping this way and they do not trust the internet as a safe source for transactions (Monsuwé et al., 2004). Such users frequently complain on factors such as: refunds, return policies, billing problems, exchange policies and faulty products. Dellaert and Kahn (1999) observed that if consumers face problems while shopping online, they only wait eight seconds to receive any response from the company's system before giving up the purchase. Still, in contrast to the traditional shopping, brick and mortar retail environment, marketers of online shopping sites generally put forward more detailed product information. This does give them an edge as these days consumers want to know everything about a product before spending money on it (Chen & Chang, 2003). E-consumers are more willing to take risks compared to offline shoppers. Several authors have talked about the risks faced by online retailers. Rowley (1998) mentioned the uncertainty surrounding online transactions, Forcht and Wex (1996) pointed out that organizations have to guard themselves when it comes to data authenticity and reliability, and Richards (1997) stated that there is an insufficient legal material for online retailing which could prove risky if something goes wrong during the online purchase (Whysall, 2000). The authors have also discussed a way

to measure the e-shopper's trust towards e-retail businesses by exploring: the security level for credit cards, private details of shopper, and the safety and trustworthiness of the website (Merrilees & Fry, 2003). These risks, especially security-related, do cause online businesses to lose potential customers. Additionally, in order to perform e-consumer must have stable internet access and they must be comfortable with using the internet. This may be an issue for the older generation who are not as confident with their technical abilities (Kim & Park, 2005). However, it should be noted that these possible risks can be avoided or lessened through acquiring the necessary experiences and obtaining certain skills and knowledge on computers, the web, and shopping online (Li & Zhang, 2002).

Timmers (2000) says E-commerce had begun to change the ways of thinking as given new venues for doing business. Mesenbourg (2001) stated E-commerce technologies such as the Internet have been most prevalent in business arena and the greatest potential of e-commerce application lies through the suitable business transaction.

Zhu, K., Kraemer, K. and Xu, S. (2003) in their study stated that Internet penetration measures the adoption and diffusion of computer and internet of individual and household in the population of each country. It is an important factor for decision makers of e-business adoption because it reflects the potential market.

Kim (2002) suggests that the design of e-store influences consumers' access to e-store. In the e-store, website design, design of product and service comparison and information, time to complete online order form, easy of searching product and service, screen layout, screen complexity, page composition, information retrieval methods, information display, use of color and background, assistance to the user and speed of accessing the e-store are notable factors attracting e-customers.

Mallikarjun Rao (2006) while studying the "Factors affecting growth of e-commerce in India" concluded that there was a close association between online purchase and availability of information about the vendors, hence, suggested that more information will increase respondents comfort level for online trade.

Gnana (2006) concluded that today e-commerce as an alternative/additional mode is being accepted by many businesses, but the rate of adoption of ecommerce is varying in different industries, for instance, a traditional industry like automotive industry in India is yet to adopt e-commerce in a big way.

Juxt Consult (April 2007), a Delhi-based online research firm conducted the study on 10,000 households in 31 cities (of population sizes 20,000 plus) revealed some interesting facts about the Internet shopping scenario in India. As per research findings, eBay (excluding online travel websites) is the most preferred site for online shopping followed by Rediff, Google and Yahoo. EBay leads to 34 percent online shoppers still preferring to visit it the most. Rediff follows at the second spot with 25 percent online shoppers preferring to visit it.

AC Nielsen (2009) conducted the study on covering 38 markets and over 21,100 respondents across the globe has revealed that more Indians are taking to shopping online. It suggested an upward trend in online shopping across the world. A significant observation of this study was that India beat the global counterparts in a number of purchases per month, with a mean of 5.2 purchases against the global average of 4.9.

Ming-Hsien, Chandlrees, Binshan, Hung-Yi (2009) opined that consumers will trust the website if they feel the site keeps a good ecommerce ethical performance, such as, practicing the privacy policies and stating it explicitly, describing products or services in an appropriate way. While analysing the Trends in e-commerce,

Rekha (2010) stated that e-buyers need to adapt to a safe mode of on-line payment and use alternative modes of payments, such as, virtual credit cards that involve less risk in diversifying the information for payment.

Othman, N. (2008) studied *Integrating consumer trust in building an e-commerce website.* His research focuses on how to integrate trust during the design and development process of an e-commerce website. The research analyses consumers' trust and behavior by understanding the concept of trust, reviewing several trust related models, mechanisms. He determined that consumer characteristics have

directly influenced on consumer purchasing intentions while web merchants should have trustworthiness characteristics such as ability, integrity and benevolence for consumer to evaluate and decide.

Agarwal (2012) in his paper E-Commerce: True Indian Picture, presented the surfing pattern of Indian public to give the critical review on truth of various reports being published. Changing lifestyles and exposure to the developed markets give a fillip to e-retailing industry. E-retailers serve 24 hours' x 7 days in a hassle free manner to consumers. Along with advantages of e-Retailing some major issues are associated with e-Retailing such as lack of personal touch; cybercrime; bargaining is not possible and e-illiteracy among rural India. But with all, we can say that Prospect of e-Retailing market is bright in India.

Mitra (2013) in his review on E-commerce in India, describes that Electronic business is more than just another way to sustain or enhance existing business practices. Rather, e-commerce is a paradigm shift. It is an innovation that is radically changing the traditional way of doing business. E-commerce is showing tremendous business growth in our country. The present study has been undertaken to describe the present status and facilitators of E-commerce in India, analyse the present trends of E-commerce in India.

Tyagi (2013) in his study on consumer perception finds that in view of the global competition, there are greater pressures on retail Industry in India to bring greater satisfaction to the consumers. E-retailing provides an opportunity to cater to consumers across geographies, no operational timings, unlimited shelf space, and all this with tiny quantity of infrastructure. In developing countries like India, this business model is good and easy way of growth.

Ngoc Doan (2014) E-commerce is a popular area for research. Recent studies have been interested in demographic information such as age, gender, and income effects on e-commerce. They attempted to divide consumers into several segments in order to develop a better marketing strategy. Other studies concentrated more on the differences between PC and mobile access and their effect on purchase choice: to explain the differences between e-commerce and mcommerce. Other research discussed product characteristics and suitability for the Internet environment,

attempting to demonstrate the heterogeneity among different categories in ecommerce.

Sharma (2009) in their study "Prospects of e-commerce in India" mentions that India is showing tremendous growth in the E-commerce. There are websites offering a number of goods and services, few provide a specific product along with its allied services and few are Multi-product E-commerce portals which offers goods and services in a variety of categories. Few are apparel and accessories for men and women, health and beauty products, books and magazines, computers and peripherals, vehicles, software, consumer electronics, household appliances, jewellery, Audio/video, entertainment, goods, Gift articles, Real estate and services.

Arika Riaz & Saravanan Raman (2014) in the study 'The Emerging Trend of Online Shopping: A Literature Review, explored, the internet has given rise to great potential for businesses through connecting globally. Shopping online has become the number one area with growing internet use. However, there is surely room for further research into the environment and experience of online shopping. Currently there is inadequate research based on ways to be successful in the business of online retailing. Therefore, in the future there is potential for further studies looking into methodology for online retail businesses. Researchers should also look into how this continuous growth of internet will affect consumers in the future generations and whether offline shopping will still remain relevant in the next few decades.

Sanjeev Kumar & Savita Maan (2014) in the study Status and Scope of Online Shopping: An Interactive Analysis, indicated that online shopping is a fun and convenient way to locate hard-to-find items, to make purchases and discover bargains, but also with some level of risk. Online shopping can be easy and enjoyable with some precautions. India's online market is at an early stage but is expected to see huge growth over the next four to five years. Retailers have a sizeable opportunity as the online population starts to spend more and buy more frequently online.

Haiping Wang & Guona Gu (2014) in the study Understanding Online Consumer Stickiness in E-commerce Environment: A Relationship Formation Model revealed that sticking to a special website not only means that consumers like shopping on the website but also means a kind of psychological reliability appears on consumers and evendors. It will encourage e-vendors to provide better products or service for consumers and promote the quick development of online transactions.

Manpreet Kaur (2017) This study has examined the role of Demonetization and the role of Electronic Payment System. This study concluded that the cashless transaction system is reaching its growth day by day, as soon as the market become globalised and the growth of banking sector more and more the people moves from cash to cashless system. The cashless system is not only requirement but also a need of today society. All the online market basically depends on cashless transaction system. This study furthers found that the cashless transition is not only safer than the cash transaction but is less time consuming and not a trouble of carrying and trouble of wear and tear like paper money. It also helps in record of the all the transaction done. So, it is without doubt said that future transaction system is cashless transaction system.

2 E-retailing: Advantages and Challenges

According to Turban (2006), E-tailing is defined as retailing conducted online, over the internet. Wang (2002) provides a broad definition of e-tailing by defining it as the selling of goods and services to the consumer market via the internet.

Zeithaml (2002) in his study Service excellent in electronic channels: Managing Service Quality, found that the success of e-tailing depends on the efficient web site design, effective shopping and prompt delivery. The other e-store services are delivery on real time, return and replacement process, period of filling out online orders form, speed of response time to e-customers' queries.

Prassas, G., Pramataris.K., Papaemmanouil, O. (2001) analyzed *Dynamic recommendation in e-retailing.* The objective was to study the application of recommender systems for electronic retail sites and forms (Shopping list

recommendations, Recommendations at check-out, Product assortment). They have examined the techniques mainly used for the automatic generation of recommendations that is data-mining and collaborative filtering. They have developed a hybrid recommendation model that combines both data mining and collaborative filtering techniques.

Ratchford (2001) tells that through Internet, consumers can gather information about merchandise and they compare a product across suppliers at a low cost.

Guttman (1998), describes Several unique elements make online shopping different from the traditional in-store retail model. Besides offering convenience and expanded product variety, the online model also makes it easy for consumers to access and compare data from multiple sources. Meeker (1997), retailers might cry foul, but the new shopping paradigm they have to face is that as premium customers begin to accept the e-tail alternative in larger numbers.

Dabholkar (1996) finds that through E-retailing, retailers can provide various payment and delivery options to customers with very limited operational costs.

Agrawal (2001), in his study Strategies and models for E-retailing: attempted retrospection in the Indian context, finds that E-tailing can also provide unique gifting opportunities. This initiative helps boost sales, and customers are encouraged to set gift registries or order online when the product is not available offline. For example, Apple only offer the personalized engraved iPod products from its online store.

Collier, J., Bienstock, C. (2006) analysed *Measuring Service Quality in E-Retailing*. The aim of the study was to design a framework to understand that how customers judge e-service quality by looking at quality evaluations in the process, outcome and recovery of a service experienced in online shopping. For the same, they have designed a questionnaire containing three major sections with sample survey of 266 respondents. In Section 1, the respondents were asked to recall the last transaction that have been made with e-retailer and questions related to the process and outcome quality were asked. In Section 2, respondents were asked to respond to

service recovery questions while experiencing a problem with their transaction. Section 3, which includes satisfaction, behavioral intention, and demographic questions. The result found that process quality of an e-service experience plays a crucial role in the overall evaluation of e-service quality. So service providers need to be aware that a bad experience in the e-service process can have a ripple effect with further users. If a customer has a bad experience in regards to the functionality of the web site, then a customer might prejudge the service quality.

Tractinsky, N., Lowengart, O. (2007) in his study,"*Web-Store Aesthetics in E-Retailing: A Conceptual Framework and Some Theoretical Implications",* analyse the role of aesthetic design in Web-based stores. They depicted that while developing website, web-store designer should take into consideration both classical and expressive dimensions. The classical dimension is related with clean and orderly design and with user perceptions of the website's usability. Whereas expressive dimension relates the designs perceived by users to be original and creative. The website aesthetics should be designed by focusing on type of merchandise they sell and type of customer they target. So e-retailers should develop their web-store design according to the combinations of consumer and product characteristics.

Haque, A., Khatibi, A. (n.d.)., studied on *E-shopping: Current Practices and Future Opportunities towards Malaysian Customer Perspective*. The objective of the study was to do a preliminary assessment, evaluation and understanding of the characteristics of Internet shopping in Malaysia. They have designed a structured questionnaire as data collection tool and surveyed the netizens who were willing to give response. The sample size was 450. They found that there is a significant relationship between internet shopping and shopping through TV/telephone. They also found that the major reason not to purchase from internet was lack of confidence and trust in using internet to purchase product along with lack of awareness related to benefit from internet purchase. They also recommended that the website should be designed such as way that not to confuse the Malaysian online potential customer. E-retailers must develop a privacy policy for their customers on discloser on personal information in order to reduce the concern for privacy.

Singh, M., Banga, A. (n.d.). studied *FDI Retailing in India.* The objective of their study was to find the reason of foreign retailers' interest in India and their strategies to penetrate Indian Market. They observed the major reason as strategic location & geography, versatile demographics and growing Economy. They also observed that foreign retailers have adopted manufacturing and local sourcing, franchising, test marketing, wholesale cash-and-carry operation and distributor.

Norazah, S., Ahamd, M., Thyagarajan, V. (n.d.). analysed *Motivation and concern factors for internet shopping: A Malaysian perspective* from Multimedia University, Cyberjaya Malaysia. The aim of the study was to concentrate on the concern factors, which affect the online buyers in Malaysia. They have framed a questionnaire as data collection tool and done survey of 579 randomly selected Netizens. The questionnaire was filled by netizens chosen randomly at various locations such as cyber cafes, higher learning institutions' labs, and shopping malls. They have chosen eight factors for the study, which were privacy concern, reluctant to change concern, quality concern, security 229 concern, trust concern, connection speed concern, payment concern and non-disclosure of complete product information concern. The most important factors found in survey was privacy followed by reluctance to change, quality, security, trust, connection speed, payment and non-disclosure of complete product information. They proposed e-retailers that the transactions must be secure, safe and trusted in order to attract and maintain existing users of the Internet.

Doherty, Neil F. and Ellis-Chadwick, Fiona (2010) in the paper entitled Internet retailing: the past, the present and the future prophesized that, at the very dawn of the Internet revolution, the Internet would represent the most important wave in the information revolution. Looking back at the first fifteen years of on-line retailing, it can be argued that there is a considerable amount of evidence to support this view: on-line shopping is moving rapidly from a minority hobby, to an everyday part of most peoples' lives. Having reviewed the growth and impact of on-line retailing, from the perspective of the past, the present and the future, it is interesting to stand back and critically appraise the implications of an increasingly vibrant and sophisticated Internet market-place, from the retailers', the consumers' and the

academics' perspective. Starting with the retailers, it may be tempting to stand back and congratulate them on a job well done. However, there are still many significant challenges that they need to confront and overcome, if on-line retailing is to complete its transition from a minority to a mainstream activity. All retailers will need to develop strategies for responding to enhanced consumer power, possibly with initiatives such as: marketing via social networking sites; growing their brand; differentiating their product offerings; and working hard to ensure that their websites provide consumers with an enjoyable and reliable shopping experience.

Gehrt, Rajan, Shainesh, Czerwinski & O'Brien, (2012) studied the "Emergence of online shopping in India: Shopping orientation segments" and surveys were collected from 536 consumer panel members. Three segments were identified: Value singularity, quality at any price and reputation/recreation. The quality at any price and reputation/recreation segments was playing the major role in online purchase decision in India.

Rakesh & Khare, (2012) analysed the "Impact of promotions and value consciousness in online shopping behaviour in India" and the study observed that online shopping continues to attract investment from retailers and offers or other promotional methods of e-retailers are not influenced by Indian consumers. Promotions may not be essentially viewed by consumers as an important attribute while purchasing products or services online.

Yashaswi (2010) studied "e-Retailing: Is India ready for it?" in which he founds that the main motive of e-retailer is to develop a sustainable competitive advantage. He found various advantages and disadvantages of e-retailing from consumer side. He also studied various challenges faced by service providers such as e-customer retention, secure payment, and customer service. He found the essential infrastructure for providing e-retailing facility such as architecture of the website-payment system, supply chain management, troubleshooting help desk, customers' database management and so on.

Jyoti (2013) finds in his study Prospect of e Retailing in India that in modern scenario, E-retailing or online shopping has become part and parcel of the people

in India. The new of consumerism coupled with urbanization with paradigm shifts in the demographic and psychographic dynamics have driven consumers frequently to use retail web site to search for product information and make a purchase of product, and E-retailing in India can be a success if the e-Retailing change their business models and understand their consumer more because consumer are the real kings.

Ghosh (2014) investigates in his study, Why Indian e-retailing market is still a partly success and a partly failure story? that with the increase in number of household computers and fast spreading internet connections, especially broadband connections, India have been experiencing an exponential growth in counts of internet users in last decade. This paper mainly focuses on to analyze why the status of Indian E-commerce and E-tailing market is not very rosy till date since inception, why E-tailing has not reached the desired goal which includes the financial gain achieved by Indian online retailers though there are huge growth observed regarding the Internet usage and more inclinations of online Indian users towards online shopping in recent times.

Forger (2000) studies for designing an effective e-tailing strategy in India, it is therefore needed to understand the needs of individual customers. Successful e-tailing are concerned with high velocity, flexible systems and procedures, extremely high service levels, and full electronic connections to the trading community.

Feare (2002) addressed five points in order to develop the right e-tailing strategy. They are: (i) prompt delivery, (ii) supply chain, (iii) demand nature, (iv) reverse logistics, and (v) accuracy.

Chatterjee (2016) studied the "E-Commerce in India: A review on culture and challenges" and the study observed that E-Commerce business throughout the world has brought a remarkable change in the business landscape and it also has redefined the business scenario by radically changing contours of space and time and it has reshaped the conception of nature of business management. India having large population with internet users is expected to be one of the major players in E-Commerce environment. In a study on customer perception towards online precious metal jewellery shopping in India.

Rekha (2016) examined that surveyed the twelve statements were grouped into four factors i.e., Product, Convenience, Service and online shopping hindrances and the composite score were calculated for each grouping factor. A significant difference is observed in the perception of two groups in case of three set of factors i.e., Product, Convenience and Service. While analysing "e-commerce in India: Evolution and revolution of online retail", Kalia, Kaur & Singh, (2017) inferred that India is third biggest nation in terms of internet users. India will drive e-commerce in Asia pacific region after China and Indonesia and the study concludes that there will be a prospective growth of electronic commerce in India is extremely positive.

Arora & Rahul (2018) studied that the key components of perceived risk (security risk, privacy risk, product risk and non-delivery risk) in e-commerce and the impact of perceived risk on online shopping attitude among online women shoppers in India and the study proved that perceived risk is not a significant factor influencing attitude of women shoppers in India. Security risk was marginally significant out of the different types of risks considered in the study.

3. M-commerce: Growth and Challenges

Electronic commerce is the term used to describe any economic activity, such as selling products and services, which occur over the Internet (Chen and Dhillon, 2003; Niranjanamurthy, Kavyashree, Jagannath and Chahar, 2013;). Accordingly, m-commerce can be defined as an extension of ecommerce, since these two terms are similar to each other. They both share fundamental business principles (Zhang, Chen and Lee, 2013). More specifically, m-commerce is a new version of e-commerce in which, all the transactions are connected via handheld devices, and are interacted in a wireless mode (Siau, Lim and Shen, 2001). "M-commerce is not a "better" ecommerce" (Swilley, 2007). However, m-commerce itself exceeds e-commerce in terms of interaction styles, usage patterns, and value chain (Chan and Chong, 2013). It gives users unlimited access at any location and at any time, meaning there is no limitations on time or geographical location when searching products via mobile devices. With m-commerce, data are transmitted

wirelessly between mobiles and computing devices, which enables users to use services flexibly without wired connection requirement (Coursaris, Hassanein and Head, 2003).

3.1 Attributes of M-commerce

There are five main characteristics of m-commerce highlighted, i.e. ubiquity (Clarke 2008; Siau, Lim and Shen, 2003;), convenience (Panneerselvam, 2013; Clarke 2008), personalization (Mark, 2000), localization (Clarke, 2008; Junglas and Watson, 2006), and accessibility (Ding, Iijima and Ho, 2004).

3.1.1 Ubiquity is the first advantage of m-commerce. It is defined as omnipresence, which means everywhere at the same time that we no longer notice its existence. In fact, this ubiquity feature provides mobile users to easily receive information, buy a product or a service from virtually any place independently of the users' current geographic location. In addition, these devices allow users to access Internet without the need to find a place to plug in; m-commerce users therefore can be present everywhere simultaneously. (Clarke, 2008) Ubiquity feature allows customers to take less time to complete a particular task, and helps to increase customer satisfaction (Okazaki, Molina and Hirose (2012); Nayebi, Abran and Desharnais (2012)). In fact, m-commerce applications enables users to engage in a variety of activities i.e. quickly communicating with friends and family via several mobile messaging apps (Whatsapp, Messenger, Instagram, Telegram etc.), easily monitoring their stocks (Future Stocks and Real-time stocks, etc.), conveniently shopping online with several apps. In addition, those applications provide alert notifications that provide information to users about their friends, clients, team members or any valuable updates in time.

3.1.2 Convenience is factor that create the agility and accessibility provided by wireless handheld devices. The attribute of convenience allows users to utilize these devices without any obstacles of time and location. Convenience refers to easy to use and favorable to the comfort. M-commerce users can continue to surf the Internet, to place an order or to operate transactions through many applications while waiting in que or stuck in a traffic jam during peak hours. Also, users can

handle more than one device at the same time. For example, a tablet with bigger screen can be used for shopping online and then a smartphone is to finish the purchasing activity. (Clarke, 2008)

3.1.3 Personalization Vic Sasan (n.d.) stated that a wireless device is a very personal device. Personalization refers to target marketing based on one's preferences. Personalization includes a procedure of gathering consumers' information during interactions with them, then individual consumers are targeted by tailored products, customer service and other interactions. Further, personalization involves several practices of addressing consumers by their own name, memorizing their preferences, allowing them to customize a product for their particular purposes or targeting advertisement based on consumer information.

Wattal (2007), Mobile devices, which are integrated both communication and multimedia functionality, are typically devices that an individual can carry in their pocket or bag

3.1.4 Localization: The Cambridge dictionary online (2015) defines localization as "the process of making a product or service more suitable for a particular country, area, etc". In m-commerce, localization refers to the ability of locating a user's physical position. Location is one of the most important advantages and most distinctive characteristic of m-commerce in comparison with e-commerce. Through GPS system, users can receive alert when their friend or colleague is nearby; likewise, the service providers can quickly track the location of the users

3.1.5 Accessibility

Perlow (2006), this is the ability to easily access, enter or approach. Accessibility is a characteristic that combines convenience and ease of use. It is easy to approach and enter, and being reached or obtained. M-commerce provides its consumers with real-time instant messaging or services. Accessibility feature allows users to receive information in a timely manner that could not prove to be useless. Due to the introduction of GPRS, customers now can always in touch, connected, and can have an "always online" service

Overall, m-commerce combines the five attributes, including ubiquity, convenience, personalization, localization and accessibility, which make it an advantage over e-commerce. These attributes give mobile users the ability to access Internet and information any time, anywhere, and the ability to know their location or others' position. In addition, these unique attributes of mcommerce are beneficial for businesses; such as it helps to reach customers, suppliers or employees regardless of the location and time (Siau and Ee-Peng, 2003).

3.2 Challenges of Mobile Commerce

Keengwe (2014) and Zhang and Adipat (2005), describes that there are several major obstacles for users using mobile devices despite of several attritutes, such as "connectivity, screen size, different display resolutions, and limited processing capability and power".

3.2.1 Connectivity

Sears and Jacko (2000), states that the wireless network connection can vary with different factors including time, days of the week or year, geographical locations, document size and bandwidth. These factors may cause delays to users when they attempt to access information via their wireless handheld devices. The long delays are associated with "increased feelings of lost" and "negative impression" for the end users.

3.2.2 Screen Size

According to Chae and Kim (2004), screen size has a strong impact on the navigation behavior, satisfaction and perception of the mobile's participants. For example, mobile users who interact with a screen smaller than 4.3 inches screen are said to be less efficient while seeking information.

3.2.3 Display Resolution

Bi (2011), states that there are huge advantages of using a large-high resolution display (3840 × 3072, 3840 × 3072 or 3840 × 3072 pixels) that a desktop can bring to its users. These advantages are huge amount of information, being viewed by

many people simultaneously, reading a large document or paper, increasing users' collaboration abilities, and enhancing the awareness.

Zhang and Adipat, 2005; Bi, 2011; and Kangwee (2014), observed that a mobile device allows much less display resolution (2560 x 1440 pixels or below) that can cause bad impacts on the quality of an image or information that displayed on the screen.

3.2.4 Limited Capability and Power

(Keengwe) 2014, The memory capacity and power of a wireless handheld device lags behind a traditional desktop computer. Some apps consume more power while they are optimized for performance, or require a large amount of memory that somehow may not be practical for mobile devices.

3.3 Trust in M-commerce

Consumer trust is a critical factor in m-commerce adoption and somewhat essential in building a relationship. The benefit of consumer trust is that it builds strong and long-term of one's commitment to the firm. (Shams-Ur-Rehman, Shareef, and Ishaque, 2012).

Lin, Wang, Wang and Lu (2014) asserted that the definition of trust is a complex construct and can widely vary from different perspectives, such as: psychology, economics or marketing, sociology and so on. However, Mayer, Davis and Schoorman (1995) had an integrated definition for trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the truster, irrespective of the ability to control that other part". According to them, despite of the situations of perceived susceptibility and vulnerability, or any uncontrolled situations may happen, trust should lead the consumers to a willingness to take risks, or accept vulnerability (Mayer et al, 1995).

There are two different phases of trust with a clear distinction between them: pre-use trust, which belongs to pre-purchase stage, and post-use trust, which belongs to post-purchase stage. The former one means trust before the use of a technology or

a service; conversely, the latter means trust after using the technology or service. (Lin, Wang, Wang and Lu, 2014).

Kannan, Chang, and Whinston (2001) do not believe that wireless commerce is equivalent to e-commerce. Wireless technology has unique characteristics that distinguish it from ecommerce. The authors state that wireless commerce can be a good complement to ecommerce. Wireless technology‟s key characteristic can be summarized as ubiquitous interactivity, which plays an important role in shaping consumer impulse purchase behaviour. Wireless devices are also well suited to dynamic transactions such as stock trades.

Tiwari, Buse, and Herstatt (2008) demonstrated characteristics and features of m-commerce. The authors defined e-commerce and m-commerce and briefly compared those two types of Internet commerce. They define e-commerce as buying and selling of products and services over the Web. M-commerce transactions are electronic transactions conducted using a mobile terminal and a wireless network. They claimed that many of the services offered by the stationary Internet are available on mobile devices. Moreover, mobile devices can offer location-based services (LBS) that traditional PCs cannot offer. Several unique features of mobile devices, such as ubiquity, immediacy, localisation, instant connectivity, pro-active functionality, and a simple authentication procedure, are also demonstrated in the study. Thus, the authors believe that m-commerce will bring significant business opportunities to companies.

According to Koukia, Rigou and Sirmakessis (2006), wireless technologies have improved traditional e-commerce by "providing the additional aspects of mobility (of participation) and portability (of technology)." On this theme, mobile and e-commerce application developments are an important factor for the expansion of m-commerce among consumers. The technical characteristics of devices and corresponding applications, as well as Internet access facilities, are determining the level of acceptance of m-commerce and its development. Aspects like processing power, display and device size, mobile internet coverage, standardization and quality of devices, are only some of the important

factors that decide the level of use of m-commerce, and consequently, the level of its development. The purpose of designing interfaces for mobile applications should be to increase consumers' interest in using and dedication to m-commerce. Among the inhibiting factors is that m-commerce applications were developed based on e-commerce applications. The most important thing when designing such applications is to design the application in such a way that it does not distract the user from the main purpose of the application. However, aspects concerning security and accessibility should not be neglected. Even though storing sensitive data such as medical, financial, or personal information on mobile devices can help people, the risks of losing such information or unauthorized access are higher and should be considered when an m-commerce transaction begin.

Sadeh (2002) explains in M-commerce: Technologies, services, and business models that Today, the mobile Internet is emerging even faster, in part because providers, content partners, customers, and investors are leveraging lessons from e-commerce. Cellular carriers, both nationally and globally, have made significant advances to enable next generation data or wireless Web services and mobile, m -commerce. Broadly defined, m- commerce involves an emerging set of applications and services people can access from their Web enabled mobile devices.

Malladi et al. (2002) and Dubendorf (2003) in Current and future applications of mobile and wireless networks, mobile wireless technologies consist of two aspects— mobility and computing. They claim that mobile computing represents users continuous access to network resources without limitation of time and location. Wireless means that transmission of any form of data, text, voice, video or image is conducted through radio waves, infrared waves or microwaves rather than using wires. mobile wireless technologies are defined as any wireless technology that uses radio frequency spectrum in any band to facilitate transmission of text data, voice, video, or multimedia services to mobile devices with freedom of time and location limitation.

Ravi *et al*. (2003) Mobile devices are widely accepted due to the convenience and it will evolve into "personal trusted devices" which pack users' identity, purchasing power and benefiting various aspects of their daily lives. It plays an important role for users in order to facilitate the vision of an intelligent ambience, by collecting and communicating various personal habits and preferences, and enabling their environments to sense and react.

Zhang et al. (2003) defines m-commerce as Mobile Commerce transactions are basically electronic transactions conducted using a mobile terminal and a wireless network. Mobile terminals include all portable devices such as mobile telephones and PDAs, as well as devices "mounted in the vehicles that are capable of accessing wireless networks" and perform Mobile Commerce transactions.

Léger, Cassivi, Wamba (2004) studies the adoption of customer-oriented m-commerce initiatives in organizations. The study investigates the nature of businesses that offer m-commerce services to their customers and a predictive model was proposed and tested. Three determinants are found that influence the adoption of m-commerce in businesses according to business size. These are: business to consumer orientation, digital nature of the product offered, and level of e-commerce adoption.

Stoica et al. (2005) finds M-commerce adoption in firms can be a complex process as it can be influenced by internal and external variables such as government involvement. This complex process involves the "organizational structure of the firm, its business strategy, organizational culture, and the environment in which the business operates".

K.S. Sanjay (2007), in his work the diffusion of mobile commerce in India, explains Mobile network is less cost included and also gives a better flexibility and effectiveness to its subscribers than landline phone. M-commerce is also a substitute of E-commerce, but the difference lies that M commerce uses wireless networking. So it gives flexible and convenient experience.

Shankar et al. (2010) describes M-commerce to create a shift in the sales paradigm where instead of consumers arriving in the company's sales environment, it is the seller who influences the consumer's environment without any limitations of time

and place through mobile devices. M-commerce is considered as new platform where economic drive for growth is continuously at odd with the concerns and needs for individual privacy. Consequently, the advantages of m-commerce must be weighed against the potential for privacy violations (Milne, 2003).

Batra (2013) extend their research on mobile commerce in India. It lists the emerging issues faced by M-commerce Industry. He quotes some definitions of M-commerce by Lehman Brothers, Ovum, and Forrester. The various is discussed. He also studies the sales and available users of smartphones in India which shows tremendous increase in the graph although it is new in India. According to him the growth drivers of m-commerce are Instant Connectivity, Personalization factor, mobility Factor, Immediacy, Localization etc. He focuses on Mobile Commerce Applications in India like entertainment, ticketing, e auction etc. To summarize his research M-commerce has changed the life of people and way of doing business. With the help of m commerce one can get the entire word knowledge on their phones, can access and manage the bank accounts, avoid parking rush, health issues etc.

Ericcson (2014), finds in his study that Indians on the average spend about 3 hours and 18 minutes a day using smartphones which is a 20 per cent increase in the past two years. Apart from entertainment and social networking, 33 per cent of Smartphone users say that mobile broadband has made their business more viable. These show a positive trend in Smartphone usage.

Gupta (2014) in their work Benefits and Drawbacks of M-Commerce in India: A Review, says that m commerce is at emerging level in India and it is complex to adapt. People have started using mobile not only to make phone call but also for web access, chatting, surfing and shopping. He discusses about how m-commerce is developing in India and identified clear context and assistant mechanism. He discusses about benefits and drawbacks of m-commerce in India, similarly as coin has two aspects so as every technology has. The benefits are user-friendly, easy to carry; low internet connective area etc.

Vandana Ahuja and Deepak Khazanchi (2016) find the changing marketing landscape has seen the advent and adoption of new tools like shopping apps for consumers. The conventional models, which have studied Information Technology (IT) acceptance and adoption by consumers, have found that adoption is a function of perceived usefulness and ease of usage. Other models have emphasized quality, enjoyment and trust as significant determinants of the adoption of e-shopping by consumers. This paper focuses on the growth of the usage of Apps by consumers in India, explores their functionalities and proposes a new conceptual model for the adoption of Mobile Apps by consumers shopping on ecommerce sites in India. Convenience, Collaboration, Hedonic Motivation, and Habit are the significant constructs outlined in the proposed model, which focuses on the usage of apps. They proposed that Degree of Internet Savviness and Individual Internet Worth are additional moderating variables, which affect the effect of convenience and collaboration on App Usage. Implications of the proposed model for research and practice are discussed.

4 Consumers Behavior towards E-retailing and M-retailing

4.1 Characteristics of e-Consumers

E-consumer of the 20th century is young, professional, and affluent with higher education and higher levels of income **(Palumbo and Herbig, 1998)**. They value time over money, which makes the working population, time constraints (Burke, 1997). Actually, both demographics and personality variables such as opinion leadership are very important factors in studies to determine the antecedents of Internet purchases (Kwak et al., 2002).

Internet usage history and intensity affect online shopping potential. Consumers with longer histories of Internet usage, educated and equipped with better skills and perceptions of the Web environment have significantly higher intensities of online shopping experiences and are better candidates to be captured in the concept of flow in the cyber world (Sisk, 2000; Hoffman and Novak, 1996; Liao and Cheung, 2001). Those consumers using the Internet for a longer time from various locations and for

a higher variety of services are considered to be more active users (Emmanouilides and Hammond, 2000).

Bellman et al. (1999) states, demographics are not much important in determining online purchasing potential. Whether the shopper has the time constraints and busy life style, the risk-taking propensity is a powerful factor. E-consumers have higher risk bearing tendencies. Consumers with high levels of privacy and security concerns have low purchasing rates in online markets, but they balance this characteristic with their search more information about the product. These educated individuals, as more confident decision makers, are much more demanding and have greater control over the purchasing process from initiation to completion (Rao et al., 1998).

4.2 E-Consumer Behavior

Liao and Cheung (2001), Saeed et al., 2003; Miyazaki and Fernandez, 2001; Chen and Dubinsky, 2003 identified pre-purchase intentions of consumers to understand why they ultimately do or do not shop from the e-retailers. The study analyses the variables influencing these intentions. The researcher examined transaction security, vendor quality, price considerations, information and service quality, system quality, privacy and security risks, trust, shopping enjoyment, valence of online shopping experience, and perceived product quality.

Andrews and Currim (2004), found in his research that factors like price sensitivity, importance attributed to brands or the choice sets considered in online and offline environments can be significantly different from each other.

Teo et al. (2004), analyzed uncertainties about products and shopping processes, the trustworthiness of the e-retailer and the convenience and economic utility they wish to derive from the e shopping that determine the costs versus the benefits of this environment for consumers.

4.3 Online Shopping Experience

According to Tauber (1972), experiences are an important part of consuming and shopping. Shoppers are not always simply looking to buy products, but also want

to get pleasure from the shopping activity. This experience is affected by the customer's shopping goals, what they expect, and what their motivations are (Demangeot & Broderick, 2006). Motivation for shopping online is an important factor to consider when analyzing the shopping experience (Swatman & Chin, 2004). Holbrook and Hirschman (1982) established that it is highly important to create hedonic significance through good experiences in order to toughen up the relationships with consumers. Customer experience involves engaging several of the customer's aptitudes to satisfy and create value while he interacts with the organization, its products and its other customers. Similarly, an online retailer's role is to establish an appropriate environment to help customers in gaining a positive experience while shopping online (Pentina et al., 2011). When people shop online, they are not only consumers, but also users of the computer (Demangeot & Broderick, 2007). Huang (2003) stated that the online shopping environment is highly interactive.

The content of the website is a critical aspect in terms of how accurate and relevant it is. The website design is also very important if the company wants to conduct a successful e-retailing business (Colla & Lapoule, 2012). The website visuals include: color themes, font usage, photos, logos, graphic qualities and so on. These visuals capture the consumers' attention by communicating a distinct image of the organization and its products and services (Demangeot & Broderick, 2006). Factors such as low prices, good customer service, easy navigation, and also plainly stated return and exchange policies, are a part of the online shopping experience (Xu & Paulins, 2005). It is possible to improve the experience of e-consumers by responding to the problems they may face, particularly safety concerns. The best way organizations can handle this issue is through communication. They should let the e-consumers know that their website is secure and that privacy protection is a priority for the organization (Strategic Direction, 2012). Companies should strive to constantly improve their online services for consumers. A sound service delivery will have great positive impacts on the experience of an e-consumer (Ahmad, 2002).

A study on online service quality showed that trust is a critical factor, which influenced the consumer's contentment. Thus, online shops have to work towards becoming more reliable in terms of delivering products on time, giving proper information, and most importantly, making sure that shopping on their website is completely safe and secure (Lee & Lin, 2005).

4.4 Perception of Online Shopping

The e-consumer's perception of their experience while shopping online is also a factor to consider. When the consumer's experience exceeds their expectations, there is a high chance they will become loyal towards that particular e-retailer. This satisfaction is based on a number of features such as: how fulfilling the experience was, how smooth the transaction was and the ease of interaction (Chen & Chang, 2003). The e-consumer's perception will also vary depending on what kind of product they are looking to purchase. For instance, Klein (1998) said that products which require searching before purchase (such as books) will be different from products that are purchased through experiences (such as clothes). Zhou et al (2007) also stated that the e-consumers' perception will vary depending on the type of product because the risk factors are different for each (Liu & Forsythe, 2010). Some consumers do not shop online because they perceive traditional shopping as being soothing and fun. It improves their mood and turns into a social activity which they can do with their friends (Liu et al., 2013).

Gerald and Valerie Trifts (2000), in the study "Consumer decision making in online shopping environments: the effects of interactive decision aids" suggested that interactive decision aids designed to assist consumers in the initial screening of available products and to facilitate in-depth comparisons among selected alternatives may have highly desirable properties in terms of consumer decision making. Such tools allow shoppers to more easily detect products that are overpriced or otherwise dominated by competing alternatives, thus increasing market efficiency. More generally, the availability of interactive decision aids in online shopping environments should enhance the ability of individuals to identify

products that match their personal preferences and, therefore, lead to substantial positive welfare effects for consumers.

Walczuch and Lundgren (2001) studied psychological determinants for consumer trust in e-retailing. They studied Personality, Perception, Experience, Knowledge-based factors and Attitude. The major findings were consumers make their decision to trust an e-retailer on a rational basis. They found that Knowledge and Experience Base factors plays a important role to consumer at a time to purchase from E-retailer.

Kim, D., Yang, Z., Jun, M. (2003) have analyzed *Customers' perceptions of online retailing service quality and their satisfaction.* The aim of the study was to identify key dimensions of online retailing service quality perceived by online shoppers. They have selected six key dimensions for online retailing service quality which were reliable/prompt responses, access, ease of use, attentiveness, security, and credibility. The finding from the survey through questionnaire confirmed that there is a strong and positive relationship between online retailers' service quality and their customer satisfaction. They found that three dimensions, reliable/prompt responses (service), attentiveness, and ease of use, had significant impacts on both customers' perceived overall service quality and their satisfaction. They concluded that online retailers implement information systems that integrate all their online and offline operations to improve their delivery performance.

Vrechopoulos et al. (2003) studied comparison between adoption rates and consumer behavior toward M-commerce among Finland, Germany and Greece and found significant difference among respondents. The study indicated European consumers are high in adoption and diffusion due to better quality mobile devices, user-friendly shopping interfaces, applications that are more useful and services, lower prices, better security, better coverage and higher speed.

Plessis and Mostert (2004) studied Period of Internet Usage: An Indicator of the Buying behavior of Internet Users. They found the relationship between the Period of Internet usage and Online-buying pattern of Consumer. They observed that the period of Internet usage significantly influenced the decision to purchase

via the Internet. Another finding was that the period of Internet usage influenced significantly whether the shopping on the Internet searched for, or considered searching for, product and service information online before purchasing from non-Internet-based sellers.

Jongeun Kim (2004) studied Consumers' Online Shopping and Purchasing Behaviors. He explored the differences between four potential groups of web users, the current non-web user, and the user who only visits web stores with no intention to purchase, the Internet browser who has an intention to buy online but has never done so, and the person who has made an online purchase. The research objectives were, understanding the differences among the four groups in terms of demographics, current technology use and access, and current attitudes towards making an online purchase. Differences in demographics and technology use were also observed between the groups.

Cheol (2005) studies mobile internet acceptance in Korea by developing an extended version of TAM to better reflect M-internet context. They finds that attitude toward mobile internet is the most significant determinant followed by the perceived playfulness and the usefulness to use M-Internet. Further, they established the positive role of the perceived playfulness and the negative role of perceived price level in developing the attitude as well as the intention.

Niina Mallat (2006) attempted a study on "Exploring Consumer Adoption of Mobile Payments - A Qualitative Study" an empirical data was collected from 6 focused group sessions from interviewees who were from Helsinki Metropolitan area in Finland. His findings have concluded that relative advantage of mobile payments is related to the specific benefits provided by the new mobile technology such as time and place independent payments, remote and ubiquitous access to payment services, avoiding queues, complementing cash payments etc,. This study has also found that in certain use of situations like unexpected need of payment, time pressure and lack of cash or loose change, the access of mobile payments plays a pivotal role. He has also suggested that many other determinants and factors are such as compatibility, complexity, costs, network extension, trust and perceived

security. Since Mobile wallet belongs to mobile payments category, his study has concluded that above findings are applicable for mobile wallet adoption either partially or fully.

Ying (2006) in this research work Essay on modeling consumer behavior in online shopping environments analyzed online purchase behavior across multiple sessions. Shopping cart abandonment is the bane of most e-commerce websites. He analyzed shopping carts in an online grocery shopping setting. Particularly, he designed a joint model for the cart, order and purchase quantity decisions. The relation between the three decisions is established by the correlations between the error terms. Analysis shows that not all abandoned shopping carts result in lost sales. Customers pick up abandoned carts routinely and execute the final orders. The study suggests to marketers important managerial implications on how to deal the shopping cart abandonment problem.

Lee (2008) studied on online consumer and their buying behavior. The finding of his study illustrates how a high proportion of negative online consumer reviews can elicit a conformity effect, with consumers showing a tendency to conform to the perspective of the negative reviews when the proportion of negative reviews increases.

Pooja Mordani (2008) explored the study on investigation of consumer‘s perception towards internet based e-shopping and the study involved an experiment in which the respondents were asked to go through the online shopping process and relate their experiences. The study found that the positive experience with a website plays a vital role in forming consumers trust while shopping online and if consumers trust the website then they will perceive ease of use, perceive enjoyment and perceive the website to be less risky which would finally culminate into an intention to transact with the website.

Sahney and Bhimalingam (2008) conducted a study on Consumer *Attitude towards Online Retail Shopping in the Indian Context.* The objective of the study was to look into the various aspects of online shopping in modern day environment and to identify those factors that affect the development of attitudes towards online

shopping. They use questionnaire as data collection tool and done the survey of 160 respondents. They study aspects which were reliability and trust, security, aesthetics, continuous improvement, access to foreign goods and post purchase service related to online retail store. Their sampling units are educated middle and upper class people who were aware of online retail shopping. They find that reliability and trust were the most important criteria as per Indian consumer for online retail store followed by information and post-sales service and security. They also find that aesthetically well-arranged site will improve their mood of consumer and motivate them to browse through the site.

Chen (2009) in his dissertation entitled online consumer behavior: an empirical study based on the theory of planned behavior extends the theory of planned behavior (TPB) by including ten important antecedents as external beliefs to online consumer behavior. The results of data analysis confirm perceived ease of use (PEOU) and trust are essential antecedents in determining online consumer behavior through behavioral attitude and perceived behavioral control. The findings also indicate that cost reduction helps the consumer create a positive attitude toward the purchase. Further, the findings show the effects of two constructs of flow – concentration and Telepresence, on consumers' attitude. Concentration is positively related to attitude toward the purchase, but Telepresence likely decreases attitude due to the consumers' possible nervousness or concern about uncertainty in the online environment.

Afizah, Erlane & Jamaliah (2009) in an examination using Fishbein's Theory on the topic, Does Consumers' Demographic Profile Influence Online Shopping investigated five variables relate to demographic profile were chosen: gender, age, salary, and job do affect the consumers' online shopping behavior. Findings support Fishbein's attitude theory that implicate demographic profile as an important variable that influence positive or negative attitude in an object, the tendency to shop online. Gender plays an important role in influencing attitude towards online shopping behavior is consistent to previous studies that found significant influence of gender on attitude, the significant difference on the attitude towards online shopping differentiated by age. The results showed that those who are between 30

to 39 years old do more online shopping compared to those between 20 to 29 years old and those over 40 years old. This is expected since those who are below 30 years old are basically those respondents who have just started working. Therefore, their financial commitment would be considerably tight compared to those respondents between 30 to 39 years who may have settled down and have excess money to spend. However, for respondents over 40 years old, the results showing that their online shopping behavior is not as high as the respondents of between 30 to 39 years old may indicate that this group of people may likely to less computer technology literate compared to other groups. The results showed that marital status plays an important role to one person's online shopping behavior.

Narges Delafrooz, Laily Hj. Paim & Ali Khatibi (2010) in their study title Students Online Shopping Behavior: An Empirical Study and the study reveals that consumers have different personalities that affects online shopping and can be classified into two orientations of utilitarian and hedonic. Consumer who have utilitarian have goal oriented, rational, deliberate, task oriented shopping behavior whereas hedonic have experiential, fun, fantasy, arousal, excitement, entertaining behavior. The findings showed that utilitarian orientations had higher effect on attitude towards online shopping and this may be due to the low level of young consumers who have experience in online shopping. Moreover convenience, price and a wider selection influenced consumers' attitudes towards online shopping.

Ankur Kumar Rastogi (2010) studied the article on a study on Indian online consumers and their buying behavior. The study analyzes the features related to the buying behavior of online shoppers. Consumer buying behavior in regard of online shopping studied using different socio-economic variables. It also suggests researchers to understand the drivers of consumers' attitude and goal to shop on the Internet, and consumers' perceptions regarding ease of use and usefulness. Conclusions can be used as useful guide for market orientation.

Ozok and Wei (2010) compared consumer usability preferences in e-commerce for stationary and mobile devices. The authors introduced four validated factors: general human factors, product-related factors, general convenience factors, and

consumer service-related issues. They invited 118 college students to complete the survey. Using ANOVA analysis, they found that mobile commerce cannot replace classic electronic commerce. In other words, mobile commerce should be a shopping medium complementary to classic electronic commerce. Even the feature of "shopping from anywhere at any time" was not perceived as superior for m-commerce.

Flynn,L.,Goldsmith,R.(n.d). analysed *The Impact of Internet Knowledge on Online Buying Attitudes, Behavior, and Future Intentions: A Structural Modeling Approach.* The aim of the study was to test a conceptual model of perceived Internet knowledge on Internet-related attitudes, online buying intentions. Through questionnaire survey found that as consumers gain knowledge of a product, they are likely to buy more and feel more secure in their purchases. Also found that greater knowledge leads to more buying, which in turn increases knowledge of the product category. They concluded that e-retailers must provide information to consumers to enhance their knowledge related to e-commerce, which will promote online buying. The information should focus on the fun and safety of Internet. As consumers understands more online buying, their safety concerns should decrease, thus leading them to shop online.

Faziharudean (2011) use theoretical framework to examine the effect on customers' behavioral intentions to use mobile data services from the various identified factors has been presented in this research. The work conducts a survey in Malaysia in the form of questionnaire. Hypotheses have been framed and Multiple regression analysis has been deployed for the purpose. The various factors such as: Perceived usefulness, perceived enjoyment, perceived mobility, social influence and perceived ease of use, all have been found to have significant positive influences on consumers' usage intentions for mobile data services.

Abu Bashar & Mohammad Wasiq (2013) in the study E-satisfaction and E-loyalty of Consumers Shopping Online found out that there is a very strong association between emotional states and consumer e-satisfaction. A directional relationship has also been found between risks in online shopping and consumer e-satisfaction.

E-loyalty is being affected significantly from emotional states and perceived risks in shopping online. So, it may be said that both emotional states and online risks does matter substantially in online shopping. Chu & Yuan (2013) in the paper The Effects of Perceived Interactivity on E-Trust and EConsumer Behaviors investigated the impact of perceived interactivity on customer trust and transaction intentions in e-commerce. The findings suggest that perceived interactivity has positive effects on the user that ultimately result in e-loyalty behavior. Further, the fuzzy linguistic scale enables researchers not only to deal with different recognition styles, but also to notice differences in individuals by providing different linguistic variable combinations for researching purpose. Finally, the outcomes will be of interest to web designers and online marketers for how to enhance interactive online web applications.

Namita Bhandari & Preeti Kaushal (2013) in the study on Online consumer behavior: an exploratory study find outs that e-commerce websites as it helps in framing strategies to make online shopping a more user friendly experience. The issues like security of financial information while transacting on websites and confidentiality of their personal information still bring anxiety to the minds of Indian consumers, hence online vendors need to bring that assurance to their minds by having robust back-end technology as well as right image through their websites' features. Further, the factor of convenience also tops the mind of an online buyer, so effort should be made to delight the consumer by giving extremely good buying experience by ensuring quick delivery and hassle free online transactions.

Dr.Gagandeep Nagra & Dr.R Gopal (2013) in the study entitled "An Study of Factors affecting on online shopping behavior of consumers" found that consumers' response across different demographics factors shows that gender does impact Possession of internet and Frequency of online purchase of consumer's occupation is a demographic variable which does not impact any of the variable under study. The overall results prove that the respondents have perceived online shopping in a positive manner. This clearly justifies the project growth of online shopping. The frequency of online shopping is relatively less in the country. Online shopping organizations can apply the relevant variables and factors, identified from the

research, to create their strategies and tactics. The organizations can prioritize the consumer inherent and unequivocal requirements in online shopping environment. The results can also be used by various organizations to identify their target customer segments.

Arjun Mittal (2013) in the study E-commerce: It's Impact on consumer Behavior examines those factors that affect the consumer's online shopping behaviors. It starts with the current status of the Internet development, and mentioned the background of marketing as representation and its difference with physical stores which in order to show the developing history of Internet shopping since the E-commerce become popular. The research focus on the Internet shopping (include the nature of Internet shopping, E-commerce website, and online security, privacy, trust and trustworthiness) and online consumer behaviors (include background, shopping motivation and decision making process). Those factors were looked at, and examined to reveal the influence at online consumer behaviors.

Nidhi Vishnoi Sharma & Varsha Khattri (2013) in the Study of online shopping behavior and its impact on online deal websites found that the prominent factors affecting this buying decision are impulse, information of availability and option to provide a review. This brings us to the conclusion that since most of the e-shopping of the deals is taking place on impulse, marketers should put their focus on increasing awareness about the availability of goods and services and building a feedback mechanism. There should adopt some technique by which consumers can be comfortable for security concerns. Trust on this tight security mechanism leads to repeat purchase, as is established here. Higher the level of trust on the website more the number of times coupons have been bought by consumers.

Garima Malik & Abhinav Guptha (2013) in the study entitled "An Empirical Study on Behavioral Intent of Consumers in Online Shopping", found that the relations between intention to shop online as dependent variable and its antecedents i.e. perceived beliefs toward online shopping, perceived behavior control, perceived consequences, social norms, demographics and personal efficacies as independent factors. The relations between behavior and its antecedents were assessed applying

Correlation and ANOVA. The data analysis and statistical tests in the analysis section showcases the fact that intention and purchase behavior in the online environment for products and services are driven by a set of factors that are not always the same. For products, even though security concerns, concerns about trusting vendors, quality of products and an appealing web interface may impact the intention of a person to shop online, it does not necessarily mean it gets converted to an actual purchase.

Ngo Tan Vu Khanh & Gwangyong Gim (2014) in the research entitled "Factors Affecting the Online Shopping Behavior: An Empirical Investigation in Vietnam" suggest that Perceived of economic benefits (PEB), Perceived of merchandise (PM), and Perceived payment benefits (PPB) have significant direct effects on consumers behavior adoption of online shopping. That means, to promote online shopping in Vietnam is to increase the ability to recognize the benefits of trading products on the Internet, addition to that the usefulness of online payment. Note minimize risks when buying and selling transactions on internet .The results of this study also showed that the development of e-commerce in Vietnam is very difficult, the fear of risk taking when dealing on the internet on the second aspect is the product / service and the transaction. Aanchal Aggarwal & Dr. Smita Mishra (2014) in the research paper Analysis of Risk Perception of Consumers in E-Commerce: found that the factors that affect online consumers' purchasing intentions, one is perceived risk. It was difficult to understand and predict people's reactions to risk posed by online hazards.

Dr. Renuka Sharma (2014) in the study entitled "Understanding Online Shopping Behavior of Indian Shoppers" revealed that the ease and convenience provided by these stores for 24x7 has made very easy shopping for consumers worldwide. Indian customers are also getting addicted to the online shopping and they do like various features of online shopping as by rest of the world. But the statistics available has shown that Indian market is still not a fully developed market for e-tail stores. The majority of internet users are youngsters, the majority of goods and services demanded are related to only this segment. Travel planning is one of the biggest services used by Indian online shoppers.

Prashant Singh (2014) in a study Consumer's buying behavior towards online shopping A case study of flipkart.com user's in Lucknow city examined that future of e-tailers in India looking very bright. E-tailers give us the best way to save money and time through purchasing online within the range of budget. Flipkart.com offering some of the best prices and completely hassle-free shopping experience. The whole concept of online shopping has altered in terms of consumer's purchasing or buying behavior and the success of E-tailers in India is depending upon its popularity, its branding image, and its unique policies.

Rajesh Panda & Biranchi Narayan Swar (2014) in the study "Online Shopping: An Exploratory Study to Identify the Determinants of Shopper Buying Behavior" revealed that Online retailing is very different from the store formats of retailing. The research made an attempt to find out the triggers that influence shopper buying behavior in online retail formats. The review of literature gave insights into the online buying behavior and the use of TAM and TPB in understanding shopper buying behavior. The primary research conducted on 20 measured attributes borrowed from existing literature and subsequently modified as per the exploratory survey was analyzed using SPSS for understanding the underlying constructs influencing online shopper behavior. The Exploratory factor analysis concluded in four factors namely Anxiety, Ease of Use, Usefulness and Price as the determinants of shopper buying behavior online. The factor 'Anxiety' comes out as the single most important factor in online shopping though the shoppers are young, technology savvy and prefer buying online.

Emily Yapp Hon Tshin (2014) in the research 'The Key Dimensions of Online Service Quality: A Study of Consumer Perceptions', found that to satisfy and retain current customers, it is critical for online retailers, i.e. the airline companies in the present context, to provide their customers with very high quality of the six dimensions (promptness/reliability, personalization, website content, flexibility, trustworthiness, and ease of navigation) of the overall service quality as perceived by them. However, to enable the online retailers to stay more competitive in the market and to increase their market share, it is highly recommended that they pay more attention on personalization and trustworthiness. With personalization and

trustworthiness, loyalty will be built between the online retailer and buyers, which, in turn, will lead to the establishment of positive word-ofmouth in the online setting.

Wang & Yang (2010) presents that the electronic equipment takes a high attraction to the percent of the individuals shopping. Compared with other goods, online shopping of electronic goods adds great convenience to the life of the people. Buying electronic gadgets online gives customers an opportunity to find a great variety of product online, and customers can review a wide selection of products and special offers and discounts with the best deals online. In the coming years, the development of online retailers will improve and promises a bright future. However, the tangible and intangible problems of electronic product online shopping still exist and the online store retailers lack the customer knowledge in some extent. Therefore, our intention is to explore customer behaviour when purchasing electronic products through investigating the factors that can affect online shoppers' attitudes, intention and actual buying behaviour. In this research, we offered the online retailers some suggestions to improve their sales and attract more customers.

Jun and Jaafar (2011) states that business revolution is a good example which is provided by online shopping. Ecommerce is experiencing a period of rapid development currently in China; for the expansion of the online shopping market, large number of Internet users provides a good foundation. After studying and analysing different variables this research found that there were relationships between the perceived usability, perceived security, and perceived privacy, perceived after-sales service, perceived marketing mix, perceived reputation and consumers' attitude to adopting online shopping in China. However, only marketing mix and reputation were significantly influence consumers' attitude to adopt online shopping. The research gives light on understanding consumers' online purchase behaviour.

Thakur (2013) in their study Customer usage intention of mobile commerce in India: an empirical study in India, investigates the factors influencing the adoption intention of mobile commerce based on constructs from the technology acceptance

model and innovation resistance theory. Results of the study indicates perceived usefulness, perceived ease of use and social influence as significant determinants for adopting this new technology platform for conducting business. The results also indicate security and privacy risks negatively related with usage of mobile commerce. Researchers have tapped into shopper orientations to study patronage behavior among elderly consumers, catalog shoppers, out-shoppers, and mall shoppers By extending this shopping behavior construct to online shopping, our study aimed at contributing to the knowledge and understanding of consumer response to electronic modes of shopping. It is becoming increasingly clear that in order to survive and more importantly to succeed, online merchants should embrace and actively pursue fundamental principles of good retailing that apply to any medium. Based on the findings from this study, it is expected that the study of shopping orientations can also help electronic retailers identify and understand those consumers who prefer to shop online and the reasons why. Further, shopping orientation could be used to segment customers and formulate different strategies based on each segment's relative propensity to adopt and use online shopping.

Kapoor (2012) finds online decision-making and online shopping phenomena are governed by a number of consumer acceptance and behavioral characteristics and grounded in theoretical aspects of consumer decision making. There are number of factors that affect what we buy, when we buy, and why we buy. In reference to buying online, the factors that influence consumers are marketing efforts, socio-cultural influences, psychological factors, personal questions, post decision behavior, and experience.

Javadi, Nourbakhsh, Saeedi & Asadollahi (2012) studied factors affecting online shopping behavior of consumers, one of the most important issues of e-commerce and marketing field. The aim of the study is filling the gap of previous studies that did not analyze main factors that influence online shopping behavior. This objective has been analyzed by examining the impact of perceived risks, infrastructural variables and return policy on attitude toward online shopping behavior and subjective norms, perceived behavioral control, domain specific innovativeness and attitude on online shopping behavior as the hypotheses of study. This research work

was an applied research with descriptive survey method. This study suggests that financial risks and non-delivery risk negatively affect attitude toward online shopping. Conclusion indicated that domain specific innovativeness and subjective norms positively affect online shopping behavior. Furthermore, attitude towards online shopping affected positively online shopping behavior of consumers.

Stancombe Research (2012) conducted quantitative research on 'Attitudes towards online shopping and knowledge about shopping online securely found that Consumers are most comfortable shopping via familiar sites and are well versed in the basic security measures: keeping records not giving out details and passwords, checking bank statements. They claim to look for 'secure payment' options but awareness of https sites as a security feature is relatively low. PayPal is known to be a secure method of payment and is sought out by consumers. Among SMBs, there is room for improvement while most have some security measures in place for online customers, they are certainly not covering them all.

Ernst & Young (2012) conducted a research study on Rebirth of e-Commerce in India. The rapid growth of the e-Commerce sector is attracting new players. The initial investment required to start an online venture is as low as a US$10,000–20,000.The sector is also attracting the interest of VCs and entrepreneurs to secure funds easily. This enables new companies to easily replicate the existing business models and, thereby, increases competition in the sector. Furthermore, some operational aspects such as free shipping of products and COD, which were differentiators earlier, have now become hygiene factors. India's e-Commerce market is mainly restricted to urban areas, with the bulk of the business being restricted to cities. Internet usage in rural areas is limited. This could be due to several reasons including low internet speed and internet user base (20 million out of a total of 121 million in 2011), though rural areas account for 70% of the country's population.

Digital Insights (2013) in the research on Online Shopping in India find out that Majority of the online shoppers use Debit cards/Internet banking as their preferred

mode of payment for shopping online. Payment through credit cards, follow closely at second position and Cash on Delivery on third position.

CRISIL (2014) conducted the opinion study "e-tail eats into retail" recommended, physical retailers in India will have to establish their presence online quickly. And, with the right strategies, they can even compete effectively. For instance, to tackle the queue problem at its stores, Wal-Mart allows customers to shop online and opt for either home delivery or store pick-up. Today, Wal-Mart is among the top 5 online retailers in the US with estimated revenues of USD 10 billion in 2013 from the online segment alone. There are other examples as well, such as BestBuy which have developed a significant online presence over the past decade and are now among the top online retailers in the US.

AC Nielsen (2014) conducted a survey on E-commerce shifts into higher gear around the world find out that online purchase intention rates have doubled in three short years for more 108 than half of the categories measured between 2011 and 2014. And these high-growth categories still have plenty of room to grow digitally.

BMI Research (2014) conducted research on 'Facing market opportunities of online shopping industry' find out key driven to online shopping are Easy / simple, Cheaper, Do not like to shop offline, Plenty of options and Good quality products. Most complaints in online shopping are the difference product display specification with product received, long shipping time, internet connection problem and Fraud issues.

PWC (2015) in the report "Future of India -The Winning Leap", emergence of new technologies, especially mobile, in India has sparked a social change that's difficult to quantify. While mobile, internet, and social media penetration and growth can be quantified, describing the changes in social values and lifestyles that have accompanied those trends is far more challenging. New technologies such as virtual walls and virtual mirrors will further help improve the retail customer experience, thereby encouraging greater consumption. Virtual mirrors let shoppers 'try on' clothes and accessories virtually before making buying decisions. In their view, there is humongous potential for online shopping companies owing to the growing

internet user base and advancements in technology. However, this will not be without its share of challenges, be it operational, regulatory, or digital. How a company prepares itself to meet these challenges will decide whether or not it succeeds.

Bashir (2013) in the study Consumer Behavior towards online shopping of electronics revealed that online shopping is getting popular among the young generation as they feel more comfortable, time saving and convenient. Researcher has analyzed from the survey that when a consumer makes a mind to purchase online, electronic goods are affected by multiple factors. The main crucial identified factors were time saving, the best price and convenience. The price factor was popular among the people because online markets prices were lower as compared to the physical markets. People compare prices in online stores, review feedbacks and rating about product before making the final selection of product and decision.

Sunita Guru (2013) in the thesis: A study of trust and perceived risk in Online Shopping found that online shopping is predominately male, young, single and educated. Internet usage pattern in terms of average time spent, place of accessing internet, main tasks accomplished and types of sites visited using internet between both buyers, and non-buyers were almost same. The majority of the online buyers ask for product return/money refund in case of dissatisfaction with the product. It is found that around 42% of the respondents were not sure whether they want to buy or not in the next 2/3 months. The three most important factors contributing to trust on online merchants were keep promises and commitments, will care for my welfare and when in problem will help me. Only significance difference between benevolence and qualification was found. No significance difference between income and ability, benevolence and integrity was found.

Pawan Kumar (2013) studied Electronic shopping: a paradigm shift in buying behavior among Indian consumers found that the consumers have perceived online shopping in a positive manner. This clearly justifies the project growth of online shopping in the country. However, the frequency of online shopping is relatively less in the country. Online shopping organizations can use the relevant variables

and factors, identified from the study, to formulate their strategies and plans in the country. Better understandings of consumer online shopping behavior will help companies in getting more online consumers and increasing their e-business revenues. At the same time, as realized the benefits from E-commerce, consumers are more willing to make purchases online. With the popularity of Internet, the number of Internet users will continue to grow and more Internet users will become online consumers, even regular online buyers.

Dr. S. Saravanan and K. Brindha Devi (2015) studied a study on online buying behaviour with special reference to coimbatore city, Online shopping is the new mantra of selling products effectively and efficiently but the criteria must be met. According to a study, "About 44 percent students use Internet in India and overall 72% of young people access Internet on regular basis. Due to the vast usage of Internet, the buying patterns have been changed. It has changed the way goods are purchased and sold, resulting to the exponential growth in the number of online shoppers. Online shopping is a new technology that has been created along with the development of the Internet. It is a convenient method of shopping and allows for a vast array of products to be at your fingertips. However, fraudulent use of the Internet is often a concern for many shoppers. Cyber thieves steal identities of shoppers and then exploit them causing a theft of their identity. This leads to a variety of problems, causing fraudulent credit card charges, opening new credit accounts, and misuse of current accounts. understanding who are the ones consuming and why they choose to use or keep away from the Internet as a distribution channel, is a critical matter for both e-marketing managers and consumers. Online consumers tend to be better educated. Higher computer literacy makes internet shopping smarter. Their awareness about the internet also makes them better positioned to identify and take decision for products and services.

N.Saravana Bhavan (2015) in the thesis entitled "A Study on Consumers Attitude towards Online Shopping With Reference To Coimbatore City" analyzed entire online process of developing, marketing, selling, delivering, servicing and paying for products and services. Coimbatore city population is highly tech savvy and the city was dotted with the firms of many successful entrepreneurs. Hinterland has

many industries, estates, corporate hospitals and good number of engineering colleges. In future, online shopping bound to grow in a big way, given the growing youth population.

Hema Swetha Rathore et.al (2016) This study explored the various factors that can affect consumer decision to adopt the digital wallet in online payment. This study +6+conducted using ANOVA method. The study has found various factors such as usefulness, alternative choice for online payment, satisfied and security and safety are the major factors plays important role in using digital wallet. This study further suggested that promotional programme, more discounts and reward points could increase the mobile wallet popularity and adoption. This study concluded that digital wallet is quickly becoming mainstream mode of online payment. The shoppers are adopting mobile wallets at an incredible rapid phase, largely due to convenience and ease of use. Tech-savy shoppers are increasingly demanding seamless Omni-channels, retails experiences and looking for solutions. This study concluded that online cashless payments yet to penetrate all the section of people which may happen in the coming years.

Manikandan.S et.al (2017) This study explained “an empirical study on consumer’s adoption of mobile wallet”. The study focused on explaining the use of wallet money supported by different companies& also the various factor that decide consumer wish to adopt mobile wallet. The study was based on primary data source with the questionnaire issued to 150 respondents. It revealed the various risk& challenges that mobile wallet user face. The author concluded that Mobile wallet usage awareness as spread among the people in India due to government policy of demonetization and this as forcefully induced the usage of mobile wallet and also he said that risk factors are reduced considered which will ensure adoption and tremendous growth of mobile wallets in the coming years.

Chapter Summary This chapter has presented a comprehensive discussion on theoretical and practical views of previous studies done on e-retailing and m-retailing by reviewing relevant literature, including definitions, concepts and issues relevant to the current study. Previous research studies done in this field which includes studies mentioned in books & e-books, Thesis & Dissertation, Peer Reviewed Journals (National & International) & Conference Proceedings and Research studies, Articles, Magazines & Newspapers. This review of literature combines factors that other studies have done that will influence the consumer's purchasing decision in online.

CHAPTER – 3

RESEARCH METHODOLOGY

1 Introduction

Online shopping is a form of e-commerce which enables customers to do shopping on internet using web browser. Customers can purchase products and services on these websites. Search engines are also available which makes it possible to search for various type of products and services and their various alternatives can be searched on websites so that they can get better price and better quality of products. In a typical online store customer can browse through different type of products and services with images, directions, prices and facilities which enables online buying experience good one. Plethora of electronic tools are available to do online shopping like desktop computers, laptops, tablets, smartphones etc.

A traditional shop or shopping store is made up of bricks and mortars but an online store is virtual store which exits online or on internet. One can access that store using its URL (uniform resource locater) or web address. Online stores make it possible for customer to search for a particular product, model, brands and price of any item or product.

The basic necessary things to complete online shopping or online transactions are an internet connection and electronic and acceptable method of payment. These methods of payment can be any one – credit or debit card, net-banking, access to paypal type service etc. The worldwide popular e-commerce websites are amazon.com, Alibaba.com and ebay.

Growth of internet and globalization retail market has become dynamic and competitive. With the growth of internet and globalization retail market has become dynamic and competitive. Invention of web or internet technology has affected

business tremendously and revolutionized the business activities like shopping, retailing, marketing, advertising etc.

Shopping on internet is also known as “e-tailing” which is short form of “electronic retail” or “e-shopping”. Online store has various synonyms like e-webstore, e-shop, web-shop, internet shop, online store, virtual store, online storefront.

With the advancement of technology now everyone had world in their hand in the form of smartphone. Mobile ecommerce or m-commerce means purchasing from online retail store through mobile device. The software used for completing these transactions are known as “apps”. These apps enable online shoppers to browse through various products, their characteristics, price etc. offered by online stores. The works which were done earlier on desktop or laptop, now can be done via smartphones. Due to ease of handling and comfortability people adopting it rapidly.

Research design and methodology is an integral part of any research study. For successful completion of any research study clear and concise definition of problem, its objectives and selection of right tools and technique etc. is essential. Hence present chapter gives details about research problem, objectives of research, hypotheses to be proved, type of data required etc.

2 Research Problem

Today e-commerce has completely changed the conventional thought of business and entirely changed the business scenario. This revolution in business can be attributed to advent of internet. Internet has completely revolutionized the entire business scenario of the world and how India can be left behind. Ecommerce in India is also witnessing remarkable growth for last several years.

e-Commerce is an advancement of traditional commerce which enables people to buy and sell goods and service from almost everywhere using internet connection and electronic device like computer, laptop, tablet etc.

e-commerce has come a long way and it is becoming advanced day by day. As the technology is changing day-by-day, so is the e-commerce. Retailers are adopting and innovating in new technology so that buying and selling experience of buyers and sellers can become pleasant and their e-commerce experience become fast, smooth and comfortable so that they can buy and sell online effectively with ease and safety.

As the technology is progressing size of the electronic devices is becoming smaller and smaller but smarter-and-smarter day-by-day. Earlier very large and big size computers were required to do small calculations but today very small computers which can be fitted on to palm can make very big calculation at very high speed and almost every electronic task can be performed with computers aka smartphone that can be fitted in palm of a person.

With the popularity of mobile devices/smartphones new term was coined called “m-commerce” or “mobile commerce” which includes monetary transaction performed using smartphones or mobile-devices. m-Commerce is and advanced version of e-Commerce. In e-Commerce you need computer or laptop which are not always portable. On the other hand, in m-Commerce which makes people enable to buy and sell goods and services or any transactions using mobile device which can be done anytime and anywhere, you just need a mobile device which can be put in a pocket and one internet connection.

Hence, the present topic of research was taken to study whether people are shifting from e-commerce to m-commerce and if yes, then to what extent and what are the reasons.

3 Research Gap

During literature review, it was found that lots of research work is available on e-commerce in various dimensions of e-retailing. But there is paucity of research work done for m-commerce and that too from retailer’s perspective. Study of literature also revealed that there is need to study the retailer’s perspective of shifting from e-retailing to m-retailing in India. Hence, present topic of research was taken to study “shifting trend toward m-retailing from e-retailing.

4 Objectives of the Study

The main objectives of the present study were as follows –

1. To evaluate e-retailing practices in India
2. To study shifting behaviour of e-retailers form e-commerce (using devices like computer, laptop etc.) to m-commerce (transactions from mobile devices/smartphones)
3. To investigate the reasons for shifting from websites to mobile applications by e-retailers.
4. To assess the perception and buying behaviour of Indian consumers towards websites and mobile applications.
5. To device a framework and suggestive measures for future trends in e-retailing in India.

5 Hypothesis of the Study

H_{01}: There is no significant difference in the perception of e-shoppers of different age group regarding shift from e-commerce to m-commerce

H_{02}: There is no significant difference in the perception of e-shoppers of different gender regarding shift from e-commerce to m-commerce

H_{03}: There is no significant difference in the perception of e-shoppers of different occupation regarding shift from e-commerce to m-commerce

H_{04}: There is no significant difference in the perception of e-shoppers of different income group regarding shift from e-commerce to m-commerce

H_{05}: There is no significant difference in the perception of e-shoppers of different educational background regarding shift from e-commerce to m-commerce

H_{06}: There is no significant shift of online consumers from e-commerce towards m-commerce

6 Research Design

Present study comes under descriptive research category. Descriptive research is defined as research method which describes the characteristic of the population. This type of research focuses more on “what” than “why” of research. This type of research emphasis on describing the subject of research rather than covering its “why” aspect i.e., why it happens. This study is also known as observation research method. It refers to research questions, design of study and analysis of data performed on the topic of research.

Some specific features of descriptive study are (a) It is quantitative research method which attempts to collect information in quantitative form for statistical analysis of the sample collected from the population. This is common market research tool which allows researcher to collect and describe demographic segment’s nature. Also in descriptive research not, a single variable is influenced in any way and it is cross-sectional study in general in which different sections belongs to same group are studied.

Hence the present study is descriptive in nature which studies behavior of netzines towards m-commerce and specially the opinion of e-retailers to study trend of shifting towards m-commerce from e-commerce. Since present research attempts to find out the behavior of netzines with respect to their shifting behavior towards m-commerce from e-commerce hence this study fits in to the realm of descriptive study.

6.1 Area of Study

In general, the area of study for research or relevant area of study is the area directly related to research. This is the area which any researcher covers in his or her research to collect data and investigate. As an example, if a particular person wants to study specific area say tribal area of particular district in a particular state

then his/her area of study would be that particular tribal area in particular district in particular state.

In the present case since researcher wanted to study the shifting behaviour of consumers towards mobile commerce and mobile commerce is not limited to a particular district or particular state hence the area considered for present study was India. Since major e-commerce or m-commerce retailers operates all over India hence data was collected from major e-retailers like amazon, flipkart etc. In order to achieve objective of the present study appropriate methodology was used and both primary and secondary data was used to conduct the study.

6.2 Source of Data to Perform Study

To conduct any study both primary and secondary may be required. For some studies only secondary data is required whereas in some study both primary as well as secondary data are required. Primary data means first hand data i.e., data which is collected by researcher himself/herself by doing experiment or doing field survey. Secondary data on the other hand is gathered from different sources which has been already collected or calculated by someone else. Generally, or mostly the studies which are conducted using primary data can not be completed without using secondary data Therefore, this study was conducted with reference to the E-retailing Websites with Mobile Application in India using both primary as well as secondary data. The sources of secondary data were newspapers, magazines, books, journals etc. which were mentioned in the bibliography given at the end of the thesis.

The primary data which was main source of the present study was collected through two self-designed questionnaires. Out of these two questionnaires one was for e-retailers like amazon, flipkart etc. and the second questionnaire was for netizens who shops online.

6.3 Data Collection Tools

Since this study was based on survey or survey research hence as stated above that source of data for the present study was primary therefore to collect primary data two self-designed questionnaires were prepared.

In survey-based research responses or opinion of respondents are received through surveys or questionnaires or opinion polls. As an example, for conducting market research, marketing research companies take opinion or feedback from customers through well designed questionnaires or survey forms. Pre-Prepared questionnaire or questionnaires designed by someone else or some other studies can also be used by researcher by taking proper permission for its use from original author and giving proper acknowledgement to original author.

Whatever type of questionnaire a researcher may be using, it must be well designed and must contain right survey questions relevant to study. The questionnaire should be balanced mix of both close end question and open-end questions. Close end questions are those question in which answers are already written and respondents have to select one of those answers, whereas open-end questions are those question in which not any answer is given and respondent has to give answer based on his/her own knowledge or experience.

These surveys or data collection through primary sources could be done in offline or online mode. Offline mode means designed questionnaires are printed on paper and distributed to target respondents by researcher through several ways i.e. distributing them individually or sending them through mails. Online mode – In the present era of information and communication technology since everything is possible electronically hence questionnaire can be designed online on a website and could be distributed online through e-mails or social media apps. These type of questionnaires are called online questionnaires.

As the two main objectives of the present study were to study online consumer behavior for shifting trend towards m-commerce, hence two self-designed questionnaires were prepared to collect primary data. These two questionnaires were-

1. Questionnaire e-Retailers
2. Questionnaire Online Shoppers

6.3.1 Questionnaire for e-Retailers

The first questionnaire was for e-retailers. E-tailing or e-retailing mean selling goods or services through internet which could be business-to-business (B2B) or business-to-consumers (B2C), means selling goods or services from business-to-business or from business-to-consumers. e-tailing requires e-tailing companies to adopt business model so that internet sales can be captured. This model include internet web-pages, warehouses, product shipping centers and shipping and distribution channels.

Since the present study was to study behavior of consumer for their shifting behavior towards m-commerce therefore it is very necessary to know the perception of e-tailers regarding this shifting behavior.

The questionnaire for e-retailers consists of two sections. In first section primary details of e-retailers were taken and in second section questions related to shifting trends were given on five-point Likert scale.

6.3.2 Questionnaire for Online Shoppers

With the advent and development of information and communication technologies new methods of day- to-day activities are evolved, shopping in one of them. Traditionally people used to go to shops that are tangible, made of cement concrete or other materials. With development of ICT, these shops are converted to virtual shops that does not require one to go to shops physically. By using any electronic device like personal computer, laptop, table or smartphone, one can access these shops at his/her home or anywhere he/she is. They just need an electronic device and internet connection we call this shopping as online shopping. Thus, online shopping is a kind of e-commerce in which people buy goods and service from e-tailers or e-seller on web-browser using internet connection. These e-shopping could be done on PC or laptop accessing web-site of e-tailer or on mobil2e (smart phone) using mobile app. Over these apps or web sites shoppers can

browse through variety of products available offered by different vendors and purchase product of best quality with fair price.

The questionnaire for online shoppers also consists of two sections. In first section demographic details like, age, gender, occupation etc. were asked and in second section 15 question related to online shoppers' shifting trend towards m-commerce were asked to know the reasons of shifts.

6.4 Reliability and Validity of Self Designed Questionnaire for e-Retailers and Online Shoppers

The reliability and validity of the self-designed questionnaire for e-retailers and online shoppers was established at three levels.

- Content validation of self-developed questionnaire schedule by experts
- Pilot testing
- Testing of reliability of self-developed questionnaire schedule

6.4.1 Content Validation of Self-developed Questionnaire Schedule by Experts

After designing the first draft of both the questionnaires to study e-retailers' point of view and online shoppers' opinion toward m-commerce, questionnaires were given to 5 experts in the concerned field for content validation. Thus, in all five experts were given this questionnaire for content validation. The criterion for choosing these experts was – having at least 5 years of experience of working in their respective fields. All the experts were requested to go through each question in both the questionnaires and asked to give their opinion and suggestions regarding addition, alteration and / or deletion of contents. After receiving response from experts regarding addition, deletion etc. in the content of questionnaires, necessary changes were made and content validity of the questionnaire was established.

6.4.2 Pilot Testing of Self- Developed Questionnaire

Pilot testing is just like rehearsal of any research work. Through pilot study researcher is allowed to test his/her research approach with small number of target sampling units before conducting actual research.

As it is very necessary to do proper experimental design. It is also very necessary to test experimental setup and improve research design before actual research execution. This process ensures smooth run of research and improves output of research work dramatically. Therefore, after content validity of the questionnaires was established, pilot testing was conducted so that opinion of respondents can be observed. Pilot testing of e-tailers' questionnaire was done on 20 respondents and for online shoppers' questionnaire it was performed on 50 respondents, so that there doesn't remain any ambiguity regarding questions as far as their understanding regarding given questionnaires is concerned.

The process of measuring the accuracy and consistency of research survey tools viz. questionnaires and schedules is known as validity and reliability respectively. One of the most necessary things in social science research is the ascertain the validity and reliability of the questionnaires or measurement tools. Researcher always wants to know that whether tool is actually measuring the desired research concept i.e., is the tool designed by researcher is valid and is the measurement tool, what it is intended to measure is measuring it consistently. The former is known as validity and later is known as reliability.

Validity measures the degree to which measurement tool measures what it supposed to measure. There are several types of validities like face validity, construct validity, content validity and criterion validity. These validities can be categorized in to two broad categories viz. internal validity and external validity. Internal validity means how accurately the measure obtained, actually quantifying what it was designed to measure. External validity on the other hand is how accurately the measure obtained from the study describe the population from which sample is derived.

Content validity of the questionnaires used in present study was established by giving draft questionnaire to subject experts. Experts were asked to evaluate drafted questionnaires and give their opinion. On receiving opinion of subject experts several changes were made in the language of the questionnaire and some unnecessary questions in the opinion of experts were deleted and few new questions were added.

6.4.3 Reliability of Questionnaire

After receiving response for pilot study reliability of online shoppers' questionnaire was calculated using Cronbach alpha test.

Reliability of questionnaire is the extent to which questionnaire measures consistently what it is intent to measure. In simple words it can be said that reliable measuring instrument is one which gives same measurement repeatedly when it is used to measure object or event one or more times. If a measuring instrument is perfectly reliable than it will give perfect positive correlation between the scores of objects or event if they were measured one or more times.

There are several methods by which we can measure reliability of any tool viz. test-retest reliability, split-half reliability, Spearman-Brown reliability and Cronbach Alpha reliability. Among these methods Cronbach alpha method is considered best due to some shortcomings of the methods of measuring reliability. Hence in the present study also Cronbach Alpha method is used to measure reliability of the questionnaire. Following formula is used to calculate Cronbach alpha reliability.

$$\alpha = \frac{N.\bar{c}}{\bar{v} + (N-1).\bar{c}}$$

Where,
N = number of items,
cbar is mean covariance between item pairs and
vbar is mean variance

The Cronbach alpha value for online shopper's questionnaire came out to be 0.876, which is greater than 0.7 hence reliability of the questionnaire was established and both the questionnaire was finalized for main study.

6.5 Procedure of Data Collection

The final data collection was done using purposive convenient sampling method. All the responses were received online using questionnaire designed on Google Forms. e-Retailers were contacted online and requested to fill the questionnaire. In this way responses of e-retailers were received.

As far as responses from online shoppers is concerned, convenience sampling and snowball-sampling methods were used to collect data from online shoppers. People in close contact who are online shoppers were requested to fill the questionnaire and they were further requested to forward the questionnaire in their contact to those who are willing to fill the questionnaire and does online shopping. In this way total sample of 270 respondents was completed. Almost 1 year was taken to complete data collection.

6.6 Sample Size

In every research study, generally a very large population is studied and inferences are made about it, but due to lack of unlimited resources, data of whole population cannot be collected. Therefore, data of a small part of population is collected and inferences about population is made from this sampled data. It is very necessary that sampled data should represent population so that correct inferences about population is made. Therefore, appropriate sample means it should be of appropriate size and has all the information of population which we want to study. There are various methods by which samples are collected viz. random sampling, systematic sampling, cluster sampling, convenient sampling etc. and appropriate sample size can be calculated using Cocharn's formula.

Calculating sampling size using Cocharn's Formula require two things – one is desired precision level and level of confidence. The Coharan's formula is given by –

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where n_0 is calculated sample size, Z is level of significance, e is margin of error, p is proportion of population following desired attribute and q proportion of population not following this attribute. Hence using this formula, the sample size came out to be 191 which is rounded up to 200 for present study.

As far as sample size for e-tailers is concerned there are more than 19,000 e-tailers in India. Using same formula, the sample size came out to be 50. The margin of error and level of significance were 0.1.

Since sample size for e-retailers came out to be 50. Therefore, 50 employees of major multi product e-retail retail stores were selected to give their opinion for shifting trend towards m-commerce from e-commerce, which was current topic of research.

e-retailers give their opinion but it is very necessary to obtain viewpoint of online customers also to know the reasons for shifting trends and the extent of shifting trend. Hence, a sample of 200 online shoppers was collected to know their opinion for the current topic of research.

6.7 Sample Selection

Two different method of sample selection were used for the present study. For e-retailers purposive sampling method was used. Purposive sampling method which is also known as judgmental sampling method or expert sampling method is a kind of non-probability sampling method in which sample is selected by judgement of researcher. Since the major objective of the present work was to study

opinion of e-retailers towards shifting behavior of customer toward m-commerce hence purposefully major e-retailers were chosen which commands the market and can give authentic opinion for the given topic. The criterion of choosing major e-retailer is also who deals in multi products/ huge diversified product categories. Therefore, 50 employees from major e-retailers were selected to give their opinion. In total 50 sample of e-retailers were taken.

Fig 1: Sample Selection

The sample for online consumers was selected using convenient sampling method. Convenience sampling is method of sampling in which researcher collect data as per their convenience. This method of sampling is commonly used sampling method as it is uncomplicated as well as economical, respondents are easily approachable. Sometimes when population is very large it is very difficult and practically impossible to approach whole population coming under sample hence convenience sample method is adopted by researcher. There is no specific criterion required to select sample only requirement is that sample should come under definition of sampling unit. All the parts of population are eligible to come under sample which are in researcher's proximity to get involved in the sample. The researcher selects sampling units based on proximity of researcher who does not

necessarily represents population using this method. Researcher can observe viewpoints, habits and get to know about opinion of respondents in easiest possible manner. Thus, people in contact who were involved or does extensive online shopping were approached and their opinion were taken for the present research work. The sample of online shoppers consists of 200 samples. How samples were selected is graphically depicted in fig.3.1.

7 Analysis of Data

Data collected from both the sampling units were first inspected for missing values and incomplete questionnaires. Incomplete questionnaires in the sense that more than 25% information was missing were rejected completely and new responses were taken and rest incomplete questionnaires were completed using appropriate statistical techniques.

When questionnaires were complete in the sense of no missing value, collected data was coded, scored and subject to analysis. The software used to analyze data were Microsoft Excel version 2019 and Statistical Package for Social Science (SPSS) Version 19.0.

7.1 Statistical Techniques Used to Analyse Data

7.1.1 Frequencies and Percentages

Frequency and percentage were used to show distribution of respondents according to a particular variable. This is used to compare proportion in different categories.

7.1.2 Mean

The Arithmetic Mean is a determined "central" value of a group of numbers that is the average of the values. To compute it, add all the numbers together, then divide by the total number of values (numbers).

7.1.3 Standard Deviation (S.D)

A standard deviation is a statistic that measures a dataset's dispersion from its mean. By calculating each data point's divergence from the mean, the standard deviation is calculated as the square root of variance. There is a bigger variance within the data set if the data points are further from the mean; consequently, the more spread out the data, the higher the standard deviation.

7.1.4 Student's t-Test

In case of small sample Student's t-test is applied instead of z-test. It was designed by W. S. Gossett whose pen name was Student. Hence this test is known as Student's t-test.

In case of means for two independent samples the hypothesis takes the following form

H_0: $\square_1 = \square_2$

H_1: $\square_1 \neq \square_2$

The two populations are sampled and means and the variances are computed based on samples of sizes n1 and n2. If both the samples are found to have same variance, a pooled variance estimate is computed from the two sample variances as follows:

$$s^2 = \frac{\sum_{i=1}^{n_1}(x_1 - \overline{x_1})^2 + \sum_{i=1}^{n_2}(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

Or,

$$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

The standard deviation of test statistics can be estimated as:

$$S_{(\bar{x}_1 - \bar{x}_2)} = \sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}$$

The appropriate value of t can be calculated as:

$$t = \frac{(\bar{x}_1 - \bar{x}_2)}{S_{(\bar{x}_1 - \bar{x}_2)}}$$

The degrees of freedom in this case are $(n_1 + n_2 - 2)$

If the calculated 't' value exceeds the value given under desired level of significance it is said to be significant at that level of significance and hence null hypothesis (H_0) is rejected and alternative hypothesis (H_1) is accepted.

7.1.5 Analysis of Variance (ANOVA)

The analysis of variance frequently referred to as the ANOVA is a statistical technique specially designed to test whether the means of more than two quantitative populations are equal. This technique was developed by, R. A. Fisher in 1920s and is capable of fruitful application to a diversity of practical problems. Basically, it consists of classifying and cross classifying statistical results and testing whether the means of a specified classification differ significantly. In this way it is determined whether the given classification is important in affecting the results.

Technique of Analysis of Variance

The ANOVA can one–way, two-way, three-way or N-way. In one-way classification the data are classified according to only one criterion. It is customary to summarize calculations for sums of squares, together with their number of degrees of freedom and mean squares in a table called the analysis of variance table, generally abbreviated ANOVA. The specimen of ANOVA table is given below:

Analysis of variance (ANOVA) table: One–way classification model

Source of Variation	SS (Sum of squares)	□ (degrees of freedom)	MS (Mean square)	Variance Ratio of F
Between samples	SSC	$□_1$	MSC	F
Within samples	SSE	$□_2$	MSE	

Where,

SST = Total sum of squares of variations.

SSC = Sum of squares between samples

SSE = Sum of squares within samples

MSC = Mean sum of squares between samples

MSE = Mean sum of squares within samples

8 Limitations of the Study

1. The present study is limited to online shoppers only.

2. Convenient sampling methods was used to collect data

3. Responses of only five major big retailers is taken. Opinion of other e-retailers may differ.

CHAPTER – 4

DATA ANALYSIS AND DISCUSSION

In the present chapter data analysis of primary data collected from e-shoppers and e-retailers is given. The objective of this analysis was to find out if there is shifting trend towards m-commerce (doing e-commerce activities using mobile devices or smartphone) from traditional e-commerce (doing e-commerce using personal computers, laptops or tablets). It was also tried to find out what are the reasons for which e-shoppers are shifting towards m-commerce i.e., using mobile devices of smartphones for e-transactions. It was also tried out to find challenges faced by e-commerce companies in the present cut throat competitive world in implementation of m-commerce technologies. Finally, some hypotheses were tested to find of if this shifting trend varies with different demographic variables.

Present chapter is divided in to three sections. In section A data analysis and interpretation of data collected from e-shoppers is given. In section B data analysis and interpretation of data collected from e-retailers is given and in section C, e-commerce practices followed by five major e-retailers in India is given. The objective of this analysis was to find out what facilities in terms of technologies are provided by e-retailers to e-shoppers to attract them towards their e-shops.

1 Section A: Data Analysis and Interpretation of e-Shoppers Questionnaire

1.1 Demographic Profile of Respondents

Table 4.1: Distribution of Respondents According to Age

Age Group	N	%
Up to 30 yrs	55	27.50
30 - 40 yrs	80	40.00
40 - 50 yrs	43	21.50
Above 50 yrs	22	11.00
Total	**200**	**100.00**

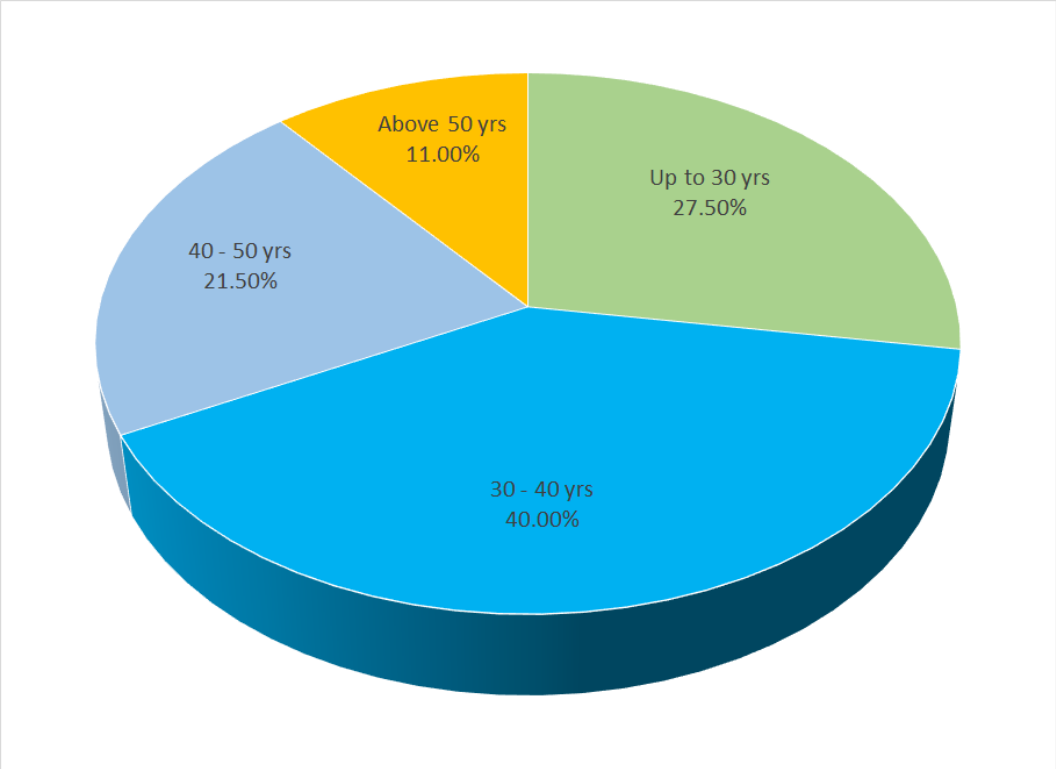

Fig. 4.1: Distribution of Respondents According to Age

Table 4.1 shows distribution of respondents according to age. The age of respondents ranges between 19 years to 68 years. 27.50% respondents are up to age of 30 years or below. 40% respondents were between 30 to 40 years, 21.50% are between 40-50 years and 11% are above 50 years of age. The average age of respondents was 38.35 years. Maximum respondents were below 40 years of age group. The reason being that younger population as compared to old population is more involved in online shopping.

Table 4.2: Distribution of Respondents According to Gender

Gender	N	%
Male	97	48.50
Female	103	51.50
Total	**200**	**100.00**

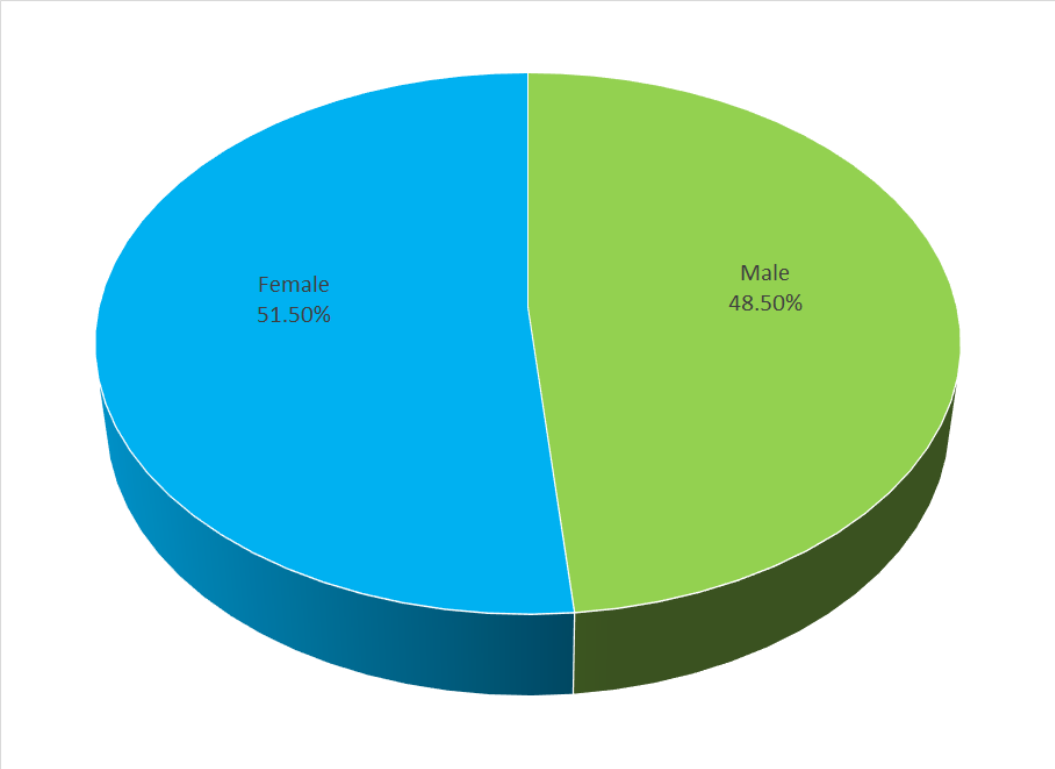

Fig. 4.2: Distribution of Respondents According to Gender

Distribution of respondents according to gender shows that almost equal proportion of male and female respondents were in the sample. There were 51.50% male respondents and 48.50% female respondents in the sample. People of both genders are doing m shopping now days, hence this almost equal proportion of respondents will justify this research work.

Table 4.3: Distribution of Respondents According to Occupation

Occupation	N	%
Service (Govt. Sector)	29	14.50
Service (Pvt. Sector)	77	38.50
Business	28	14.00
Self Employed	23	11.50
Retired	6	3.00
Housewife	21	10.50
Student	16	8.00
Total	**200**	**100.00**

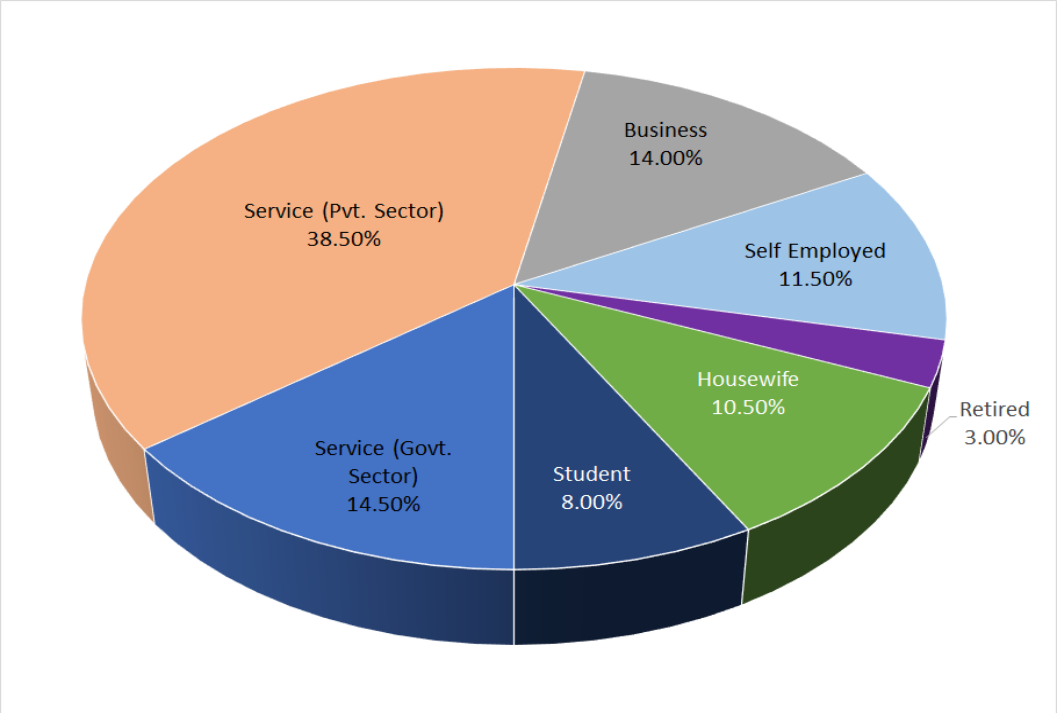

Fig. 4.3: Distribution of Respondents According to Occupation

Distribution of respondents according to occupation shows that sample included all types of respondents i.e., from all type professions. There were 14.50% of respondents who are in government service, 38.50% were from service in private sector. 14% were doing business and 11.50% were self-employed. 10.50% respondents were housewife and remaining 8% were students. Thus, sample constitutes of respondents form all types of profession.

Table 4.4: Distribution of Respondents According to Income

Income	N	%
₹ Up to ₹ 20,000	44	22.00
₹ 20,001 ₹ 40,000	34	17.00
₹ 40,001 ₹ 60,000	28	14.00
₹ 60,001 ₹ 80,000	22	11.00
₹ 80,001 ₹ 100,000	18	9.00
More than ₹ 1,00,000	54	27.00
Total	200	100.00

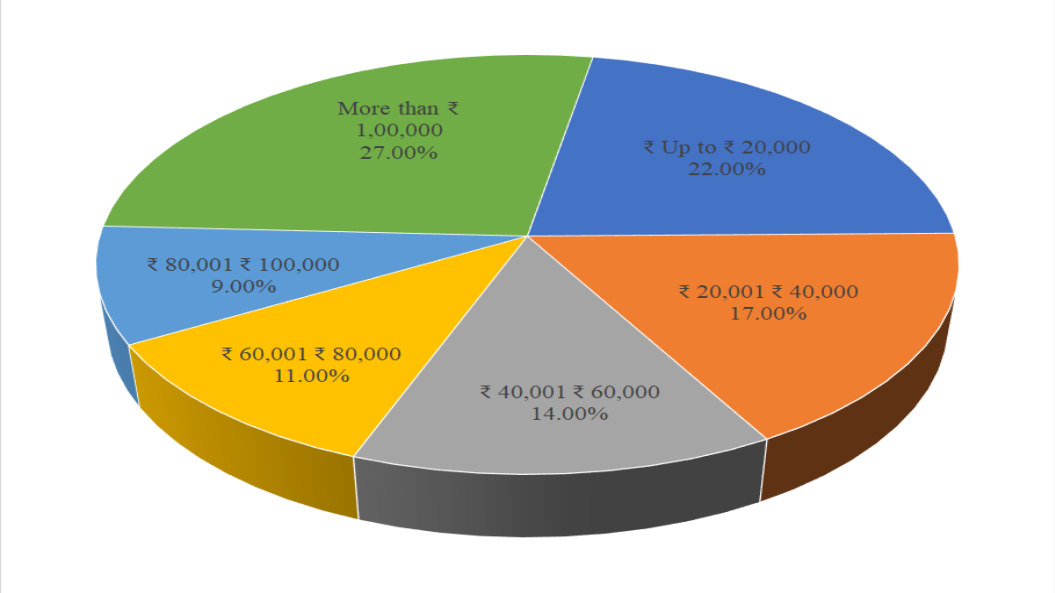

Fig. 4.4: Distribution of Respondents According to Income

Table 4.4 shows distribution of respondents according to income of respondents. The average income of respondents is around ₹ 60,000. 22% respondents were up to ₹ 20000 per month income. 17% having income between twenty to 20,000 to 40,000 rupees per month. 34% respondent having income between ₹ 40,000 to ₹ 1,00,000 per month. Thus, respondents can be categorized in to three groups on the basis of their income. In the first group where income was up to or below 40,000. In these group 39% respondents fall. The second group to which we can say middle income group, which ranges between 40,000 to 1,00,000, in this category 34% respondent fall. The last income group was the group in which respondents' monthly income was above ₹ 1,00,000. 27% respondents fall in this income group.

Table 4.5: Distribution of Respondents According to Education

Education	N	%
Illiterate	3	1.50
Up to Sr. Secondary (12th)	6	3.00
Graduate	60	30.00
Post Graduate or Higher	131	65.50
Total	**200**	**100.00**

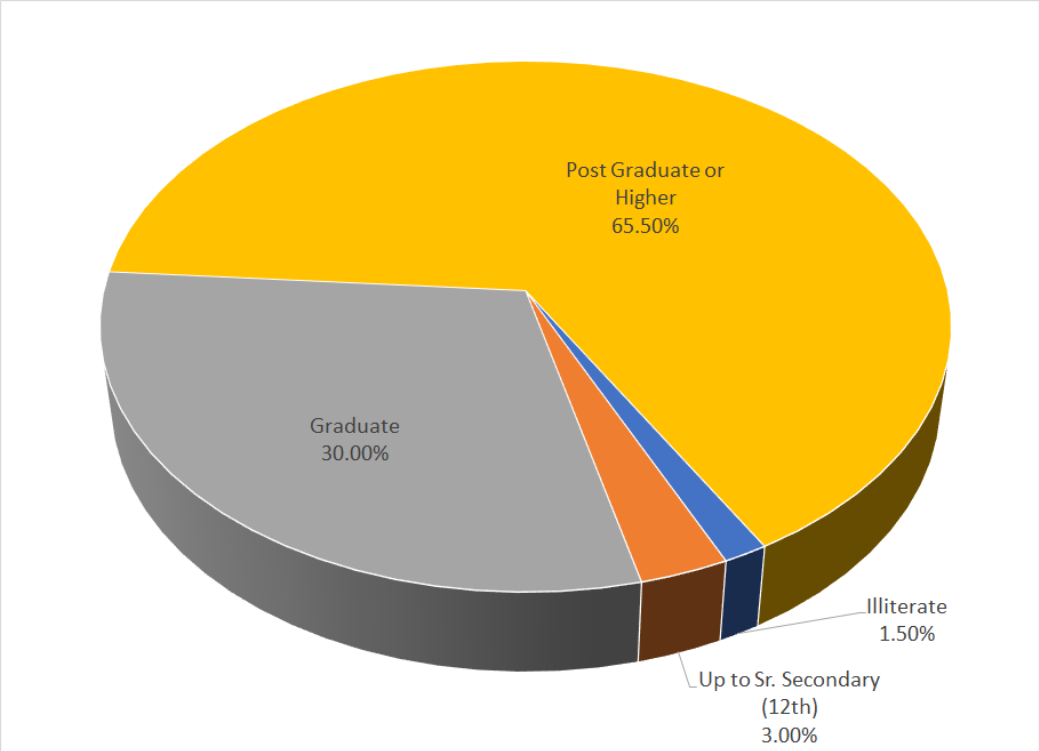

Fig. 4.5: Distribution of Respondents According to Education

Distribution of respondents according to education shows that very few respondents were less educated and maximum respondents were highly educated. 4.5% respondents were educated up to senior secondary or below. In this 4.5%, 1.5% were illiterate and 3% were literate and educated up to XII. 30% were graduates and remaining 65.50% were either post graduate to educated above post-graduation. Thus, it can be said that maximum people with high education are involved in mobile banking.

1.2 Online Shopping Behavior of Respondent

Table 4.6: Years of Online Shopping

Time	N	%
Up to 3 Years	34	17.00
3 - 6 Years	87	43.50
6 - 9 Years	32	16.00
9 - 12 Years	37	18.50
Above 12 Years	10	5.00
Total	**200**	**100.00**

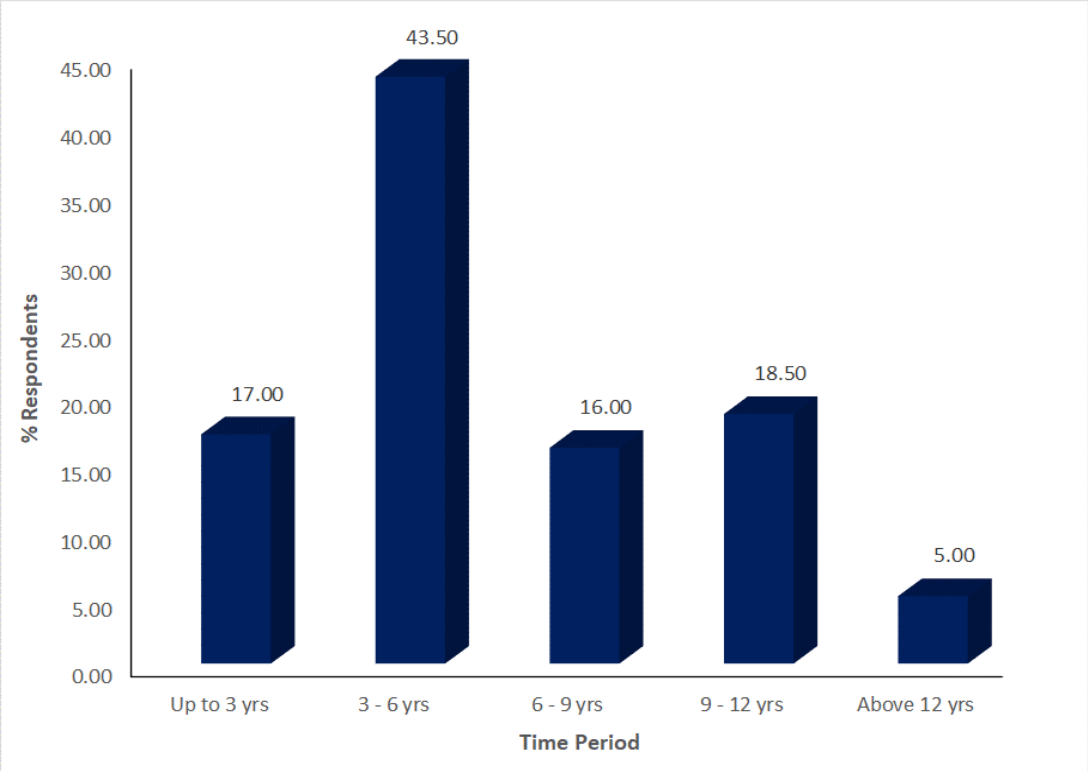

Fig. 4.6: Years of Online Shopping

The average time duration for which sampled respondents were doing online shopping was 6.5 years. 17% were new to online shopping i.e., they were doing online shopping for part 3 years. Maximum 43.5% were doing it since last three to six years. 16% were shopping online between 6 to 9 years. 18.5% were doing online shopping for 9 to 12 years and remaining 5% were doing it for above 12 years. The median value of this duration was 5 years which shows that 50% of

respondents were doing online shopping since last five years where as rest 50% were doing online shopping for more than five years. The average duration of online shopping for those who were below or up to median value was 3.33 years whereas those respondents whose duration of online shopping was above median value, the average period of shopping was 12 years. Hence, it can be concluded that maximum respondents in the sample were doing online shopping for a long time.

Table 4.7: Type of Products for which Online Shopping is done

Type of Shopping	N	%
Travel ticket Booking (Air/ Bus/ Train etc.)	176	88.00
Taxi Booking (Ola/ Uber etc.)	179	89.50
Purchasing Clothes	187	93.50
Purchasing Books	140	70.00
Purchasing Groceries	166	83.00
Food Ordering (Zomato etc.)	176	88.00
Online Hotel Booking	178	89.00
Movie Ticket Booking	157	78.50
Utility Bills (Water, electricity etc.)	172	86.00
Bank Transactions	167	83.50
E-tax filling	90	45.00

Table 4.7 shows type or categories of products for which online shopping is done. Maximum respondents were doing online shopping for all the listed products. Highest proportion (93.5%) of respondents were found to be using online shopping mode for purchasing clothes. 88-89% were using online mode of shopping for travel ticket booking, food ordering, hotel booking and taxi booking like ola, Uber etc. 86% respondents use online mode of transaction for paying utility bills like water, electricity etc. Around 83% respondents use online mode of transaction for

purchasing groceries and doing bank transactions. 78.5% were found to be using online mode of transaction for movie ticket booking and 70% respondents were found to be using online mode of shopping for purchasing books.

Very less proportions of respondents were using online mode for e-tax filling (45%) and very few were found to be using online mode of transaction for making donations, purchasing electronic items and purchasing medicines. Thus, it can be said maximum people are using online mode of transaction for purchasing daily requirement products.

Fig. 4.7: Type of Online Shopping

Table 4.8: Distribution of Respondents According to Frequency of Online Shopping

Frequency of Online Shopping	N	%
Weekly (every 7 days)	65	32.50
Fortnightly (every 15 days)	49	24.50
Monthly (every 30 Days)	75	37.50
Bi-Monthly (every 60 days)	8	4.00
Whenever required	3	1.50
Total	**200**	**100.00**

Table 4.8 list out frequency of online shopping along with number and percentage of respondents with corresponding frequency of doing online shopping. The average purchase frequency of online shopping of sampled respondents was found to be 20 days. 32.5% were found to be doing online shopping every week, 24.50% doing it fortnightly, maximum (37.5%) were found to be doing online shopping every 30 days. Very less percentage of respondents (4%) were found to be doing online shopping bimonthly. Only 1.5% were found be doing online shopping whenever need arise. Thus, it can be said that online shopping has become habit now.

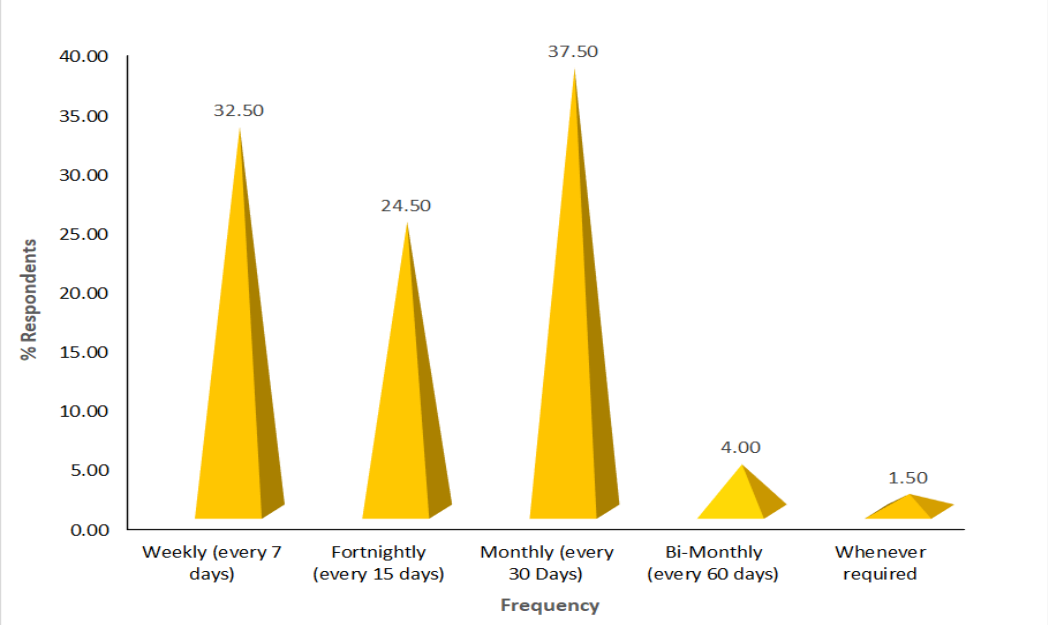

Fig. 4.8: Frequency of Online Shopping

Table 4.9: Proportion of Online Shopping Done Out of Total Shopping

Proportion	N	%
Up to 20%	28	14.00
20 - 40 %	38	19.00
40 - 60 %	63	31.50
60 - 80 %	66	33.00
Above 80 %	5	2.50
Total	**200**	**100.00**

Table 4.9 shows distribution of respondents according to proportion of online shopping (i.e., shopping through PC/Laptop/Desktop or Mobile App) out of total shopping done by them. 14% respondents said that out of total shopping, up to 20% of shopping they do through online mode. 19% said that 20-40% of their shopping is done through online mode. 31.50% said that they do 40% - 60% of their total shopping through online mode. Maximum 33.50% said that between 60 to 80% of their shopping is done through online mode and 2.50% said that more than 80% of their shopping is done through online mode. Thus, it can be said that greater number of ampled respondents do more than 40% of their total shopping in online mode.

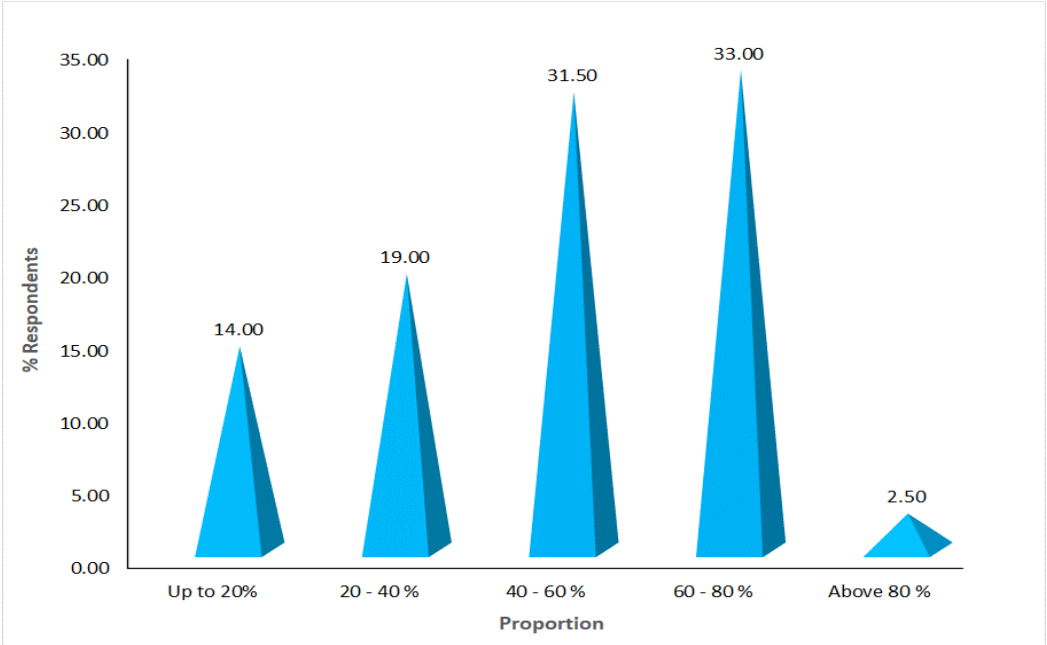

Fig. 4.9: Proportion of Online Shopping Done Out of Total Shopping

Table 4.10: Proportion of Offline Shopping Done Out of Total Shopping

Proportion	N	%
Up to 20%	14	7.00
20 - 40 %	60	30.00
40 - 60 %	76	38.00
60 - 80 %	45	22.50
Above 80 %	5	2.50
Total	**200**	**100.00**

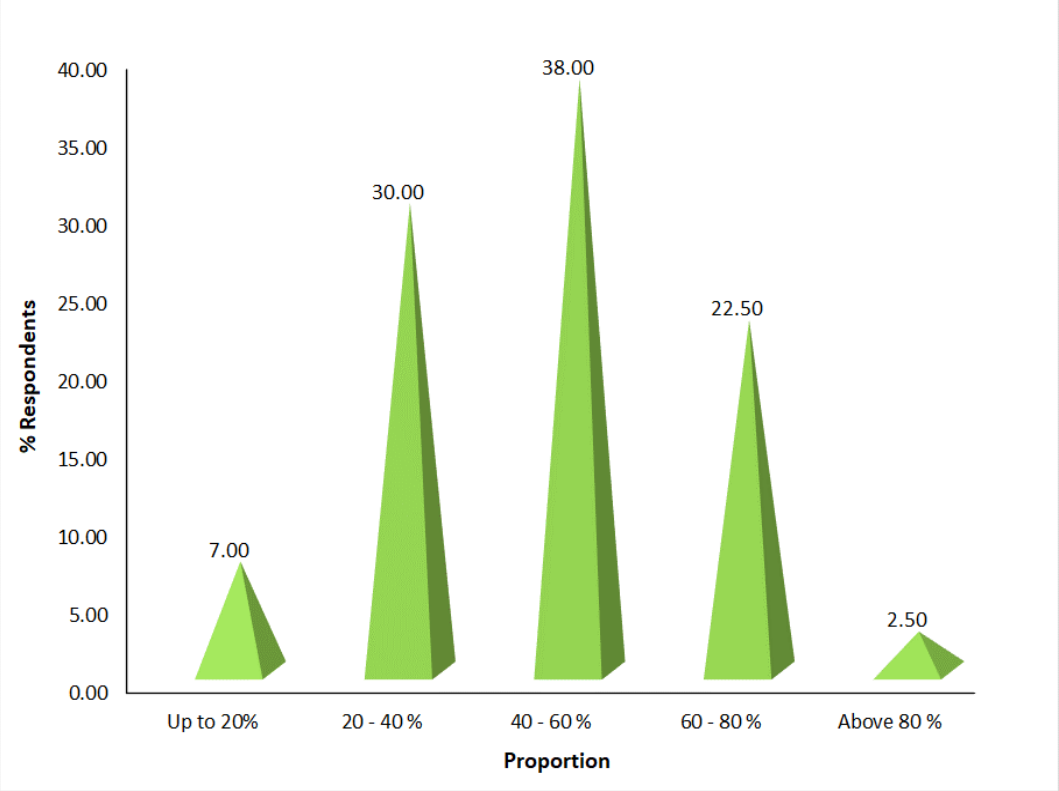

Fig. 4.10: Proportion of Offline Shopping Done Out of Total Shopping

Table 4.10 shows distribution of respondents according to proportion of offline /Instore shopping (i.e., shopping through Brick-and-Mortar shop) out of total shopping done by them. 7% respondents said that out of total shopping, up to 20% of shopping they do through offline mode. 30% said that between 20-40% of their total shopping is done through offline mode. Maximum 38% said that they do 40% - 60% of their total shopping through offline mode. 22.50% said that between

60 to 80% of their shopping is done through offline mode and 2.50% said that more than 80% of their shopping is done through offline mode.

On further analysis it was found that on an average out of total shopping 51% of shopping is done through online mode and 49% is done through offline mode. Thus, there is not much difference in offline and online mode of shopping but trend indicate that soon more people will go for online mode of shopping due to various reason like easy of doing shopping, comparison of products, getting best prices out of several options and one more reason which the current pandemic revealed which is personal safety from health point of view.

1.3 Online Shopping Platform Used

Table 4.11: Media Used for Online Shopping

Media / Device	N	%
Personal Computer (PC)	38	19.00
Laptop	88	44.00
Tablet	21	10.50
Mobile (Smartphone)	200	100.00

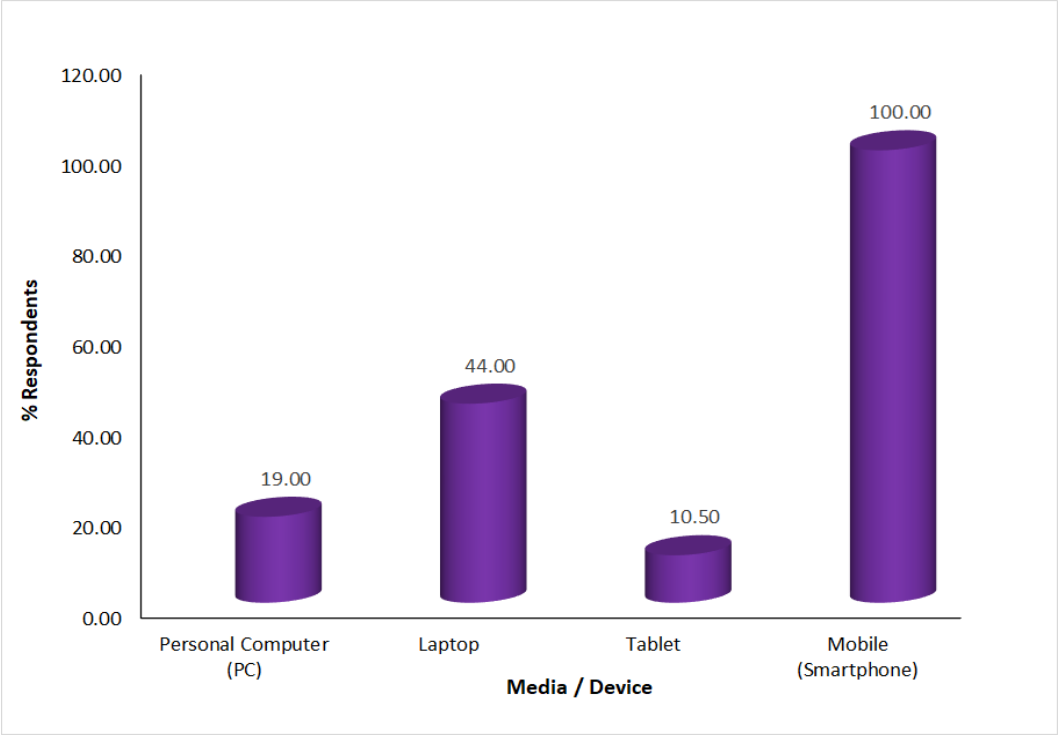

Fig. 4.11: Media Used for Online Shopping

Table 4.11 shows distribution of respondents according to media used to do online shopping. This was multiple option question which means that respondents can choose more than one option. Table data suggests that 100% i.e., all the respondents were using mobile for online shopping. Besides mobile another device which also used for online shopping is Laptop, but less than 50% respondents (44%) were found to be using it for online shopping. Much less than this i.e., 19% people were found to be using personal computer for online shopping and only 10.5% people were found to be using tablet as a media for doing online shopping. Thus, it can be said that mobile is the most popular media for doing online shopping.

Table 4.12: Media Used Maximally for Online Shopping

Media	N	%
Personal Computer (PC)	6	3.00
Laptop	10	5.00
Tablet	11	5.50
Mobile (Smartphone)	173	86.50
Total	**200**	**100.00**

Respondents were asked about media or device which they use maximum for doing online shopping. In response to this only 3% respondents said that they use personal computer or PC, 5% said that they do maximum online shopping using Laptop, 5.50% said that they use tablet maximally for online shopping. Out of all the given options, maximum 86.50% respondents have given top priority to mobile for their online shopping.

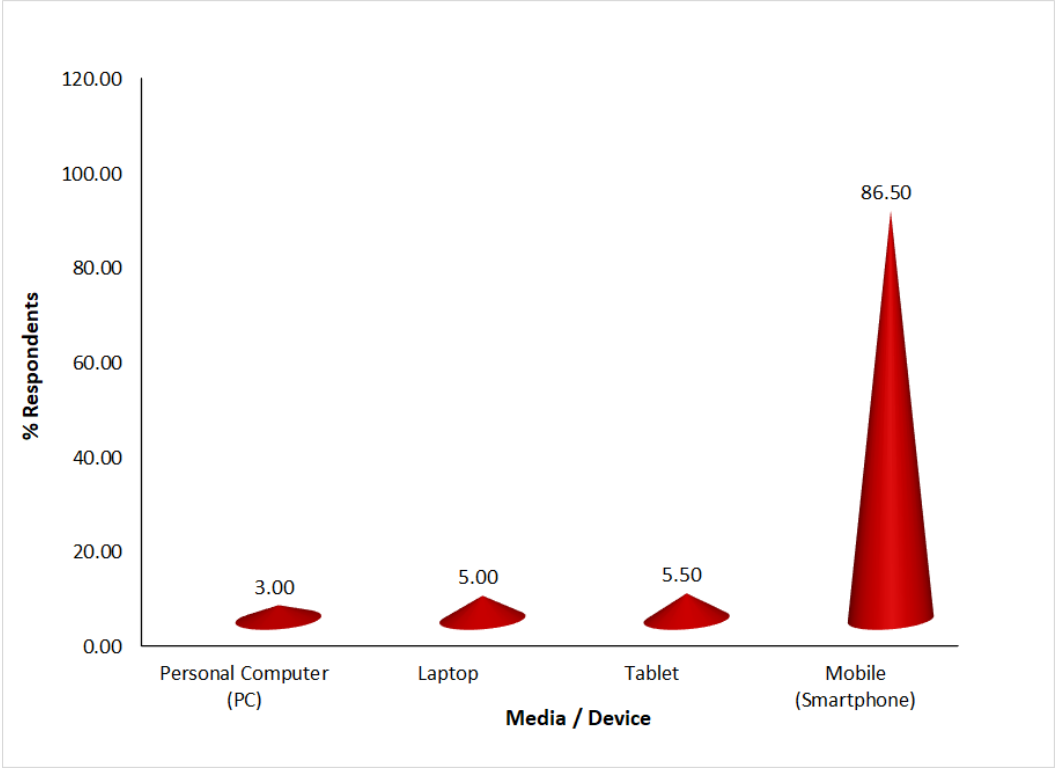

Fig. 4.12: Media Used Maximally for Online Shopping

Table 4.13: Convenient Media for Online Shopping

Rank	Personal Computer	Laptop	Tablet	Mobile (Smartphone)
Rank 1	21.00	14.00	25.00	69.50
Rank 2	12.00	38.00	33.00	9.50
Rank 3	28.00	42.00	26.00	4.50
Rank 4	39.00	6.00	16.00	16.50
Weighted Score	**53.75**	**65.00**	**66.75**	**83.00**

Respondents were asked to rank different media according to its convenience, they use for online shopping. Table 4.13 shows distribution of this data. In this table Rank 1 means highest rank given. Thus, to personal computer 21% respondents give rank 1, 12% rank 2, 28% rank 3 and 39% rank 4. To laptop 14% gave rank 1, 38% rank 2, 42% rank 3 and 6% rank 4. To table, 25% give rank 1, 33% rank 2, 26% rank 3 and 16% rank 4.and finally to mobile, maximum 69.50% gave rank 1, 9.5% rank 2, 4.5% rank 3 and 16.50% rank 4.

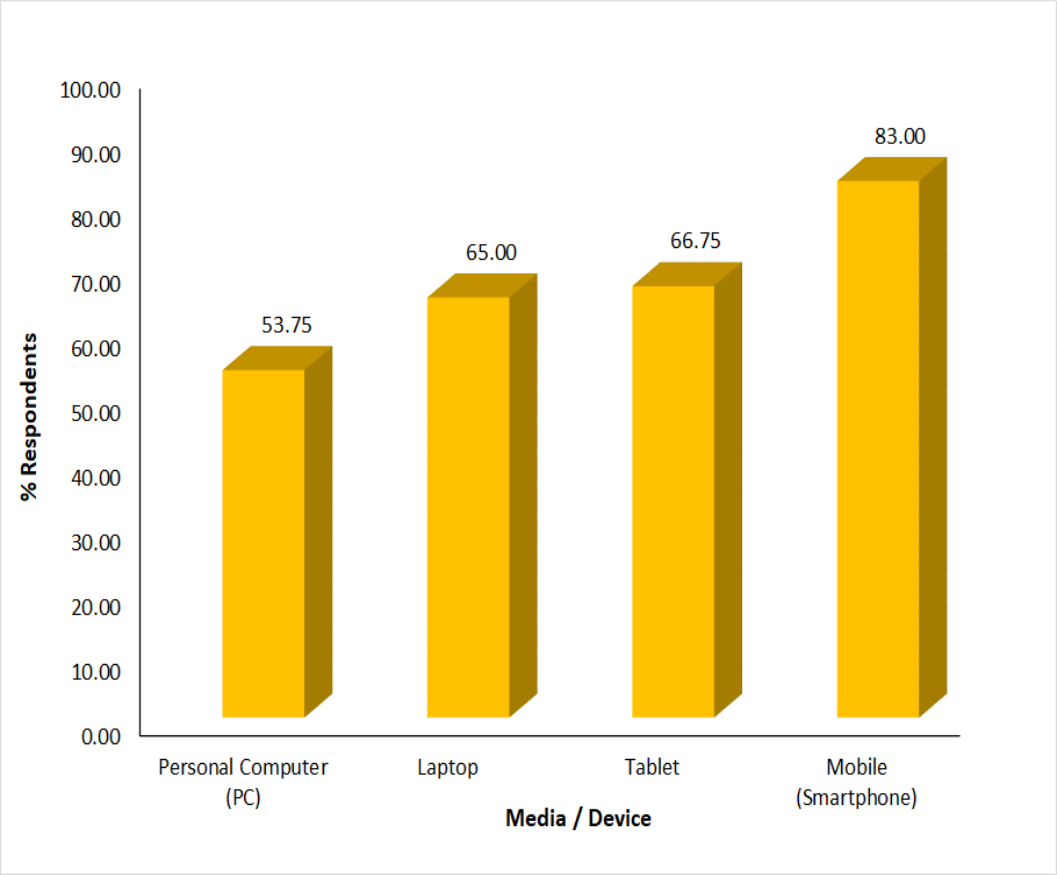

Fig. 4.13: Convenient Media for Online Shopping

Finally, on the basis of ranks given weighted scores were calculated for each media or device in percentage terms. Thus, lowest score is obtained by PC, after that laptop then table and finally mobile or smartphone got highest score. Hence, these scores shows that mobile it the most convenient device to do online shopping as compared to other device or media.

Table 4.14: Shared Proportion of Total Online Shopping among Different Media

Media	Average %
Personal Computer (PC)	10.85
Laptop	19.79
Tablet	7.79
Mobile (Smartphone)	61.58

Table 4.14 shows average proportion of media used by respondents for online transaction/shopping. Tablet is the least used media or device for online shopping or transaction. On an average only around 8 times table is used. Personal computer (PC) is used around 11 % of times while doing online transaction. Laptop is used 20% of time. The most popular or most frequently used media or device is mobile phone or smartphone for e-commerce transactions. Around 62% of time it used out of 100, for online or e-commerce transactions.

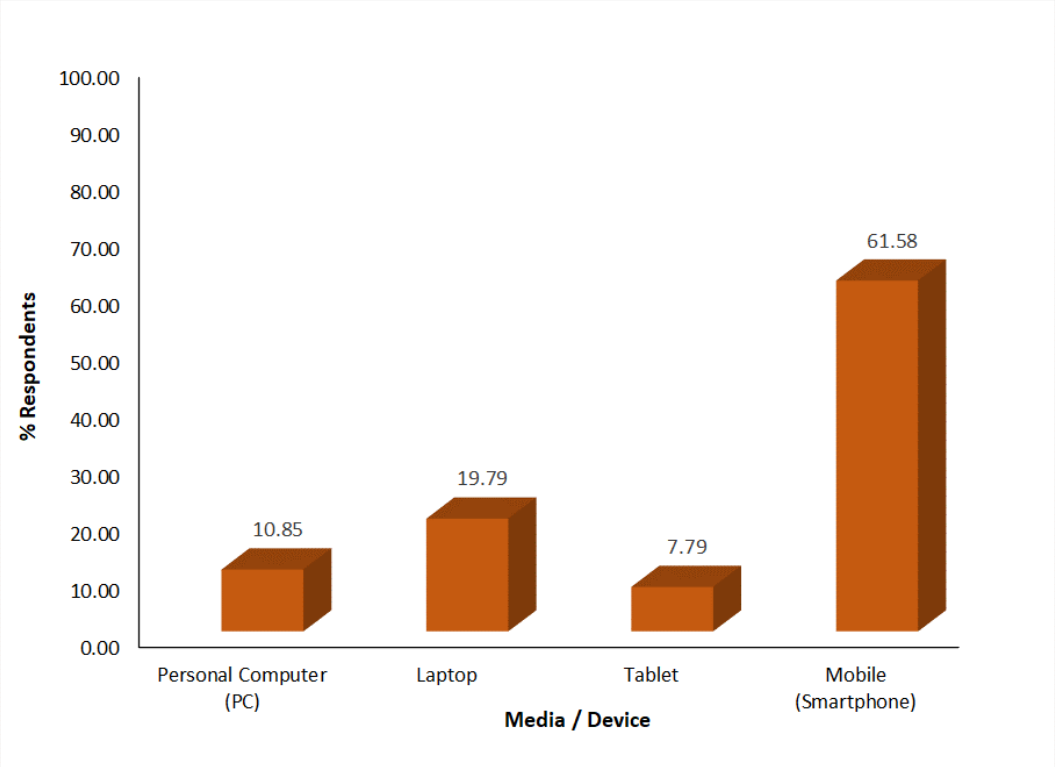

Table 4.15: Most of the Online Shopping now-a-days is done Using Mobile - Opinion

Response	N	%
Strongly Disagree	0	0.00
Disagree	4	2.00
Neutral	0	0.00
Agree	56	28.00
Strongly Agree	140	70.00
Total	**200**	**100.00**

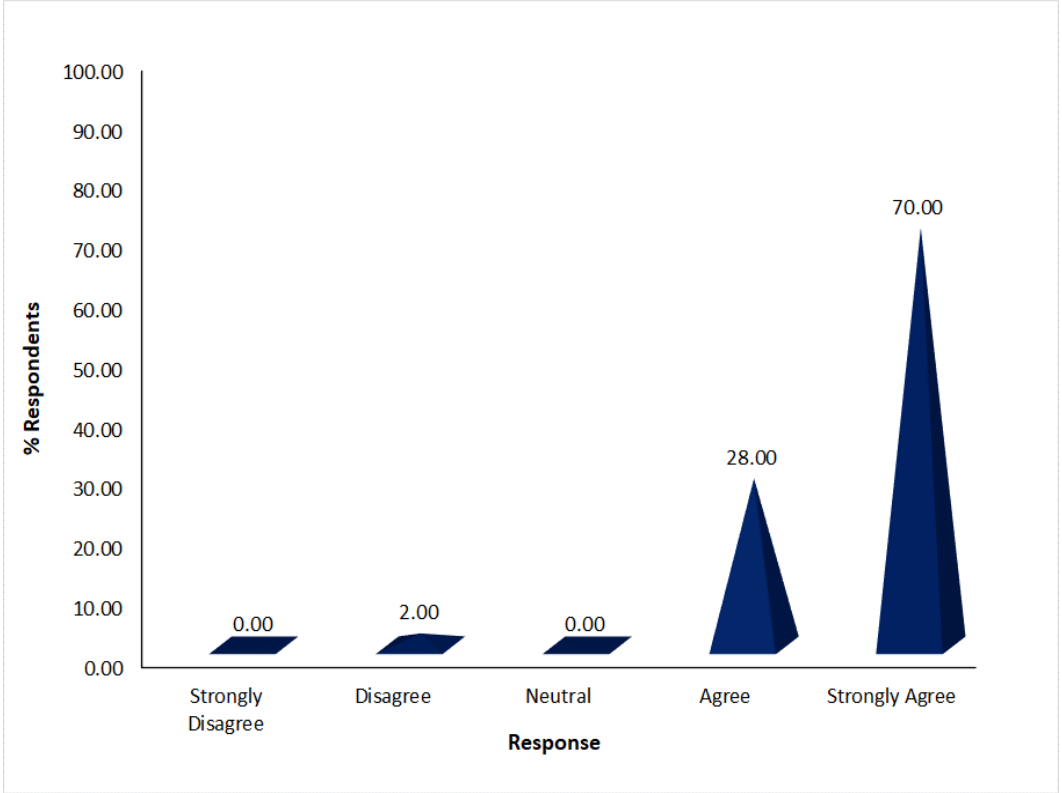

Fig. 4.15: Most of the Online Shopping now-a-days is done Using Mobile - Opinion

Respondents were asked to give their opinion regarding increasing use of mobile for e-commerce transactions now-a-days. They were asked whether they think that most of the e-commerce transactions are done through mobile now-a-days? In response to this question 70% respondents strongly agreed with given

statement, 28% agree and only 2% disagree. No one was neutral or strongly disagree. Thus, respondents also agree that mobile is used most frequently for doing online e-commerce transactions.

1.4 Reasons for Shifting Towards m-Commerce from e-Commerce

In this section researcher tried to find out reasons which are responsible for shifting towards m-commerce from e-commerce. Respondents were asked to rate 24 statement/scale items on five-point Likert rating scale. First descriptive statistics about these 24 statements were calculated. First descriptive analysis of these 24 items is given below.

Ratings given by respondents later converted to percentage points so that weightage given by the respondents to characteristics or features of m-commerce can be compared. Table 4.16 given below depicts percentage point as well as rank for each item.

Table 4.16 shows that top five reasons (in the order of their ranks) for shifting towards mobile commerce or m-commerce are – people using mobile or smartphones because of its small size. Due to its small size, it is easy to handle as compared to other electronic devices which are bigger in their size as compared to mobile. Item on the second rank was facility of doing online transaction irrespective of location i.e., from any city, country etc. Item on the third rank was "Shopping using mobile (Smartphone) is most convenient". Item on the fourth rank was "easily available mobile apps". It is easy to find apps for any type of online transaction which is comparatively difficult to find on Availability of Mobile wallet option like PayTM, Amazon Pay etc., so that transaction can be done easily and safely.

Table 4.16: Reasons for Shifting towards Mobile Commerce

Statement	% point	Rank
Shopping done using mobile (Smartphone) is most convenient	88.00	3
You can do online shopping from anywhere irrespective of place, city or country	89.00	2
It is easy to find applications (Mobile apps) for online shopping on mobile which is not so easy in case of online shopping done through PC, Laptop, Tablet etc.	86.50	6
It is easy to handle (Operate) mobile device then PC, or other media	86.20	7
Searching for product can be done more easily on mobile app rather than PC, Laptop etc.	79.20	18.5
Get timely information about new products, offers	84.50	9
It is easy to track order on mobile than on PC (when it is reaching, where it has reached etc.)	79.40	17
Payments using mobile is more convenient than on other devices like PC, Laptop etc.	82.40	14
Mobile wallet option available (like PayTM, Amazon Pay, Google Pay etc.) so that payment can be done easily on mobiles	87.10	5
Purchasing using Mobile is more safe and secure than PC or Another device	71.70	24
On Mobile we can review products easily (by reading opinion of other customers)	76.70	22
We get more information about product by clicking in mobile website	78.00	21
We get more discount offers on mobile app rather than on PC, Laptop etc.	73.50	23
When we use mobile app to purchase anything online it is easy to make payment on mobile because it remembers all the information about payments like Card number, Name, (Card Details)	84.00	10

Statement	% point	Rank
It is also easy to get opinion of friends, family member etc. about anything we want to purchase on mobile using social media	82.70	13
Social media (WhatsApp, Facebook, Instagram) etc. also helps me in purchasing using mobile device	83.90	11
It is quicker and faster to do online transaction on mobile than PC/Laptop etc.	81.60	15
Mobile (Smartphone) due to its small size it is very easy and convenient to handle and do transaction on it.	89.70	1
It is easy to switch between different application while shopping, to compare products and their prices.	83.60	12
Mobile application is more user friendly as compare to websites on PC/Laptop etc.	81.00	16
More time is spent on mobile as compared to PC/Laptop hence it is easy to do transaction using mobile	85.50	8
Easily available Mobile apps	87.60	4
Easy to search product using mobile than PC/Laptop	78.80	20
Cost of mobile is less than the cost of PC/Laptop	79.20	18.5

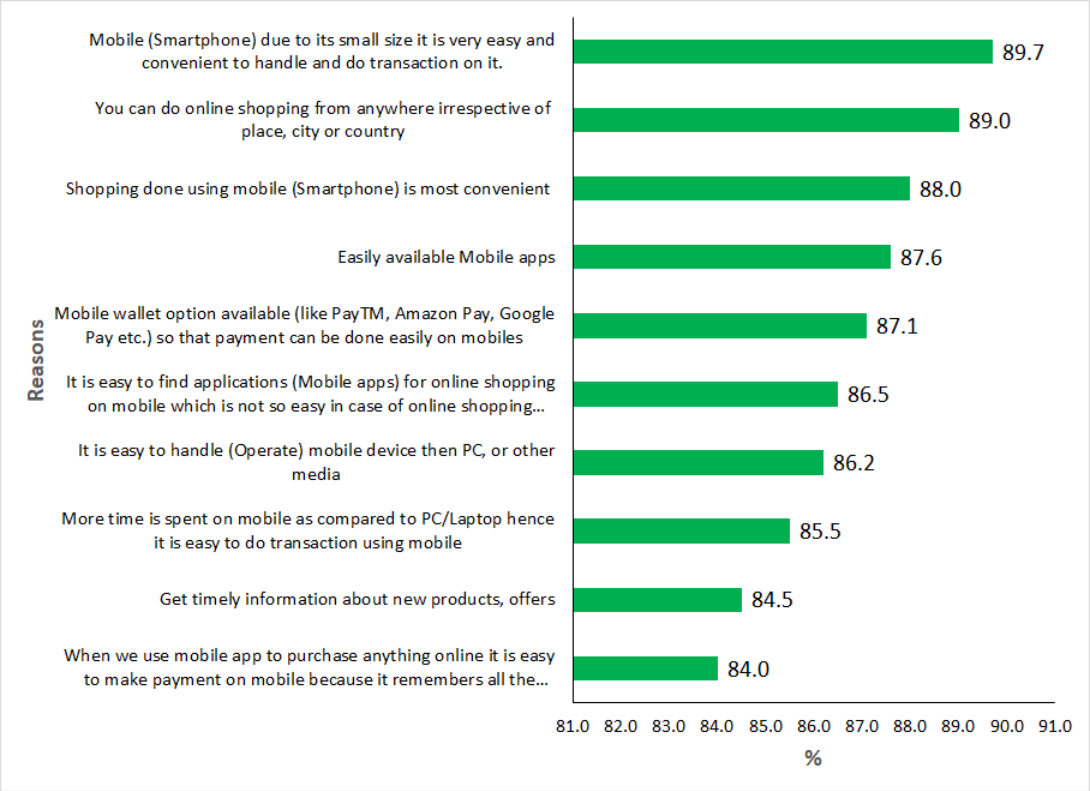

Fig. 4.16: Top 10 Reasons for Shifting towards Mobile Commerce

Although every given item received high rating but other reason on the rank slightly below above describe items are - ease of handling mobile device as compared to other device. People also find it easy to use mobile for e-commerce transaction because more time is spent on mobile as compared to other device. Getting timely information about new product like offers, discounts etc.

One of the features of mobile it to remember information of user. Due to this property online shopper do not need to remember their card number, code etc. after entering it once. Autofill option in the mobile enable them to automatically fill information when the need arises. Because of this facility people attract to use mobile.

Presence of social media in the same device helps in making purchases. With the help of social media, they can get opinion of friends/family members about

any product or item. Also, mobile users find it easy to switch between different application while shopping to compare products and their prices.

Using mobile device, it is easy to get opinion of friends/relative instantly on the spot which is not possible or rather inconvenient or difficult to get on another device. It is easy to make payments on mobile as compared to other devices. Tracking order any time is also a great facility so that shopper can get location of their ordered product any time.

Other features or characteristics which are on comparatively lower ranks are – Searching for product can be done easily on mobile rather than on PC or Laptop. Cost of mobile is another factor – It is easy to purchase good mobile in the price range of 10,000 to 15,000 now-a-days but prices of PC or Laptops are much higher than it. This also one of the reasons for which people are shifting towards mobile device. It is easy to search product on mobile, review the product by getting opinion of other users or customers. Getting discounts or offers on mobile also attract them towards m-commerce. Finally, people think that purchase on mobile is more safe and secure as compared to PC or another device. Hence, these are the reasons for which people are now shifting towards m-commerce.

Table 4.17: Convenient in doing Online Shopping using Mobile Application as Compared to Other Media like PC, Laptop etc.

Convenience	N	%
Convenient to a Very Great Extent	108	54.00
Convenient to a Great Extent	61	30.50
No difference between shopping on mobile or PC/Laptop/Tablet etc.	23	11.50
Less Convenient as compared to shopping using PC/Laptop/Tablet etc.	8	4.00
Total	**200**	**100.00**

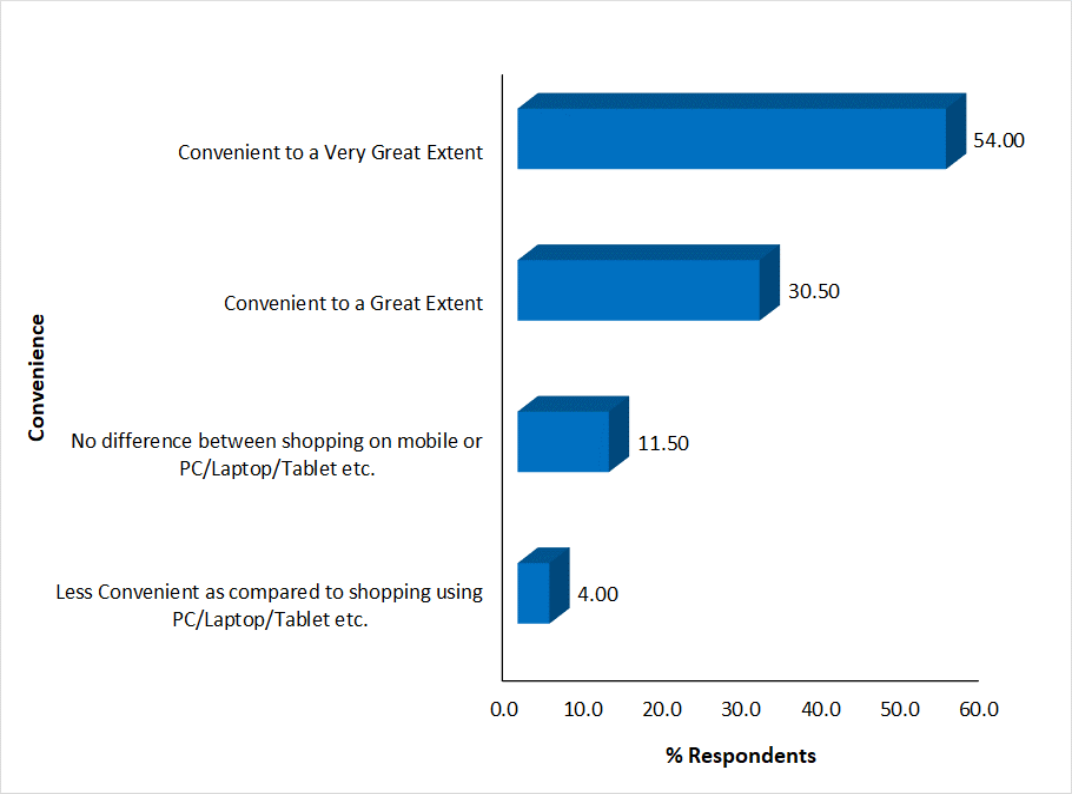

Fig. 4.17: Comparative Convenience in doing Online Shopping using Mobile Application Compared to Other Media like PC, Laptop etc.

In the last respondents were asked to rate the level of convenience they receive as compared to other communication devices. Four options were given to respondents to choose. Table given above shows tabulated response. 54% respondents said that doing online shopping is convenient to a very great extent as compared to other devices. 30.50% said that it is convenient to a great extent. 11.50% see no difference in using mobile or PC/Laptop/Tablet and remaining 4% think mobile is less convenient than PC/Laptop/Tablet. But overall picture says that maximum of people think that mobile is the most convenient device to do online shopping.

2. Section B - Data Analysis Results – e-Retailers

In the present section data analysis results related to e-retailers are given. e-retailers' questionnaire was designed with an objective of findings the reasons for

shifting from e-commerce to m-commerce. An attempt was also made to find out challenges faced by e-retailers in implementing m-commerce.

2.1 Profile of Major E-retailers of India

Table 4.18: Company (e-Tailer Profile)

Variable	Flipkart	Amazon	PayTM Mart	Snapdeal	ShopClues
Employees	16000 fulltime employees	62000	5000	750	803
Revenue	34610 cr. (2020)	11400 cr. (2019-20)	3186 cr. (2020-21)	1168.3 cr. (2020)	97cr.
Established	2007	2013	2015	2010	2011

Table 4.18 depicts the e-tailer profile of five major e-tailer companies working in India. These five major companies are Flipkart, Amazon, PayTM Mall, Snapdeal and Shopclues. Flipkart which was established in India in 2007, has 16000 fulltime employees as of 2020 with revenue of 34610 crore rupees. Amazon India started its operations in India in 2013. Amazon India has employee base of 62000 employees. The revenue of Amazon India for 2019-20 financial year was 11400 crores. PayTM mart was established in 2015 by Vijay Shekhar Sharma. It has employee base of 5000 plus employees with revenue of 3186 crores in 2020. Snapdeal and Shopclues are small companies as compared to already discussed giants. Snapdeal was established in 2010. Snapdeal has employee workforce of 750 with revenue in 2020 of Rs. 1168 crore. Shopclues is the smallest among these five companies as far as revenue is concerned. It was established in 2011 and has employee base of 803 employees. The total revenue of company was 97 crores in 2020.

The range of services and type of products sold on these major e-tailers varies but there are some common categories of products which are sold by every company. Shopclues deals in clothes/textiles, books and magazines, Groceries.

They don't deal in ticket booking of any type, and hotel bookings, movie ticket booking etc. neither it deals in utility bill payments.

Amazon which the biggest e-tailer in the world, in its India operations deals in clothes/textiles items. It sells books and magazines and grocery items. Amazon also deals in ticket booking for movies. It doesn't deal in travel ticket booking, taxi booking. Hotel booking etc. Amazon also gives services of utility bill payments. Like water bill deposit, electricity bill deposit, telephone bill payment, mobile recharge etc.

Table 4.19: Type of Products Sold by e-Tailers

Product Category	ShopClues	Amazon	FlipKart	Snapdeal	PayTM
Travel ticket Booking (Air/ Bus/ Train etc.)	No	No	**Yes**	No	**Yes**
Taxi Booking (Ola/ Uber etc.)	No	No	No	No	No
Clothes / Textiles	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Books/magazines	**Yes**	**Yes**	**Yes**	**Yes**	No
Groceries	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Food Items	No	No	No	No	No
Hotel Booking	No	No	No	No	No
Movie Ticket Booking	No	**Yes**	No	No	No
Utilities (Water, electricity etc. Bill deposits)	No	**Yes**	No	No	**Yes**

Flipkart deals in Clothes / Textiles, Books/magazines and Groceries item. They also deal in travel ticket booking like air ticket, bus ticket, train ticket booking etc. Flipkart doesn't deal in fresh food items, hotel booking, movie ticket booking and utility bill payments.

Snapdeal deals in Clothes / Textiles, Books/magazines and Groceries items. Snapdeal also does not deals in travel ticket booking, taxi booking, hotel booking, movie ticket booking and utility bill payments.

The last e-Tailer in these is PayTm mall. It is also a giant company which deals in large variety of products. From daily use product to financial instruments. PayTm deals in all types of travel ticket booking like, bus, train and air ticket bookings. It also deals in clothes and textile products. It also sells grocery items. PayTm does not sells books and magazines, fresh food items, hotel booking, taxi booking movie ticket booking etc. PayTm also provide services like utility bill payments.

2.2 Share of Business Coming from different Electronic Media

Table 4.20: Approximate Proportion of your Online Business Coming from Mobile Apps

Proportion	N	%
Above 80	0	0.00
60 – 80	40	80.00
40 – 60	10	20.00
20 – 40	0	0.00
Up to 20	0	0.00
Total	**50**	**100.00**

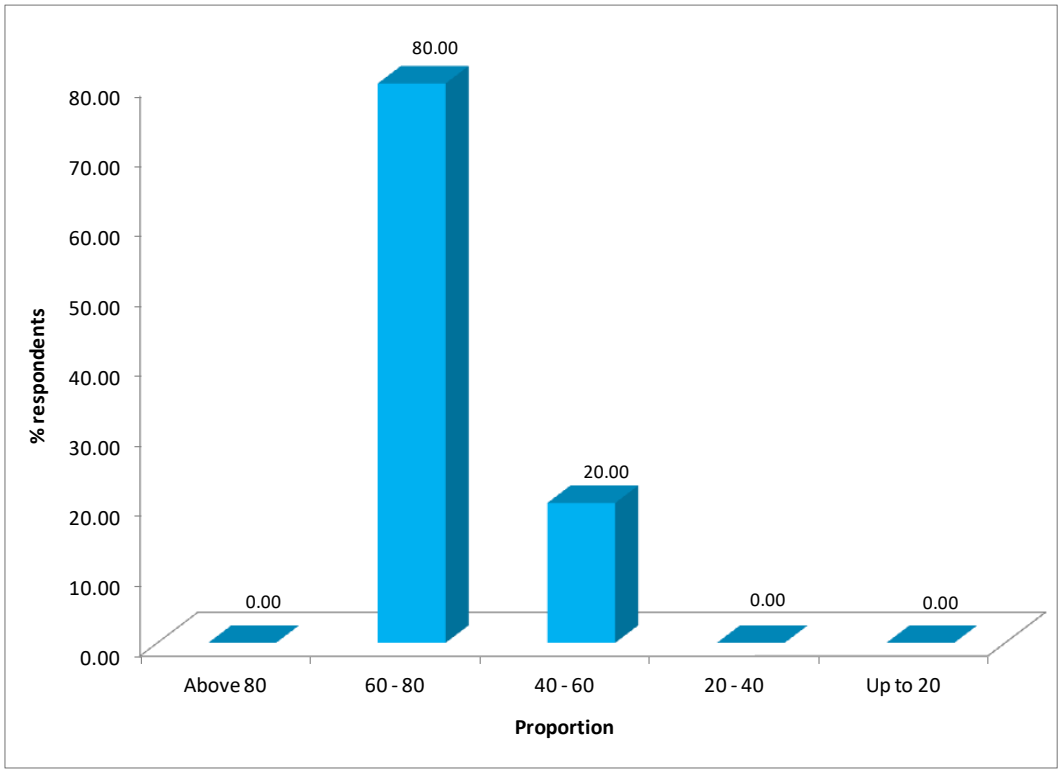

Fig. 4.18: Approximate Proportion of Online Business coming from Mobile Apps

Company employees were asked about proportion of their business comes from mobile apps. In response to this question 80% respondents said that around 60 to 80 percentage of their business is coming from mobile apps i.e., through e-commerce. 20% respondents said that between 20 to 40 percentage of their business comes from mobile app or through m-commerce. Thus, according to respondents of these companies on an average 65% of their business comes from mobile apps.

Table 4.21: Approximate Proportion of your Online Business coming from Website

Proportion	N	%
Above 80	0	0.00
60 – 80	0	0.00
40 – 60	9	18.00
20 – 40	41	82.00
Up to 20	0	0.00
Total	**50**	**100.00**

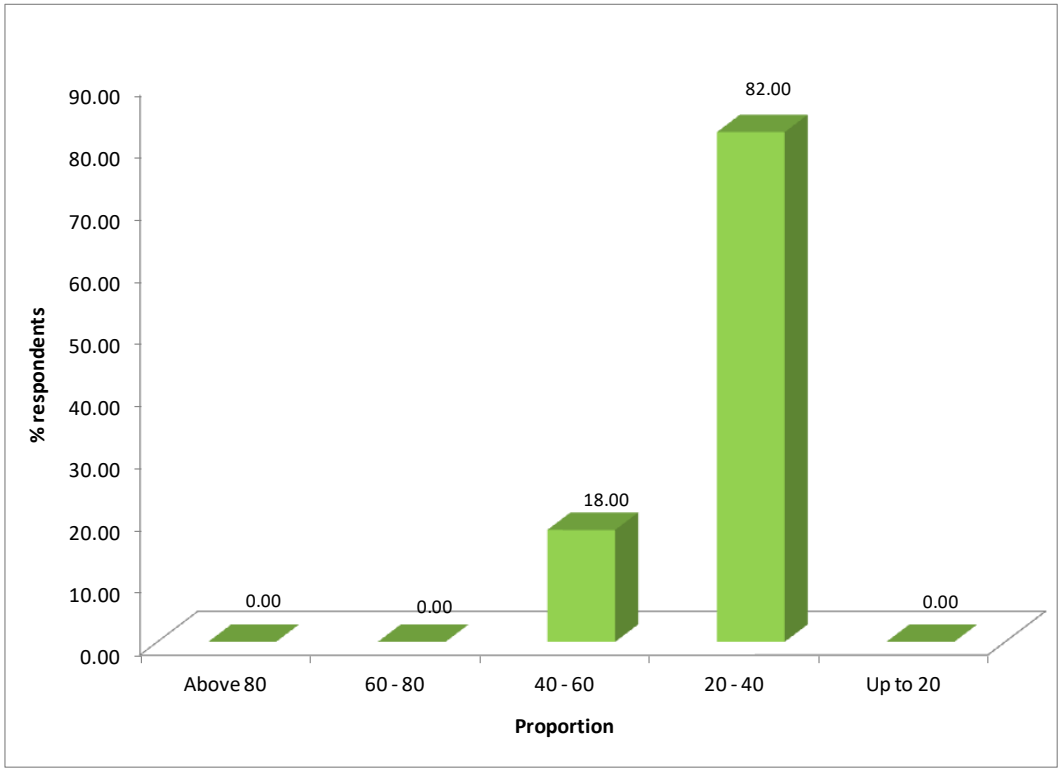

Fig. 4.19: Approximate Proportion of Online Business coming from Website

Table 4.21 depicts data regarding opinion of e-tailer companies about proportion of online business coming from mobile app. Data in the table shows that 18% of respondents said that between 40 to 60 per centage of their business comes from websites whereas 82% respondents said that between 20 to 40 percentage of their business comes from websites. All over presently 35% of their business comes through websites.

Table 4.22: Present Trend toward Online Transaction through Mobile as Compared to PC/laptop - Opinion

Level of Agreement	N	%
Strongly Agree	13	26.00
Agree	25	50.00
Neutral	12	24.00
Disagree	0	0.00
Strongly Disagree	0	0.00
Total	**50**	**100.00**

Respondents were asked to give their opinion regarding question that do they agree that presently more online transaction is done by people using mobile or mobile apps as compared to other electronic devices like PC/Laptop etc. In response to this question 26% strongly agree, 50% agree and 24% were neutral. No one disagreed to this question which confirms the statement that presently there is trend of using mobile devices for online transaction as compared to other electronic devices

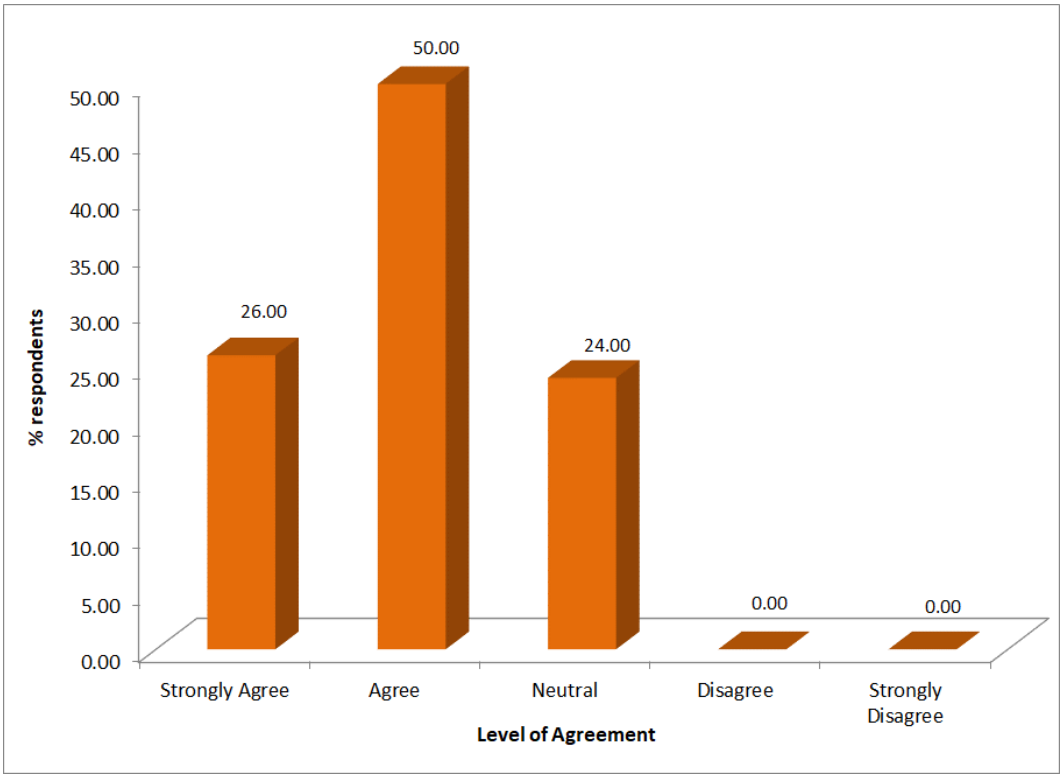

Fig. 4.20: Present Trend toward Online Transaction through Mobile as Compared to PC/laptop - Opinion

2.3 Reasons for Shift towards Mobile Commerce from E-commerce

Table 4.23: Reasons for Shift towards Mobile Apps from Websites on PCs and Laptops for e-Commerce

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Rank
Customer get more information about products by clicking on mobile website / app	0.00	14.00	26.00	30.00	30.00	19
Discount, offers, promo cards are given to customers for using mobile apps	0.00	6.00	28.00	28.00	38.00	14
Photos & Videos are more engaging online content which keep customers engaged	4.00	4.00	34.00	40.00	18.00	21
Mobile payments benefits both customers as well as retailers	0.00	2.00	22.00	48.00	28.00	10
Customers frustrate by entering numerical information about cards etc., mobile device allows to remember all their information hence no need to insert it again and again.	0.00	0.00	32.00	66.00	2.00	20
It is more convenient to do transaction using mobile app/ mobile web site as compared to website on PC/Laptop	0.00	0.00	0.00	100.00	0.00	12
Digital wallets simplify the payment process	0.00	2.00	28.00	46.00	24.00	15
More fasters and quick transaction on mobile as compared to PC/Laptop	0.00	0.00	4.00	70.00	26.00	6
M-commerce gives more information to companies, valuable insight about customers (with m-commerce you can retrieve better customer data through mobile app which was not possible traditionally.	0.00	2.00	30.00	46.00	22.00	17

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Rank
M-commerce allows companies to build better customer loyalty because with mobile apps your business is always visible on customer mobile screen as an icon.	0.00	2.00	18.00	58.00	22.00	12
It is always easy to bring customers back to your online store by using push notification, loyalty reward etc.	0.00	0.00	4.00	38.00	58.00	4
M-Commerce offers scalability to grow i.e., more customers are spending time on mobile apps because they are more convenient, faster and allows you to store settings.	0.00	2.00	58.00	38.00	2.00	22
Mobile app features such as social media integration or push notifications aid in boosting user engagement.	0.00	0.00	0.00	32.00	68.00	2
If you advertise on social media via ads, it is very likely that customer will leads to mobile version of your store.	0.00	0.00	10.00	52.00	38.00	5
As 90% of people use more than one mobile device to accomplish a task therefore it is easy for companies to bring them to their stores	0.00	0.00	64.00	36.00	0.00	23
Mobile expand word of mouth referrals means it is customers' natural desire to share their experience on social media platform like twitter, Facebook etc. therefore it is advantageous form companies as a medium of mouth publicity.	0.00	2.00	38.00	28.00	32.00	16

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Rank
Today youth is addicted to mobile/smartphones hence it is the easiest way to reach customers.	0.00	0.00	0.00	0.00	100.00	1
Shorten time on mobile to load/reload page and reducing the likelihood of users closing the app before purchasing is completed	0.00	6.00	20.00	32.00	42.00	7
M-Commerce has an advantage over normal e-commerce that companies know exactly who you are reaching out because mobile is generally used by only a single person and is unlikely to be shared therefore, there is better chance that message sent to mobile devices will be read by the intended recipient	0.00	0.00	0.00	100.00	0.00	12
With mobile device advertisers can better pin point and appeal to their audience	0.00	12.00	58.00	30.00	0.00	25
Companies can better utilize the mobile platform to improve their ability to deliver the products their customer wants and when they want.	0.00	8.00	56.00	32.00	4.00	24
Maintenance cost of mobile app is less than maintaining website.	0.00	4.00	30.00	48.00	18.00	18
Switching from one e-retail website to another is convenient on mobile as compared to traditional web site.	0.00	6.00	18.00	40.00	36.00	8
As e-retailer companies promote m-commerce over e-commerce so that customer can purchase products anytime and from anywhere over their smartphones.	0.00	0.00	0.00	34.00	66.00	3
Marketers can send personalized marketing deals and offers directly to the customers at the	0.00	2.00	28.00	34.00	36.00	9

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Rank
right time and engage them for better conversion						

Fig. 4.21: Top 10 Reasons of Shift: e-Retailers' Perception

It was tried to find out the reason for shifting of online customers from website to mobiles for their purchases. Besides asking from online shoppers, e-tailers were also asked to give their opinion regarding shifting of online shoppers from website to mobile apps. It is estimated that by end of 2021 more than 80% of retail business in India would come from mobile apps. In the tables given below analysis of opinion of e-tailer company employees regarding this current trend of shifting from websites to mobile app is given. Respondents were given 25 statements to rate upon five-point Likert scale from Strongly Agree to Strongly Disagree. Table given below depicts percentage of respondents under each category i.e., strongly agree, agree, neutral etc. as far as their opinion regarding a particular given statement is concerned. Finally rank of all the statements was calculated on

the basis of their response, so that relative importance of given statement can be checked.

Up on analysis of these given 25 statements, it was found that the top most reason for shift towards m-commerce is that today's youth is addicted to mobile or smartphones hence for companies is it easy to attract them towards their e-retail stores through mobile apps, and therefore companies are also encouraging people to use mobile apps for their purchase. This statement was ranked 1st and level of agreement was 100% with the said statement.

The second reason for shift towards mobile app for e-shopping was according to company employees was company's efforts towards social media integration i.e., e-tailer company's marketing efforts in redirecting target customers towards their website using social media. The level of agreement for this statement was 93.60%. This was the second among the top 10 reasons for shift of customer towards mobile shopping.

The third top reason for shift towards this shift from websites to mobile is that e-tailer companies themselves promote m-commerce over e-commerce. The reason for this is that – e-tailer companies think that using mobile customers can purchase their product anytime from anywhere. This reason was the third top reason for current shift and level of agreement with the given statement was 93.20%.

The fourth reason for shift towards mobile in view of e-tailers is that – it is easy to bring customer back to company's website using push notifications. Push notifications are clickable pop-up messages that appear on user's browsers irrespective of the device they are using. Using these notifications, they attract and lure online customers towards e-tailer's website by giving them lucrative offers. Level of agreement with this statement was 90.80% and this was the fourth reason of shift towards mobile apps from websites.

e-retailers' strategies to attract online customers towards their e-store is by advertising on socio medial platforms like facebook, twitter etc. They think that

using this strategy mobile user will be attracted towards their e-store. This reason was on fifth position and level of agreement was 85.60%.

e-tailer companies think that transactions on mobile are quicker and faster as compared to websites on PC/laptop etc. due to this online user give preference to mobile apps as compared to websites on PC/Laptop etc. Level of agreement with this statement was 84.40% and. This reason was on the sixth position among top 10 reasons.

The seventh reason was technical reason due to which people prefer mobile app for purchase as compared to using PCs of laptops. The reason is that it takes short time to load web page on mobile as compared to loading web page on PC or laptop. Due to quicker loading of page users can quickly surf through various websites at the same time to compared products. Hence, quicker loading of web pages on mobile or smartphone give them sense of accomplishing their task quickly and the likelihood of closing webpage due to delay in loading is reduced significantly. Level of agreement with this statement was 82%.

The next reason on eighth rank was similar to statement on seventh reason with little difference. The reason is that switching from one retailer website to another is convenient on mobile as compared to traditional websites on PCs and laptops. The for this as described in seventh reason that, on mobile websites load quickly due to short area to cover and display hence webpages load quickly as a result of which user can switch fast on other web pages of e-stores and accomplish their task quickly which gives them feeling of convenience. The level of agreement which this statement was 81.20%.

The nineth reason for users towards mobile apps is that marketers can send personalized deals to individual customers using data science techniques. E-tailers can send personalized deals according of users' experiences, preferences and characteristics using combination of modern techniques of machine learning, data

science and artificial intelligence at the right time to convert them in to loyal customer.

The tenth top reason for shift was that mobile payments benefit both customers as well as retailers at the same time. Modern payment techniques like UPI, QR Code scan, mobile wallet, payment apps like gpay, phonepe. Amazon pay etc. make quick payment which benefits e-tailers and in return e-tailers gives customer cashbacks and discount offers on various products and future payments. Level of agreement with this statement was 80.40%.

On the 11th rank there were three reasons for shift towards mobile apps and these reasons were – convenience felt by user in making transaction using mobile app rather than on PC or laptop. As described already that dues to various technical reasons it more convenient to do transactions using mobile apps as compared to on PCs and laptops. Another reason for shift is that better customer loyalty through mobile apps as compared to PC and laptops. The reason for shift, e-tailer companies give is that while using mobile apps e-tailer company's business is always visible on their mobile screen as icon hence it is easy for e-tailer businesses to keep reminding themselves which build better customer loyalty. The third reason on eleventh rank given by e-tailer companies is that using mobile apps it is advantageous to give mobile users personalized experience in terms of offers, choices of products etc. the reason for this companies gives is that – mobile is generally used by single user and it is unlikely to be shared by another even in family hence companies can offer products and offer according to preferences, choices and characteristics of particular mobile user. The level of agreement was 80% for all the three reasons on 11th rank.

Another reason on 12th rank for online customers' inclination towards mobile apps is that – it is easy to give/offer discounts, promo codes using mobile apps and these offers reach directly to intended user who is using mobile and not to any other person. The level of agreement was 79.60 percent.

Fifteenth reason for popularity of mobile apps over using websites on PC/laptops for online shopping, is availability of easy payment options like digital wallets. Digital wallets are just like wallets in real life, in which you can put money and withdraw it at the time of necessity. The difference is just that digital wallet exists on cloud where as normal wallet you can keep in your pocket. In digital wallets you can deposit money any time and withdraw it any time you need it for payments. You can forget normal wallet at home but, you can not forget digital wallet if your mobile is with you, because it exists on cloud. Hence, digital wallets are also reason for popularity of mobile apps for purchases. This reason was on 13th rank with level of agreement equal to 78.40%.

Another reason why e-tailer companies promoting mobile apps is "word of mouth referrals". It is natural desire or nature of human being that if they like of dislike something they share it with others like family members, friends or relatives etc. Now-a-days people maximum times glued on social media platforms like facebook, twitter etc., on their mobiles hence it advantageous for e-tailers companies that if customer like something he/she will share it immediately with others which give free of cost publicity to e-tailers. This reason was on 14th rank with 78% level of agreement.

The reason on 15th rank for shift towards mobile apps and e-tailers more emphasis to m-commerce is that with the help of mobile apps e-tailers get better and more information about its customer. When any customer make purchase on any mobile app of any particular company, the software which is running at the backend collect information about customer and send back to e-tailers to which e-tailers later use to know more about its customer and given discounts, deals, product offers according to his/her preferences. This facility was available earlier. Level of agreement with statement was 77.60%

Next reason why e-tailer companies emphasizing mobile apps is the cost of maintenance. Maintenance cost of mobile apps is much less as compared to

maintaining a website for PC/laptop etc. This reason was on 16th rank with level of agreement equal to 76%.

Other reason for shift is – customers get more information about products by clicking on mobile apps (rank 17th, level of agreement 75.20%).

If online customer is regular online buyer on mobile apps then it is very cumbersome that whenever customer make purchase, customer has to give all the details about their card number, date of expiry etc. this is very cumbersome and tiring. Therefore, every e-tailer given an option to customer that it can retain all the payment information like card number, expiry date, type of card etc. once it is stored next whenever customer make purchase, he/she does not have to enter all the information again and again and all the information will be filled automatically. With the help of this feature users not only saves time but also refrain from errors while inputting information. Level of agreement was 74% for this statement and it was on 18th rank.

Photos and videos on mobile apps keep customers engaged in online contents which attracts online customers towards mobile apps. It was on 19th rank with level of agreement of 72.80%.

Some other reasons for popularity of mobile apps over PCs and laptops are – great potential for scalability to grow – in case of brick-and-mortar business it is very difficult to grow faster but by building mobile apps e-tailers can reach very large people withing few days. Level of agreement was 68% with this statement and it was on 20th rank. Next reason related to this reason was that as more than 90% of people use more than one mobile device to accomplish their task hence it is easier for e-tailer companies to reach them. 67.20% was level of agreement with this statement and it was on 21st rank.

The last two reason for shift towards mobile apps from websites on PCs and laptops was that e-tailers companies are better utilizing their ability to deliver products fast whenever they want wherever they want and with the help of mobile

devices advertisers can better pin point to their customers and appeal to their audience.

Hence, in the above analysis it was found that there are various advantages of using mobile apps for e-shopping or any other activities using mobile device as compared to using websites over PCs or laptops. Though level of agreement with some statement was more as compared to other but overall level of agreement with the given statements which were related to advantages of shifting towards mobile apps from PCs and laptops for e-commerce activities was high (80%). This indicates that certainly there is shift towards m-commerce from traditional e-commerce.

2.4 Challenges Faced in m-Commerce

Respondents were given around 9 problem statements which m-commerce users may face during mobile operation or e-shopping through mobile. Respondents who were e-tailer company employees asked to rate these statements on five-point Likert scale according to level of difficulty they think customer may face during e-shopping. Table given below shows to what extent respondent agree with said problem statement and later ranked. These challenges are discussed below along with level of agreement of respondents with the given statement (challenge).

Table 4.24: Challenges faced in M-commerce Business

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Rank
There are lot of security concerns for entering payment information through your smartphone device compared to when using a laptop or desktop computer	0.00	10.00	56.00	30.00	4.00	8
Smartphones have small screen size this makes it difficult to scroll through the page to view product information especially when the website is not optimized for mobile users.	0.00	4.00	44.00	42.00	10.00	5
If customer wants to compare different products before making purchase, a desktop will be more convenient for use in such situations	0.00	0.00	0.00	100.00	0.00	2
There is increased fraud risk in mobile marketing and users should transact with caution to avoid being defrauded through various mobile ads.	0.00	2.00	46.00	46.00	6.00	6

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Rank
Mobile phones have low speed compared to computers this affects the quality of image. Some m-commerce images may not be clear when viewed through the phone	8.00	18.00	34.00	22.00	18.00	9
The devices used in accessing the m-commerce are of low quality and have inadequate memory capacity and low processing systems slowing down the accessibility of products	6.00	16.00	30.002rfd	34.00	14.00	7
Customer need to download apps for various e-commerce site together with the payment system app to your mobile device to ease your transactions	0.00	4.00	22.00	34.00	40.00	1
There is no personal interaction and customers on rely on reviews left in the system and captivating graphics to make their purchase decisions.	0.00	0.00	24.00	72.00	4.00	4
Every business is fighting for the same target customers online creating a lot of competition.	0.00	2.00	28.00	54.00	16.00	3

The first disadvantage of using mobile or smartphone device for e-commerce is that one has to download mobile app of that particular service even if you want it to use single time. This is not so in case of using websites on PC or laptops. 74% respondents agree with this challenge and 22% were neutral only 4% disagree. Thus, this is the biggest challenge in m-commerce in view of e-tailers. Overall level of agreement was 82%.

The second challenge is that if any customer wants to compare different products online then it is very convenient to use PCs or laptops as compared to mobile device. The reason is that due to its small size of display it very difficult to surf different websites conveniently on mobile devices. On the other hand, the display size of PCs and laptops is much larger so that user can easily switch between them using mouse or keyboard shortcuts. Hundred percent respondents were agreeing with this problem or challenge. The level of agreement was 80% and it was ranked second among nine top problems in using m-commerce.

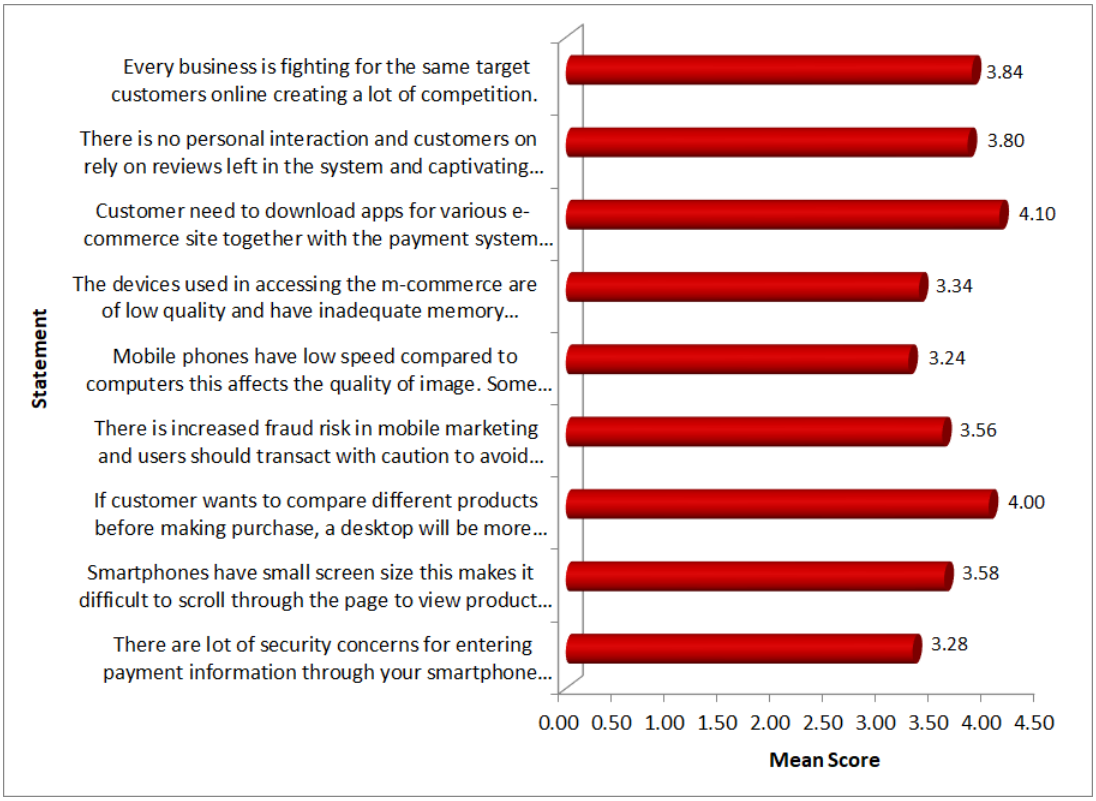

Fig. 4.22: Challenges faced in m-Commerce Business

The third problem or challenge is - fierce competition among e-tailers. 70% respondents agree or strongly agree that every business is fighting for the same target customer online which creates lot of competition among them and it becomes very difficult to attract them towards their e-store. 28% were neutral regarding this statement and only 2% disagree. Thus, overall level of agreement was 76.80% and it was third biggest challenge in m-commerce.

The fourth biggest challenge is that there is no personal (one-to-one) interaction between e-tailer and customer hence customer has to rely on reviews of other customers for any query related to product and service offered. If any customer has any question regarding product or service then either he/she has to send mail or put as query and wait till reply comes. 76% respondents agree or strongly agree with this problem and 24% were neutral regarding this problem. Thus, overall level of agreement was 76% and it was ranked 4th among 9 problems listed.

The fifth biggest challenge in m-commerce is small size of display of mobile device. Due its small size of display sometimes it is very cumbersome to scroll through webpage on mobile and get all the necessary information. User get distracted in managing the display and sometime it becomes difficult to get information one is searching for. 10% respondents strongly agree, 42% agree and 44% were neutral regarding this statement. Only 4% respondents disagree to this problem. He overall level of agreement with this statement was 71.60%.

One more challenge in using mobile device for m-commerce is fraud. Miscreants create fake websites of many popular business and collect money deceiving people on the name of popular e-tailing company. They create fake advertisements by offering discounts etc. and lure people. 52% e-tailers agree or strongly agree with this challenge. 46% were neutral and 2% were disagree. Thus, overall level of agreement was 71.20% and this challenge was on 6th rank.

Sometimes due to bad quality of mobile device with low memory and slow speed, taking too much time to complete any transaction and sometimes resulting in to failed transactions also creates problem which people do not understand and put blame on e-tailers. With this challenge 14% strongly agree, 34% agree, 30% were neutral, 16% disagree and 6% strongly disagree. Hence, overall level of agreement was 66.80% and this challenge was on 7th rank. Regarding this challenge the level of agreement was not high and many respondents do not see it as a challenge.

Another challenge is that there are lot of security concerns for entering payment information through smartphone on mobile device as compared to PC or laptop. Maximum 56% respondents were neutral regarding this challenge, 30% agree and 4% strongly agree 10% disagree with this challenge, Thus, maximum respondents were neutral or disagree and only 34% agree with this challenge. Therefore, it can be said that still there is risk in storing payment information in mobile device if mobile is stolen. But now there are lots of options available with which one can make his/her device secure.

The last challenge is that mobile devices generally have low memory as compared to PCs and laptops. With bigger memory the processing gets faster and transactions could be done quickly. PCs and laptops generally have bigger memory so that transactions could be done very quickly. But now a days base model of mobiles come with sufficient memory and processing power so that all these m-commerce transactions can be done easily. Only 18% strongly agree and 22% agree with given statement. 34% were neutral, 18% disagree and 8% were strongly disagree with this problem. Thus, overall level of agreement was 64.80% and this challenge was on 9th and last rank among the given challenges.

3. Hypotheses Test Results

To test whether perception of respondents of different age groups, different gender, different education background etc. toward reasons of shift form e-commerce (traditional way of doing e-commerce using websites on PCs or laptops) to m-commerce (using mobile device or smartphone) differ significantly or not, several hypotheses were framed for each demographic variable and analysis of variance and t-test were applied to test those hypotheses. The results of analysis are given in the tables depicted below.

3.1 Effect of Age

H_{01}: There is no significant difference in the perception of e-shoppers of different age group regarding shift from e-commerce to m-commerce

Table 4.25: Test Result – e-Shopper Perception and Age

Age Group	N	Mean	SD	F	Df	Result
Up to 30 yrs	55	3.46	1.22	18.37	3, 196	***
30 - 40 yrs	80	4.39	0.50			
40 - 50 yrs	43	4.41	0.50			
Above 50 yrs	22	4.27	0.65			

The first hypothesis tested was regarding age. The null hypothesis was – "There is no significant difference in the perception of e-shoppers of different age group regarding shift from e-commerce to m-commerce". To test this hypothesis ANOVA was applied. Test results are given in the table above. The test results showed that There is highly significant difference in the perception of e-shoppers of different age groups regarding shift from e-commerce to m-commerce ($F = 18.37$, $p<0.001$). From the table given above it can be observed that scores are increasing with age which indicated that reasons of shift are more prominent for people with higher age group i.e. people of high age group in general find it more convenient to use mobile device / app for e-transactions as compare to lower age group. Thus, null hypothesis "There is no significant difference in the perception

of e-shoppers of different age group regarding shift from e-commerce to m-commerce" is rejected.

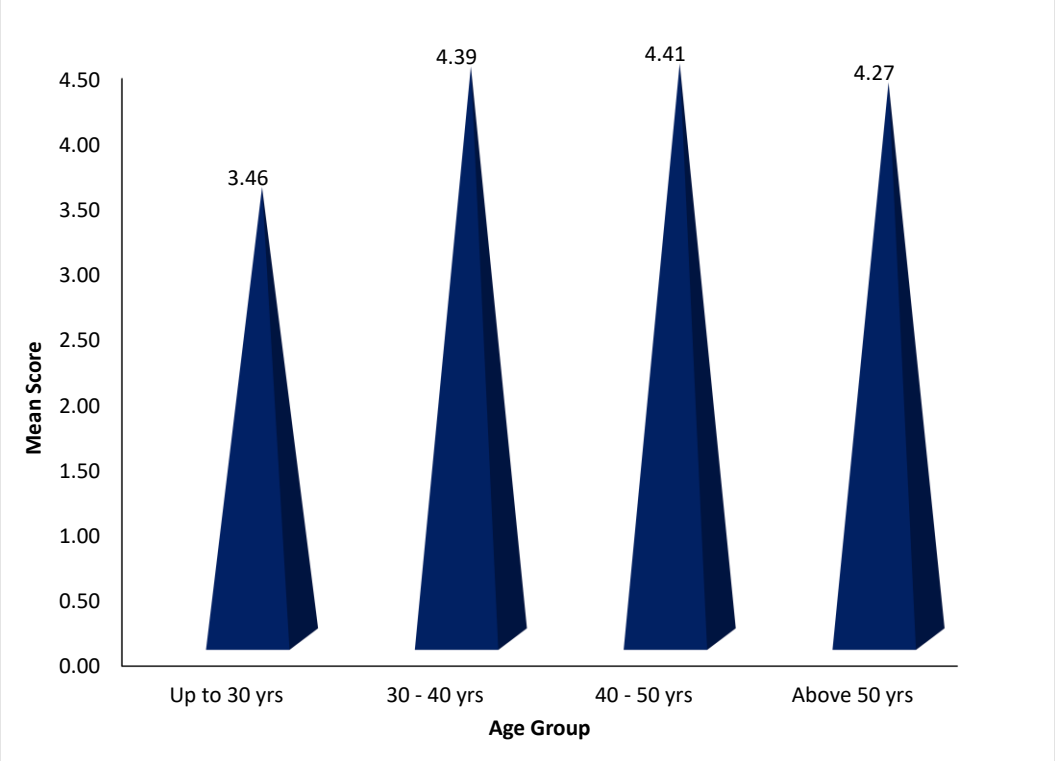

Fig. 4.23: e-Shoppers' Perception and Age

3.2 Gender

H_{02}: There is no significant difference in the perception of e-shoppers of different gender regarding shift from e-commerce to m-commerce

Table 4.26: Test Result – e-Shopper Perception and Gender

Gender	N	Mean	SD	t	Df	Result
Male	97	3.95	1.12	-2.78	198	**
Female	103	4.25	0.52			

With respect to gender also highly significant difference in the perception of e-shoppers was found ($t = -2.78$, $p < 0.01$). Test result given above shows that reasons of shift from e-commerce to m-commerce are more significant for female as compared to male. Female e-shopper find it more convenient or more favorable to use mobile device or app for e-transactions or e shopping as compared to their

male counterpart. As it is true that in any family knowingly or unknowingly female does more work as compared to male in the family. Therefore, they find more comfort in using mobile apps as compared to traditional e-commerce due to various reasons already discussed. Thus, null hypothesis that "There is no significant difference in the perception of e-shoppers of different gender regarding shift from e-commerce to m-commerce" is rejected.

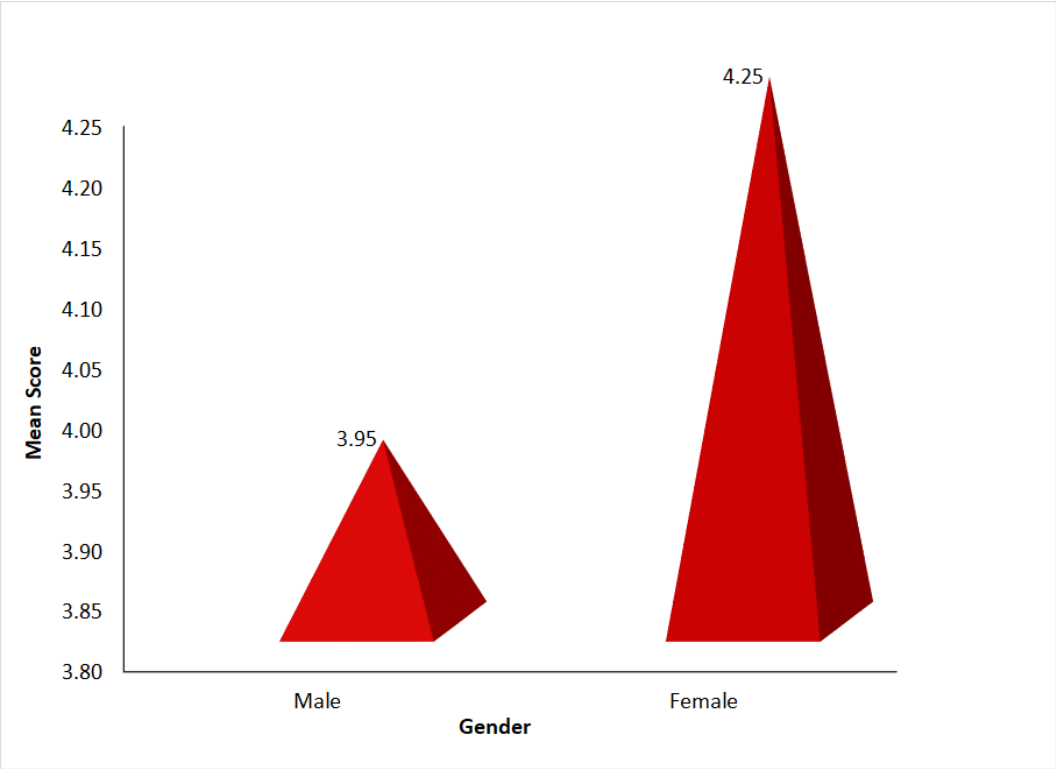

Fig. 4.24: e-Shoppers' Perception and Gender

3.3 Occupation

H_{03}: There is no significant difference in the perception of e-shoppers of different occupation regarding shift from e-commerce to m-commerce

Table 4.27: Test Result – e-Shopper Perception and Occupation

Occupation	N	Mean	SD	F	df	Result
Service (Govt. Sector)	29	4.49	0.56	2.96	6, 193	**
Service (Pvt. Sector)	77	4.00	1.25			
Business	28	4.08	0.44			
Self Employed	23	4.02	0.50			
Retired	6	4.21	0.00			
Housewife	21	4.56	0.28			
Student	16	3.65	0.15			

Table 4.27 given above shows analysis of variance test applied to test perception of e-shoppers of different occupations reading shift towards m-commerce. Test results given above shows that there is highly significant difference in the perception of respondents of different occupation ($F=2.96$, $p<0.01$). The scores given in the table shows that e-shoppers who are female, or who are in government services or those who are retired find it more convenient to use mobile device of apps for e-shopping or e-transaction as compare to e-shoppers in other occupation. Scores of respondents who are in service in private sector or in business or self-employed were almost similar. Score of students shows that as compared to people is other occupation, students are less affected as whether they are doing e-commerce or m-commerce. Therefore, it can be concluded that perception of e-shoppers of different occupation differ significantly and the null hypothesis "There is no significant difference in the perception of e-shoppers of different occupation regarding shift from e-commerce to m-commerce" is rejected.

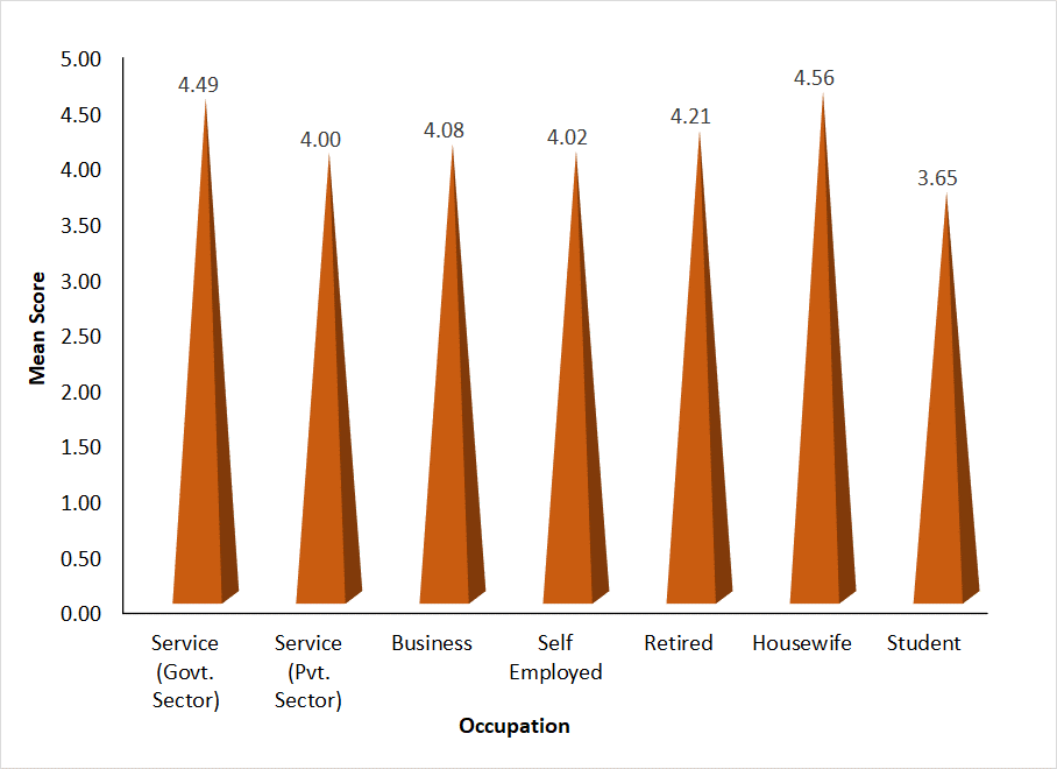

Fig. 4.25: e-Shoppers' Perception and Occupation

3.4 Income

H_{04}: There is no significant difference in the perception of e-shoppers of different income group regarding shift from e-commerce to m-commerce

Table 4.28: Test Result – e-shopper perception and income

Income	N	Mean	SD	F	Df	Result
₹ Up to ₹ 20,000	44	4.22	0.56	6.32	5, 194	***
₹ 20,001 ₹ 40,000	34	4.44	0.35			
₹ 40,001 ₹ 60,000	28	4.00	0.65			
₹ 60,001 ₹ 80,000	22	4.48	0.31			
₹ 80,001 ₹ 100,000	18	4.48	0.48			
More than ₹ 1,00,000	54	3.65	1.35			

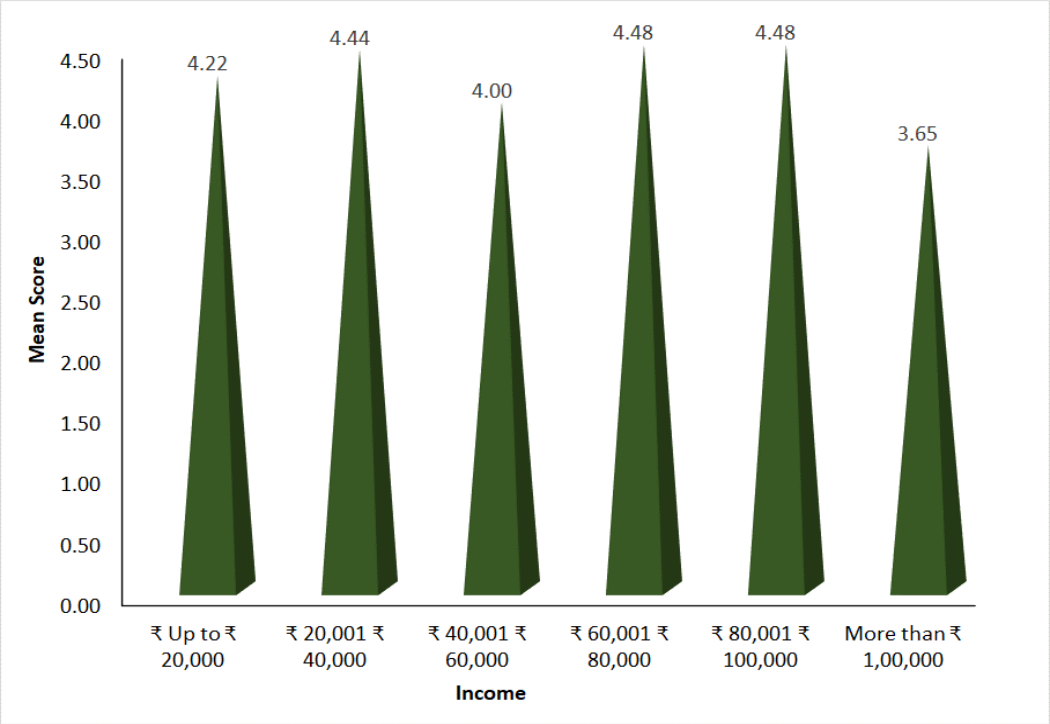

Fig. 4.26: e-Shoppers' Perception and Income

Next the perception of respondents of different income group was tested using ANOVA. Test result given in the table above shows that there is highly significant difference in the perception of e-shoppers of different income groups ($F = 6.32$, $p<0.001$). Data given in the table shows that people in the income group of 60,000 to 1,00,000 monthly find it more convenient to use mobile apps instead of traditional e-commerce. The reason could be understood that - as it can be assumed that people in high income group must be too much busy so that they find it easy to use m-commerce as compared to e-commerce. Thus, null hypothesis "There is no significant difference in the perception of e-shoppers of different income group regarding shift from e-commerce to m-commerce" is rejected.

3.5 Education

H_{05}: There is no significant difference in the perception of e-shoppers of different educational background regarding shift from e-commerce to m-commerce

Table 4.29: Test Result – e-Shopper Perception and Education

Education	N	Mean	SD	F	df	Result
Up to Sr. Secondary (12th)	9	4.19	0.54	1.48	2, 197	NS
Graduate	60	4.28	0.50			
Post Graduate or Higher	131	4.05	1.01			

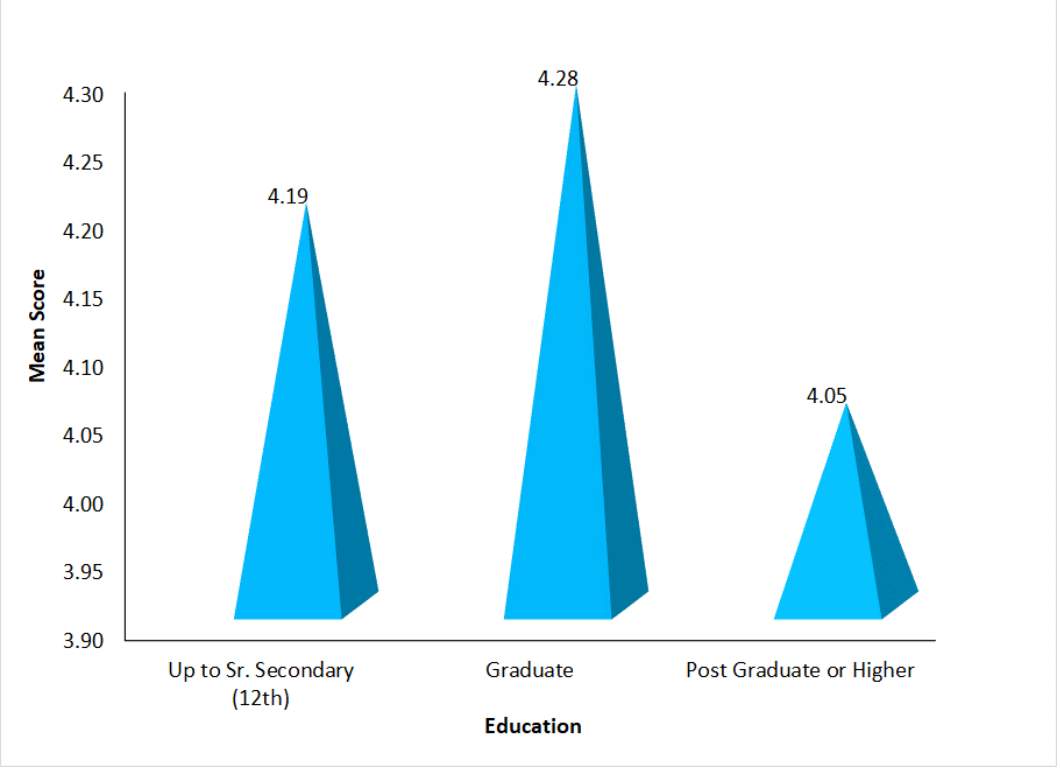

Fig. 4.27: e-Shoppers' Perception and Education

Finally, the hypothesis regarding perception of e-shoppers of different educational background was compared. ANOVA was applied. Test results given in the table above shows that with respect to education there was no significant difference in the perception of e-shopper regarding shift from e-commerce to m-commerce ($F = 1.48$, $p > 0.05$). The scores of respondents of different educational

background do not differ significantly. Hence, it can be said that reasons of shifting towards m-commerce from e-commerce do not differ significantly and null hypothesis "There is no significant difference in the perception of e-shoppers of different educational background regarding shift from e-commerce to m-commerce" is accepted.

Thus, concludingly it can be said that perception of people regarding shift from e-commerce to m-commerce differ significantly with different demographic variable. The reasons for these shifts are obvious because people in different groups with respect to different demographics have different requirements.

H_{06}: There is no significant shift of online consumers from e-commerce towards m-commerce.

Table 4.30: Test Result – Perception of e-Shopper and e-Retailer

Entity	N	Mean	SD	T	Df	result
e-shopper	200	4.66	0.59	27.88	199	***
e-retailer	50	4.02	0.714	5.15	49	***

The last hypothesis tested with the objective of knowing whether is there any real shift from e-commerce to m-commerce? For this a null hypothesis was framed and defined as "There is no significant shift of online consumers from e-commerce towards m-commerce". To test this hypothesis perception of e-shoppers as well as that of e-retailers was tested. T-test was applied. The observed values of perception of e-shoppers and e-retailers were tested against assumed threshold value of 3.5 which is quite high on scale of 5 and it is assumed that if observed value is significantly high above this threshold value or test value then it will confirm our belief that really there is significant shift from e-commerce to m-commerce.

Test results given in the Table 4.above shows that for both e-shoppers as well as e-retailers' perception t values were highly significant ($t = 27.88$, $p < 0.001$ and $t = 5.15$, $p < 0.001$) above test or threshold value, hence we can conclude that

from both e-shoppers' as well as e-retailers' perspective significant shift has occurred from e-commerce to m-commerce. Thus, null hypothesis "There is no significant shift of online consumers from e-commerce towards m-commerce" is rejected.

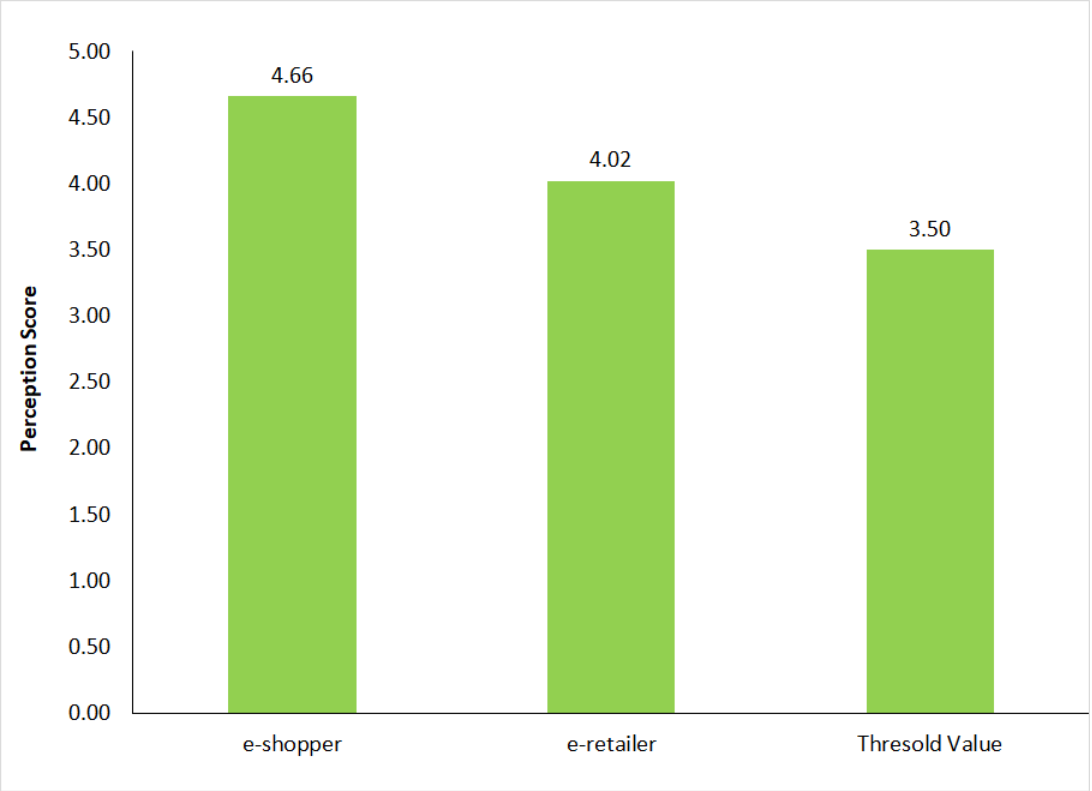

Fig. 4.28: Perception of e-Shoppers and e-Retailers towards m-Commerce

One more thing can be observed from the table given above that mean score of e-retailer was low as compared to e-shoppers which indicated that despite being quite high value e-retailers still see there is lot of space available to be fill as far as growth of m-commerce is concerned.

4 Current Scenario of E-retailing in India:

Section C - Practices followed by Five Major e- Retailers for Online Shopping

4.1 Amazon

4.1.1 Type of Products Offered

Amazon sells very wide variety of products including grocery items, electronic items, cosmetics, books, decorative items, kitchen appliances etc. the list is very long. Besides offering products Amazon offers services also like travel ticket booking, utility bill payments like mobile recharge, water and electricity bill payments, DTH recharge, insurance premium for bike, car payments, credit card bills payments, flight and bus ticket booking etc. One can buy products by category also.

4.1.2 Payment Options

Various payment options are available for purchasing or products and services like Cash-on-Delivery, Net Banking, Credit/Debit card. Amazon web site also offers wallet called Amazon Pay in which you can add money and use it at the time of purchase. Discounts and cashback amounts are also added to this wallet. By using it one could be safe because a customer can load money one time and use it later partially so that risk involved with every time purchase with net banking or any other option can be eliminated. Transaction history of using Amazon Pay (Wallet) is also maintained so that one can check later in case of any doubt or other purpose.

All the details of cards, net banking, UPI payments etc. with which online transaction are done by user is maintained by website so that one need not remember or enter every information upon next purchase.

4.1.3 Promotions/Discounts

Amazon also gives various types of discounts and offers so that people come again and again to their website for purchase. Some of the methods of promotion are described here.

- Cash Back: Amazon gives discounts to those users who pays utility bill through this website. Sometimes direct cash discount is given by deducting the offered amount form the bill or sometimes it gives discount on purchase of some other products so that whenever one purchase that product or service he/she get discount. They call it reward.

- Free Delivery/Shipping: Many times, discount is also given in terms of free delivery when you purchase a product of value above certain limit. By getting it, one does not have to pay for courier charges.

- Social Media Promo Code: Social media promo code is an offer through which seller gives percentage discounts on certain products. It creates a unique URL to be shared on social media channel like Facebook, Instagram, Twitter etc.

- Percentage Off: Direct percentage off is also offered

Amazon mainly provide four types of promotions viz. Price Discount, Best Deal, Lightning Deal and Promo Code.

- Price Discount is provided by reducing the customer price for products.

- Best Deal: It is a type of price discount promotion often featured on the Amazon.com deal page. It is basically used to drive traffic to entire catalogue, create awareness across several brands.

- Lightning Deal: It is a type of price discount promotion that is available for several hours as a flash sale

- Promo Code: In this type of offer customers are given discount on eligible products when they enter promo code at checkout. Company can share promo codes with social media influencer.

4.1.4 Delivery Options

Various type of delivery options is also available to customers. For regular customer who do not need quick delivery, delivery of product will take normal time but if customer take prime membership, then he/she can get very fast delivery within minimum time possible.

Customers can get delivery of products at the designated address whether it is home or office. Besides this, customer can also authorize his/her neighbor to take courier in his/her absence. One more option is pick up location. If customer do not want the courier person come to their home, then they can choose to select pickup location from where a person can take his/her product.

Another option is, when a person makes purchase of value amounting to or above certain specified value then that person is eligible for free delivery (without courier charges) of his/her purchased product.

4.1.5 Customer Review

With every product, customer review for that product who has already purchased that product is given, so that wherever a person wants to purchase that product he or she can review that product by reading opinion of other customers about that product or service. This is very helpful for new customers who can decided by reviewing the opinion of other customers regarding that product, that whether he should purchase the product or not.

4.1.6 Wish List

Wish list option is also available for the customer who like the product and want to purchase the product but due some reason(s) (like due to lack of money, product unavailability or customer want to review that product again or some other

reason) customer is not purchasing that product at that time. Then the customer can store that product in to his/her wish list and then whenever again he/she desire to purchase that product again he can choose that product from wish list.

4.1.7 Order History

Order history of customer is also maintained by the website so that by some reason if customer want review the order history, he/she can do that,

Transaction History in Amazon Pay (Wallet)

If a customer uses Amazon Pay wallet for purchasing products, then he can load money into that wallet and later he can use that money as much as required whenever you make purchase. Whenever a customer gets discounts of cash back from offers than that money is also added in to that wallet. All the details of previous and current transaction details are maintained under transaction history. Whenever customer want to check that history, he can use that record of transaction history.

4.2 Flipkart

4.2.1 Type of Products Offered

Flipkart also sales variety of products which included grocery items, mobiles, fashion category includes men's wear women's wear, footwear, watched, accessories, all type of clothes, windcheaters, raincoat, electronic, home appliances, kitchen appliances, washing machines, air conditioners, refrigerators, seasonal appliances, travel ticket bookings, food and drinks, nutrition and health care products, sports and fitness, Baby care products, toys and school supplies, sports and fitness products, books and music, personal hygiene products etc.

4.2.2 Shop by Category

All the products are arranged in different categories on website and can be accessed from drop-down menu.

4.2.3 Payment Options

Like other e-retailer Flipkart also offer multiple digital payment methods including net banking, Gift Card, debit card, credit card, UPI payment options like Amazon Pay, Google Pay, Phone Pe etc., Mobile wallet option is also available there through which one can make payments. Cash on Delivery is also available. Flipkart accepts payment methods using Visa, MasterCard, Maestro, and American credit or debit cards in India and 21 other countries. All the payment options are properly protected through Flipkart's trusted payment gateway partners. They use secure encryption technology to keep customer's transaction details confidential. If any customer pays by Debit or credit card or UPI all information regarding customer payment options so that customer save the hassles of typing the complete UPI information again and again at the time of shopping. Also, the website store multiple payment option of customer like multiple cards' information, UPI information etc. so that in future at the time of purchase the customer can choose from various alternative available.

Filpkart give assurance to its customers that their information regarding Card or UPI is 100% safe and protected and they do not save PIN or MPIN numbers of customers on their servers. If customers want to delete stored information regarding UPI anytime he/she can do so.

4.2.4 Promotions/Discounts

Flipkart also gives various offers to its customers on various categories of products. They give percentage discount on MRP. Coupons are also provided like Special Offer for New Customers, Grocery Savings Pass Offer in these types of coupons flat discount is offered on purchase of particular category of items. Any customer can purchase and send gift card from Flipkart to his/her friend or relative.

Super Coin option: In this offer customer get 2 Super coin of every 100 Rs. of purchase and maximum 50 coins can be earned by the customer on single order. The validity of SuperCoin is one years after which it expired.

4.2.5 Delivery Options

For delivery of product different type of delivery options are available like Cash-on-Delivery, free shipping. Shipping period for product if not imported is 2 to 5 business days and if imported it takes 3 to 4 weeks for delivery. Customers can know shipping status and dispatch status is also reflected on website for customer information. Flipkart deliver products only domestically. International delivery of product is not yet available

The delivery charge varies with each seller i.e., each seller charge differently for same product. Because seller incur high delivery charges on low value items in that case seller charge a nominal delivery charge to compensate for logistic costs. Products listed as F-Assured are charged Rs. 40 for delivery per item if order value is less than 500. If order value is 500 and above then delivery is free.

Cash on Delivery option is also available for customer who do not want to pay in advance. They can pay later at the time of delivery of product. On some items or location Cash on Delivery option is not available.

4.2.6 Return and Replacement

Return scheme is also available by the respective sellers in which there is option of exchange, replacement and refund. These options are provided by respective sellers and all the product under same category may not have same return policy.

On different type of product different type of return policies are applicable as an example: Lifestyle products like kid's wear, men's wear, women's wear there is 14 days refund, replacement or exchange policy. Products like jewellery, footwear, travel accessories etc. have 10 days refund or replacement policy. Medicines both allopathy and homeopathy have 2 days refund policy. All types of books, mobile and electronic items bear 7 days replacement only policy.

4.2.7 Customer Review

Customer reviews are also are also available for any product. Besides these there is question and answer section in which answers of commonly asked questions about the particular product is given so that new customer can review the product and take decision whether to buy that product or not.

4.2.8 Wish List

Wish List is also offered by Flipkart in in which customers can store products for future purchase that he/she does not want to purchase currently.

4.2.9 Order History

Order history of every transaction of customer is maintained to which the customer can refer if he/she want to review it later for any reason.

4.2.10 Customer Care Day Night

Flipkart's help page list out various type of issues that any customer may encounter at the time of purchase or later which they can refer any time during or after purchase for quick resolution. As an example, customer can get more information about order tracking, delivery date changes, help regarding return and refund etc.

This help page has various filters to filter out unnecessary information that you do not want and get only information that is required by customer. Besides website help. Customer can also get help from Customer Service Representative using phone numbers given on website.

4.3 Snapdeal

Snapdeal is India's online shopping site established in 2010 by Kunal Bahl and Rohit Bansal with widest collection of more than 35 million products from more than 800 diverse categories from one lakh twenty-five thousand regional,

national and international brands and retailers. It is a shopping site for internet users across the country.

4.3.1 Type of Products Offered

Snapdeal Offers products in the categories of - Mobiles, Mobiles Accessories, TVs, Audio & Video, Memory Cards, Computers, Camera, Watches, Fashion Accessories, Men's Clothing, Women's Clothing, Home & Kitchen, Books, FMCG Offer - Top Brands, Appliances, Home Furnishing, Furniture Online, Toys & Games

4.3.2 Shop by Category

You can search products by category. You can limit the display of items of particular brand and also by limiting the product within a price range which is in your budget.

4.3.3 Payment Options and Return and Replacement

Snapdeal offers various payment options e.g., Credit Card, Debit Card, Net Banking, Cash-On-Delivery, EMI, e-Gift Voucher, UPI. Snapdeal’s Trust Pay policy ensure assured seller refund or replacement on specific products when someone return or replace purchased product withing 7 calendar days from date of delivery. Request for refund or replacement must be raised at My Orders Page of the company’s website. Customers are also eligible for refund upon successful cancellation of the product prior to delivery. Company only entertains products for refund or return if they are non-used (unused, unwashed, unsoiled with non-tampered quality check seals/ warranty seals), non-damaged (product) [should be undamaged and without any scratches, dents, tears or holes] and non-damaged (packaging) [Product's original packaging/ brand box should be undamaged].

4.3.4 Promotions/Discounts

Snapdeal offers various types of discounts based on product category. They offer cash discounts, Percentage discounts, Promocodes, Snapdeal Coupons, Snapdeal discount coupon - gives certain percentage of discount on all the product,

Snapdeal coupon code today – in this type of promotion Snapdeal gives up to 75% of discount on selected items, Snapdeal offer code – In this type of discount Snapdeal gives cash discount up to say 100 Rs. on selected product, Snapdeal new user promo code – In this type of discount New Snapdeal user get discount up to Rs. 300, Snapdeal free promo code - Customer get Flat 10% Off up to Rs 50 on purchased product.

Besides these Snapdeal gives special discounts on different occasions for example: Snapdeal Blockbuster Deals - 60% to 70% of men, women fashions, Kitchenware, Grooming Essentials, etc.; Snapdeal Super sale - 15% to 25% off using PNB, RBL, BOB, Federal Banks credit/debit card; Snapdeal End of sale seasons - 15% cashback using Free charge Wallet; Snapdeal 299 Stores - Under this offer all products buy at 299; Snapdeal T-shirt Mela - Explore t-shirt under your budget category; Snapdeal 99 Store - Under this offer all items buy at 99 only; Snapdeal Price point store - 40% to 80% off given products by Snapdeal; Snapdeal Religious Store - Explore religious products under your budget category, + 25% discount using PNB credit/debit card; Snapdeal Half price store - Get half price of given products given by Snapdeal; Snapdeal Puja offers - 50% to 70% off under this Puja offer (https://couponswala.com/snapdeal-offers)

4.3.5 Delivery Options

When a customer buys any product on Snapdeal Web Site/Web Store, a tracking number for that parcel is established and company register all the details of sender and receiver and this is done for every single product purchased. Besides sender and receiver information like address, other data is also stored like travel route, estimated delivery time, fees, type of product etc. With tracking number, customer can check the position of his/her parcel any time. The user can see real time location of his order.

4.3.6 Customer Review

Customer review option is also available where they can write their review about product purchased so that other people can decide whether to purchase that

product or not. Besides this customer can also write about services they received etc.

4.3.7 Wish List

Wish List on Snapdeal is available on the name of ShortList where one can store the product they wish to purchase in future.

4.3.8 Order History

Order history of every customer is also maintained which the customer can refer if he/she want to review it later for any reason.

Transaction History

Transaction history is also maintained by the website which customer can refer later.

4.4 Shopclues

4.4.1 Type of Products Offered

Shopclues is also provides multiple variety of products which include mobile and other electronic items, men and women wear, food and beverages, jewelry, cosmetics, home and kitchen appliances, home furnishing, health related products, exercise equipment, grocery items, sportswear and sports items etc.

4.4.2 Shop by Category

You can search products by category. You can limit the display of items of particular brand and also by limiting the product within a price range which is in your budget.

4.4.3 Payment Options

Shopclues.com offers various payment options for secure and convenient payment options. All their payment gateways are secured by SSL (Secure Socket

Layer). They provide multiple modes of payment option like Credit cards, debit cards, ATMcards, Net Banking, Cash on Delivery (CoD). Presently they do not accept international cards. Various UPI payment options are also available through GPay, PayTm etc. Wallet option is also available at shopclues.com One can use Gift Card option also to give gift to someone.

Besides these payment options Shopclues provide their own payment option CluesBucks. Actually, CluesBucks are points that are credited to customer's ShopClues account and is ruled by terms and conditions provided by the company. One point is equal to one rupee and one can redeem the collected points on the next shopping form ShopClues.

4.4.4 Promotions/Discounts

ShopClues offer different types of discounts for its promotions. These discounts or offers comes under different categories like…Season essentials in which they offer discount for different type of products like discount on Women top and skirts, discount of men's shorts, FlipFlop etc.

Discount on kitchen essential, discounts on men's footwear, home furnishing, Wholesale discounts are also given if one purchase products in bulk as an example if any one purchase certain number of quantities of mobile then company gives up to 60% to 75% of discount. Wholesale discounts are given also on categories like fashion, home and kitchen, footwear.

Discounts or offers are also given on particular brands of products. Discounts on new arrivals of products. Shopclues also gives discounts on particular category of products like SareeFest in which they give discount on Sarees. Watch Carnival in which they give heavy discount on different type of watches. Bulk discounts are offered on Jeans in Jeans Fest. Different percentage of discounts are given on products under different price categories like under 99, under 199, under 249 etc.

Shop by discount: In this category of discount or offer products are categories according to different percentage of discounts like 25% off, 50% off, 60% off etc. Buy More Save More – Under this category also good discounts are given on clothes, footwear, watches etc.

Refer and earn – In this type of offer existing customers can invite their friends or relatives to join ShopClues. Once friend or relative join ShopClues giving reference of existing friend then then friend whose reference is given receives CluesBucks of certain amount offered by the company.

4.4.5 Delivery Options

For delivery of product different type of delivery options are available like Cash-on-Delivery, free shipping. Shipping period for product if not imported is 2 to 5 business days and if imported it takes 3 to 4 weeks for delivery. Customers can know shipping status and dispatch status is also reflected on website for customer information.

4.4.6 Return and Replacement

Customer can return product also if wrong product (wrong size, wrong color, style or quality) or damages product is delivered. For that customer has to make complaint within 48 hours (2 days). Customer have to make complaint within 48 hours if product is missing or empty package is delivered. However, in other cases return or replacement request for any order should be submitted within 10 days of receiving the product.

4.4.7 Customer Review

Customer reviews are also are also available for any product so that new customer can review the product and take decision whether to buy that product or not.

4.4.8 Wish List

Wish list for customer is also maintained so that he or can add a particular product for future purchase it he/she do not want to purchase it presently.

4.4.9 Order History

Order history of every customer is also maintained which the customer can refer if he/she want to review it later for any reason.

4.4.10 Transaction History

Transaction history is also maintained by the website which customer can refer later.

4.5 PayTM Mall

PayTM is an Indian company that specializes in e-commerce, finance and digital payment system based in Noida (U.P.). Specialty of PayTM is that it offers its services in 11 Indian languages besides selling product of daily need like grocery, clothing, electronic items etc. PayTM offers online use-cases like mobile recharges, utility bill payments, travel, movies and event bookings. PayTM also offers in-store payments at grocery stores, fruits and vegetables shops, restaurants, parking, tolls, pharmacies and educational institutions with PayTM QR Code. According to company more than 20 million merchants across India were using PayTM QR Code for accepting their payments. To generate revenues company also uses advertisements and paid promotional contents.

PayTM was founded in August 2010 by Vijay Shekhar Sharma initially PayTM offered prepaid and DTH recharge platform and later added data card, postpaid mobile and landline bill payments. In 2014 company launched PayTM wallet option. Indian railways and Uber gave recognition to it by adding it as one of the payment options. In 2015 it added facilities of paying education fees, metro recharges, electricity, gas and water bill payments through its portal. In 2015

PayTM's travel business crossed 500 million dollars with 2 million tickets booked per month. In 2017 PayTM becomes first payment app which crossed 100 million app downloads and launched PayTM Payments Bank. By 2018 it allowed merchants to accept payments through PayTM, UPI and card payments and deposit amount in their accounts with 0% charge. "PayTM for Business" app was also launched allowing merchants to track their payments and day to day settlements. In March 2018 its merchant base reached to 7 million.

4.5.1 Type of Products Offered

PayTM mall assures its customers quick, convenient and trouble-free online shopping environment. PayTM mall offers its customers over 65 million products ranging from baby products to makeup kits, dairy products, shoes for men and women, watches, kitchen ware, jewelry, clothing, electronic items, mobile etc. They boast of providing top quality products and reasonable prices.

Electronic items, clothes, grocery items, kitchen ware, health care products, personal care products, books, backpacks, stationary items. They even sale automobiles, car, scooter, bikes and their accessories etc. etc. Means every item which is needed in anyone's life is available there. One can search products by categories.

PayTM also offers stocks and Investment options like PayTM Gold, mutual funds, stocks and EFTs. Insurance services are offered like bike and car insurance, life insurance, health insurance, besides this type of insurance customized insurance products like insurance for protection against Coronavirus, personal accidental cover, dengue insurance, hospital cash insurance, cancer care plan, heart care plan, communicable disease insurance etc. Loans and credits are also offered by PayTM.

4.5.2 Shop by Category

PayTM mall offers products under 10 broad categories namely mobiles & tablets, electronics, women's fashion, men's fashion, kids store, health & grocery essentials, bags & luggage, home & kitchen, protect yourself and small appliances.

Under each category one can shop by brand, by price range, by features. They have made separate category for popular products, tablets, and brands.

4.5.3 Payment Options and Return and Replacement

PayTM various types of payment options. One can pay for products and services through net banking, UPI, debit or credit cards. PayTM wallet option is also available in which you can deposit lumpsum amount and later you can pay partially at the time of purchase using PayTM wallet. PayTM also has its bank named as PayTM Payment Bank in which you can deposit money and use it for Payments, one can link bank account with PayTM and pay through it also

4.5.4 Return and Replacement Policy

Paytm has different return or replacement policy for different category of products like - consumer electronics - 7 days replacement, large appliances - 7 days return/replacement, small appliances - 7 days return/replacement, laptops, cameras and TVs, mobiles, tablets - 7 days replacement, apparel - 15 days return/replacement, lifestyle - 7 days return/replacement, food, groceries, pooja supplies and pet supplies - non returnable, cars and bikes - no cancellation/non-returnable, auto accessories - 7 days return/replacement, home and kitchen - 7 days return/replacement, baby and kid care - 7 days return/replacement, books and stationery - non returnable, gifting - non returnable, gold - non returnable.

4.5.5 Promotions/Discounts

PayTM give its user great number of offers which saves them money. They give coupons that help them in their future payments and transactions on PayTM. Customers can find all their favourite brands on PayTM and gives discounts via PayTM promo codes and cashbacks. Cashback amount is added in their wallet and later they can use it for their future purchase.

Offers and discounts are also given on watching movies i.e., on movie ticket purchase thus, buying ticket on PayTM not only saves their time by avoiding them standing on long queues but also save their money by giving them discounts.

Besides giving discounts on movie tickets discounts and cashbacks etc. are also given on recharge and bill payments, on recharge of DTH, on prepaid mobile phones or paying the postpaid bills, electricity bills and other utility bills. Loyalty cashbacks for all recharge and bill payments are also offered.

Paytm give offers through promo codes, offers and coupons and give certain amount of discount on specific products and services for example - up to 50% discount on bus or flight ticket bookings, movie ticket booking, mobile recharge and bill payment. Also, Paytm offers easy cashbacks. PayTM keep updating their customers with new deals and discounts / offers through e-mails, app-notifications and other communication mediums. Something amazingly crazy offers came as an example ₹ 10,000 cashback on iPhone or ₹ 14000 cashback on bicycle purchase. IT has created a separate web page for offers it is giving which is https://paytm.com/offer/

4.5.6 Delivery Options

When a customer buys any product on Snapdeal Web Site/Web Store, a tracking number for that parcel is established and company register all the details of sender and receiver and this is done for every single product purchased. Besides sender and receiver information like address, other data is also stored like travel route, estimated delivery time, fees, type of product etc. With tracking number, customer can check the position of his/her parcel any time. The user can see real time location of his order. (https://www.ship24.com/shops/snapdeal-tracking)

4.5.7 Customer Review

Customer review option is also available where they can write their review about product purchased so that other people can decide whether to purchase that product or not. Besides this customer can also write about services they received etc.

4.5.8 Wish List

Wish List on PayTm is knows as save for later option though which one can save his /her wished items and purchase them in future.

4.5.9 Order History

Order history of every customer is also maintained under my Orders category.

4.5.10 Transaction History

Transaction history is also maintained by the website which customer can refer later.

CHAPTER – 5

SUMMARY, CONCLUSIONS & SUGGESTIONS

In the present chapter summary of findings are drawn after analysis of data of both the questionnaire i.e., of e-shoppers and e-retailers are given. Besides final conclusions drawn and suggestions for e-retailers are also given at the end of this chapter.

1 Summary of the Study

Although e-commerce is in existence for quite a long time but the present time is time of m-commerce. It predicted that by the end of 2021 m-commerce dominates online shopping sales by 53.9% or up to $649 billion (statista.com). The share of m-commerce was 34.5% in 2017 in Unite States. This indicate that there is shift in behaviour how customers are shopping online. Not far back people used to do online shopping through websites on their PCs and laptops but with growing popularity and increasing processing power of smartphones trend of online shopping is shifting towards mobile shopping i.e., m-commerce. Online shopping is a form of e-commerce which enables customers to do shopping on internet using web browser. The basic necessary things to complete online shopping or online transactions are an internet connection and electronic and acceptable method of payment. Invention of web or internet technology has affected business tremendously and revolutionized the business activities like shopping, retailing, marketing, advertising etc. Shopping on internet is also known as “e-tailing”. The software used for completing these transactions are known as “apps”. These apps enable online shoppers to browse through various products, their characteristics, price etc. offered by online stores.

As the technology is progressing, size of the electronic devices is becoming smaller and smaller but smarter-and-smarter day-by-day. With the popularity of mobile devices/smartphones new term was coined called “m-commerce” or

"mobile commerce" which includes monetary transaction performed using smartphones or mobile-devices. m-Commerce makes people enable to buy and sell goods and services or any transactions using mobile device which can be done anytime and anywhere, you just need a mobile device which be put in a pocket and one internet connection.

1.1 Need of the Study

While reviewing literature related to present research work it was revealed that lot of research work and analysis has already been done on e-commerce but very less research work is done in the area of m-commerce and no one has attempted to find out the reason of this shift particularly from the point of view of e-tailers. Hence, the present topic of research was taken to study whether really there is current trend of shifting towards mobile shopping from online shopping through PCs and laptops. An attempt was also made to find out reasons for this current shift.

1.2 Research Design

Research design and methodology is base and very essential part of any research study. To carry out any successful research work it is very necessary that it has clearly defined objectives, type of data needed, method of data collection, type of analysis to be performed and what tools will be used to do analysis. All these were discussed in details in research methodology chapter but as a summary here it is also given.

The main objectives of present research work were (a) to evaluate e-retailing practices in India (b) to study shifting behavior of e-retailers form e-commerce (using devices like computer, laptop etc.) to m-commerce (transactions from mobile devices/smartphones) (c) to investigate the reasons for shifting from websites to mobile application by e-retailers. (d) to assess the perception and buying behaviour of Indian consumers towards websites and mobile applications, and (e) to device a framework and suggestive measures for future trends in e-retailing in India.

Present study comes under realm of descriptive research category. Descriptive research is defined as research method which describes the characteristic of the population. Hence the present study is descriptive in nature which studies behavior of netzines towards m-commerce and specially the opinion of e-retailers to study trend of shifting towards m-commerce from e-commerce.

1.2.1 Area of Study

In general, the area of study for research or relevant area of study is the area directly related to research. In the present case since researcher wanted to study the shifting behaviour of consumers towards mobile commerce hence the area considered for present study was whole India. Also, the scope of operation of major e-commerce or m-commerce retailers is all over India hence data from employees of major e-retailers was collected from all over India. In the present study both primary and secondary data were used for analysis to complete the study.

1.2.2 Source of Data to Perform Study

The primary data was main source of data for the present study and was collected through two self-designed questionnaires. One questionnaire was for e-retailers and the second questionnaire was for netizens who shops online. The sources of secondary data were newspapers, magazines, books, journals etc. which were mentioned in the bibliography given at the end of the thesis.

1.2.3 Data Collection Tools

Since this study was based on survey or survey research hence as stated above that source of data for the present study was primary therefore to collect primary data two self-designed questionnaires were prepared. In survey-based research responses or opinion of respondents are received through surveys or questionnaires or opinion polls. Two key objectives of the present study were to study online consumer behavior for shifting towards m-commerce and to study the point of view of e-trailer for this current shift, two self-designed questionnaires

were prepared to collect primary data. These two questionnaires were (a) Questionnaire e-retailers, and (b) Questionnaire online shoppers.

a. Questionnaire for e-Retailers

The first questionnaire was for e-retailers, because the aim of present research work was to find out the reasons for shift behaviour of consumer towards mobile commerce therefore it is very necessary to know the perception of e-tailers regarding this shifting behavior. Keeping that objective in mind questionnaire for e-retailers was designed. The questionnaire for e-retailers consists of two sections. In first section primary details of e-retailers were taken and in second section questions related to shifting trends were given on five-point Likert scale.

b. Questionnaire for Online Shoppers

The questionnaire for online shoppers also consists of two sections. In first section demographic details like, age, gender, occupation etc. were asked and in second section 15 question related to online shoppers' shifting trend towards m-commerce were asked to know the reasons of shifts.

1.2.4 Reliability and Validity of Self Designed Questionnaire for e-Retailers and Online Shoppers

The reliability and validity of the self-designed questionnaire for e-retailers and online shoppers was established at three levels (a) Content validation of self-developed questionnaire schedule by experts (b) Pilot testing, and (c) Testing of reliability of self-developed questionnaire schedule

a. Content Validation of Self-Developed Questionnaire Schedule by Experts -

Content validity of both the questionnaires was established by giving first draft of the questionnaire to five experts of the field. After getting their feedback regarding addition, deletion etc. in the content of questionnaires small changes were

done in the language and ordering of the questions. Making changes suggested by the expert questionnaires were again shown to them and after their final consent questionnaires were float for the pilot study. The criterion for selection of experts was having at least 5 years of experience of working in their respective fields.

b. Pilot testing of self- developed questionnaire

After content validity of the questionnaires was established, pilot testing was conducted. Pilot testing of e-tailers' questionnaire was done on five questionnaire and for online shoppers' questionnaire it was performed on 50 respondents.

Researcher always wants to know that whether tool is actually measuring the desired research concept i.e., is the tool designed by researcher is valid and is the measurement tool, what it is intended to measure is measuring it consistently. This is known as reliability.

c. Reliability of Questionnaire

Reliability of shoppers' questionnaire was calculated using Cronbach alpha test. Reliable measuring instrument is one which gives same measurement repeatedly when it is used to measure object or event one or more times. If a measuring instrument is perfectly reliable than it will give perfect positive correlation between the scores of objects or event if they were measured one or more times. **The Cronbach alpha value for online shopper's questionnaire came out to be 0.876,** which is greater than 0.7 hence reliability of the questionnaire was established and both the questionnaire was finalized for main study.

1.3 Procedure of data collection

The final data collection was done using purposive convenient sampling method. All the responses were received online using questionnaire designed on

Google Forms. e-retailers were contacted online and requested to fill the questionnaire in this way responses of e-retailers were received.

For online shoppers' convenience sampling and snowball sampling methods were used to collect data from online shoppers. People in close contact who are online shoppers were requested to fill the questionnaire and they were further requested to forward the questionnaire in their contact to those who are willing to fill the questionnaire and does online shopping.

Sample Size - Appropriate sample size can be calculated using Cocharn's formula. Using this formula, the sample size for online shoppers came out to be 191 which is rounded up to 200 for present study. As far as sample size for e-tailers is concerned there are more than 19,000 e-tailers in India. Using same formula, the sample size came out to be 50, therefore, 50 employees of major multi product e-retail retail stores were selected to give their opinion for shifting trend towards m-commerce from e-commerce which was current topic of research and a sample of 200 online shoppers was collected to know their attitude toward m-commerce.

1.4 Analysis of Data - Data collected from e-tailers and online shoppers were pre-processed by inspection for missing values and incompleteness. Questionnaire with more than 25% information was missing were rejected completely and new responses were taken and rest incomplete questionnaires were completed using appropriate statistical techniques. After that collected data was coded, scored and subject to analysis. The software used to analyze data were Microsoft Excel version 2019 and Statistical Package for Social Science (SPSS) Version 19.0.

Statistical Techniques Used to Analysis of Data – (a) Frequencies and percentages: Frequency and percentage were used to show distribution of respondents according to a particular variable. This is used to compare proportion in different categories. (b) mean and standard deviation: mean is used to calculate central value around which other values lie. Standard deviation is used measure extent of deviation around mean values.

1.5 Findings from Online Shoppers' Questionnaire

- The age of respondents ranges between 19 years to 68 years. The average age of respondents was 38.35 years. Maximum respondents were below 40 years of age group. The reason being that younger population as compared to old population is more involved in online shopping.

- Gender wise distribution of respondents showed that almost equal proportion of male and female respondents were in the sample. As people of both genders are doing m-commerce hence this almost equal proportion of respondents justify the sample.

- As far as distribution of respondents according to occupation is concerned sample included respondents from all type professions like government service employees, people who work in private sector. Businessmen, self-employed, housewife and students were also there in the sample. Thus, sample constitutes of respondents form all types of profession.

- As far as income of respondents is concerned the average income of respondents is around ₹ 60,000. Respondents were categorized in to three groups on the basis of their income. In the first group income was up to or below ₹ 40,000. In the second group to income ranges between ₹ 40,000 to ₹ 1,00,000, and in the last income group respondents' monthly income was above ₹ 1,00,000.

- According to educational status of respondents very few respondents were less educated and maximum respondents were highly educated. Only 4.5% respondents were educated up to senior secondary or below. 30% were graduates and remaining 65.50% were either post graduate to educated above post- graduation. Thus, maximum people with high education level are involved in m-commerce.

- The average time duration for which sampled respondents were doing online shopping was 6.5 years. Maximum respondents were doing online

shopping since last three to six years. The median value of this duration was 5 years which shows that 50% of respondents were doing online shopping since last five years where as rest 50% were doing online shopping for more than five years. The average duration of online shopping for those who were below or up to median value was 3.33 years whereas those respondents whose duration of online shopping was above median value, the average period of shopping was 12 years. Hence, maximum respondents in the sample were doing online shopping for quite a long time.

- Type or categories of products purchased online - Highest proportion (93.5%) of respondents were doing online shopping for purchasing clothes. 88-89% were using online mode of shopping for travel ticket booking, food ordering, hotel booking and taxi booking like ola, Uber etc. 86% respondents use online mode of transaction for paying utility bills like water, electricity etc. Around 83% respondents use online mode of transaction for purchasing groceries and doing bank transactions. 78.5% were found to be using online mode of transaction for movie ticket booking and 70% respondents were found to be using online mode of shopping for purchasing books.

- Very less proportions of respondents were using online mode for e-tax filling and very few were found to be using online mode of transaction for making donations, purchasing electronic items and purchasing medicines. Thus, maximum people use online shopping for purchasing daily requirement products.

- Frequency of Online Shopping - The average purchase frequency of sampled online shoppers was found to be 20 days. Maximum respondents were doing online shopping within 30 days and minimum were found to be doing online shopping bimonthly and only 1.5% were found be doing online shopping whenever need arise which means that maximum people do online shopping at least once a month and it can be said that online shopping has become habit now.

- Proportion of online shopping out of total shopping i.e., shopping through PC/Laptop/Desktop or Mobile App. Around 65% of respondents said that between 40% to 80% of their shopping in done through online mode and for around 30% respondents their proportion of online shopping is less than 40%. Thus, now greater proportion of shopping is done through online mode of shopping.

- Further analysis revealed that on an average ratio of online and offline shopping is almost 50%-50%. From out data it was found that 51% of shopping is done through online mode and 49% is done through offline mode. Thus, there is not much difference in offline and online mode of shopping. Current trend indicate that soon more people will go for online mode of shopping due to various reasons.

- As far as media or use of device for online shopping is concerned multiple devices are in use for online shopping which means that respondents have more than one option (media/device) to do online shopping. Data suggested that all the respondents (100%) were using mobile for online shopping. Besides mobile another device used for online shopping is Laptop, but only 44% respondents were found to be using it for online shopping. Very few (19%) people were found to be using personal computer for online shopping. Therefore, data revealed that mobile is the most popular media for doing online shopping now-a-days.

- Respondents were asked about media or device which they use maximum for doing online shopping. In response to this out of all the given options, maximum respondents have given top priority to mobile for their online shopping. Only 3% respondents said that they prefer personal computer or PC and 5% said they prefer laptop for online shopping.

- Most convenient media for online shopping – Respondents were asked to rank different media according to its convenience, they use for online shopping. On the basis of ranks given weighted scores were calculated for each media or device in percentage terms lowest score is obtained by PC,

after that laptop then tablet and finally mobile or smartphone which got highest score. Hence, these scores showed that mobile is the most convenient device to do online shopping as compared to other device or media.

- Shared Proportion of Total Online Shopping among different media - Data showed that tablet is the least used media or device for online shopping or transaction after that comes personal computer (PC) which is used around 11 % of times while doing online transaction. Laptop is used 20% of time. The most popular or most frequently used media or device is mobile phone or smartphone for e-commerce transactions. Around 62% of time it is used out of total frequency of online or e-commerce transactions.

- In response to question that do they think that most of the e-commerce transactions are done through mobile now-a-days? In response to this question 70% respondents strongly agreed with given statement, 28% agree and only 2% disagree. No one was neutral or strongly disagree. Thus, respondents also agree that mobile is used most frequently for doing online e-commerce transactions.

1.6 Reasons for Shifting towards m-commerce from e-Commerce

- In this study it was tried to find out reasons which are responsible for shifting towards m-commerce from e-commerce. For this, respondents were given 24 statements to rate upon five-point Likert rating scale. Ratings given by respondents later converted to percentage points so that weightage given by the respondents to characteristics or features of m-commerce can be compared.

- The top five reasons for shifting towards mobile commerce or m-commerce are – (a) People are using mobile or smartphones because of its small size. Because of small size, it is easy to handle mobile as compared to other devices. (b) The second top reason for shift was that independence of doing online transaction with time and location of online transaction, which means

with the help of mobile, people can do online transaction anytime, from anywhere. (c) The third reason was convenience - Shopping using mobile or smartphone is most convenient. (d) The fourth reason is easy availability of mobile apps. It is easy to find apps for any type of online transaction which is comparatively difficult to find on website. (e) The fifth reason was availability of mobile wallet option like PayTM, Amazon Pay, Google Pay etc. Availability of such payment options make it convenient for online shopper to do transaction.

- In the list of 24 items although every item received high rating but other reason on the above 5 ranks i.e., from 6th to12th rank were - It is easy to handle (Operate) mobile device then PC, or other media (rank 7). People also find it easy to use mobile for e-commerce transaction because more time is spent on mobile as compared to other device. Getting timely information about new product like offers, discounts etc., More time is spent on mobile as compared to PC/Laptop hence it is easy to do transaction using mobile (rank 8), Get timely information about new products, offers (rank 9)

- When we use mobile app to purchase anything online it is easy to make payment on mobile because it remembers all the information about payments like Card number, Name, (Card Details) (rank 10). One of the features of mobile it to remember information of user due to this online shopper do not need to remember their payment information like card number, code etc. after entering it once. Autofill option in the mobile enable them to automatically fill information when the need arises. Because of this facility people attract to use mobile app.

- Social media (WhatsApp, Facebook, Instagram) etc. also helps in purchasing using mobile device (rank 11). Presence of social media in the same device helps in making purchases. With the help of social media, they can get opinion of friends/family members about any product or item.

- It is easy to switch between different application while shopping, to compare products and their prices (rank 12). Mobile users find it easy to

switch between different application while shopping to compare products and their prices

- Items on rank 13 to 19 i.e., reasons of shifting towards mobile from PC and laptops for online transactions were - It is also easy to get opinion of friends, family member etc. about anything we want to purchase on mobile using social media (rank 13). Using mobile device, it is easy to get opinion of friends/relative instantly on the spot which is not possible or rather inconvenient or difficult to get on another device.

- Payments using mobile is more convenient than on other devices like PC, Laptop etc. (rank 14). It is easy to make payments on mobile as compared to other devices. Tracking order any time is also a great facility so that shopper can get location of their ordered product any time.

- It is quicker and faster to do online transaction on mobile than PC/Laptop etc. (rank 15). Mobile application is more user friendly as compare to websites on PC/Laptop etc. (rank 16). It is easy to track order on mobile than on PC (when it is reaching, where it has reached etc.) (rank 17). Searching for product can be done more easily on mobile app rather than PC, Laptop etc (rank 18) and Cost of mobile is less than the cost of PC/Laptop (rank 19). Cost of mobile is another factor – It is easy to purchase good mobile in the price range of 10,000 to 15,000 now-a-days but prices of PC or Laptops are much higher than it. This also one of the reasons for which people are shifting towards mobile device.

- Reasons for shift on rank 20 to 24 with little less score were - Easy to search product using mobile than PC/Laptop (rank 20). Searching for product can be done easily on mobile rather than on PC or Laptop. Getting more information about product by clicking in mobile website as compared to websites on PC or laptop (rank 21). It is easy to search product on mobile. On Mobile we can review products easily by reading opinion of other online shoppers (rank 22).

- The last but one reason for shift is getting more discount offers on mobile app rather than on PC, Laptop etc. (rank 23). Getting discounts or offers on mobile also attract them towards m-commerce is now become common. These offers are more frequent on mobile devices as compared to PCs and laptops; hence this is also a reason for shift.

- The last reason for shift is Purchasing using Mobile is more safe and secure than PC or Another device (rank 24). People think that purchase on mobile is more safe and secure as compared to PC or another device.

- Thus, above discussed points were the main reasons for which people are now shifting towards m-commerce.

- Finally online shoppers asked to rate the level of convenience they receive while using mobile device as compared to other communication devices. 54% respondents said that doing online shopping is convenient to a very great extent. 30.50% said that it is convenient to a great extent. 11.50% see no difference and remaining 4% think mobile is less convenient than PC/Laptop/Tablet. But overall maximum of people opined that mobile is the most convenient device to do online shopping among all the available devices at present.

1.7 Findings from E-Retailers' Questionnaire

- To know the e-tailers' perspective regarding people's shift towards mobile devices from PCs or laptop, opinion of employees of five major e-tailer companies was taken. These companies were Flipkart, Amazon, PayTM Mall, Snapdeal and Shopclues.

- Flipkart which was established in India in 2007, has 16000 fulltime employees as of 2020 with revenue of 34610 crore rupees.

- Amazon India started its operations in India in 2013. Amazon India has employee base of 62000 employees. The revenue of Amazon India for 2019-20 financial year was 11400 crores.
- PayTM mart was established in 2015 by Vijay Shekhar Sharma. It has employee base of 5000 plus employees with revenue of 3186 crores in 2020.
- Snapdeal was established in 2010. Snapdeal has employee workforce of 750 with revenue in 2020 of Rs. 1168 crore.
- Shopclues is the smallest among these five companies as far as revenue is concerned. It was established in 2011 and has employee base of 803 employees. The total revenue of company was 97 crores in 2020.
- All of these company sale clothes/textiles and groceries and all except PayTM sale books and magazines also. Flipkart and PayTM offers travel ticket booking for air, bus and train also.
- Amazon offer services for movie ticket booking also. PayTM and Amazon also provide services for paying utility bills also.
- Company employees were asked about proportion of their business that comes from mobile apps. 100% respondents said that the proportion of business that comes from mobile apps is between 40% to 80%, and in these too 80% respondents said that 60% to 80% of their business comes from mobile apps. Thus, on an average 65% of their business comes from mobile apps.
- 18% of respondents said that between 40% to 60% of their business comes from websites and 82% respondents said that between 20 to 40 percentage of their business comes from websites. On average 35% of their business comes through websites.
- Currently there is trend of using mobile more for online transaction as compared to other electronic devices. 26% strongly agree, 50% agree and 24% were neutral and no one disagreed for this question, which confirms

current trend of using mobile devices for online transaction as compared to other electronic devices

1.8 Reasons for Shifting in e-Retailers' Perspective

- The top five reasons for shifting behaviour of online shoppers towards mobile devices from other electronic devices like PCs, Laptops or tablets are:
    - (a) Today youth is addicted to mobile/smartphones hence it is the easiest way to reach customers for e-retailers
    - (b) mobile app features such as social media integration or push notifications aid in boosting user engagement
    - (c) e-retailer companies promote m-commerce over e-commerce so that customer can purchase products anytime and from anywhere over their smartphones.
    - (d) It is always easy to bring customers back to your online store by using push notification; loyalty reward etc.
    - (e) Advertise on social media increases the possibility of customer pulling to mobile version of e-retailer's store.
- The other reasons of shift on the rank from 6 to 10 were - More fasters and quick transaction on mobile as compared to PC/Laptop. Shorten time on mobile to load/reload page and reducing the likelihood of users closing the app before purchasing is completed. Switching from one e-retail website to another is convenient on mobile as compared to traditional web site. Marketers can send personalized marketing deals and offers directly to the customers at the right time and engage them for better conversion and Mobile payments benefits both customers as well as retailers.
- Some more reason for shifting trend towards use of mobile as compared to other electronic devices like personal computer, laptop of tablet PC are - It

is more convenient to do transaction using mobile app/ mobile web site as compared to website on PC/Laptop.

- M-commerce allows companies to build better customer loyalty because with mobile apps their business is always visible on customer mobile screen as an icon. M-Commerce has an advantage over e-commerce that companies know exactly who they are reaching out because mobile is generally used by only a single person and is unlikely to be shared therefore, there is better chance that message sent to mobile devices will be read by the intended recipient. Discount, offers, promo cards are given to customers for using mobile apps and Digital wallets simplify the payment process.

- Still other reasons are mobile expand word of mouth referrals means it is customers' natural desire to share their experience on social media platform like twitter, Facebook etc. Therefore, it is advantageous for companies as a medium of mouth publicity. M-commerce gives more information to companies, valuable insight about customers. With m-commerce they can retrieve better customer data through mobile app which was not possible traditionally. Maintenance cost of mobile app is less than maintaining website. Customer get more information about products by clicking on mobile website / app and mobile device allows to remember all the customer's payment information which eliminates the need of inserting it again and again. Customers frustrate by entering numerical information about cards etc. again and again in every transaction.

- Other less prominent reasons as compared to already discussed reason of shift and on least ranks are - Photos & Videos are more engaging online content which keep customers engaged. m-Commerce offers scalability to grow i.e., more customers are spending time on mobile apps because they are more convenient, faster and allows you to store settings. As 90% of people use more than one mobile device to accomplish a task therefore it is easy for companies to bring them to their stores. Companies can better utilize the mobile platform to improve their ability to deliver the products

their customer wants and when they want and with mobile device advertisers can better pin point and appeal to their audience

- Hence, there are various advantages of using mobile apps for e-shopping using mobile device as compared to using websites over PCs or laptops. Though level of agreement with some statement was more as compared to other but overall level of agreement was high (80%). This indicates that certainly there is shift towards m-commerce from traditional e-commerce.

1.9 Current Status of e-Retailing Practices in India and Future Trend

The Indian e-commerce sector saw sharp increase because most of the people started shopping online instead of going outside to shop. According to McKinsey report around 60% of consumers are expected to shift their behavior towards online shopping and continue after COVID-19 pandemic.

Large investments from big companies like Facebook, Google with Reliance Jio have been done in the e-commerce market. This exponential growth in e-commerce industry can be attributed to increasing penetration of internet and smartphones. Smartphone units in India reached to 50 million units registering growth of 8% year-on-year basis by first quarter of 2020.

e-Retailing or e-commerce is one of the top growing businesses in India which offered great opportunities for investments. In 1991 after economic liberalization many MNCs are attracted towards India leading to growth of IT Industry in India. IT industry and SMEs were the early adopter of internet. In the last two decades internet has grown tremendously along with mobile revolution which has changed the way we communicate; do business and the way we work. Increased internet penetration and evolution of smartphones taken the world of e-commerce by storm.

India’s retail market has undergone a major transformation and witnessed tremendous growth in past 10 years. India’s e-commerce retail market was of 30

billion dollars in 2019 which is expected to reach 99 billion dollars by 2024 with a compound annual growth rate of 27%. It is expected that number of households carrying out online transactions in India is estimated to grow from 154 million in 2020 to 233 million in 2025. India is considered best among the countries to be invested in retail space. India is ranked on second position in Global Retail Development Index (GRDI) in 2019.

Role of Mobile – At the start of e-commerce people do online shopping using personal computers, laptops, tablets etc. but today with the advent of smartphones complete scenario of e-commerce has changed. Presently mobile devices have incredible market penetration so that most of the e-commerce companies developed applications for mobile devices. With the help of mobile devices consumers can easily search products and services. The data suggests that 78% of local business search done on mobile/smartphones turned in to purchases.

Mobile as Market Research Tool - Mobiles can track the habits of customers, their preferences and trends which is helpful for market researchers. When customers make purchases, these companies collect information about customers like their age, gender, location etc. Later using big data analytics these companies analyze data and detect consumer preferences their choices etc. and offer products according to it.

Shopping Behavior - Mobile commerce has changed behavior of customers also. Presently, people can shop anything from anywhere location and time has become irrelevant. Smartphones made it possible to do this type of shopping. Now they can shop anything without even stepping out from their homes in the comfort of their homes using their mobile/smartphone device.

Future Trends

By 2024 India’s e-commerce is expected to reach at 99 billion US dollars with compound annual growth rate of 27%. Grocery and textile products will be main contributors in this. It is expected that by 2024, online penetration of retail will reach 10.7% which was 4.7% in 2019.

Online shoppers in India are expected to reach 220 million by 2025. India's digital sector is expected to increase two times by 2025 and will touch the mark of 335 billion US dollars. The Indian online grocery market is expected to exceed sales of about US $3.19 billion (nearly 22500 crore) by the end of 2020.

Future of e-Retail in India

India's e-commerce industry is expected to become second largest in the world by 2034. On the other side India's e-retail industry is expected to reach between 300 to 350 million shoppers in next five years. This huge growth in the industry is powered by increasing base of first-time internet and smartphone users. This large base of internet and smartphone users may be attributed to 'Digital India' program. According to August'20 data there were 760 million internet connections in India. As companies continues to innovate major trends will appear in future. Some new trend may appear in the field of e-commerce due to changing technologies in the IT field. Some of these trends are discussed below –

Augmented Reality (AR): AR technology will fill the gap between virtuality and reality. It will help online shoppers to visualize the product in their home setup which will help them in deciding whether that product is good for them or not.

Voice Search: Voice assistants like Google Assistant and Amazon Alexa giving new experience to users by helping them to do certain works for them by following orders given in voice commands. In very near future online shoppers will be able to shop by giving simple voice commands.

Chatbots: This technology is like a salesperson in the brick-and-mortar shop. Chatbots acts like a salesperson. This is very helpful for companies by handing many customers at the same time and giving experience of personal attention for each customer. This will radically change the way people shop online.

Subscription Feature: Subscription feature by the company will help customers by making prediction of their needs. It will allow customer to maintain their loyalty towards company and at the same time benefits company by

maintaining and retaining customer for greater long-term value. Moro and more companies will offer this feature in their services.

1.10 Challenges Faced in m-Commerce by e-Retailers

E-tailers were asked about challenges they faced in m-commerce. In response to this the main challenges i.e., top five they revealed in order of their severity are –

- Customer need to download apps for various e-commerce site together with the payment system app to mobile device to ease the transactions. (b) If customer wants to compare different products before making purchase, a desktop will be more convenient for use in such situations (c) Every business is fighting for the same target customers. Online selling is creating a lot of competition. (d) There is no personal interaction and customers can only rely on reviews left in the system and captivating graphics to make their purchase decisions and (e) Smartphones have small screen size this makes it difficult to scroll through the page to view product information especially when the website is not optimized for mobile users.

- Other less prominent as compared to discussed above five challenges in order of their severity are – (a) There is increased risk of fraud in mobile marketing and users should transact with caution to avoid being defrauded through various mobile ads. (b) If the devices used in accessing the m-commerce are of low quality and have inadequate memory capacity results in low processing systems, slowing down the accessibility of products (c) There are lot of security concerns for entering payment information through your smartphone device compared to when using a laptop or desktop computer and (d) Mobile phones have low speed compared to computers thus affects the quality of image. Some m-commerce images may not be clear when viewed through the phone.

2 Conclusion

Mobile commerce or m-commerce is becoming increasingly popular now-a-days. More than three billion people around the world are using smartphone every day for doing online activities. M-commerce is no longer remained an option today but it has become a necessity now or fundamental requirement for e-commerce. Online shopping and any other online activity in palm of our hands. More and more users are looking forward for shopping online through mobile. Only thing that are required for m-commerce are a smartphone and internet connection. It includes both type of operations viz. business to business (B2B) and business to customer (B2C). The online activities include making online payments, buying and selling goods, downloading audio and video, playing games etc. etc. The advent of m-commerce has changed the face of ecommerce not only in India but throughout the world also and it has reduced the gap between developed and developing nations. In 2018 the number of mobile phone users in India has reached world's highest with 483 million users and it is estimated that by the year 2023 the number of mobile phone users in India will reach around 500 million users (Statista.com). Now India is the second largest smartphone market in the world. Majority of people in India irrespective of their age, gender etc. are using smartphones. On an average younger generation of age group between 25 years to 34 years are using their smartphones for online shopping.

In the present research work an attempt was made to find out the reasons for current trend of shifting of online shoppers towards m-commerce. For our study it was found that followings are most prominent reasons for which people in India are shifting towards m-commerce –

Quick Access to Shopping – Today thousands of mobile apps are available with which mobile users can shop anytime from anywhere. In current time people have become so busy that they find it difficult to get time to go to market and shop from there or sometimes they are so busy that they can't find time to sit in front of a desktop and make purchase on website. Instead of going to market or make purchase on a desktop or laptop they find it easy to shop on mobile because through mobile they have liberty to shop from anywhere and anytime.

Another advantage from online shoppers' point of view is the ease of use. With the help of mobile applications or mobile apps in short, people can quickly access their favourite retail store online and with few clicks they can purchase anything that e-retail store offers. This gives them fastest ever shopping experience they had till then. They don't need to travel to brick and mortar stores which saves their time and energy.

Yet another reason for current trend of shift toward m-commerce is fast transactions. Because most mobile applications are much faster as compared to traditional websites therefore it is possible to complete any transaction much early as compared to traditional e-commerce. Due to this feature customers buy things quickly, which gives them better user experience. This better user experience results in exponential growth of m-commerce users.

If we see from e-tailers' perspective then the significant advantage of m-commerce today there exists numerous technologies that help them reach their potential customers quickly and with ease. Availability of various social media channels and other mobile application help them boosts their sales multiple folds. This was made possible only through currently available new technologies which were not available earlier in traditional e-commerce marketing.

Another advantage of mobile application is that mobile offer them better user experience because mobile devices are optimized to offer fast and modernized shopping experience by offering them facility of fast navigation and complete purchase with few clicks. This is much enjoyable experience as compared to other traditional methods.

Enhanced Marketing – availability of new marketing channels establishes direct connection between e-retailer and online customer or end user and sell product directly to customers with the help of mobile device. With help of push notifications, e-retailers can offer customers latest products and deals as per their requirements.

Low-Cost Higher Productivity – The cost of developing and maintaining a mobile application is much lower as compared to other e-commerce platform. On the other hand, using mobile app to connect customers quickly saves money on marketing campaigns. Social media integration further reduces marketing costs to spread the awareness about brand.

People now-a-days use their phones to search online. Therefore, with the help of mobile optimized site, e-retailers can increase the probability of attracting new customers. M-commerce technique like mobile re-targeting also helps and allows them to serve mobile ads to users. They already know and increases the chances of customers to coming back to their store.

Mobile applications proved e-retailers with insightful analytics that help them better target their customers and increase their sale. When customers make purchase, these mobile apps collect their data like name, age, sex, occupation, their location, buying history, their habits etc. With the use of new technology like data science, machine learning and artificial intelligence, these companies analyze their data and can offer products according to their need and shopping experience. This same level of data and analytics is not as easy to gather on other e-commerce platforms.

Hence, in totality, it can be said that the main reasons of shift are easy of doing shopping, comparison of products, getting best prices out of several options and one more reason, which the current pandemic revealed which is personal safety from health point of view.

3 Suggestion

- The top problem came out with which customers are uncomfortable is that they have to download every app they want to use. As it is experienced that "customers are more comfortable using web apps rather apps and when it comes to adoption, web will always win over proprietary technologies" (**Aquarone S., 2013**). Hence, companies should build mobile compatible website to enhance users' m-commerce experience.

- **Enhance User Payment Experience** – Most of the people who are not using mobile apps for m-commerce is due to concerns of safety and security. Hence it is necessary for the e-retailers to make full-proof payment system so that user do not get cheated while using mobile apps.

- Sometime payments get stuck due to various reasons like poor connection, load on app or lack of proper connectivity between mobile app and bank etc. due to these reasons people fear to use mobile apps. Hence, e-retailers must research and optimize the payment systems so that user do not face such problems.

- **Checkout System should be Optimized** – the fewer the steps, customers have to make while purchasing something, more comfortable is the user and higher is the frequency of repeating purchase for the same e-retailer.

- Many e-retailers have long forms to be filled by the customers to complete their purchase. There are two consequences of this (a) it is very difficult to complete the form on mobile (b) user will left the app or web and will search for better option. Therefore, it is necessary that only essential information should be asked from the customers in order to complete the sale by reducing the number of fields in completing purchase.

- Because of lots of variants of mobile devices, e-retailers should build responsive design web apps rather than designing fixed layout so that site will configure its layout in optimum manner according to architecture of mobile device.

- **User Experience should be optimized** – web app or mobile apps should be designed in such a way that customers' journey of purchase can be smooth and comfortable. Some suggestion for this may be – buttons should be clear and large enough for mobile resolution. Navigation on mobile should be easy. Editing any content should be easy and less cumbersome. It is useful to add options of auditory and sensory feedback on mobile apps.

- **Take Feedback from Customers** – It is necessary to take feedback from customers about their shopping journey so that they can say about the problems they faced and what they liked on a particular app. Taking feedback help e-retailers to sort out their problems customers are facing and strengthen positive points in their e-retailing site or app.

- Since every business is fighting for the same target customers online creating a lot of competition therefore offer something different to online customers so that they can remain attracted towards their e-retail store the examples are like rewarding regular and repeat customers and options for loyalty points etc.

- Mobile is now-a-days default social media platform hence it is necessary for e-retailers to take advantage of this and convert social site visitors to their customers.

- To compare products on different websites still consumers face difficulty to browse on mobile and still website is better option for this purpose. Therefore, mobile applications must be designed in such a way that customers compare products easily on multiple websites on mobile or smartphones.

There is no direct personal interaction between customers e-retailers and customers has to rely on reviews left in the system. Therefore, provisions can be made for one-to-one interaction between customer and e-retailers for any queries. to make their purchase decisions.

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APPENDIX

A Study of Paradigm Shift in e-Retailers from Website to Mobile Application in India

Questionnaire for e-Retailers

Q 1. Name of Firm / Company.....

Q 2. Number of employees .....

Q 3. Operating Since ..... (years)

Q 4. Annual Turnover: ₹ .....

Q 5. Type of product do you sale online.....

1. Travel ticket Booking (Air/ Bus/ Train etc.)		2. Taxi Booking (Ola/ Uber etc.)	
3. Clothes / Textiles		4. Books/magazines	
5. Groceries		6. Food Items	
7. Hotel Booking		8. Movie Ticket Booking	
9. Utilities (Water, electricity etc. Bill deposits)		10. Other (Pls. Mention below)	

Q 6. For Online sailing / transaction you have.....

1. Website		2. Mobile App		3. Both	

Q 7. Approximately what proportion (percentage) of your online business comes from.....

1. Website	.....
2. Mobile App	.....
Total	**100%**

Q 8. Do you agree that presently more online transaction is done by people using mobile / mobile apps as compared to on websites using PC/Laptop etc. other than mobile?

1.Strongly Agee	2.Agree	3.Neutral	4.Disagree	5.Strongly Disagree

Q 9. According to your experience what are the reason the online customers are shifting towards m-commerce (using mobile as compared to PC, Laptop, Tablet etc. other than mobile)

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Customer get more information about products by clicking on mobile website / app	1	2	3	4	5
2. Discount, offers, promo cards are given to customers for using mobile apps	1	2	3	4	5
3. Photos & Videos are more engaging online content which keep customers engaged	1	2	3	4	5
4. Mobile payments benefits both customers as well as retailers	1	2	3	4	5
5. Customers frustrate by entering numerical information about cards etc., mobile device allows to remember all their information hence no need to insert it again and again.	1	2	3	4	5
6. It is more convenient to do transaction using mobile app/ mobile web site as compared to website on PC/Laptop	1	2	3	4	5
7. Digital wallets simplify the payment process	1	2	3	4	5
8. More fasters and quick transaction on mobile as compared to PC/Laptop	1	2	3	4	5
9. M-commerce gives more information to companies, valuable insight about customers (with m-commerce you can retrieve better customer data through mobile app which was not possible traditionally.	1	2	3	4	5
10. M-commerce allows companies to build better customer loyalty because with mobile apps your business is always visible on customer mobile screen as an icon.	1	2	3	4	5
11. It is always easy to bring customers back to your online store by using push notification, loyalty reward etc.	1	2	3	4	5

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
12. M-Commerce offers scalability to grow i.e., more customers are spending time on mobile apps because they are more convenient, faster and allows you to store settings.	1	2	3	4	5
13. Mobile app features such as social media integration or push notifications aid in boosting user engagement.	1	2	3	4	5
14. If you advertise on social media via ads, it is very likely that customer will leads to mobile version of your store.	1	2	3	4	5
15. As 90% of people use more than one mobile device to accomplish a task therefore it is easy for companies to bring them to their stores	1	2	3	4	5
16. Mobile expand word of mouth referrals means it is customers' natural desire to share their experience on social media platform like twitter, Facebook etc. therefore it is advantageous form companies as a medium of mouth publicity.	1	2	3	4	5
17. Today youth is addicted to mobile/smartphones hence it is the easiest way to reach customers.	1	2	3	4	5
18. Shorten time on mobile to load/reload page and reducing the likelihood of users closing the app before purchasing is completed	1	2	3	4	5
19. M-Commerce has an advantage over normal e-commerce that companies know exactly who you are reaching out because mobile is generally used by only a single person and is unlikely to be shared therefore, there is better chance that message sent to mobile devices will be read by the intended recipient	1	2	3	4	5
20. With mobile device advertisers can better pin point and appeal to their audience	1	2	3	4	5

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
21. Companies can better utilize the mobile platform to improve their ability to deliver the products their customer wants and when they want.	1	2	3	4	5
22. Maintenance cost of mobile app is less than maintaining website.	1	2	3	4	5
23. Switching from one e-retail website to another is convenient on mobile as compared to traditional web site.	1	2	3	4	5
24. As e-retailer companies promote m-commerce over e-commerce so that customer can purchase products anytime and from anywhere over their smartphones.	1	2	3	4	5
25. Marketers can send personalized marketing deals and offers directly to the customers at the right time and engage them for better conversion	1	2	3	4	5

Q 10. To what extent do you see given below items as challenges in m-commerce business?

Statements	Very High	High	Moderate	Low	Very Low
1. There are lot of security concerns for entering payment information through your smartphone device compared to when using a laptop or desktop computer	1	2	3	4	5
2. Smartphones have small screen size this makes it difficult to scroll through the page to view product information especially when the website is not optimized for mobile users.	1	2	3	4	5
3. If customer wants to compare different products before making purchase, a desktop will be more convenient for use in such situations	1	2	3	4	5

Statements	Very High	High	Moderate	Low	Very Low
4. There is increased fraud risk in mobile marketing and users should transact with caution to avoid being defrauded through various mobile ads.					
5. Mobile phones have low speed compared to computers this affects the quality of image. Some m-commerce images may not be clear when viewed through the phone					
6. The devices used in accessing the m-commerce are of low quality and have inadequate memory capacity and low processing systems slowing down the accessibility of products					
7. Customer need to download apps for various e-commerce site together with the payment system app to your mobile device to ease your transactions					
8. There is no personal interaction and customers on rely on reviews left in the system and captivating graphics to make their purchase decisions.					
9. Every business is fighting for the same target customers online creating a lot of competition.					

Q 11. Anything else you want to say regarding shopping on mobile?

……

……

……

……

……

Thanks for your Co-operation

A Study of Paradigm Shift in e-Retailers from Website to Mobile Application in India

Questionnaire for Online Shoppers

Q 1. Name of Respondent .....

Q 2. Age ..... years

Q 3. Gender

1. Male		2. Female	

Q 4. Occupation

1. Service (Govt. Sector)		2. Service (Pvt. Sector)	
3. Business		4. Self Employed	
5. Retired		6. Housewife	
7. Student		8. Other (Pls. Mention)	

Q 5. Monthly Income

1. Up to Rs. 10,000		2. Rs. 10,001 – Rs. 20,000	
3. Rs. 20,001 – Rs. 30,000		4. Rs. 30,001 – Rs. 40,000	
5. Rs. 40,001 – Rs. 50,000		6. Rs. 50,001 – Rs. 60,000	
7. Rs. 60,001 – Rs. 70,000		8. Rs. 70,001 – Rs. 80,000	
9. Rs. 80,001 – RS. 90,000		10. Rs. 90,001 – Rs. 100,000	
11. More than Rs. 1,00,000			

Q 6. Education

1. Illiterate		2. Up to Secondary (10^{th})	
3. Up to Sr. Secondary (12^{th})		4. Graduate	
5. Post Graduate or Higher		6. Other	

Q 7. Highest Educational Degree.....

Q 8. Do you shop Online?

1. Yes		2. No	

Q 9. For how long you are shopping online ……years

Q 10. Out of the following which type of online shopping you do?

1. Travel ticket Booking (Air/ Bus/ Train etc.)		2. Taxi Booking (Ola/ Uber etc.)	
3. Purchasing Clothes		4. Purchasing Books	
5. Purchasing Groceries		6. Food Ordering (Zomato etc.)	
7. Online Hotel Booking		8. Movie Ticket Booking	
9. Utility Bills (Water, electricity etc.)		10. Bank Transactions	
11. E-tax filling		12. Other (Pls. Mention below)	

Q 11. How frequently you do online shopping?

Frequency	Number of Times	Frequency	Number of Times
Weekly (every 7 days)		**Fortnightly (every 15 days)**	
Monthly (every 30 Days)		**Bi-Monthly (every 60 days)**	
Quarterly (every 3 months)		**Half-yearly (every 6 months)**	
Yearly		**Other (pls. mention)**	

Q 12. If you do both online & Offline shopping then what is the proportion of online & offline shopping

Shopping	%
1. Online	
2. Offline	
Total	**100%**

Q 13. Which of the following medias do you use for online shopping (**you can select multiple option**)

Media	Tick
1. Personal Computer (PC)	
2. Laptop	
3. Tablet	
4. Mobile (Smartphone)	

Q 14. Most of the **(MAXIMUM)** online shopping you do using. **(Select only one media)**

Media	Tick
1. Personal Computer (PC)	
2. Laptop	
3. Tablet	
4. Mobile (Smartphone)	

Q 15. Which media do you feel is the most Comfortable/ Convenient Media for online shopping? (Please Rank)

Media	Rank
1. Personal Computer (PC)	
2. Laptop	
3. Tablet	
4. Mobile (Smartphone)	

Q 16. Distribute your total online shopping (100%) among following medias

Media	%
1. Personal Computer (PC)	
2. Laptop	
3. Tablet	
4. Mobile (Smartphone)	
Total	**100%**

Q 17. Do you think that most of the online shopping now-a-days is done using Mobile?

1.Strongly Agee	2.Agree	3.Neutral	4.Disagree	5.Strongly Disagree

Q 18. What are the main reason for shifting towards m-commerce (online shopping using mobile device) From e-commerce (Online shopping done using PC/Laptop). Please rate your opinion on five point scale (From Strongly agree……..Strongly disagree.)

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Shopping done using mobile (Smartphone) is most convenient	1	2	3	4	5

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
2. You can do online shopping from anywhere irrespective of place, city or country	1	2	3	4	5
3. It is easy to find applications (Mobile apps) for online shopping on mobile which is not so easy in case of online shopping done through PC, Laptop, Tablet etc.	1	2	3	4	5
4. It is easy to handle (Operate) mobile device then PC, or other media	1	2	3	4	5
5. Searching for product can be done more easily on mobile app rather than PC, Laptop etc.	1	2	3	4	5
6. Get timely information about new products, offers	1	2	3	4	5
7. It is easy to track order on mobile than on PC (when it is reaching, where it has reached etc.)	1	2	3	4	5
8. Payments using mobile is more convenient than on other devices like PC, Laptop etc.	1	2	3	4	5
9. Mobile wallet option available (like PayTM, Amazon Pay, Google Pay etc.) so that payment can be done easily on mobiles	1	2	3	4	5
10. Purchasing using Mobile is more safe and secure than PC or Another device	1	2	3	4	5
11. On Mobile we can review products easily (by reading opinion of other customers)	1	2	3	4	5
12. We get more information about product by clicking in mobile website	1	2	3	4	5
13. We get more discount offers on mobile app rather than on PC, Laptop etc.	1	2	3	4	5
14. When we use mobile app to purchase anything online it is easy to make payment on mobile because it remembers all the information about payments like Card number, Name, (Card Details)	1	2	3	4	5
15. It is also easy to get opinion of friends, family member etc. about anything we want to purchase on mobile using social media	1	2	3	4	5

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
16. Social media (WhatsApp, Facebook, Instagram) etc. also helps me in purchasing using mobile device	1	2	3	4	5
17. It is quicker and faster to do online transaction on mobile than PC/Laptop etc.	1	2	3	4	5
18. Mobile (Smartphone) due to its small size it is very easy and convenient to handle and do transaction on it.	1	2	3	4	5
19. It is easy to switch between different application while shopping, to compare products and their prices.	1	2	3	4	5
20. Mobile application are more user friendly as compare to websites on PC/Laptop etc.	1	2	3	4	5
21. More time is spent on mobile as compared to PC/Laptop hence it is easy to do transaction using mobile	1	2	3	4	5
22. Easily available Mobile apps	1	2	3	4	5
23. Easy to search product using mobile than PC/Laptop	1	2	3	4	5
24. Cost of mobile is less than the cost of PC/Laptop	1	2	3	4	5
Other reason please mention					

Q 19. To what extent you find it convenient to do online shopping using mobile application as compared to do online shopping on website on PC/Laptop etc.

1. Convenient to a Very Great Extent	2. Convenient to a Great Extent	3. Not very Convenient as compare to website	4. Less Convenient	5. Very Less Convenient

Q 20. What problem do you face while doing transaction / Purchasing using mobile?

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Q 21. What fears do you see while doing online transaction /purchase using mobile app on Smartphone.

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Q 22. Anything else you want to say regarding shopping on mobile?

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Thanks for your Co-operation

RESEARCH ARTICLES

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GST and E-Retailing: a Crucial Tax Reform in Indian Economy

[1]RANU GUPTA

[1]Research Scholar, School of Commerce &Management
Vardhman Mahaveer Open University, Kota.

[2]Prof. Pawan Kumar Sharma

[2]Director, School of Commerce &Management
Vardhman Mahaveer Open University, Kota.

Abstract

E-Commerce industry in India is a "Sun-rising industry" which has contributed significantly to the country's GDP. India has become the second largest market for e-commerce in the world. It stands on the brink of its biggest transformation in the tax reform i.e. the implementation of Goods and Service Taxes "GST". The introduction of GST, a consumption based tax, is about to end the tussle among the states to tax the e-commerce transactions. The implementation of GST for an e-commerce company can give them a required relief from the recurrent sales tax demands, investigations, and stoppage of goods at the check post. In this Research Article, the researcher tries to find out the implications of GST on e-retailing in the e-commerce sector where there are mixed responses, inexplicit arguments and opinions among the manufactures, traders and society about GST implemented by Government of India. Research study is based on secondary data and this article assess the impact of GST on e-commerce industry by means of changes in taxation and highlights prospectus, benefits and challenges after implementation of the GST in India.

Keywords: *Goods and Services Tax, Tax Reforms, E-Retailing, E-Commerce, Indian Economy.*

INTRODUCTION

E-commerce has seen unprecedented growth and India is pegged as the second largest market for E-commerce. Indian eCommerce is growing at an annual rate of 51%, the highest in the world, and is expected to jump from $30 billion in 2016 to $120 billion in 2020 as per ASSOCHAM-Forrester study paper. The retail sector, one of the largest items in eCommerce, is also showing a promising trend of 11% CAGR and is expected to breach $1 trillion mark by 2020 as per the study conducted by Internet and Mobile Association of India.

The E-commerce sector of India was burdened with the plethora of taxes, and there were multiple taxes applicable to a single transaction such as VAT, CST, excise, service and TDS. It is even more difficult to differentiate between the goods and services when the products are like software download, music, e-books etc. Hence, the implementation of GST has incorporated a separate chapter on the E-commerce transactions to achieve this endeavour.

A good tax system plays a vital role in the economy of a country through their impact on both efficiency and equity. Already 160 countries have implemented GST (Goods and Services Tax) in their tax regime. GST is a comprehensive tax system that will subsume almost all the indirect taxes of states and central governments. India Govt. has introduced GST in July 2017. GST is one indirect tax for the whole nation, which will make India one unified common market. GST is a single tax on the supply of goods and services from the manufacturer to the consumer. Credits of input taxes paid at each stage will be available in the subsequent stage of value addition, which makes GST essentially a tax only on value addition at each stage. The final consumer will thus bear only the GST charged by the last dealer in the supply chain, with set-off benefits at all the previous stages.

According to CRISIL, E-commerce players have a large number of sellers listed on their platform. These sellers will have cash-flow issues as they will have to claim refunds for tax paid on inputs, which e-tailers will not be able to account. Thus, this will increase the compliance burden for e-commerce players. Further, any payment made to a supplier would be subject to tax collected at source at the notified rate. This might create a rift between sellers and e-commerce companies. The e-commerce players that depend heavily on third-party logistics firms to transport goods to the customer's doorstep have widely welcomed the new GST regime, which eased the hassle of inter-state ferrying of goods under a centralised tax regime.

Objective of the study:

1. To study about Goods and Service Tax and its impact on Indian e-Commerce industry.
2. To examine benefits and challenges of Goods and Service tax implementation.

Research Methodology:

This paper is prepared by using explanatory research method based on secondary data collected from different journals, newspapers, magazines and websites covering wide collection of academic literature on GST.

Objectives of GST:

- ✓ One Country - One Tax.
- ✓ Consumption based tax instead of Manufacturing.
- ✓ Uniform registration, payment and Input Credit.
- ✓ To eliminate the cascading effect of Indirect taxes on single transaction.
- ✓ Subsume all indirect taxes at Centre and State Level i.e. Central Excise, Service Tax, VAT/Sales Tax, Entertainment TAX, Purchase Tax, Octroi and Entry Tax etc.
- ✓ Reduce tax evasion and corruption.
- ✓ Increase productivity, Tax to GDP Ratio and revenue surplus, Increase Compliance.
- ✓ Removes the custom duties applicable on exports.

Implications of GST on E-Commerce

- ✓ It is mandatory for e-commerce operators / aggregators to register under GST irrespective of their turnover. Since e-commerce business model is such that seller expects orders from all the states, they are liable to obtain registration in all states.

- ✓ If e-commerce operator does not have an establishment in a state, his representative in the state will shall be liable to pay tax.
- ✓ Opportunity for less and underdeveloped states: A rate of 2% inter-state was levied for all the production and thus, the produce was kept within the state itself. The levy of GST bill has provided a national market and thus it can be dispersed. It will create opportunities for others as well.
- ✓ The reduced tax burden on companies will reduce production cost making exporters more competitive at national and international level.
- ✓ Every e-commerce operator should collect tax @2% on the net value of taxable supplies made through their platform, where such supplies, has to be collected by the operator.
- ✓ The timing for deduction of such amount by the operator on account of the actual supplier of goods or services shall be earlier of time of credit of the amount to the account of actual supplier or time of payment in cash or any other mode to the supplier, whichever is earlier. Place of supply in case of B2C transactions would be the location of the service provider, and in case of B2B, it would be the location of the service recipient.
- ✓ The amount collected by the operator is to be paid to the credit of appropriate Government within 10 days after the end of the month in which the amount was so collected. The operator is also required to file a statement, electronically, containing details of all amounts collected by him.

GST has a major impact on e-commerce in the country. Apart from consumers, this trade segment has two key players, i.e. the e-commerce marketplaces and the sellers. In India, cash on delivery (COD) is the most preferred payment method, accumulating 75% of the e-retail activities.

E-Commerce operator

Every person who directly or indirectly operates, owns or manages an electronic platform which is engaged in facilitating the supply of any goods and/or services, is called e-commerce operator. A person supplying goods/services on his account will not be considered as an operator. Amazon, Snapdeal and Flipkart are e-commerce operators.

Aggregator

Aggregator is a person who owns and manages an electronic platform, and through the application and communication device, enables a potential customer to connect with persons providing service of a particular kind under the brand name or trade name of the aggregator. Ola and Uber Cabs are aggregators.

Market Place

- Marketplace enables third-party sellers to register and sell online on their platform.
- Marketplace charges a subscription fees/ commission on sale value of listed sellers.
- Third party sellers under this model gain access to a larger customer base, registered with marketplace.
- Customer obtains access to multiple sellers and competitive prices for desired products.

Advantages of GST for e-Commerce Players:

- ✓ Cascading Taxes Abolishment: E-commerce industry gets benefitted from a new change under the GST, i.e. the abolishment of restrictions on cross-utilisation of credits. This change facilitates the seamless credit across the supply chains, accompanied by tax set-offs (the amount of tax credit that can be claimed in the VAT return) which are accessible across the production value-chain, both for goods & services. This will result in lowering the cascading effect of taxes and supplies' overall cost.
- ✓ Uniform & Harmonized Tax Rates

Impact of GST on an online seller's operations:

- ✓ Increased reach of e-retailers: GST has opened avenues for small and medium-sized e-retailers to compete with larger enterprises at a national level. Previously, these e-retailers were limited to operating within the confines of one state due to the rising tax rates of trading across multiple states.
- ✓ Compulsory registration requirement: The government has specified a turnover threshold of Rs.20 lakh for registration under GST. This has been relaxed to Rs.10 lakh for north-eastern states. However, for e-retailers, registration is mandatory, irrespective of whether they fall below the turnover slab of Rs.20 lakh or not.
- ✓ Ineligible for Composition Scheme: E-retailers are not eligible for the Composition Scheme either. It allows businesses with a turnover of under Rs.75 lakh to file quarterly returns instead of monthly and pays tax at a low rate of 2%. Although this might seem to be a disadvantage for e-retailers, the number of documents required to file for the Composition Scheme is relatively higher, reducing the burden of document collection on the seller.
- ✓ Tax collected at source (TCS): E-commerce marketplaces are required to deduct 2% TCS on the net value of sales as the GST liability of the seller and deposit it with the government. Further, the sales reported by both the e-commerce marketplace as well as the seller need to tally at the end of each month. Discrepancies will be added to the turnover of the seller and they will be liable to pay GST on the additional amount. This measure will weed out fraudulent sellers and subsequently build trust between marketplaces and sellers.
- ✓ Filing of Tax Returns: The e-retailers need to follow the process that is followed by brick-and-mortar retailers. Form GSTR-1, containing details of outward supplies, needs to be submitted by the 10th of every month. The seller will receive Form GSTR-2A by the 11th of the same month, which contains details of the tax collected by the e-commerce marketplace. They then need to review and submit Form GSTR-2 by the 15th of the month. Discrepancies in supplies are to be submitted through Form GST ITC-1 by the 21st of the same month.
- ✓ Increase in Credit: The GST law has established 'input tax credit' to cover goods or services used by a company in the course of the business. E-retailers need to establish a direct relationship between the input material, and the final product/service. Much like other registered entities under GST, e-commerce sellers too can now avail input credit.
- ✓ Refunds under cash on delivery: Consumers extensively opt for 'cash on delivery' in India and such sales witness return of orders to the tune of 18%. The reconciliation process for refunds takes around 7-10 days. Initially, there might be confusion around generating refunds for cancelled orders where taxes have already been filed.

The impact of GST on logistics and warehousing

With the Government having done away with multiple layers of tax, GST is bound to reduce costs incurred in e-commerce logistics. Also, with state-level taxes being subsumed under GST, e-commerce platforms can reduce warehousing costs as they need not maintain huge warehouses across multiple locations in India. With the free movement of goods and services and a uniform tax rate across states, e-retailers will be free to transport across different locations in India.

The implementation of GST stands to benefit e-retailers, as due to the elimination of entry taxes and faster movement of goods vehicles across states, the last mile delivery costs will come down. This benefit can be passed on to customers. Also, e-commerce marketplaces are now free to source goods across India and not just limit themselves to local players across states. Such a move will give incentive to the SME sector in India and encourage healthy competition among SMEs, thereby improving the quality of products and services available in India.

Challenges for E-Commerce Companies:

1. No threshold for GST registration: Government has specified a threshold limit for all the businesses after which business is liable to register under Goods and Services Tax. However, such limit is not applicable in case of E Commerce sellers. All the businesses carrying out e-commerce activity irrespective of their turnover are required to get registered under GST.
2. No Benefit under Composition Scheme: Most of these sellers registered with marketplace operators are small and medium businesses. Government has introduced composition scheme under GST law. This scheme is primarily aimed to reduce the burden of compliance for SMEs. Under this scheme, businesses are required to file returns quarterly instead of monthly and pay taxes at nominal rates. However GST law has explicitly excluded E-Commerce businesses from this scheme.
3. Registration in each state: As per the provisions under GST law, every business involved in E-commerce is required to get registered in every state in which they are supplying goods.
4. Tax Collection at Source by Marketplace Operator: Under GST, online marketplaces will have to deduct 2% tax per transaction while making payments to sellers listed on their portal. This Tax Collected at Source (TCS) will be handed over as collection towards GST to the government. This rule however does not apply to offline retailers. With TCS, capital will be locked away for periods between 20-50 days depending on the transaction date. This impact on the cash flow will force smaller firms to seek additional working capital. This will impact the liquidity and cash flow of these sellers.
5. Compliance issue in case of returns and refunds: Majority of the products sold online carry a return date of 30 days which translates to about 15 – 20 million transactions per month, the returns and refunds for these have to be done with utmost care. The returns are required to be filed monthly now by both parties and refund adjustment will need special attention affecting tax liability.
6. System Changes: Marketplaces have to make necessary changes to their ERPs to handle the new requirements emerging due to GST:
   Key points:-
   a. Big MNC Company incurred more cost for infrastructure.
   b. No Composition scheme available to E-Commerce Company.
   c. TCS to be Deducted by E-commerce company and file a separate return.
   d. System Change.
   e. No threshold limit for registration under GST.
7. Few Challenges of e-Commerce sector itself which are increasing problems:
   i. High cash-on-delivery (COD).
   ii. Payment Gateways.
   iii. Internet connectivity.
   iv. Poor Courier Services.
   v. Heavy Discounts.
   vi. Low level of digital literacy.
   vii. Poor Logistics & Supply Chain.
   viii. Storage of goods.
   ix. High Cost of Customer Acquisition.
   x. High technical barriers to market entry.
   xi. Regulatory Challenges–Taxation.
8. Increased Compliance burden: with the implementation of GST, eCommerce operators are required to collect tax at source and deposit the applicable amount of GST during payment time to the supplier. This results in increased onus & compliance burden on eCommerce operators; partly because many of them have lots of vendors. However, under this GST law and with the resulting burden of TCS, those eCommerce operators will also be needed to undertake extra compliances in the States based on suppliers' locations.
9. Taxation on Stock Transfer: After this GST law implementation, Intrastate & interstate stock transfers are also considered as supplies and subjected to GST. Moreover, the defined transactions without consideration are also coming under supplies. Despite the fact that the tax paid would be accessible as credit to the eCommerce entity, this may give birth to cash flow blockages.

10. Impact on Discounts or Incentives: Under GST, the tax computation is now based on transaction value (value of goods or services). This value may include Pre/Post supply discount. The pre-supply discount means the discount permitted before or during the supply time is included on the invoice. On the other hand, post-supply discounts are provided after affecting the supply. The tax is charged based on transaction value and whether the discounts will be incorporated or not relies on the discount category. If it is a pre-supply discount, it will not be incorporated in the transaction value. However, if it is a post-supply discount, then it will form the part of the transaction value. Therefore, the trends of offers followed by eCommerce operators, such as cash backs & promo codes will fall under the post-supply discount category and these offer trends will have to be re-examined to suit these new changes under the GST.

With the implementation of GST in India, the procedure for GST registration became centralized and standardized similar to service tax registration. Under GST regime, business is no longer have to obtain multiple VAT registration – as a single GST registration is applicable across India. The procedure for obtaining GST registration is also standardized, thereby improving the ease of starting a new business in India.

Recommendations for e-Commerce

- E-commerce specific provisions: it is imperative to have e-commerce-specific provisions under the GST regime. This will ensure that there is absolute clarity with regard to applicability of taxes on transactions undertaken by e-commerce companies as well as companies using e-commerce platforms for their transactions.
- Setting up of an e-commerce-specific committee: At this stage, an e-commerce specific committee must set up. The committee should have government as well as business representation. It should understand various business models followed by the e-commerce industry as well as issues the industry is currently facing while undertaking business in India.
- Identifying who is liable to pay tax: To avoid ambiguity and unnecessary litigation, e-commerce provisions under the GST law should clearly state when and for which transaction the e-commerce company or vendor on the e-commerce platform is liable to pay GST.
- Clear 'place of supply' provisions for e-commerce transactions: 'Place of supply' provisions would determine the state in which the goods or services are supplied by the assessee.
- Point of taxation: refers to when the tax has to be paid in respect of a transaction. For e-commerce transactions, following are the key recommendations on this aspect:
    - Point of taxation for the services rendered by the e-commerce marketplace company should be the date of invoice raised or date of payment received, whichever is earlier.
    - Point of taxation for the vendors/retail companies selling goods through the online portal should be the date of invoice.
- GST rate for goods and services should be uniform and not more than 18%. It should be kept the same throughout the country in light of the 'one tax, one market' concept. This would also help in easier administration and compliances, and ensure uniformity. For this purpose, CGST, SGST and IGST rates should be uniform across the country.
- Rate of tax for combo offers: If there are different rates for some goods which are sold in a combo, clear provisions should be stipulated about the rate.
- Back-to-back sales: involve cases where there are two sales but only one movement of goods. In such cases, it needs to clarify whether additional tax will be levied once or depending on the number of sales.
- Elise registration should be allowed for undertaking compliances relevant for all the places of business across India through one registration. The IT network developed by the GST network (GSTN) should allow for such a provision. Alternately, the concept of one-stop registration may be introduced, under which a company can take registration in one state and comply with provisions across all states.
- The online marketplace may also provide a facilitation centre where vendors can stock their goods, which are further dispatched to the customers as well as logistics services. This is the hybrid/warehousing model.

- One company should be assessed/audited by only one tax office for all its compliances under the GST regime.
- Credit rules should be liberal. An assessee (regardless of whether it supplies goods or services) should be allowed to avail credit of any tax paid while incurring any kind of business expenses.
    - Any credit availed of in respect of goods should be allowed to be offset against GST liability on account of rendering services and vice versa.
    - Important to ensure that credit of central taxes (CGST and IGST) should be available across registered units (located in various states) of one entity.
    - Unutilised credit standing at the end of the current regime should be allowed to be carried forward to the GST regime.
- Stock transfers: In the e-commerce model, goods may be stock-transferred from vendor location to warehouse (maintained by the e-commerce company), or from one warehouse to another if needed. Under GST, interstate stock transfers will be liable to IGST. Further, additional tax of 1% may not be levied (the Select Committee has also recommended that 1% tax should not be levied on stock transfers). Considering the above, stock transfers should be tax-free or tax should be paid on stock transfers only when the actual sale of goods takes place, to avoid any undue financial burden on MSMEs and other assessees.
- Waybill/transit form requirements: E-commerce companies are facing various issues currently with the check-post authorities, which is leading to delays in delivery of consignments, undue seizure of goods, penalties, etc. It is strongly recommended that the requirement of waybills/transit forms should be dispensed with to ensure that the 'India as one market' objective is achieved under GST. Since all purchases and sales would be already linked on the GST portal, there should be no requirement of such waybills/ transit forms.
- Taxability of digital supplies: Digital supplies include supply of goods and services over the Internet, such as e-books, music, ringtones and images, which are downloadable and can be viewed online/offlne by a customer. It should clearly mentioned whether digital supplies qualify as goods or services, to mitigate any risk of ambiguity with regard to their taxation under GST.
- There should be clear provisions allowing the adjustment of any tax paid (including additional 1%) on account of a sale return or cancellation.
- In case of replacement of goods, provisions should not be result in double taxation. For instance, replacement would involve both the return of original goods as well as their replacement with new ones. Hence, provisions may allow for adjustment of tax paid on original goods and payment of tax on new goods (which replace the original), thereby making the transaction tax-neutral.
- Treatment of debit note, credit note and invoice cancellation: There need to be specific provisions stipulating payment or adjustment of tax, as the case may be; for the purpose of adjustment on account of debit/credit note, there should be no requirement of matching of the credit note issued with individual invoices.
- There should be no time limitation for claiming tax adjustment on account of sale returns, cancellations or issuance of credit note.
- Transition provisions: For both the government as well as assesses, transition provisions would need to be structured comprehensively to avoid any ambiguity or disputes. Further, a reasonable amount of time needs to be provided to the assessees for transitioning to the new regime.
- Refunds: The transition mechanism for transfer of existing refund claims for a period pertaining to a time prior to the introduction of GST legislation should be framed in an easy and assesse friendly manner. Further, guidelines should be issued for quick disposal of such refund claims.
- Compliances: In case a transition period is provided in GST, there may be an overlap in compliances under the existing regime and GST regime. In such a case, the compliances should be standardised and automated across the states so there is no unnecessary burden on the assessees.

Conclusion

From the above discussion, we may conclude that GST will reduce cascading effect of current indirect taxation system that will provide relief to the producers and consumers by subsuming the several indirect taxes. After introduction of GST, manufacturer, wholesaler and retailer can be easily recovered input taxes in form of tax credits. Moreover, GST has a positive impact on different sectors like manufacturing sector, employment sector, FMCG sector, IT sector and so on. Thus, implementation of GST will lead commercial benefit, more employment opportunities and would essentially lead to economic development that will improve GDP of the country. It is noteworthy to mention that GST will give India a world-class tax system by grabbing different treatment to manufacturing and service sector. However, these will critically depend on a neutral and rational design of the GST. Further, taxpayer education or public awareness programmed, workshops, training and various seminars on GST must be conducted in all states by their respective state governments.

Industry experts have welcomed the standardization that GST promises, but it is believed that tax collected at source will defer sellers from listing themselves on e-commerce marketplaces and hit the e-commerce industry. Also, companies with business units in the same or different state would be required to register themselves in each of the State where they have their presence. Thus, compliance are expected to multiply. The economic advantage hoped by taxpayers in the long-run is keeping them optimistic about the new regime.

Digital India is the most celebrated agenda of the Government of India; however, it has ended up in creation of additional trade barriers for e-commerce operators under GST. In this regard, it is yet to be seen whether GST is able to keep harmonious balance between offline and online vendors including e-commerce operators and help them to achieve organized and all-inclusive growth.

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HAPPINESS THROUGH E-RETAILING IN SMART CITIES OF INDIA: A CONCEPT OF SUSTAINABLE DEVELOPMENT

RANU GUPTA[1]; ANUDESH GAUTAM[2]

[1]Research Scholar, School of Commerce &Management, Vardhman Mahaveer Open University, Kota, Rajasthan
[2]Research Scholar, Department of Economics, Vardhman Mahaveer Open University, Kota Rajasthan

Abstract

The urbanisation with its modernity introduced in the 19th century. From west to east the concept of mega cities, smart cities have been growing rapidly. At that time the scarcity of resources coupled with environmental pollution chokes the urban environment and makes the cities unhealthy and unsustainable. Various issues are raising and to accommodate and resolve the problems associated with fastest growing urbanisation Indian government has come up with the plan of building hundred new smart cities. This paper explains the concept of smart cities in India with the focus on the idea of happiness, use of E-retailing as well as mobile apps technology to enhance the standard of living of the citizens of the smart city towards sustainable development. This paper also focuses on the challenges of infrastructure, environment, governance, policy-making initiatives, technology initiatives, various opportunities and prospects for sustainable smart cities in India.

Keywords: Smart Cities, Happiness, E-retailing, Sustainable Development, Urbanisation

Introduction

The modern form of urbanisation began around the early nineteenth century in developed countries. Early cities of world Philadelphia, Boston and New York were the largest in late seventies. At this stage, only 3% of the global population lived in cities. By 2000 the mega cities (cities with 10 million populations) rose to 16, and this expected to reach around 27 by 2025. Massive urbanisation creates opportunities on the one hand and poses challenges on the other. The cities which are magnets for small and medium town population slowly steadily face resource and infrastructure crunch. The scarcities of resources coupled with environmental pollution choke the urban environment and make the cities unhealthy and unsustainable.

Smart Cities are considered the engines of growth. They are also a hub of various demographic, environmental and economic complexities and problems. It estimated that currently cities consume 70% of the resources and generate 80% of greenhouse gases. Cities are producing maximum waste which includes solid waste, e-waste and non–biodegradable waste. There is no efficient method to get rid of huge waste generated by the urban centres.

The Smart City is a high-tech city with several problem-solving capabilities. Cities worldwide are facing various demographic, morphological and environmental transformations. These changes have posed several urban challenges. Developing a city "smart" is emerging as a wise strategy to mitigate the problems generated by rapid urbanisation. Pardo and Nam (june,2011)in his article "*Conceptualizing smart city with dimensions of technology, people, and institutions"* described three main dimensions of the *smart city*, i.e. technological dimensions, human dimensions and institutional dimensions. Technological dimensions involve the concepts of digital city, virtual city, information city, ubiquitous city and intelligent city. In fact, in 1994, Amsterdam became the first digital city in Europe. The human dimensions focus on education and health i.e. this includes concepts of Learning City, Knowledge city, Creative City, Happy City, Healthy City, Humane city and Inclusive City. The institutional dimensions include a concept of participatory and smart governance. This makes the concept of Smart City a versatile and holistic concept.

Giffinger (2008) favoured that *a smart city is a city well performing built on the intelligent combination of endowments and activities of self-decisive, independent and aware citizens*. A city that is equipped with basic infrastructure to give a decent quality of life, a

sustainable and clean environment through the application of some smart solutions is called a smart city.

In other words, Smart City is a conceptual city which uses information and communication technologies so that its critical infrastructure, components and public services provided, are more interactive, efficient and so that citizens can be made more aware of them. According to Intelligent Community Forum of New York, "cities and regions that use technology not just to save money or make things work better, but also to create high-quality employment, increase citizen participation and become great places to live and work".

Smart Cities and India

According to Census 2011, Cities accommodate nearly 31% of India's current population that contribute 63% of GDP. Generally urban areas are expected to house 40% of India's total population and provide 75% of India's GDP by 2030.All this requires a comprehensive development of physical, economical, institutional, and social infrastructure.

This Smart Cities Mission is a new initiative and an innovative step by the Indian government to drive the economic growth and improve the quality of life of people by enabling development at a local level and harnessing technology as a means to create smart outcomes for citizens. To accommodate and resolve these problems associated with the rapid urbanisation, the government of India has planned to build 100 new smart cities (the target revised to 109 cities).

These smart cities (communities, clusters, regions) are defined as multi-layer territorial systems of innovation that bring together knowledge-intensive activities, institutions for cooperation in learning and innovation, and digital spaces for communication and interaction to maximise the problem-solving capability. In this approach of the Smart Cities Mission, the objective of government is to promote cities that provide core infrastructure and provide a quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The focus is on an inclusive and sustainable development, and the main idea is to look at the compact areas and create a replicable model which will act as a lighthouse to other aspiring cities. These core infrastructure elements in a smart city would include:

- ✓ Education and Health.
- ✓ Assured electricity supply.
- ✓ Good governance, especially e-Governance and citizen participation.
- ✓ Digitalization and robust IT connectivity.
- ✓ Efficient urban mobility and public transport.
- ✓ Adequate water supply.
- ✓ Sanitation, including solid waste management.
- ✓ Affordable housing, especially for the poor.
- ✓ Safety and security of citizens, particularly women, children and the elderly.
- ✓ Sustainable environment.

Smart City Features

Some features of extensive development in Smart Cities are described below.

1. **Making governance citizen-friendly and cost effective** - increasingly rely on online services to bring about transparency and accountability, especially using mobiles, computers to reduce services cost and providing services without having to go to municipal or other offices..
2. **Applying Smart Solutions to services and infrastructure in area-based development** - in order to make them better. For example, making Areas less vulnerable to disasters, using fewer resources, and providing cheaper services.
3. **Promoting mixed land use in area based developments** – planning for 'unplanned areas' containing a range of compatible activities and land uses close to one another in order to make land use more efficient. The States will enable some flexibility in land use and building bye-laws to adapt to change.
4. **Housing and inclusiveness** - by expanding housing opportunities for all.
5. **Creating walkable localities** – reduce congestion, air pollution and resource depletion, boost the local economy, promote interactions and ensure security.
6. **Preserving and developing open spaces** - playgrounds, parks, and recreational spaces to enhance the quality of life of the citizens, reduce the urban heat effects in Areas and promote eco-balance.

7. **Giving an identity to the city** - based on its main economic activity such as, health, arts, craft and education, local cuisine, culture, sports goods, furniture, hosiery, textile, dairy, etc.
8. **Promoting a variety of transport options** - Transit Oriented Development (TOD), public transport and last mile Para-transport connectivity.

As per estimates, every minute about 25–30 people will migrate to major Indian cities to urban areas in search of a better livelihood and better lifestyles. With this momentum, about 843 million people are expected to live in cities by 2050. To accommodate this massive urbanisation, India needs to find some smarter ways to reduce expenses, manage complexities, and improve the quality of life.

The Government of India in Budget 2014–15 allocated ` 70.6 billion for Smart Cities. The government machinery is working on putting together the standards for executing this mega plan, and identifying the cities to be developed in consultation with states. A few smart cities are already coming up across the country, including Gujarat International Finance Tec-City (GIFT) in Ahmedabad, Kochi Smart City, Naya Raipur in Chhattisgarh, Lavasa in Maharashtra and Wave Infratech's 4,500-acre smart city near New Delhi. India has also been inviting foreign partnership in developing the smart cities and has signed deals to build eight cities, three with Germany, three with the US, and one each in Spain and Singapore.

Smart City plan is part of an extensive agenda of creating different Industrial Corridors between big metropolitan cities. These include the Chennai-Bangalore Industrial Corridor, the Bangalore-Mumbai Economic Corridor and Delhi-Mumbai Industrial Corridor. It is believed that many commercial and industrial centres will be recreated as "Smart Cities". In its first phase the (DMIC) Delhi-Mumbai Industrial Corridor, which is spread across six states, seeks to create seven new smart cities.

Eight critical pillars of India's Smart City Programmes

1.**Smart Education:** Indian government has allocated US$13.95 billion for the education sector in the Union Budget 2014-15.

- ✓ Online education market size in India is expected to be US$40 billion by 2017

- ✓ The Ministry of Human Resource Development plans to have 1,000 private universities for producing trained manpower to meet services and industry requirements
- ✓ US$78.5 million Budget has allocated to set-up five new IITs and five new IIMs
- ✓ 100% FDI allowed in the education sector.

2. Smart Energy: Three crucial dimensions of smart energy systems are:

Smart Grid

- ✓ Establish smart grid test bed by 2014 and smart grid knowledge centre by 2015
- ✓ Electrification of all households with power available for at least 8 hours per day by 2017
- ✓ Implementation of 8 smart grid pilot projects in India with an investment of US$10 million.

Energy Storage

- ✓ Addition of 88,000 MW of power generation capacity in the twelfth five year plan (2012-17)
- ✓ India needs to add at least 250-400 GW of new power generation capacity by 2030
- ✓ The Power Grid Corporation of India has planned to invest US$26 billion in the next five years
- ✓ India to install 130 million smart meters by 2021

3. **Smart IT & Communications:** Information and Communications Technology

- ✓ Broadband connections to 175 million users by 2017
- ✓ Cloud computing will evolve into a US$4.5 billion market in India by 2016

Security and Surveillance

- ✓ The Government of India and World Bank signed US$236 million agreement for reducing disaster risks in coastal villages of Tamil Nadu and Puducherry.
- ✓ the Union Ministry proposes US$333 million to make seven big cities (Ahmedabad, Delhi, Mumbai, Kolkata, Chennai, Bangalore and Hyderabad) Under the flagship "Safe City" project, to focus on technological advancement rather than manpower Disaster Management

4. **Smart Transportation:** Indian Government has set ambitious targets of developing public transportation system to support the ever growing urban populace.

Green Transport

- ✓ Approved a US$4.13 billion plan to spur electric and hybrid vehicle production by setting an ambitious target of 6 million vehicles by 2020
- ✓ Electric vehicle charging stations in all urban areas and along all state and national highways by 2027 Railways
- ✓ Metro: Ministry of Urban Development plans to invest more than US$20 billion on the metro rail projects in coming years
- ✓ High Speed Rail: The proposed 534 km Mumbai-Ahmedabad high speed rail project will have an investment of around US$10.5 billion
- ✓ Monorail: India's first monorail project at Mumbai will cost around US$500 million, of which US$183 million has been spent on phase I

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6. **Smart Buildings:**

- ✓ India is expected to emerge as the world's 3rd largest construction market by 2020, by adding 11.5 million homes every year
- ✓ The Intelligent Building Management Systems market is around US$621 million and is expected to reach US$1,891 million by 2016
- ✓ Smart Buildings will save up to 30% of water usage, 40% of energy usage and reduction of building maintenance costs by 10 to 30%

7. **Smart Health Hospitals**

- ✓ To establish six new AIIMS like institutes and 12 government medical colleges in the country
- ✓ Health budget up by 27% in FY 2014-15 to US$5.26 billion, with special focus on improving affordable healthcare for all
- ✓ Accessible, affordable and effective healthcare system for 1.2+ billion citizens

Medical Devices

- ✓ Wellness
- ✓ Indian wellness industry is expected to reach around US$16.65 billion by 2015
- ✓ Indian medical devices market to reach US$11 billion by 2023
- ✓ 100% FDI allowed in the medical devices sector under the automatic route

8. **Smart Governance**: Investments of about US$1.2 trillion will be required over the next 20 years across areas such as transportation, energy and public security to build smart cities in India. Highlights:

- ✓ Smart City projects to create 10-15% rise in employment
- ✓ US$83 million allocated for Digital India Initiative

- ✓ Ministry of Urban Development has plans to develop 2 smart cities in each of India's 29 states
- ✓ PPP Model to be used to upgrade infrastructure in 500 urban areas
- ✓ Delhi Mumbai Industrial Corridor Development Corporation Ltd (DMICDC) plans seven "smart cities" along the 1,500 km industrial corridor across six states with a total investment of US$100 billion
- ✓ US$1.2 billion allocated for smart cities and FDI norms relaxed

9. Smart Environment: Three crucial dimensions of ensuring sustainable development are: Renewable Energy

- ✓ The Government of India and the World Bank have signed a US$500 million credit for the Rural Water Supply and Sanitation (RWSS) project in the Indian states of Assam, Bihar, Jharkhand and Uttar Pradesh
- ✓ About 67% of the rural population continues to defecate in the open, and India accounts for about 50% of the world's open defecation
- ✓ Ministry of New and Renewable Energy has plans to add capacity of 30,000 MW in the 12th Five Year Plan (2012-17)
- ✓ The Yamuna Action Plan Phase III project for Delhi is approved at an estimated cost of US$276 million
- ✓ The Indian Ministry of Water Resources plans to invest US$50 billion in the water sector in the coming years
- ✓ Water and Waste Water Management

Smart City Strategy

The strategic components of area-based development in the Smart Cities Mission are city improvement (retrofitting), city renewal (redevelopment) and city extension (Greenfield development). Below are given the deions of the three models of Area-based smart city development:

- ➢ **Greenfield development** will introduce most of the Smart Solutions in a previously vacant area (more than `250 acres) using innovative planning, plan financing and plan implementation tools (e.g. land pooling/ land reconstitution) with provision for affordable

housing, especially for the poor. Greenfield developments are required around cities in order to address the needs of the expanding population.

- **Retrofitting** will Depending on the existing level of infrastructure services in the identified area and the vision of the residents, the cities will prepare a strategy to become smart. Since existing structures are largely to remain intact in this model, it is expected that more intensive infrastructure service levels and a large number of smart applications will be packed into the retrofitted smart city. This strategy may also be completed in a shorter time frame, leading to its replication in another part of the city.
- **Redevelopment** will effect a replacement of the existing built-up environment and enable co-creation of a new layout with enhanced infrastructure using mixed land use and increased density. Two examples of the redevelopment model are the Saifee Burhani Upliftment Project in Mumbai (also called the Bhendi Bazaar Project) and the redevelopment of East Kidwai Nagar in New Delhi being undertaken by the National Building Construction Corporation.

The concept of E retailing and happiness towards standard of living

The internet, smartphones, increasing storage and processing capacity of computing, improvements in sensing and modelling capabilities and the Internet of Things are collectively re-shaping the economic, operational and social dynamics of cities. These technologies give an opportunity for cities and city governments to create more efficient, and equitable urban environments. Till recently GDP has been used as a measure of standard of living. Recognising the importance of additional factors such as knowledge, longevity, quality of life, human well-being, United Nations has recommended Human Development Index (HDI) as an alternative measure of standard of living. For example, India has a lower HDI rank of 134 as compared with Norway having an HDI rank of first. Another measure of standard of living being promoted in recent times refers to Gross National Happiness (GNH). The original four pillars of GNH philosophy are

1. The promotion of sustainable development
2. Preservation and promotion of cultural values
3. Conservation of the natural environment

4. Establishment of good governance

GNH is based on this conviction that material wealth alone does not bring happiness, or ensure the contentment and well-being of the people and that economic growth and modernization should not be at the expense of the people's quality of life or traditional values. It is a holistic development philosophy which balances physical and spiritual wellbeing of the people and values both objective and subjective measures of progress. It takes into account both subjective, objectives, non-quantifiable and quantifiable, dimensions of development.

The above concept of standard of living originally promoted by Bhutan is reported to receive much attention from developed countries. The sustainable economic development refers to the goal of achieving the needs of the present without affecting the potential of future generations to meet their needs. It can be seen from the above that while economic growth through technology is very essential, it alone is not sufficient for a better standard of living. These aspects are additionally incorporated in the concept of a Smart City.

Benefits of E-Retailing to smart city

Technology has made our lives much easier, from computers to mobile, online shopping to use of mobile applications, different things introduced to make our lifestyle easier. The strategically best logistic planning, the ease of availability of things, the effectiveness of a delivery system, E-Retail, mobile apps introduced a platform to citizens to make their lives easier and full of happiness that enhance the standard of living. The e-commerce industry that was non-existent a few years ago is today worth $5 billion. There are 35 million Indians who buy products online electronics, apparel, baby products and so on. The concept of E-retiling to smart city citizens introduces more and more efficient ways to save time.

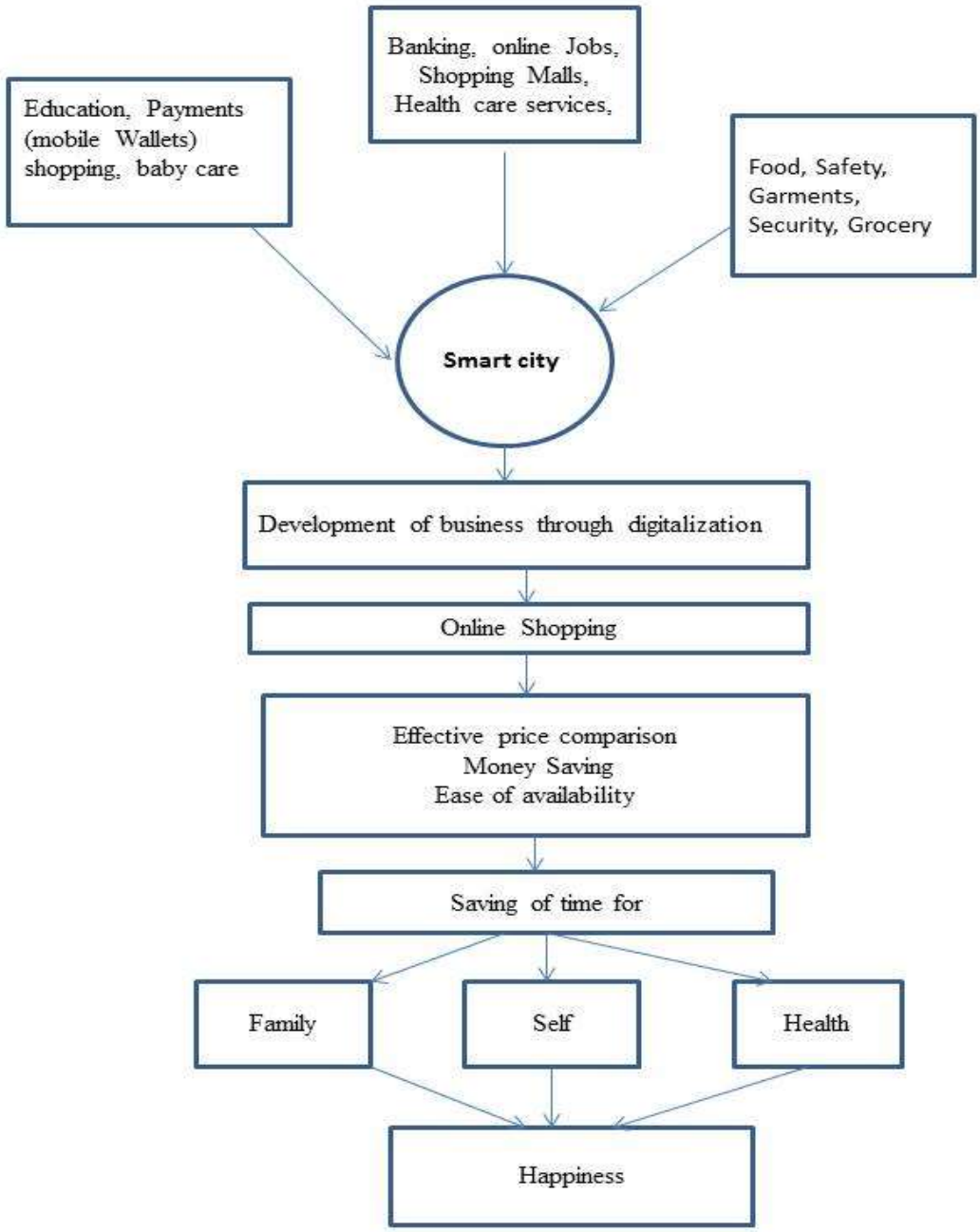

Figure 1 Concept of E-Retailing and happiness towards standard of living for citizens of smart city

- ✓ **Effective and Smart Transportation-** E retailing minimizes extra effort to short and reduces Public traffic to market.

- ✓ **Smart IT & Communications**- E retailing is the best example for information and communication technology as it provides maximum information regarding retail market on one screen.
- ✓ **Security and Surveillance** -When people started shopping at home, crowd on roads has been reduces and is now able to manage manpower which is good for security and surveillance.
- ✓ **Smart Buildings**- E retailing is pushing organized sector of retail like shopping mall where people can enjoy recreational activities and can have fun with family with friends which induces happiness and standard of life..
- ✓ **Smart Health Hospitals and medical devices**- Online health services improve the quality of health services due to competition and more information which results in increasing digitalization and standard of life. And ends with happiness and satisfaction with citizens
- ✓ E-retailing place major role in providing better and best medical equipment from the world to gain best maximum results and satisfaction in citizens for getting best treatment of their disease.
- ✓ **Digitalization** also helps in insurance sector to increase knowledge and information regarding insurance market
- ✓ **Smart Education**- For rural area, smart and E classes are being provided to reduce their migration to rural to urban and developing
- ✓ **Development of business**

Technology can more be used to provide other services in the home, initially to save energy and eventually to offer targeted services and products. Residents can be notified when they are close to exceeding recommended consumption levels of water and electricity. Devices at the house can be switched on and off based on when residents are home to save heating costs.

Thus E-retailing and mobile apps will not only help in saving time and money, by creating easiness, the effectiveness of healthy lifestyle but in total save time in the sense of family, self and health that eventually increase the happiness of citizens of the smart city. It enhances the standard of living and makes a way towards sustainable development.

Challenges and Suggestions

The Smart Cities Mission requires smart people who actively participate in governance and reforms. Citizen involvement is much more than a ceremonial participation in governance. Smart people involve themselves in the definition of the Smart City, decisions on deploying Smart Solutions, implementing reforms, doing more with less and oversight during implementing and designing post-project structures in order to make the Smart City developments sustainable. The participation of smart people will be enabled by the SPV through increasing use of ICT, especially mobile-based tools.

Day to day experiences in Indian cities depends on who is describing that experience. There is no doubt that a slum dwellers 'experience is finer grained and closed to city realities than the middle class and elite experiences of a city which received by them after a lot of filtration made possible by accumulated wealth. One side experiences lack of almost all the things needed for a good life while another side seeks improvements on the acquired endowments and faster economic growth. Overall the Indian cities and towns face some serious challenges. Sanitation, the mobility of all classes, and affordable safe and environmentally friendly modes of transformation all these are crucial to the making of smart cities. Some estimates even foresee that by 2050 a majority of Indian population will live in cities. Future of India thus is likely to be urban. Urban poverty, homelessness, unemployment, lack of basic social and physical infrastructure, lack of mobility, unclean environment, etc. remain central problems of the Indian city. A few challenges are –

- ✓ The challenges of urban infrastructure
- ✓ The environment challenge
- ✓ The governance challenge

Nobel prize winner Amratya sen argues that three factors are required to be considered before undertaking any policy reforms, these are reach ,range and reason –

1. The reach of the results to be achieved,
2. The range of the ways to be used.
3. The reason for choosing and priorities we pursue.

This study lists down the following propositions as suggestions:

- ✓ Centre, State and local leadership must work together to find ways to deal with the complicated political environment that currently hampers urban development in a big way.
- ✓ Smart city plans should also contain recommendations on managing neglected problems, such as public safety and security; living and livelihood of poor and vulnerable persons, and migrants; unemployment; water, drainage and sanitation deficiencies; traffic congestion and vehicular emissions; environmental degradation; encroachments and unauthorized constructions; haphazard growth in.
- ✓ Civic agencies should be adequately empowered for project implementation and enforcement of laws.
- ✓ Opportunities should be created for a continuous exchange of ideas and experiences, and the knowledge thus generated should be utilized in refining the smart city strategy.
- ✓ Manpower, financial and technical capabilities of traditional urban local institutions should be strengthened by organizing useful training programmes, and the higher tiers of the government should offer the necessary support to ensure that the lessons learned during training are successfully implemented.
- ✓ State and local governments should be assisted in increasing their tax and non-tax revenues for day-to-day city management, as well as for meeting the costs involved in implementing new development projects. Efficiently managed services (both online and offline) should be made available to citizens for reporting complaints, such as water logging, broken road, power failure, etc., and such problems should be resolved in a time-bound manner by the concerned agencies. Committed non-state actors, such as NGOs and the private sector, working for the welfare of the city and its residents, should be engaged in the urban reform process.
- ✓ Sufficient awareness should be generated among the unemployed persons about various career options, and they should be assisted in starting various kinds of income-generating activities. Greater funds should be allocated for improving the capacity of existing urban planning education institutions, and new institutions should be built for increasing the number of urban planners and managers in Indian cities.
- ✓ Government departments and residents in India will have to respond in a proper and responsible manner if the vision is to be achieved.

Conclusion

While the smart city is an emerging and welcoming concept, it might appear from the above, that currently, it is more a slogan than a reality. However, the concept is useful for the society; the journey is long with technical challenges and with improvement and commitment in the mindset of the citizens, it is possible to achieve with reasonable success. Besides the required technology, environmental protection, human values, social and cultural values, public awareness, social cooperation, civic sense, tolerance attitudes, etc. have to be respected and practiced by every sector of the society. In a nutshell, an enabling environment with human values should be promoted.

The process of physical transformation of cities is yet to begin. Hence, it may be concluded that only when the projects start to be implemented, it will be clear how much and by when success is achieved. While mainstream sustainable development framework focuses on environment and resource management or supply side, this happiness approach focuses on human behaviour or consumption management which is the demand side of sustainable development. Thus this paper explains the concept of smart cities in India. The focus is on the idea of happiness, use of E- retailing as well as mobile apps technology to enhance the standard of living of the citizens of the smart city towards sustainable development for the success of the Mission; this study lists down the following propositions:

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