

## OVERVIEW OF MOBILE COMMERCE INDUSTRY IN INDIA

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### ABSTRACT

Mobile Commerce is an evolving concept of Electronic Commerce and growing eventually due to the advancement in technologies. Mobile Commerce is directly influenced by the widespread mobile usage. It is the mobile these days which keeps everybody around the globe updated with all the types of products and services available in the global market. This has led to quick interaction between the people and has penetrated the Indian market with the view to enhance the different M-Commerce applications that enable people to exploit its benefits. With the advent of smart-phones and recent developments in mobile internet technology, the Indian online as well as mobile retail industry is going through a phase of rapid evolution. The following section discusses the recent trends in the rate of internet penetration and number of users accessing internet over their smart-phones in India. Further, it attempts to capture the rise of mobile phone users in India and the proportion of it using a smart phone. Finally, it analyses the effect of these trends on the revenue generated from the Indian online retail commerce market in general and from mobile retail commerce market in specific.

Key words : Mobile Commerce, Retail commerce market

### INTRODUCTION

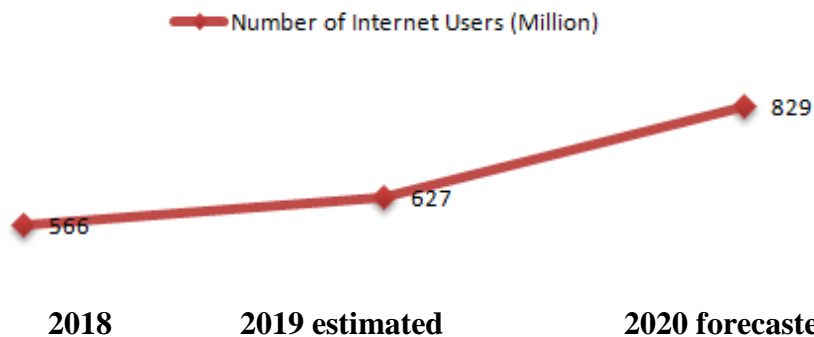
#### *Internet Penetration in India*

Nowadays the term M-Commerce is gaining popularity due to the maximum usage of mobile phones worldwide. Different researchers studied different aspects related to the said term. Anubhuti Sharma (2016) in his research on M-Commerce: A Revolution in India focused on the applications of mcommerce and the factors that affect the use of m-commerce. He also studied the factors that have led to issues in the working of commercial transactions over the mobile handsets. According to him, the main applications are mshopping, entertainment, education etc. and the boosting factors are mobility, wide reach, fast connectivity etc.

As far as Indian market is concerned, according to a recent report, the internet penetration in the country was over 566 million users in 2018 and is estimated to go up to 627 million users by this year, registering a growth rate of 11 % (Timesnownews.com 06 March 2019).

The growth rate is the result of increased internet penetration in the rural areas. According to a report, as of 2018 India's total population was 132.42 crores (1.3 Billion) out of which only 43 crores lived in urban areas and the rest 89.42 crores were in the villages or in the rural parts of the country (Kantar IMRB, 2018). However, the internet penetration is around 65% in urban areas as against only 21% in rural parts (eMarketEdu.com, 14 April 2019). With increasing access to internet in the rural India, the overall internet penetration is further expected to increase and reach around 829 million users by 2020 (CISCO report, Dec 2018). This rapid growth trend in the internet connectivity in the country offers a great scope of success for online and mobile commerce industry. Figure 1.1 presents the estimated growth of internet users in India from 2018 to 2020.

### Number of Internet Users (Million)

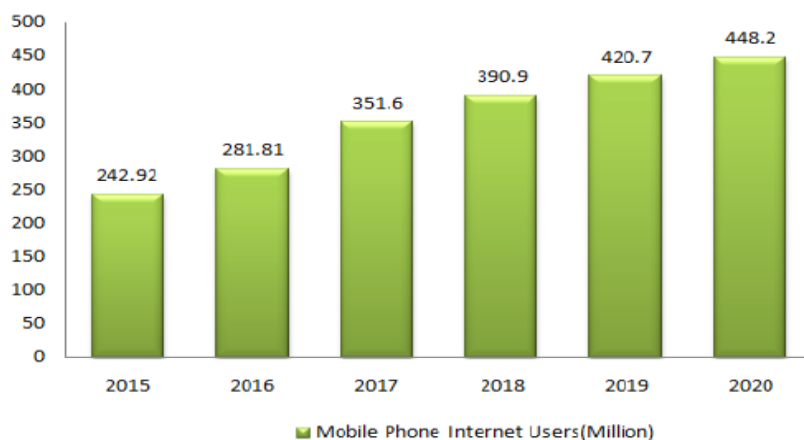


**Figure 1.1:** Number of Internet users in India (Million) from 2018 to 2020 (Source: CISCO report, Dec 2018; Timesnownews.com March 06, 2019)

A recent report predicted the internet penetration in India for the year 2018 to be 483 million users (Statista, 2019) which has been surpassed with over 566 million of total internet users reported as of 2018 (Timesnownews.com 06 March 2019) and is now predicted to reach 829 million internet users by 2020(CISCO report, Dec 2018).

#### Mobile Internet Users in India

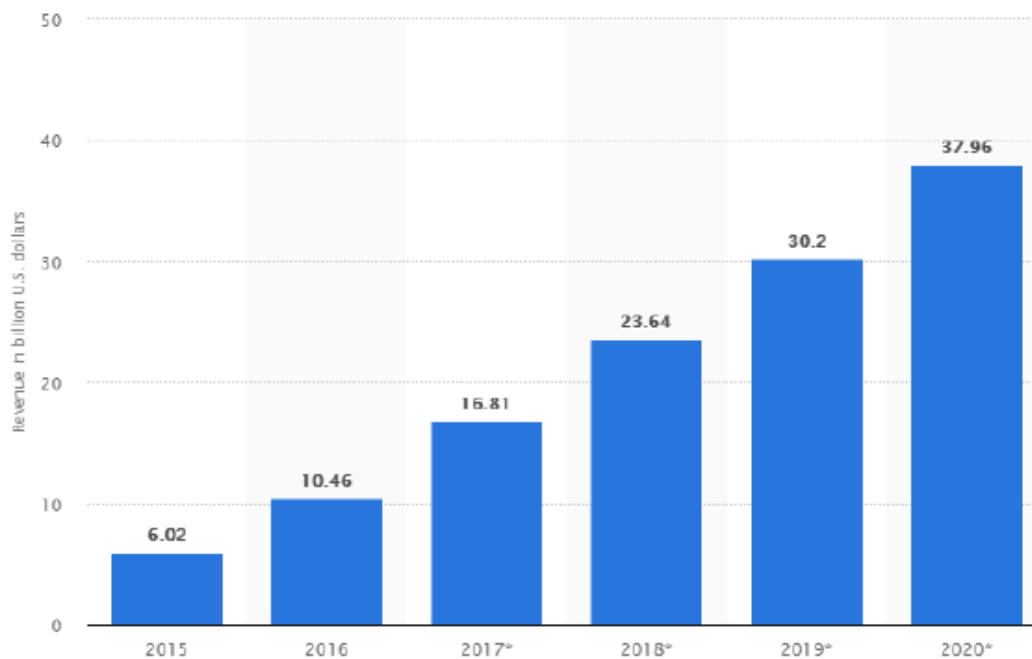
The number of users accessing internet over mobiles stood at 456 million as of December 2017, with an increase of over 17 per cent from the figures reported for December 2016. By 2018, this figure supposedly touched 478 million (Indo-Asian News Service, 2018). The urban mobile internet users are estimated at 291 million against 187 million rural users as of 2018. The escalation in mobile internet usage can be accredited to the availability of cheaper smart-phones, faster connectivity, and affordable services. “Urban India witnessed an estimated 18.64 per cent year-on-year rise, while rural India witnessed an estimated growth of 15.03 per cent during the same period” (Smith, 2018; Times of India, May 29, 2018). The report made another revelation about mobile internet usage, pre-dominantly by the youngsters, 46 per cent urban users and 57 per cent rural users are below 25 years of age (Times of India, May 29, 2018).



**Figure 1.2:** Predicted number of mobile phone internet users in India from 2015 to 2020 (in millions) (Statista 2019)

The statistics in the Figure 1.2 shows that by 2020, mobile phone internet users are predicted to reach 448.2 million in number (Statista, 2019). According to another recent market research, in terms of percentage of total population, mobile internet penetration in India is estimated to be 34.36% by 2020, making India a potential

market for mobile-based services (Statista, 2018). The shift from computer-based internet usage to mobile-based internet usage can again give a tremendous boost to the mobile commerce market.



**Figure 1.3:** Retail m-commerce sales in India from 2015 to 2020 (in billion U.S. dollars)

In 2015, out of the total \$12 billion annual online sales in India, nearly half took place through mobile phones. The retail mobile commerce revenue amounted to US\$ 6.02 billion that year and was reported to reach US \$ 37.96 billion by 2020 (Statista, 2019). Mobiles will be primarily responsible in driving this growth. In 2016, mobile commerce represented nearly 50% of online retail sales in India, compared with around 48% in China and 34% in the US, making India the most lucrative mobile commerce market (Srivastava, 2016).

Recent years have witnessed a remarkable growth in terms of internet penetration rate, number of mobile internet users, smart-phone users and mobile phone users in India, which has given a boost to the overall online retail and mobile retail market in the country. As of 2018, almost 566 million Indians from urban as well as rural parts had an access to internet, resulting in the internet penetration rate of almost 43% of the total population.

Among the total internet users that year, almost 450 million Indians accessed internet on their smart-phones. The number of mobile phone users were reported to be 775 million out of which 36% owned a smart-phone. The resulting revenue from retail m-commerce market that year was reported to be US\$ 23.64 billion. The smart-phone users and mobile internet users are estimated to grow further in number in the coming years, making India a potentially strong mobile commerce market globally. However, this is only a possibility if the service providers have a good knowledge of the consumers' needs and expectation from the mobile commerce industry.

### **MOBILE COMMERCE APPLICATIONS**

The term mobile commerce has a wide application and covers a spectrum of services which can be availed using mobile devices and wireless networks. Few of the most common applications of mobile commerce in India are mobile shopping, mobile payments, mobile entertainment, mobile banking, mobile ticketing and mobile gaming (Gordon and Gebauer, 2001; Sadeh, 2002; Hu, 2005, Jahanshahi et al., 2011). Figure 1.4 shows the varied services included in mobile commerce.



Figure 1.4: A Glimpse of Mobile Commerce Spectrum

**Mobile Shopping**

In the recent years, mobile shopping has become massively popular and is quickly penetrating into the fast-paced lives of the today’s consumers. The utilisation of mobile devices has diversified to include a wide variety of activities ranging from initial search for the products, comparison among different vendors, placing of orders, and making online payments for services and products purchased (Hung et al., 2012). It is “any monetary transactions related to purchase of goods or services through internet-enabled mobile phones or over the wireless telecommunication network” (Wong et al., 2012). It is a division of mobile commerce, which can further be explained as “any transaction with a monetary value- either direct or indirect- that is conducted over a wireless telecommunication network” (Barnes, 2002).

The rapid development and explosion in the mobile technology with the reducing rates of mobile network services and of high-end smart-phones, has made mobile shopping a popular trend amongst the consumers all over the world. Gaining from this mounting fame of mobile shopping amongst the consumers, marketers and retailers are investing significant funds and efforts towards this industry. Marketers worldwide are directing their energies towards promoting mobile devices for shopping among the consumers. Merchants are engaging with a variety of mobile applications to provide shoppers a safer and more convenient shopping experience. Also known as mobile retail commerce, mobile shopping was estimated to touch a global revenue of US\$ 669 billion by 2018 (Statista, 2016; Chopdar and Sivakumar, 2019). In India, with 478 million people using smart-phones to access internet (Indo-Asian News Service, 2018), the mobile retail commerce sales are estimated to reach US\$ 37.96 billion in 2020 (eMarketer, Dec 2016; Poddar, 2016; Pandey and Chawla, 2019).

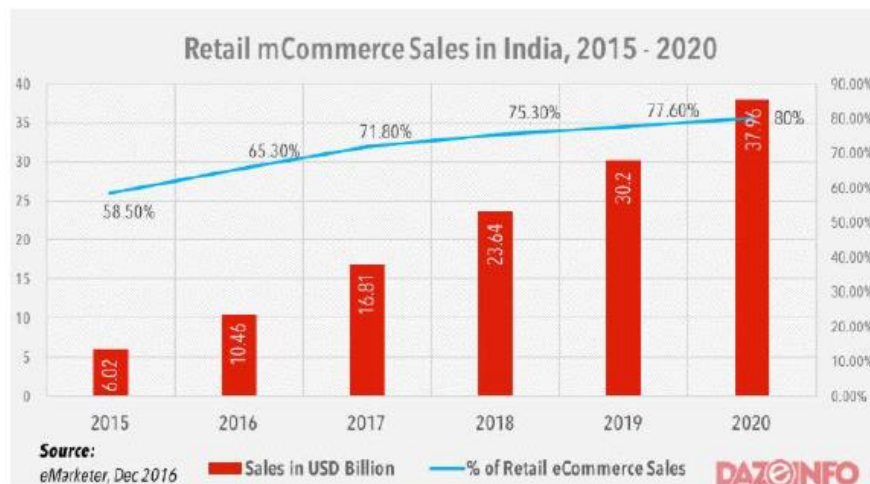


Figure 1.5: Retail mobile commerce sales in India from 2015-2020 (source: eMarketer, Dec 2016)

Few of the major market players offering mobile shopping services in India are Flipkart, Amazon India, Paytm, Snapdeal, Junglee, Groupon, Retailmenot (Chawdhary, 2015).

As of 2016, 44% of Indian smart-phone users preferred Flipkart over other sites for mobile shopping as against 32% users preferring Amazon (Poddar, 2016). As far as market share is concerned, as of 2017, Flipkart along with its subsidiaries Myntra and Jabong had a major market share of 39.5% in India followed by Amazon with 31.1% market share, Paytm with 5.6% share, Snapdeal with 2.5% share, Shopclues with 2.1% share and so on (Variyar, March 22, 2018). In the last festive season of October 2018, Flipkart had a leading market share of 51 percent, followed by Amazon with 32 percent and the rest of the companies shared the remaining 17 percent of the market (The Hindu Business Line, October 18, 2018). Figure 1.6 shows the market share of two major mobile shopping companies as of October 2018 in India.

Market Share 2018

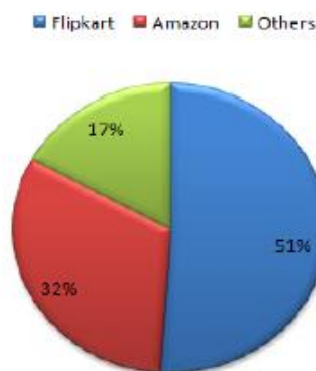
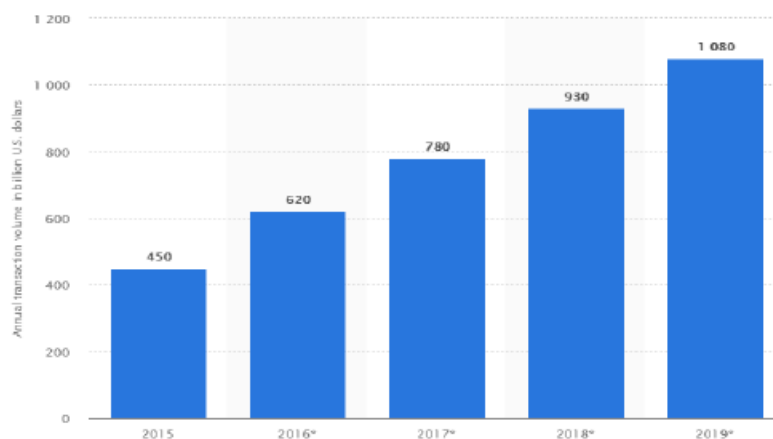


Figure 1.6: Market share of two major players in mobile shopping market as of October 2018 (Source: The Hindu Business Line, Oct 18, 2018)

Despite its strong potential, the consumers’ response is still slow and unenthusiastic towards using wireless devices for shopping online (Wong et al., 2012). The reason behind could be the issues faced by mobile shopping users with respect to limited screen size, poor connectivity, security and privacy concerns and the like (Chopdar and Sivalumar, 2019)

### Mobile Payments

The conventional payment methods through traditional banking and financial institutions are facing major challenges in the developing nations as the utilisation of mobile devices and digital platforms for making payments is increasing rapidly (Duncombe and Boateng, 2009). This has resulted in a significant raise in terms of volume of mobile payment transactions across the globe. The global mobile payment volume in 2018 was 930 billion U.S. dollars i.e. close to 1 trillion U.S. dollars (Statista, 2019) and is estimated to go up to 14 trillion U.S. dollars by 2020 (Rolfe, 2018). In India, the number of users availing mobile payment services are estimated to grow to 93 million by the end of 2019 (Nayak, 2018). As of 2018, 26% of India's population were smart-phone users and by the year 2020 the smart-phone users are expected to reach almost 500 million in number.



**Figure 1.7:** Worldwide Mobile Payment Revenue from 2015-2019 (Statista, 2019)

With the increasing internet and smart-phone users, a primary app that Indian smart-phone users are using is one or the other payment apps available (Kats, November 05, 2018). India has witnessed a recent erupt in the number of mobile payment solutions offered by various firms to its customers in different markets. About 93% of the Indian retailers are expected to accept digital wallet or mobile payments enabling their customers to shop without carrying cash (Chaturvedi, 2016).

### Mobile Entertainment

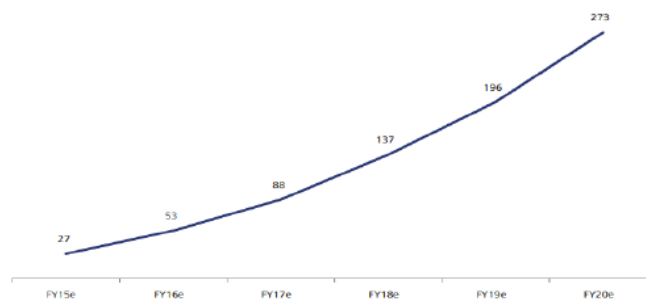
With the advancements in mobile and internet technology, another service which is gaining rapidly in terms of market value is the mobile entertainment service. It is another division of mobile commerce (Wong and Hiew, 2005), which includes any leisure activity undertaken over a wireless telecommunication network involving interaction with the service provider, and incurring of some cost. Example would be mobile gaming, mobile television, mobile internet, downloading of ring tones and music, mobile gambling and the like (Wong and Hiew, 2005). Mobile entertainment is defined by the Mobile Entertainment Forum as entertainment products including mobile games, ring tones and images functioning over a wireless network and individual mobile gadgets (Leong et al., 2013). It includes a variety of services ranging from ring tones, games, videos to even gambling over a mobile network (Shchiglik & Scornavacca, 2004). Broadly classifying, mobile entertainment services can be categorised into three parts: mobile music that includes ring tones, caller tunes and mp3 downloads; mobile television including mobile broadcasting and Video on Demand i.e. VOD and lastly mobile gaming (Kim et al., 2009).

Mobile television (mobile TV) is amongst the important upcoming application of mobile technology (Choi and Totten, 2012). It refers to traditional television content being transmitted to wireless- handheld mobile devices on a real-time basis (Loebbecke et al., 2008). It is an integration of mobile and television services which is changing the way people have been watching television for years (Wong et al., 2016). The additional advantages of flexibility and mobility offered by mobile devices, enables users to access television services without any restriction of place and time (Lee et al., 2011; Wong et al., 2014; Hew, 2016).

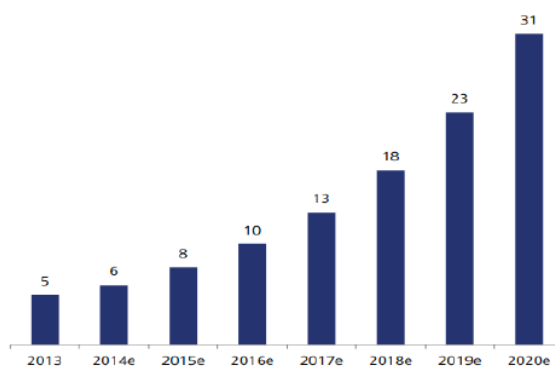
Mobile television is a personalised mode of watching television on a most personalised device i.e. mobile phone (Kaasinen et al., 2009). It involves simultaneous delivery of various multimedia services such as television, radio and video channels to the receivers on their mobile handheld devices (Kwon and Chon, 2009; Pagani, 2011). It is different from the traditional ways of watching television as it enables users to watch television programs of their choice on demand on their personal portable devices. Simply defining, Mobile television implies watching television programmes on mobile devices (Wong et al., 2015).

Mobile phone usage over the period has evolved in three major spheres of life i.e. home, work and public, with increased usage in the public sphere such as while travelling or while waiting. Mobile television has perfect utility in such situation to keep the users entertained and up dated with information (news and sports updates) (Knoche and McCarthy , 2004; Maki, 2005; Kaasinen et al.,2009). Popularity of mobile TV, in the initial phase of its diffusion, can be attributed to its ability to provide on-demand sports and news updates. Initially the utility of mobile TV was driven by sporting events such as World Cup games, FIFA (Federation Internationale de Football Association) and Olympic Games where in sports lovers were in need of continuous updates of scores of their favourite games wherever and whenever they want (Bhebhe, 2008). Another important utility that made mobile TV popular was providing real time news updates to the users (Carlsson and Walden, 2007). However, in the present time, mobile TV services are being extensively availed by users to access a variety of content including news, music, movies, cartoons, soap operas as well as sports updates (Knoche and McCarthy, 2004). Globally, the revenue from mobile TV stood at US\$ 7.69 billion in 2015 and is estimated to grow at a CAGR of 9.5% to reach US\$ 17.02 billion by 2020 (Transparency market research Report, Aug 2016). In India, it is estimated that 50% of the total video and Television viewing will take place using mobile devices by 2020 (The Economic Times, October 10, 2017). Some of the leading mobile video content providers are Youtube, Netflix, Hotstar, Amazon.

Online audio content is another service included in the broader concept of mobile entertainment. Audio content including ring-tones, caller-tunes and music downloadable or capable of online streaming on mobile devices via mobile network is another important aspect of mobile entertainment. In India, 273 million users are estimated to listen to music online by 2020 and the overall digital music industry is estimated to reach revenue of INR 31 billion by that year (Deloitte Analysis). Figure 1.8 depicts the trend in the number of mobile music listeners in India.

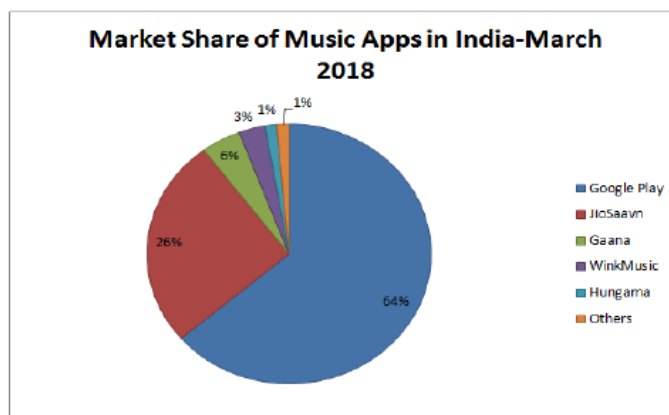


**Figure 1.8:** Online Music Users in India (Million) (Source: Deloitte Analysis) [e-estimated]



**Figure 1.9:** Digital Music Industry Revenue in India (Billion) [Source: Deloitte Analysis]

Figure 1.9 shows the current and predicted scenario of Digital music industry of India in terms of revenue generated. Major online music streaming application available in India includes Apple music, Amazon prime music, JioSaavn music, Google Play, Wink music, Gaana, Spotify, Hungama music, Coke Studio and the like (Sekhose, Feb 2018, Siddula, March 2019). It can be observed from the figure 1.10 that as of March 2018, Google play music had a leading market share of 63.7%, followed by Jio Saavn with 26.1%, Gaana with 4.5%, Wink music with 3% and Hungama with 1.3% share (Statista, 2019).



**Figure 1.10:** Market Share of Music Apps in India- March 2018 (Source: TheAtlas, 2018; Statista, 2019)

Mobile Gaming is another segment under mobile entertainment services, which has gained popularity with the advent and spread of smart-phones in the market (Kleijen et al., 2003). By providing the services of gaming over a mobile device, utilising mobile network, mobile technology has enabled users to play complex multi-player games (MPG) with and against users playing remotely (UMTS Forum, 2000) without any constraint of location and time. It serves as an effective time-killing and leisure-time entertaining activity for the users (May, 2001). At the time when mobile phones were launched and their functionality was restricted to a communication device only, users played games that came stored in their mobile handsets. The mobile gaming market truly became global, when in early 2000s, mobile phones were commercialised on their capabilities of downloading games from the operators’ own portals. However, the nature of such games was simple and was similar to the gaming consoles available in the market 10-15 years before (Durlacher, 2000). The reason was the limited processing power and graphical resolution of the mobile phones of that time (Stone, 2001; Feijoo et al., 2012). With the launch of i-phone by Apple in 2007, offering a set of advanced features such as touch screen, enhanced display, increased storage capacity, better location systems, and high-quality audio and video, there came a dramatic change in the mobile gaming market. Further, the introduction of ubiquitous mobile networks such as 2G, 3G and



4G services, many innovations were made possible. Innovations such as downloads from application stores, online gaming across different media using social networking sites such as Facebook, possibility of playing interactive multi-player and location-based games, are all possible now (Feijoo et al., 2012). Globally the mobile gaming market stood at revenue of US\$ 137.9 billion in 2018, and is predicted to go up to a revenue of US\$ 180 billion by 2020 (MediaKix, Feb 06 2019). With about 250 million gamers, India is among the top five markets in terms of active user-base and is predicted to reach the mark of 628 million users by 2020 (dotcominfoway, 2018). In terms of market revenue, mobile gaming industry has a revenue amounting to US\$ 1,015 million in 2019 and with a CAGR of 12 %, this amount is expected to be US\$ 1,597 million (Statista, 2019). As of 2017, some of the top games from India were, Ludo King with the highest number of daily active users (DAU) of 10 million, Subway Surfer with 5 million DAU and Temple Run with 2.5 million DAU (Laghate, Aug 14 2018).

## **Mobile Banking**

Innovation and rapid developments in information technology has affected every dimension of our modern lives including our means of banking and making payments for transactions. It has resulted in creation of new, flexible, and more user-friendly methods of payments (Akhturan, 2012; Dash 2014). In the pursuit of providing greater value to its customers in terms of convenience, reduced costs as well as to maintain profitability, financial companies are searching for alternative modes (Puschel et al., 2010). Mobile banking is one such alternative mode of banking which provides financial services through information technology to millions of people even in the low-income countries or emerging markets that have access to mobile phones (Ismail, 2009; Anderson, 2010; Hanafizadeh, 2014). It provides an opportunity to the financial institutions to reach new customers, improve their service quality as well as to reduce their operational costs (Ismail, 2009; Abbas et al., 2018). Mobile banking is a potential channel with which people who are otherwise excluded from the mainstream financial system due to poor access or awareness can be reached (CGAP, 2006; Ismail, 2009). It is believed, “banking is essential to a modern economy, banks are not” (Tan and Teo, 2000, pp.3)

Introduction of low-cost smart-phones along with affordable mobile internet plans in India has made it the fastest growing market in terms of smart-phone users in the Asia Pacific region (Chawla and Joshi, 2017). The ever increasing number of smart-phone companies in India including Samsung, Sony, Apple, HTC along with the new entrant such as Asus, Xiami, Micromax, etc. has resulted in the development of new alternatives for bankers as well as consumers in the form of mobile banking. India being a developing country has more number of mobile users as compared to computer users giving mobile banking a fair chance to be a potential success. The majority of India’s mobile subscribers are expected to own a smart-phone within next five years (Forrester’s Indian Mobile Banking Functionality Benchmark report, 2015). With the Government of India supporting projects such as “The Digital India”, the popularity of smart-phones has grown enormously, making it a vital part of the daily life of the citizens (Deb and Agrawal, 2017). As a result major banks in India (both private and public sector) have developed mobile websites and mobile applications for providing easy access of financial services to their customers over their mobile hand-held devices. Mobile banking can provide cost-effective banking services to the Indian population which was earlier outside the coverage of the organised banking sector (Deb and Agrawal, 2017). As a result, in India there were 251 million registered mobile banking customers as of March 2018, as against 163 million registered customers in March 2017, witnessing a growth of 54%. Further, in terms of volume it showed an increase of 13% from 2017 to 2018 (The Economic Times, Aug 29, 2018). However, with a total population of 1.3 billion, there is a huge proportion of Indians who are yet out of the reach of mobile banking, offering a great scope of growth to this sector, but only if the marketers manage to build a positive consumers’ attitude towards its adoption.

## **Conclusion**

Mobile Commerce has made a rich and prosperous environment for the organizations dealing with the users over the mobile phones. It has created an ease for the users to transact at one click and has established a platform for fulfilling their needs at any hour of the day. This has helped in quick and bulky transactions performed by the

users along with convenience and fast connectivity. The organizations are too at an advantage to reach the people of the world even at distant places. There has been a rise in interaction and has set up connections among the people. People can access the global market at anytime and can have a wide variety of products and services. The business has grasped this opportunity to run in a cost effective and an efficient manner to flourish them. Though there are certain issues like low bandwidth, poor connectivity, less security and storage but still the technological developments have increased the pace to overcome such issues. It will lead to a revolution in the coming years.

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