

## The undeniable importance of mobile applications and its global impact

Er. Kapil Mehta

Assistant Professor & Head, Department of Computer Science & Engineering, Gian Jyoti Group of Institutions, Shambhu kalan, Rajpura, Punjab, India

### Abstract

This paper presents the uses and effect of mobile application in individuals, business and social area. The world is humming to the tune of mobile apps where there is a solution for anything and everything with Smartphone. The technological innovation by the various Mobile App Development Companies suggests that as more and more people are getting addicted to mobile apps to fulfill so many requirements while on the move, life has become so easier. The competitive market demands upgradation of the apps and the new improved features so as to give the best advantage to the end user. This paper demonstrates that how individual mobile user facilitate using mobile application and the popularity of the mobile application. Here we are presenting the consequence of mobile application in business sector. Different statistical data of the past and present situation of mobile application from different parts of the world has been presented here to express the impact. This paper also presents some effect of mobile application on society from the ethical perspective.

**Keywords:** business consequence, competitive market, business promotion, mobile application, social effect

### 1. Introduction

Over the years mobile phones have changed from a simple communication device to an operative tool that has become the focal point of many businesses due to its amazing new features. Increasing advances in mobile technology, high speed data access and the interactive interfaces have turned mobile computing into a whole new experience for users. One of the biggest reasons for this is the mobile app development company has seen one of the biggest growths in the last decade by developing apps for androids as well as iPhone. Now these mobile apps have become an integral part of our lives and we rely on them in more than one way: People can do many things of his daily life and business life. Not only the mobile application has an impact for user but also it plays an important role in business. Many business companies are earning revenue using mobile application. The mobile application has an impact on society.

### 2. Mobile Application Overview

A mobile app is a software application developed specifically for use on small, wireless computing devices, such as and rather than desktop or laptop computers. A mobile application software or mobile app is a designed to run on mobile devices such as Smartphone and tablet computers. Most such devices are sold with several apps bundled as such as a mapping program, and an app for buying music or other media or more apps. Some pre-installed apps can be removed by an ordinary uninstall process, thus leaving more storage space for desired ones. Where the software does not allow this, some devices can be rooted to eliminate the undesired apps.

According to application area, there are different categories of mobile application.

1) **Native:** Native apps live on the device and are accessed through on the device home screen. Native apps are installed through an application store (such as Google Play or Apple's App Store). They are developed

specifically for one platform, and can take full advantage of all the device features — they can use the camera, the GPS, the accelerometer, the compass, the list of contacts, and so on. Communications: Internet Browsing, email IM client, Social Networking

2) **Mobile:** Web apps are not real applications; they are really websites that, in many ways, look and feel like native applications, but are not implemented as such. They are run by a browser and typically written in HTML5. Users first access them as they would access any web page: they navigate to a special URL and then have the option of “installing” them on their home screen by creating a bookmark to that page.

3) **Hybrid:** Hybrid apps are part native apps, part web apps. (Because of that, many people incorrectly call them “web apps”). Like native apps, they live in an app store and can take advantage of the many device features available. Like web apps, they rely on HTML being rendered in a browser, with the caveat that the browser is embedded within the app.

### 2.1 Past, Present and Future of Mobile Application

Think About how far Smartphone have come since they were first introduced by Steve Jobs in 2004. Within just a few short years' Smartphone and Smartphone applications have revolutionized the flow of information in terms of human interaction, business, entertainment, science and education. According to predictions by market intelligent firm IDC (international Data Corporation), mobile devices have now outnumbered laptops and desktops, and technology is changing customer preference, business conditions, and market opportunities. The implications are clear; if you are not able to reach your audience through mobile or you are not providing a satisfactory mobile experience, you will miss out on your customers. Just to put things into perspective for you, a study carried out by O2 last year found that the average

Smartphone user tends to spend approximately 2 hours a day using their device. In comparison, the time we spend with our other halves, wife/girlfriend, is just 97 minutes, almost a third less.

With this being the state of play, the focus of today's blog is to reflect on mobile technology in terms of the past and also highlight how it will change during the present and foreseeable future. Let's get started.

- **The Past** – looking back into mobile technology within the past does not involve trawling through the history books, as mobile technology is still only relatively new. With the release of the first iPhone by Apple in 2007, mobile technology and in particular Smartphone, entered the mainstream. Over the last 7 years we have seen mobile technology, especially Smartphone, emerge as a realistic alternative to traditional forms of accessing information such as web browsing to eventually becoming the “go to device” for many customers. The fact that many businesses starting up now begin with having a mobile optimised website speaks volumes for how mobile technology has shaped the business world around us. Added to this is the popularity of apps such as Facebook, Whatsapp, Twitter and Skype to name just a few that have allowed mobile applications to flourish amongst socially savvy customers.

- **The Present** – fast-forwarding to the here and now highlights just how quickly mobile technology has become part of our daily lives. For example, the mobile device has replaced many household devices and can now be considered our complete entertainment and lifestyle device.

A simple example could be an alarm clock or a digital camera, two devices that seemed a necessity just a few years ago. However, both have been impacted by the Smartphone, which has eliminated the need for many traditional devices. With the modern day Smartphone being akin to a super computer and offering much more than a voice/texting facility, many devices around the home are being kicked into obsolescence. This trend is only set to continue, as Smartphone become even more feature rich over the coming months and years.

- **The Future** – it can be difficult to predict the future with regards to technology with any certainty as the market evolves and adapts so quickly. However, one thing that is clear to see is that mobile technology is the next frontier for technology. With so much potential to unlock in terms of features, services, untapped developing markets and consumer preferences, mobile technology is the leading industry on the planet.

With that being said, now is a great time to enter the mobile landscape and help businesses adopt a mobile strategy that will align their business with their customer's expectations. To find out more, please contact the Eazi-Apps team today.

### 3. Business Consequence of Mobile Application

With the recent growth in mobile technology, the percentage of consumers using mobile devices to browse products shows a dramatic increase; 80% of internet users own a Smartphone, and among many other technologically advanced options, consumers still prefer to use this device to browse products and services according to smart insights. In this digital era,

people are highly tech savvy and they are using their mobile device for everything, ordering food, or goods. A mobile app is the easiest way to enable this behavior. Focusing on this idea, many business entities have moved into the mobile app market to widen their customer reach and to provide a more convenient and immediate customer experience. These businesses have already moved to a mobile app as the early adopters of restaurant apps, café apps and other e-Commerce apps. An app can be expensive to develop, and a restaurant may not have the time or the finances to create one. But the owner may find it worth the investment. Just having a presence on your consumer's phone is a big win for the business, as your customer has a miniature version of your store in his or her pocket. Within last few year, Smartphone and mobile application uses growth rate is so high. There are different areas of business where the mobile applications play an important role that we tried to discuss some issue about business consequence. All of the Smartphone and feature phone have smart environment and vast number of mobile application.

#### 3.1 Business of Mobile Broadband/Internet

Most of the applications are connect people to the world via Internet/ mobile broadband. For example, Google map navigation, email, entertainment, gaming, and m-Commerce. So world wide mobile users are use internet using mobile and the mobile operator and other third party company doing business by providing broadband internet service.

In last few year, the uses of mobile broadband rise dramatically all over the world but not everywhere. According to a report <sup>[5]</sup> we can see that, in Asia & Pacific and Europe the mobile broadband has a greatest numbers of subscriptions.

#### 3.2 Mobile Application Development Business

In a year round a large number of smart phone b Theresold, so mobile application development is one of fastest growing business. The Smartphone or feature phone or portable devices are easy to change setting and make it customize. There are programs for Blackberry, Android, iPhone etc. Some Specialize development companies make user friendly software or template which, user can customize them for doing their own work like share with friend. Also those software uses for video game or any entertainment. The developer company charge for the software. More users will use their software, the user will promote the software more and the company will earn more. There are mainly two types of Business model (store): one is Native or on deck and another is Third party or off deck. In one of research “Global Mobile Application Market (2010- 2016)” <sup>[11]</sup>, published that in 2010 about 6.4 billion mobile application has been downloaded from native and third-party application store. In that some are free, some are paid and some are ad-supported. In that yeas the total revenues came around \$4.5 billion with 2.5 billion download. Now the Google, Nokia and other company entering in application market space with news software which are increase the usability of Smartphone and mobile application. According to their research estimates <sup>[11]</sup>, the global mobile applications market is expected to be worth \$25.0 billion in 2015. The Wireless Expertise <sup>[14]</sup> published that, in 2013 the global mobile app market including games will rise to \$16.60 billion.

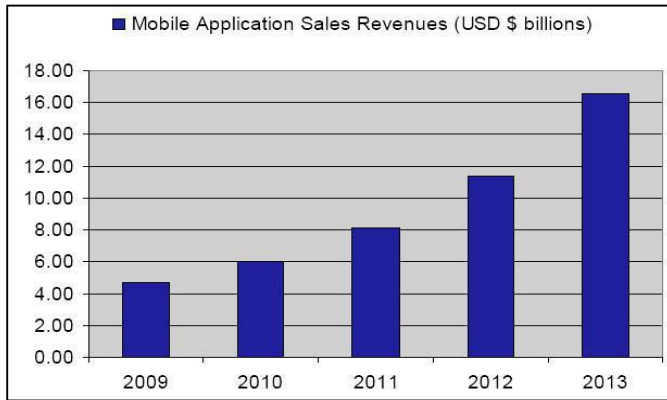


Fig 1: Mobile Application sales revenues in different year and future (From [14]).

The 2010 IBM Tech Trends Survey [10], conducted to 2000 IT developers and specialists across 87 countries and getting response. According to the survey, 55% IT professional expect that, mobile software application development for devices such as iPhone and Android, and even tablet PCs like iPad and PlayBook, will surpass application development on all other traditional computing platforms by 2015.

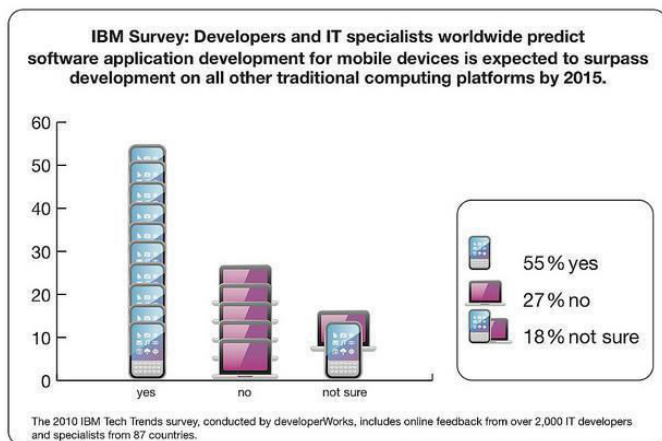


Fig 2: IBM Survey of mobile software application development (From [10])

### 3.3 Mobile Application Market

Different mobile operating system has provided by different mobile company. And for those mobile, most of the mobile company has own mobile application market. For example Ovi market, iPhone application market, BlackBerry application market, Android market etc. From those online market, mobile users can download many useful mobile application. Some application are free or provided by company with handset and some user has to pay for downloading. In every year a large number of mobile application downloaded by mobile user. So this is a big business sector. In this business sector mobile manufacturer company as well as network operators or mobile application developer companies are earning huge amount of money. Also for downloading those software the Smartphone user are using the mobile internet. Not only the mobile application but also the user downloads game, music and other entertainment material.

According to a study by mobile application store operator the mobile application market will reach \$17.5 billion by 2012.

By then, the number of mobile application downloads will have also grown to nearly 50 billion from just over 7 billion in 2009. However, as Getjar founder and chief executive officer made the bold prediction that "mobile apps will eclipse the traditional desktop Internet," even going so far as that "mobile devices will kill the desktop."

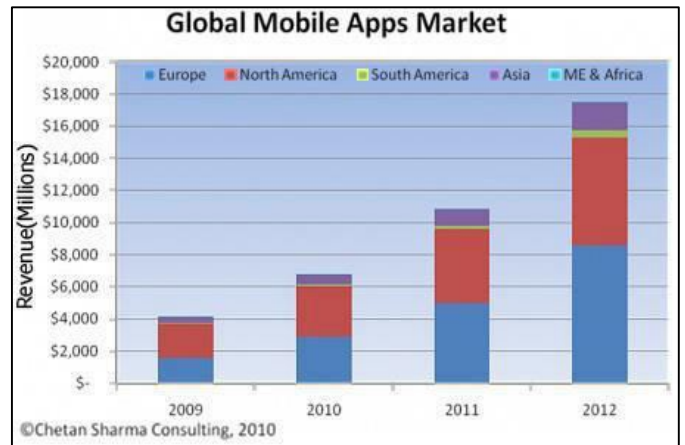


Fig 3: Global mobile apps market (From [15])

According to the survey we can see that the market mostly in Europe and North America and the market in Asia is growing. Seventeen percent of GetJar users already spend more time on Internet-linked mobile phones than they do on desktop computers, according to Laurs.

Not only Mobile Phone application but also the mobile devices like iPod application are another big market. The Mobile analysis firm Flurry on Thu, Apr 01, 2010 released and statistical date [9] for showing the impact of the iPod on mobile application development. According to the report 22% new applications starts registered with the company over the past 60 days targeted the iPod.

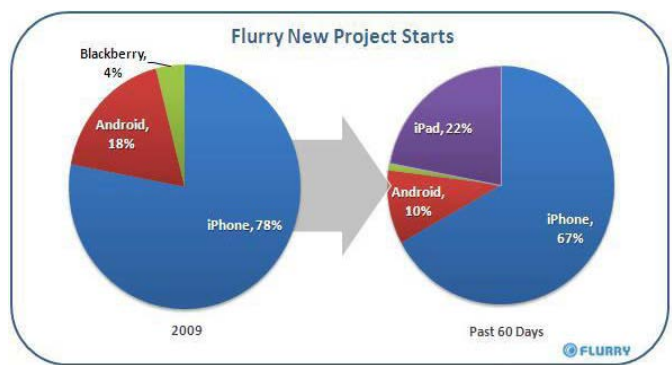


Fig 4: Impact of the iPod on mobile application development (From [9]).

### 3.4 Business Promotion or Advertising using Mobile application

The concept, Business promotion or advertising in mobile application is not so old. Now a day this is another positive impact of mobile application for business. Mobile application publisher, distributor and service provider are getting large revenue by providing ads as a part of mobile application. The advantage of advertising in mobile application depends on the popularity of application and uses frequency of that application.

### 3.5 Business using Mobile application

Here we are not talking about the business or earning money by developing or sale mobile application, we are talking about some specific mobile application by which we can do business and earn money. There are many mobile applications by which the service providers earn al lots money every month. For example, Facebook, YouTube, Twitter, Skype and other VoIP software etc. All over the world so many people using those software and the providers are earning the revenue.

If we think about the m-Commerce, there are many companies all over the world doing business by m-Commerce, by this time general user getting facilities by this.

### 4. Mobile Application's Effect in Society from the Ethical Perspective

Not only individuals or business, the mobile application also has a great effect in society. The whole society can be facilitate using Mobile application. Some issues of social effect describe bellow.

#### Quick communication

Some mobile application like Facebook, Twitter, Messenger, Skype, Google Talk are helps the society people for communication to each other. They can stay in touch where the geographical distance is not a factor. So the social relation improves and make strong. And this is good for family, friend and society.

#### Save time and increase productivity

In society or in developed country people can do their daily work like check email, contact with business partner from any time in bus, train, car or walk. So, no need to wait in room or office. In this way save the time and people can get more time to work. The manpower's productivity of society or country is increasing gradually.

#### Improve IT infrastructure in developing country

In developing country the uses of mobile application improve the knowledge of people. Because, they are accessing Internet from everywhere. As a result the IT infrastructure improves in any developing country.

#### Increase Job vacancy

The mobile application development and mobile application business make more job vacancy in society. So many people can get job in this field. This is also good for society/country.

#### Less computer use less power consumption

When most of the people will use mobile application for their daily simple work and getting facility from mobile application, the computer uses will be less as well as the power consumption will be less.

#### Considerable Cost Saving

Mobile VoIP application can help people to making international call from his mobile. As a result the monthly expenditure reduced.

#### Entertainment

Using mobile application people in society can entertained

themselves.

There are so many other social effect issues which all are ethically good for the society. On the other hand there are some bad effects of mobile application which are not ethically good for the society. Those issues as follows:

1. When the so many Internet based mobile application is available to the teenager, they are wasting time by using Facebook, skype, YouTube etc. The young generations are in risk when they are using internet game or other bad application.
2. Beside the uses of mobile application most of the people use mobile in every place like bus, train, office, college, university. Some body feels disturb for them.
3. Frequently use of mobile is bad for health.

### 5. Mobile Application Uses & Limitation

One of the big challenges of mobile application is its platform capability and limitation. Beside the interesting usability of mobile application they have some more interesting platform problems and limitation. We are trying to discuss the limitation in bellow.

- 1) **Small Screen Size:** In mobile platform it is difficult or impossible to view text and graphics like a desktop computer screen.
- 2) **Lack of windows:** In desktop we can see many windows at a time. But in mobile platform it is difficult.
- 3) **Navigation:** Most mobile devices do not have mouse like pointer, so it has limited flexibility in navigation.
- 4) **Types of pages accessible:** The mobile platform do not support all type of file format.
- 5) **Speed:** The speed of processing and speed of connectivity of mobile platform is slow.
- 6) **Size of messages or email:** Many device sup[p15o]rt limited number of characters in message or email.
- 7) **Cost:** The cost of cellphone, mobile application and the internet bandwidth charge is high.

### 6. Conclusion

After all the limitation of mobile environment and mobile application, the uses and popularity of mobile application are increasing day by day. Most of the people are trying to use mobile device and mobile application instead of desktop for easy task. Gradually the uses of mobile applications are increasing corresponding to the use of desktop applications. All of the mobile manufactured companies and mobile application Developer companies are increasing the capacity, quality and functionality. So the modern mobile applications are more capable and more usable for the user. And the global impacts of mobile applications are going high.

In this paper we have tried to explain the so many things about mobile application and business with some data from modern market. And we think this paper will help to other for further study in the mobile application area.

### 7. References

1. Mobile Marketing Association, 2008, USA 1670 Broadway, Suite 850, Denver, CO 80202.
2. Bin Yang, Yang-Yang Hao, Jie Wang, Zhi-Hua Hu "Flexible service architecture for maritime business promotion based on mobile technology " 978-0-7695-4011-5/10 \$26.00 © 2010 IEEE DOI 10.1109/NSWCTC.2010.269.

3. Ngai EWT, Gunasekaran A, A review for mobile commerce research and applications. Decision Support Systems, 2007; 43(1):3-15.
4. International Telecommunications Union, "THE WORLD IN 2009: ICT FACTS AND FIGURES", Oct 2009.
5. Mobile web, Wikipedia, URL: [http://en.wikipedia.org/wiki/Mobile\\_Web](http://en.wikipedia.org/wiki/Mobile_Web).
6. The Nielsen Company, "The State of Mobile Apps", released in September 2010.
7. Uses Of Mobile Applications For Smart Phones Visited 24-10-10
8. Eric Slivka, "Flurry: 22% of Recent Mobile Applications Starts Targeting iPad, Friday April-02, 2010 11:16 AM EST, <http://www.macrumors.com/2010/04/02/flurry-22-of-recent-mobile-applications-starts-targeting-ipad/>.
9. IBM Survey: IT Professionals Predict Mobile and Cloud Technologies Will Dominate Enterprise Computing By, Posted 2010.
10. Global Mobile Application Market Markets and Markets, Aug 2010.
11. Anand Srinivasan, Fastest Growing Mobile App Categories, June 17th, 2010.
12. Anuj Khanna, Market Report, The future of mobile application storefronts, Wireless Expertise Ltd, 2009.