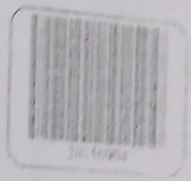


CUSTOMER SATISFACTION TOWARDS MOBILE SERVICES AND MOBILE APPS IN M-COMMERCE - COMPARATIVE STUDY ON SELECTED COMPANIES IN KARNATAKA

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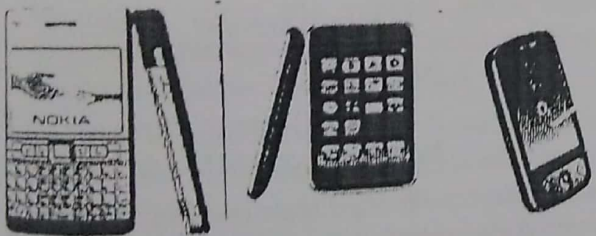


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M-commerce, is a concept that involves various applications, latest technologies and services which are accessible from Internet enabled Mobile devices. The concept of M-commerce has taken birth from the traditional commerce, any business transaction whose price or essential terms were negotiated over an online system such as Internet, Extranet, Electronic Data Interchange network, or electronic mail system. Today consumers are not only concerned with earning money but also look at the various aspect of spending it which could make the customer happy and satisfied in their every Mobile service. Wireless technology in the name of mobile has made the day to day affairs of today's customer smarter, better, faster and reliable with current standard of living. Hence it is stated that the M-commerce is treated as the best solution to the today's generation's demand which offers new services to interact with customer importance along with Network Company's goodwill.

Definition and meaning of M-Commerce

M-commerce is defined as " mobile commerce is the use of information technology & communication technologies for the purpose of mobile integration of different value chains an business processes and for the purpose of management of business relationships". - Webagency



Mobiles and Mobile Apps

"M-Commerce is the use of mobile devices to communicate, inform transact and entertain using text & data via a connection to public % private networks". - Lehman Brothers.

"The use of mobile handheld devices to communicate, interact via an always on high speed connection to the internet". - Forrester.

Purpose of the study

Mobile Commerce which was started in 1997 with basic hand set and basic services to customers in the form of making calls , receiving calls, send messages, receive messages reached to the height of having video conference with the help of 3G data and GPRS with the introduction of smart phones in the market at very competitive price by 2015 that is today..

Mobile commerce gradually claimed the ladder and explode the potential of mobile market through mobile iphone

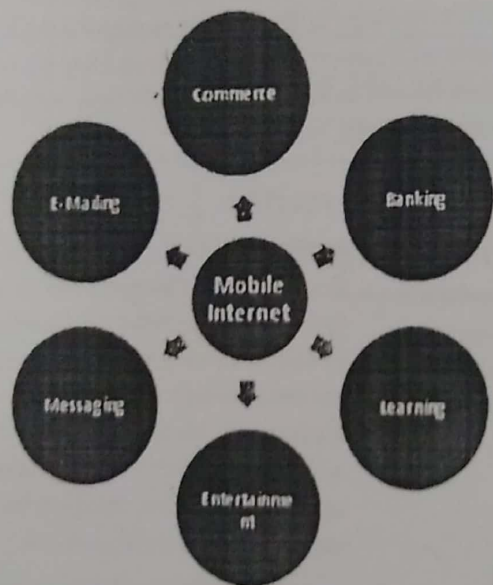
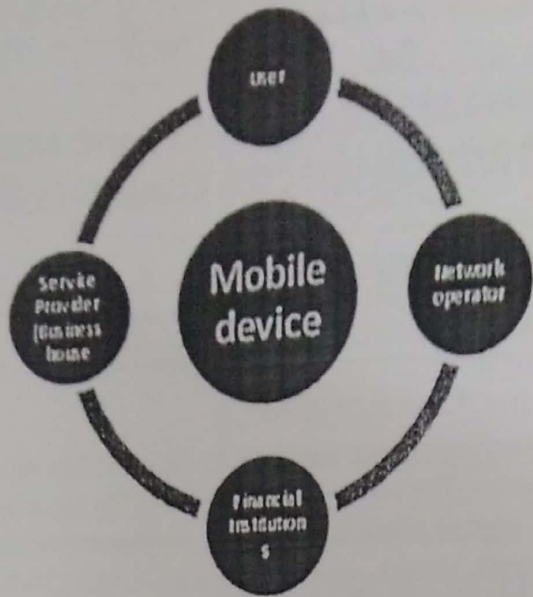
manufactures such as Nokia, Motorola, Eriksson , Qualcomm are working which carries AT&T wireless an sprint to develop WAP-enabled Smartphone, which offers fa e-Mail and phone capabilities. Early 2014, brick and mort business owners and big-box retailers in particular, ha made an effort to take advantage of M-commerce by utilizin, mobile capabilities like location-based services ,barco scanning and push notification to improve the custom experience of shopping in stores.

M-commerce, In today's business the new buzzword Mobile and Mobile services & Mobile Apps in any indus which has given platform by providing voice calln multimedia services, entertainment and other comme transition which are expected to enhance in the rever generation. Few of the important mobile commerce servi are in use by the customer are discussed here.

Categories of Mobile applications:

- Commerce : Mobile transactions & payments.
- Education : Mobile classrooms & labs
- Traffic Gps : & Traffic advisories.
- Healthcare : Accessing & updating patient records.
- Entertainment : Music\Video downloads & online gamin
- Travel & Ticketing : Travel management
- Mobile commerce and Mobile Payment Players

Every analyst or scholars has depicted the definitio M-Commerce which gives a wide meaning as its ser states. This research would like to define mobile commer " Master mind commerce " which makes consi comfortable & timeless efforts.



Mobile Internet services

Criteria for choosing M-Commerce Services/Products

1. Limited but precise choice.
2. Predictable availability.
3. Does not require lengthy & depth decision making
4. Convenience.

Reasons for M-Commerce Success

1. Affordability and personalization of mobile devices.
2. Doing things anytime & anywhere.
3. Mobile internet connectivity
4. Mobile payment gives best results than traditional methods.
5. Security through GSM/GPRS/GPS
6. Bridging the gap between E-commerce & conventional stores.

Limiting Factors M-Commerce

1. Size: Small size of Smartphone's with less powerful hardware and display interface
2. Memory: Mobile device have limited storage capacity
3. Complex application: Mobile devices can't run complex applications.

Importance of the study

In the world, M-commerce in many countries is very popular. The emergence of the mobile technology might be considered to be the key to mobile commerce in all the countries. The acceptance of M-commerce technology is increasing. The services which are available on the M-commerce are much used by the youth, it is the one of the common things to be used universally by any age group of people.

- Services available through M-Commerce
- Attempt to explore modern and easy business

Objectives of research work

The objective of this study is to find out the services influencing the customers' satisfaction in a comparative study on Airtel Network and BSNL towards using Mobile commerce today

1. To assess the customer satisfaction towards Mobile Services.
2. To assess the customer satisfaction towards Non-Mobile Services

Hypothesis :

- H1: " There is a positive association between Mobile services and Mobile Commerce".
- H2: " There is a positive association between Non-Mobile services and Mobile commerce".

Scope of the Research:

- To conduct this research the target population is mobile service users who are Post graduate students using GSM technology. Respondents are 'savvies'.
- Geographical area targeted was South Bangalore with sample size of 40 Mobile service users using Mobile services and Mobile Apps
- Survey has been done with questionnaire consisting of open-end and closed ended questions

Research Methodology

Descriptive Research. Data collection was begun by analyzing Mobile phone service users. This represents the formal bridge for the mobile commerce.

satisfaction towards the mobile basic services and Mobile Apps. The process of employing a factor analysis technique to elicit essential customer data is discussed thoroughly. After that, initial customer data were collected by conducting objective group sessions with mobile phone users and by conducting interviews. The processes of designing, testing, and assessing the survey instrument and its factors will be experimented through the pilot study stage. Additional information's about population size, sample size, scale design, and related ethical considerations will be provided.

In order to know the respondents intention to use M-Commerce basic services and Mobile Apps survey was administered through questionnaire. On the basis of review of literature the questionnaire for the research was designed and pilot testing was done with a sample of 40 postgraduates commerce students. Few modifications in terminology of statements & Clarity were carried out after pilot study.

Data has been gathered through the primary & Secondary sources. Secondary information is gathered through the information already available in the continent sources like journals, books, magazine and very important are websites. Company profile and Broachers especially Airtel and BSNL Companies. Information also gathered from commercial service office, Internet, Books, Journals and news papers.

Primary data is collected based on the simple questionnaire which provided a brief description of various Mobile services and Mobile Apps and respondents were given introduction about the concept while preparing the questionnaire researcher also considered the variable applied in the research before framing questions.

The respondents are Government servants, Businessmen, Homemakers, Students and others of South Bangalore. Random sampling method is adopted to collect the response from the respondent. The sample is drawn from the total population of south Bangalore city of Karnataka state. Respondents are using Mobile Basic Services and Mobile Apps from Airtel and BSNL network service provider to have comparative study.

Mobile basic services like Make calls, receive calls, send messages, receive messages, take picture/videos, use calculator, use timer, attend miss calls and use calendar are categorized here. Selected popular Mobile Apps like Whatsapp, You tube, true caller, Viber, twitter, maps, Flipboard, G-mail app and face book on Mobile are considered on the second objective.

Literature review:

Development of wireless and mobile technologies, Mobile Commerce (M-Commerce) is expected to make substantial impact on the business landscape. The mobile cellular market is the fastest growing telecommunication

market in terms of subscriber numbers and popularity in India (Sita Mishra 2014). Research captures users acceptance behavior towards M-Commerce by applying theory of planned behavior model developed by Ajzen (1991). Result has been indicated with the help of Hypothesis that attitude towards perceived behavior control have positive and significant impact on individuals intention while subjective norm has positive but not significant impact on intention. Further intention is found to be significantly and positively related with behavior.

A study of adoption behavior of mobile banking services by Indian consumers by Nitin Nayak, Vikas Nath & Navdeep Goel, 2014 had discussed about the Recent innovations in telecommunication which has proved to be a boon for banking sector and its customers. In the article the researcher has briefed about the Mobile Banking, where customers interact with the bank via mobile phones and banks provide them the various services like short message services, money transfers, account details, issue of cheque book etc. Now we could see that the most of the bankers providing the mobile banking as one of the services. The purpose of the research review paper is to explore the factors that influence adoption behavior of mobile banking services by Indian consumers. Article has also discusses the various steps mobile banking providers should take to increase their mobile banking services user's database. Here they have discussed detail about the Theory of reasoned action, Technology acceptance model, theory of planned behavior, Innovation diffusion theory discuss the five characteristics of innovation and Unified theory of acceptance and use of technology model.

India's largest E-commerce marketplace snapdeal gets over half of its sales from mobile based transactions from just 5% from the same platform nearly a year ago (Paresh Mishra 2014). In a statement, snapdeal said that 45% of transactions seen on mobile now come through the mobile applications while the remaining 55% come through mobile site. In the article the writer also mentioned Flipkart founder has replied the boom of the mobile commerce and this is just the beginning of the deals, still need to move on.

Faid Husein Sndreas Gausrab, Eli Bensaci- University of Ottawa's has projected that what all could be expected in M-commerce in 2002 itself. Now in 2014 all these are real common man.

- Video conferencing.
- Music & video on demand.
- Knowledge based highly personalized marketing campaigns.
- Full anywhere anytime access to corporate systems.

Location specific information pull.

Global Roaming.

Enhanced end to end security.

Dynamic call screening.

Tools of research:

Average, Standard deviation, Factor Analysis, Cronbach's Alpha and Chi-Square test.

Limitations of the study

- The geographical area of the study is restricted to south Bangalore city of Karnataka state.
- The result of the study is based on the sample survey conducted who are using basic Mobile services and Mobile Apps.
- The results cannot be generalized as the sample size is too small compared to the overall population of South Bangalore city.

Data Analysis and Interpretation

Mobile phone services are treated by each individual in a different way. During this research survey respondents gave the various responses within the question framed. It is an effort to know, whether mobile is just Useful, Essential, Personal, Status Symbol or any other reason to have mobile services in their life.

Statistics

Mobile phone service	
Mean	2.6486
Std. Deviation	1.33261
Range	4.00
Minimum	1.00
Maximum	5.00

From the above frequency table, we observe that maximum Mobile phone consumers express that mobile phone services are treated as essential which gives prominence of 34.9% and there are few people above which think that mobile is treated as useful device for them which express by presenting 21.4%.

A researcher has devised a nine basic mobile services questionnaire with which hope to measure how consumer feel while using mobile phone services like Make calls, Receive Calls, Send Messages, Take Picture, Use calculator, Use timer, Attend missed calls and Use calendar. Each service was given

Mobile phone service

	Frequency	Percent	Valid Percent
Useful	75	21.4	21.4
Essential	122	34.9	34.9
Personal	50	14.3	14.3
Status symbol	57	16.3	16.3
Others	46	13.1	13.1
Total	350	100.0	100.0

5-point liker item from strongly disagree to strongly agree in order to understand the question reliability test presented with the result.

Reliability Statistics

Cronbach's Alpha	N of Items
.884	9

We can see that Cronbach's alpha is .884 indicates a high level of internal consistency for our survey.

Researcher wishes to know the ability of providers and customer interest in Value added services provided. There are many mobile network services in the market like Airtel, BSNL, Vodafone, reliance, Idea and Others. However the importance was given to BSNL networks. Hence it is an effort to compare network services and BSNL network services. How of the network service provider are giving new competitive price to satisfy the customer and long run. Here the services like Internet, Mobile Voice Mail, E-Mail and Chat, News, Games, Entertainment, Shopping/Purchases are categorized as added mobile services.

Above table explains about the utility of mobile services by the Mobile service users. Entertainment represents most sort after among the value added services followed by the Games, E-Mail and Chat, Roaming, Shopping, Internet, mobile banking and least utility service is Voice Mailing.

Value Added Services	Male	Female	Total out of 350	Percentage of response
Internet	120	85	205	58.57%
Mobile Banking	98	26	124	35.4%
Voice Mailing	18	4	22	6.28%
E-Mail and Chat	165	152	317	90.57%
News	64	29	93	26.57%
Games	170	172	342	97.71%
Roaming facilities	148	128	276	78.86%
Entertainment	175	173	348	99.42%
Shopping	134	129	263	75.14%
Total	175	175	350	100%

In this research the consumer spending on the mobile phone services usage, one need to consider many factors of consumer behavior out of which one of the major factor is its usage and adoption of mobile services in one's life. When it is compared with the mobile networks like Airtel, BSNL, Vodafone, Reliance, Idea and others with Monthly mobile bill amount spent whether prepaid or postpaid. The Choice was spending the mobile bill between Re '0' to above '1000'.

Hypothesis states: " There is no impact of Mobile networks and monthly mobile bill spent by the consumer"

Alternate Hypothesis states: " There is an impact of Mobile networks and monthly mobile bill spent by the consumer"

When compared with Mobile Network related to Monthly mobile bill amount spent on network like

Count **Mobile Network * Monthly mobile bill Cross tabulation**

Mobile Network	Monthly mobile bill					Total
	Less than Rs 100	Rs 100 - 250	Rs 250 - 400	Rs 400 - 1000	Above Rs 1000	
Airtel	13	32	59	59	12	175
BSNL	6	7	11	6	3	33
Idea	2	5	5	6	1	19
Others	5	20	23	21	2	71
Reliance	1	5	5	3	4	18
Vodafone	2	14	10	5	3	34
Total	29	83	113	100	25	350

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.788 ^a	20	.141
Likelihood Ratio	24.434	20	.224
N of Valid Cases	350		

SNL, idea, Reliance, Vodafone and other networks, results are quite clear stating 0.05 significance level. Chi-Square value is 26.788a with 20 degree of Freedom, p-value 0.141 for chi-square $0.141 > 0.05$, Thus we, accept Null Hypothesis and conclude: " There is impact of Mobile networks and monthly mobile bill spent by the consumer"

Findings

Using mobile phone services has become quite essentials to consumers rather than any other reason

All most all the mobile phone users use all the basic mobile services whether it is paid or comes free.

Value added services are used by the most of the respondent, only those who feel it is paid or find complicated to use are avoiding the VAS. However if they are trained most of them are ready to adopt the VAS even at the cost.

It is found customer from students to others are adopting the various mobile paid plan, may be prepaid or postpaid which ranges from Rs 0 to Rs 1000 where service provider are not given much importance as ever service

provider are providing quality service competition and to be in market for long run

Conclusion.

Telecommunication which is the major communication not only to business but also depends on day to day affairs. Over the research the knowledge, that telecommunication also major business through providing various services of Basic mobile services and Value added services quite accepted by the consumers. However the Brands of Mobile and various Mobile network Here the question is about the services and the which is required for the customer to use with which allows them to download mobile apps, phones much in use are the smart phone which customer smart to smarter. In this research, presented the customer mood of using basic service and value added service along with where is the today we could see most of the customer handled through mobile phone by downloading mobile apps.