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# A STUDY ON CONSUMER PERCEPTION ON THE IMPACT OF M-COMMERCE IN CHENGALPATTU, KANCHIPURAM DISTRICTS

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## 1. INTRODUCTION

“Mobile commerce is any agreement, on the transfer of holding or ownership to use goods and services, which is launched and/or obtained by utilizing mobile access to computer negotiated systems with the benefit of an electronic device” Airtel, who early inaugurated m-commerce assistance check which will help the consumers to pay Airtel mobile and fixed landline bills, recharge Airtel prepaid and digital TV accounts, buying prizes, spending insurance premiums, tickets and shopping using their mobile phones. Reliance communication with Atom technologies and m-commerce solution provider. All culture subscribers purchase insurance services, DTH recharges, movie tickets, books and periodicals, consumer goods, holiday packages, and train and bus tickets using Reliance mobile connections. According to a recent survey performed by ACNielsen and Paymate, India has currently around 5 million M-commerce users. In India pay mate, oxycash, mcheck and ITZcash are some players in M-commerce.

### Objectives of the study:

- 1) To know about the demographic profile of the respondents.
- 2) To investigate the factor that influenced the adaptation of M-commerce services.
- 3) To know about the respondent's attitude towards M-commerce services.
- 4) To analyze the problem faced by the respondents while using mobile commerce services.

### Scope of the study:

- 1) The scope of the study is to know about the potential target consumer groups of mobile commerce.
- 2) To establish each sector based on their recent habit of m-commerce and expectation to use m-commerce in the immediate future.
- 3) This research will also help to explore the components that influence the choice towards the forthcoming use of e-commerce in the modern era.

### Limitations of the study:

- 1) The study was limited to one month.
- 2) The study area taken for this research is limited to Chengalpattu, kanchipuram districts.
- 3) The study was limited to 275 respondents
- 4) The result of the research was declared based on the respondent's approach so the result may be biased or uneven.

### Problem statement:

In the context of India, the theory of m-commerce is unique and in transmitting convenient and hassle-free shopping experiences to the customers, businesses of m-commerce are still examining the mobile sites and mobile apps. In this concern, a lot of firms are also to appoint if they would assign mobile-phone websites or mobile apps. However, owing to the inadequacy of knowledge, the use of m-commerce has not been as substantial in this country. In fact in India, while it is true that users of smartphones' are many. Apart from that, plenty of users feels risky when making payments over mobile phones. An additional issue is low internet connectivity (2G, 3G). In India, the 3G rates have dramatically declined. Somehow, some phones do not support 3G. Meanwhile, the velocity of 2G is extremely low for making purchases and payments.

### Need of the study:

The present research is carried out to investigate consumer preference and the impact of M-Commerce. This study helps to know about the influential factors in the adaptation of M-commerce, consumer's attitude towards M-commerce, consumer attitude towards M-commerce, problems encountered by the respondents while using mobile commerce.

## 2. LITERATURE REVIEW

**B.M. Gupta, S.M. Dhawan, and Ritu Gupta(2018)**<sup>1</sup> The objective of the study was to know about mobile commerce research growth, country-wise contribution to international collaborative research, and identifying top 10 productive countries in this area The paper also provides information on their relative citation index, their international collaborative publications share, activity index of sub-fields in mobile commerce research and bibliographic characteristics of 25 highly cited paper mobile commerce applications, technologies, and devices such as wireless user infrastructure, wireless network infrastructure, and mobile middleware.**Harriet Koshie Lamptey(2018)**<sup>2</sup> The objective of the study was to know about Mobile commerce in developing countries A total of eighty articles on studies conducted during 2009 and 2015 were selected for this review The concept adds up to existing modes of commerce. The review disclosed that mobile payment services appear to have more patronage than retail activities.**S. Muthu Kumar, Dr.N. Muthu(2017)**<sup>3</sup> The objective of the study was to know about Impact of mobile commerce in Chennai The primary data collected from 720 respondents was explored in this article the sample size is adequate to conduct factor analysis This study reveals that Internet, Entertainment apps, Whatsapp and Video-calling are the often-used applications in Chennai.**Azham Bin Hussain, Alaa Thamer Mahmood, Raed Kamil Naser(2017)**<sup>4</sup> The objective of the study was to investigate the Effect of M-Commerce Design Usability on Customers' Trust. The regression analysis was used to determine usability. This study investigated the effect of usability design elements on customers' trust to use m-commerce apps. A total of 20 users were invited to use the app through a series of activities to help us understand their usage behavior through the direct interaction with the app design elements.**Chiang-nan chao(2017)**<sup>5</sup> The objective of the study was to know about Emergence impact of mobile commerce: An exploratory study The targeted sample respondents were college students in a large university in the northeast of the U.S. questionnaires were distributed online over past semesters to target respondents Hypotheses, and Tests of Hypotheses. The academic research was focused on the comparisons between the computer internet and the smartphone advertising is limited, and it may take some years before significant research publications were available. **Babu Banarsi Das(2016)**<sup>6</sup> The objective of the study was to know about the impact of mobile commerce in E-commerce from in perspective of the Indian scenario Online shopping shifts to smartphones from desktop computers. Researchers have said that M-Commerce has proved a major boon for business sectors like a fiancé, telecommunication, Retail sectors, Information Sector, etc through its versatility and superiority This research paper has shown that Mobile commerce is the extension of e-commerce. It works within a mobile device using mobile network infrastructure. M-commerce is a rising technology like e-commerce. **Satinder, Niharika(2015)**<sup>7</sup> The objective of the study was to know about the impact of mobile commerce in India A Swot analysis The strategic planning method is used to evaluate the four important aspects: -i.e. Strength, weakness, opportunity, threats involved in a business venture or a project is SWOT analysis This research paper shows that M-commerce is rapidly growing in Indian business market despite its positive and negative impact. **Lila Rajabion(2015)**<sup>8</sup> The objective of the study was to know about Critical factors for the adoption of mobile commerce services The target sample was 150 young adult (18-30) mobile phone users in Saudi Arabia and Iran This study deals with consumers' perspectives regarding the m-commerce services. In the process, key determinants of consumer preference and performance are examined by systematically conducting related studies.

### Research gap:

A review of the literature tells about the impact of M-commerce. The study identified that many studies were conducted on the impact of M-Commerce only. They failed to include about consumer perception. Therefore the research gap was observed to research the consumer perception and impact of M-commerce in Chengalpattu, kanchipuram districts.

## 3. RESEARCH METHODOLOGY

The research was focused on both primary and secondary data. The primary data was collected through a well-structured questionnaire, scheduled interview, and telephonic interview among 300 respondents out of which 25 were found to be defective. The study was conducted in Chengalpattu, kanchipuram districts. Secondary data was collected through already existing sources like periodical journals, books, and websites. A simple random sampling technique was used for the research and a descriptive research design was adopted. The study used statistical tools like percentage analysis, correlation, CHI-square, and Factor analysis. SPSS was used as a statistical package.

## 4. DATA ANALYSIS AND INTERPRETATION

Table 1 showing demographic variables of the respondents

SNO	DOMINANT FACTORS	PARTICULARS	PERCENTAGE
1	Age in years	20-25	35.6
2	Highest qualification	Graduate	51.3
3	Designation	Student	44
4	Area of residence	Urban	73.1

**SOURCE: PRIMARY DATA****Interpretation:**

The above table tells that the majority of the respondents fell under the age of 20-25, 51.3% of the respondents completed their graduation, 44% of the respondents were students and a majority of the respondents were from urban areas.

**Table 2 showing correlations between designation and convenient of using m-commerce applications**

$H_0$  There is no correlation between designation and convenience of using M-commerce.

$H_1$  There is correlation between designation and convenience of using M-commerce.

Correlations			
		Designation	I think mobile commerce is convenient
Designation	Pearson Correlation	1	-.055
	Sig. (2-tailed)		.361
	N	275	275
I think mobile commerce is convenient	Pearson Correlation	.055	1
	Sig. (2-tailed)	.361	
	N	275	275

**SOURCE: PRIMARY DATA****Interpretation:**

Table 2 shows that the value of -.055 is negative and the sig value is .361. Since the p-value is greater than 0.01. Hence **there is correlation between designation and convenient of using M-commerce.**

**Table 3 Showing chi-square between designation and type of Smartphone**

$H_0$  There is no significant difference between designation and type of Smartphone

$H_1$  There is a significant difference between designation and type of Smartphone

		TYPE OF SMARTPHONE				TOTAL	P-VALUE	DEGREE OF FREEDOM	SIGNIFICANCE
		ANDROID	APPLE	WINDOWS	OTHERS				
DESIGNATION	STUDENT	95	7	8	11	121	50.117 <sup>a</sup>	9	.000
	EMPLOYEE	39	8	8	7	62			
	PROFESSIONAL	18	8	8	6	40			
	OTHERS	16	10	6	20	52			
TOTAL		168	33	30	44	275			

**SOURCE: PRIMARY DATA**

**Interpretation:**

Table 3 shows that Pearson chi-square value 50.117<sup>a</sup> with a calculated value of .000. Since the calculated value is lesser than 0.05. the null hypothesis is rejected at 9% level of degree of freedom. Hence **there is a significant difference between designation and type of smartphone.**

**FACTOR ANALYSIS OF VARIABLES****Table 4 showing the kmo-ballet test**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.863
Bartlett's Test of Sphericity	Approx. Chi-Square	10868.445
	df	1035
	Sig.	.000

**SOURCE: PRIMARY DATA**

Table 4 shows that Kaiser-Meyer-Olkin Measure is an index that defines sampling adequacy. The KMO test value is 0.863 which is more than 60% can be considered acceptable and valid to perform data reduction techniques. Bartlett's test spherically assists the researchers to predict the result of the factor analysis is worthy to continue.

**Table 5 Total variance explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.066	28.405	28.405	13.066	28.405	28.405	12.042	26.177	26.177
2	8.265	17.968	46.372	8.265	17.968	46.372	5.752	12.504	38.681
3	3.632	7.895	54.267	3.632	7.895	54.267	5.174	11.248	49.930
4	2.756	5.992	60.259	2.756	5.992	60.259	4.716	10.253	60.183
5	1.583	3.440	63.699	1.583	3.440	63.699	1.618	3.517	63.699
6	1.461	3.175	66.875						
7	1.181	2.568	69.443						
8	.971	2.111	71.554						
9	.905	1.968	73.521						
10	.859	1.868	75.389						
11	.807	1.755	77.144						
12	.711	1.546	78.689						
13	.675	1.467	80.156						
14	.668	1.451	81.607						
15	.598	1.299	82.906						
16	.560	1.217	84.123						

17	.534	1.160	85.283						
18	.495	1.076	86.359						
19	.478	1.038	87.398						
20	.437	.951	88.348						
21	.398	.865	89.213						
22	.381	.828	90.041						
23	.349	.759	90.800						
24	.325	.707	91.507						
25	.319	.693	92.200						
26	.307	.666	92.866						
27	.298	.648	93.514						
28	.273	.593	94.108						
29	.249	.541	94.649						
30	.230	.500	95.149						
31	.225	.489	95.638						
32	.217	.471	96.109						
33	.201	.436	96.546						
34	.189	.411	96.956						
35	.173	.376	97.333						
36	.166	.360	97.693						
37	.160	.347	98.040						
38	.138	.300	98.340						
39	.130	.282	98.622						
40	.119	.258	98.880						
41	.114	.247	99.127						
42	.107	.232	99.359						
43	.095	.206	99.565						
44	.077	.167	99.732						
45	.070	.151	99.884						
46	.054	.116	100.000						
Extraction Method: Principal Component Analysis.									

**SOURCE: PRIMARY DATA**

**Table 6 Rotated component matrix**

Rotated Component Matrix
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	Component				
	1	2	3	4	5
Mobile commerce is compatible with my banking needs	.852				
Mobile commerce makes it easier for me to do banking( online)	.807				
I am satisfied with the way that the merchant protect my information while in a transaction	.793				
Mobile commerce is flexible for 24*7	.792				
I think that mobile commerce service is beneficial to me	.792				
I think mobile commerce transactions are faster					.777
Mobile commerce gives me the joy of controlling my financial transactions	.775				
I believe that the security system will ensure my identity before disclosing					.770
I feel mobile commerce save transport cost					.768
Mobile commerce transactions save more time					.747
I think mobile commerce is convenient					.741
Mobile commerce helps me to know about my bank account details faster	.736				
I think mobile commerce enhance my ability to save and earn interest	.727				
I find that mobile commerce is easy to use					.724
I will frequently use mobile commerce services in future					.720
I believe that the security system does not allow unauthorized access to the account		.711			
Mobile commerce need expertise training	.705				
Mobile commerce site provides inadequate pieces of information					.695
Mobile commerce has a more flexible way to search for information					.683
I endorsed the ability of mobile commerce is protecting my privacy	.673				
Mobile commerce has a chance of data loss and cheating	.639				
Access speed becoming low		.858			
Inconvenience in mobile device		.821			
Lack of security		.812			
Poor quality of services		.788			

High price for mobile access		.785			
Service is not personalized enough		.783			
Target customers do not use M-commerce services		.767			
Consuming more data		.733			
I shop through mesho/amazon/Flipkart			.819		
I use what's app/telegram for messaging			.806		
I use mobile for entertainment			.804		
I use OLA /UBER			.796		
I use google map for navigation purposes			.795		
I use mobile wallets to pay bills			.767		
I use Skype/google duo/ google meet for video call			.743		
I use internet service in mobile					.865
M-commerce makes it easier for me to do shopping				.841	
I can search for desired products quickly				.798	
It is easy to understand and navigate the websites				.792	
The websites are always available				.754	
I could order products whenever I want				.716	
M-commerce helps me to know about my state of order				.713	
M-commerce provides me prompt and efficient service				.671	
I feel that the user-friendliness of the mobile commerce website is important					.684
Mobile commerce is reliable					.607

**SOURCE: PRIMARY DATA**

**Interpretation:**

**The first factor consists of 11 variables.**

S.no	Variables	Value
1	Mobile commerce is compatible with my banking needs	.852
2	Mobile commerce makes it easier for me to do banking( online)	.807
3	I am satisfied with the way that the merchant protect my information while in a transaction	.793
4	Mobile commerce is flexible for 24*7	.792
5	I think that mobile commerce service is beneficial to me	.792

6	Mobile commerce gives me the joy of controlling my financial transactions	.775
7	Mobile commerce helps me to know about my bank account details faster	.736
8	I think mobile commerce enhance my ability to save and earn interest	.727
9	Mobile commerce need expertise training	.705
10	I endorsed the ability of mobile commerce is protecting my privacy	.673
11	Mobile commerce has a chance of data loss and cheating	.639

**Thus these factors were named as personal opinions on M-Commerce**

Since the first factor deals with opinion about banking needs, flexibility, enjoyment of using e banking services, these factors were named as **personal opinion on M-commerce**.

**The second factor consist of 9 variables**

S.no	Variable	Value
1	Access speed becoming low	.858
2	Inconvenience in mobile device	.821
3	Lack of security	.812
4	Poor quality of services	.788
5	High price for mobile access	.785
6	Service is not personalized enough	.783
7	Target customers do not use M-commerce services	.767
8	Consuming more data	.733
9	I believe that the security system does not allow unauthorized access to the account	.711

**Thus these factors were named as Problem on utilization of M-commerce**

Since the second factor deals with issues about device access, fear about security, accessibility charge, so these factors named as **Problem on utilization of M-commerce**

**The third factor consist of 7 variables**

S.no	Variable	Value
1	I shop through mesho/amazon/Flipkart	.819
2	I use what's app/telegram for messaging	.806
3	I use mobile for entertainment	.804
4	I use OLA /UBER	.796
5	I use google map for navigation purposes	.795
6	I use mobile wallets to pay bills	.767
7	I use Skype/google duo/ google meet for video call	.743

**Thus these factors were named as availability of M-commerce applications**



Since the third factor deals with applications about online shopping, cab booking, usage of Google map so these factors were named as **availability of M-commerce applications**

**The fourth factor consist of 7 variables**

S. no	Variable	Value
1	M-commerce makes it easier for me to do shopping	.841
2	I can search for desired products quickly	.798
3	It is easy to understand and navigate the websites	.792
4	The websites are always available	.754
5	I could order products whenever I want	.716
6	M-commerce helps me to know about my state of order	.713
7	M-commerce provides me prompt and efficient service	.671

**Thus these factors were named as a psychological factor**

Since the fourth factor deals with preference about desire, interest efficiency etc so these factors were named as **psychological factors**.

**The fifth factor consist of 12 variables**

S.no	Variable	Value
1	I think mobile commerce transactions are faster	.777
2	I believe that the security system will ensure my identity before disclosing	.770
3	I feel mobile commerce save transport cost	.768
4	Mobile commerce transactions save more time	.747
5	I think mobile commerce is convenient	.741
6	I find that mobile commerce is easy to use	.724
7	I will frequently use mobile commerce services in future	.720
8	Mobile commerce site provides inadequate information	.695
9	Mobile commerce has a more flexible way to search for information	.683
10	I use internet service in mobile	.865
11	I feel that the user-friendliness of the mobile commerce website is important	.684
12	Mobile commerce is reliable	.607

**Thus these factors were named as an e-payment factor**

Since the fifth factor deals with the security system, cab booking, site provides inadequate so these factors were named as **e-payment factors**.

## 5. SCOPE FOR FURTHER RESEARCH

The present research was conducted on the consumer perception on the impact of M-Commerce in chengalpattu, kanchipuram districts. Further research can be conducted in other topics like buyer's behavior towards M-Commerce services, consumer awareness on M-Commerce payment options and so on. This study was focused on chengalpattu, kanchipuram districts only also further research can be conducted on other province like Delhi, Mumbai etc.

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## 6. FINDINGS

### GENERAL FINDINGS:

- 1) The majority of the respondents are between the 20-25 age group.
- 2) The majority of the respondents were qualified up to graduation.
- 3) 44% of the respondents were students.
- 4) The majority of the respondents were from urban areas.
- 5) Students felt comfortable about M-commerce services.
- 6) Most of the students were using android phone

### SPECIFIC FINDINGS:

- 1) Five factors are identified with the help of factor analysis. And these are personal opinions on M-Commerce, **Problem on utilization of M-commerce, availability of M-commerce applications, psychological factors and e-payment factors.**
- 2) 46 variables were limited into 5 factors with a cumulative variance of 63.699%.
- 3) These 5 factors separately have the variance of 26.177, 38.681, 49.930, 60.183 and 63.699.

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## 7. SUGGESTIONS

- 1) Without proper safety and privacy protection, users will not believe the assistance provided by M-commerce, and the users may not skillfully adopt it. Hence, M-commerce should focus on enhancing the value of the system, trust security, and lessening the cost of M-commerce services to improve the adoption of M-commerce.
- 2) Consumer adoption of M-commerce will only boost when they find it useful. This is because M-commerce has unique factors such as ubiquity and nearness, whereby users can obtain evidence immediately and contact the agreements anytime and anywhere. The more useful the online consumers perceive M-commerce, the more feasible and it is to adopt it.
- 3) Mobile commerce applications should require less scrutiny from users, they should be related to the mobile networks only when needed to reduce the rapport charge, and they should be able to ride appropriately on the victim's mobile devices.
- 4) Mobile commerce is an arising market. Hence there are substantial changes and crucial risks. However, a vigorous market needs an atmosphere of favors, creations, and a diversity of stakeholders.

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## 8. CONCLUSION

Mobile commerce is shifting the ways and rules to do marketing and business. Mobile commerce is not only furnishing immediate assistance, comfort, personalization but on the whole, it is giving value for money to the consumers. New applications show the huge acceptance and achievement of mobile commerce. This study also shows that anticipated efficacy, biased norm, buyer understanding, and anticipated hazard are the significant determinants of mobile commerce adoption. M-commerce players need to improve the user interface rapidly and implement resourceful pricing systems. M-commerce is very confident; it can transform people's lifestyle extraordinarily and have an entry from anywhere and anytime.

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