

FINANCIAL AND ECONOMIC IMPACT OF USAGE OF MOBILE APPS IN INDIA: AN EMPIRICAL ANALYSIS

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ABSTRACT

The success of apps and services in India depend significantly on their ability to run on feature-phones. Even with the shift to smartphones, successful apps and services will need the ability to run very 'light' – using little memory and very little cellular data. This 'run light and small' are the big reason for Facebook and WhatsApp's success in India. For many low-income prepaid mobile users who spend less than INR 100 a month on recharging their mobile subscriptions, their first experience of mobile data is not email or web browsing, but WhatsApp to connect to friends and family, or to a peer group. Mobile Applications' usage occupies great place in today's scenario. This study analyses the financial and economical impact on usage of Mobile Apps in India.

KEY WORDS: Economic Impact, Financial Impact, Mobile Apps

INTRODUCTION

For the marketing communication channel, use of mobile phones evolved significantly for many reasons. Firstly, mobile phones are technologically advanced both as hardware and software. Secondly, numerous amounts of data can be consumed in a very short time because of the bandwidth provided by the telephone networks. Moreover, the mobile data plans and portability options provided by the telecom companies make the mobile consumption affordable. That is why the mobile communications becomes the plethora for any companies to work as a marketing tool. Growing numbers of mobile phones generate the need for development of apps day by day. Mobile apps are much different kinds of form for the mobile communication such as SMS advertising. India's mobile market has been dominated by low-end phones, usually called feature-phones to distinguish them from smartphones Looking into this scenario, need arises to study the economical and financial

impact of Mobile apps in India.

LITERATURE REVIEW

Islam, (2014) in his study focused on the challenges faced and security threats in the mobile banking and payment system. According to him, now a days each and every financial institution is using mobile banking and other financial services as a growth strategy tool, but at the same time this usage is posing as a security threat. This study is focused on the current scenario in the security system by analysing the available literature and educating the customers on the security threats in mobile banking and financial service industry. In this study the threats posed by mobile payments, operating systems, and network and transport system is studied. This study stated that organisation and mobile companies should work together to make efficient mobile system, mobile companies should work with operational and network companies to make reliable security system. System should be regularly updated, and some SMS should be blocked that pose security threat by adopting these measures challenges can be minimised.

Aggarwal, (2014) in this study stated that in present scenario the role of the technology is increasing very fast and for the growth of an industry the adoption of the technology is must. Banking sector plays an important role for the growth of any economy, and the usage of technology in the banking sector is also increasing and the concept of mobile banking emerged. This study mainly focused on the importance of mobile banking in the era of the technology that will facilitate the growth of banking sector with high speed. This study stated the mobile banking provides certain benefits like speed, easy accessibility, security, less cost, universally accepted, increase in customer base and many more benefits that are required for the development and growth of any economy, so the concept of mobile banking is very important and gaining momentum in present scenario.

Nayak, Nath, & Goel, (2014) in this study stated that adoption of M-Banking in India is only 12 percent although there is a huge base of the internet user subscribers of 143.2 million. So, to increase the rate of adoption in India banks should take certain steps, awareness program on M-Banking should be executed through demo fairs, advertisements, pamphlets and campaigning etc. This study suggested that trust should be built among the consumers and the service providers for the security and privacy. Management's main focus should be on the development of useful systems, cost reduction and trust building among the customers as perceived ease of use and perceived usefulness are the main factors that affect the customer's adoption behaviour. Customers will use this

technology if they feel it easy to use and understand. Moreover, cost reduction strategies should be implemented by the management to attract more customers as perceived cost is also one of the determining factors for the adoption of technology.

Mariotto & Verdier (2015) in this surveyed the issues of innovation and competition in internet and mobile banking. This study states that consumer's protection should be given priority over competition, and the banks of Finland are doing the same by establishing the payment system regulator in U.K.in 2013. This study said that regulators should design the system in such a way that consumer protection, privacy, security, terms to access consumer accounts and unification of security requirements can be established.

Fenua & Pau, (2015) found that android and IOS are the main platforms on which banks are establishing their apps. Moreover there are many more advanced features in mobile banking applications than their counterpart web based banking. According to this study this platform can be used to provide access to various another extended services to the customers due to its capabilities of making possible of new advanced services and applications. So banks are investing a huge amount of funds in establishing mobile banking applications.

Sharma & Kaur, (2016) stated that the concept of M-Services is becoming prominent these days. Growing trends of investment in these services act as a promise to serve to the society. According to the Global Banking Report, M-banking is the speedily adopted and is the largest banking channel in terms of volume and value of transactions. This study is mainly focused on analyzing the adoption pattern of M-banking; and to study the progress of M-banking with various banks. It was found that the trends of Mobile banking are increasing. It was found in this study that Private Banks are playing a vital role in providing mobile-based banking services. There are many sources to spread mobile banking, but mobile banking applications are the mostly used mean of mobile banking as compare to SMS banking and website based mobile banking. It was found that M-banking is used mainly to pay bills, check statements, and check balance and mainly to transfer funds to one's own two accounts. In case of mobile banking, the major concern is of security issues. One report of Wagilant stated that most of the M-banking attempts are not able to generate fruitful impacts due to their failure in providing security. The transactions and talks are not in encrypted form, so security is the major concern and the biggest hindrance in providing customer satisfaction with these services.

A variety of researches have been conducted to examine the success of IS model at individual as well

as organization level. Moreover, the D&M model was mainly used to analyse the interrelationship of constructs at both the individual and organization level. Many studies have found that D&M model is very successful in evaluating utilitarian mode of Information System. The updated D& M model is a useful framework to understand the key success dimensions and their existing interrelationships, but other researches should be done to measure the use of D&M model in hedonic IS and further steps need to be taken by researchers to formulate a complete comprehensive and informative measure of IS Success (Petter, DeLone, & McLean, 2008).

RESEARCH METHODOLOGY

The research design is descriptive in nature. The research approach is quantitative in nature. The study covers youths ranging from age 18 to 40 from different parts. The questionnaire was filled up by anybody in India who falls under the age group up to 40 years including working and non-working groups. The distribution of questionnaires has been done through WhatsApp and emails as well as meeting personally. The present study is based on both primary and secondary data. Primary data is collected from the youths through distribution of structured questionnaire, schedule interview and discussion. Also, Secondary data are collected from the important publications, books, journals, reports, articles, published as well as unpublished work of eminent scholars associated with the field. Data has been analyzed using descriptive statistics and other statistical techniques as per requirements of the project.

ANALYSIS OF ECONOMIC & FINANCIAL IMPACT ON USAGE OF MOBILE APPS

The analysis of economic and financial impact on usage of Mobile Apps has been done by collecting primary information through structured questionnaire from the people in India. The study is to analyse what is the people's take in using mobile apps and to analyse the financial and economic impact on the usage of Mobile Apps.

Economic Impact on Usage of Mobile Apps

	Minimum	Maximum	Mean	Std. Deviation
Using mobile apps helps in getting market information	1	5	3.58	1.182
Using Mobile Apps for economic transactions gets more updates about the products/commodities/services launching in the market and the prices	1	5	3.53	1.175
Using Mobile Apps for shopping enjoys lots of Discounts and its attractive	1	5	3.51	1.136
Using mobile apps for economic activities are valuable to me	1	5	3.51	1.162
It becomes easy to find out job and related matters due to mobile apps	1	5	3.45	1.147
Using Mobile Apps while shopping earns Mobile Wallets saving and its valuable saving	1	5	3.39	1.182
At current price, Mobile shopping apps provides a good value	1	5	3.37	1.109
Products on Mobile shopping apps are reasonably priced	1	5	3.30	1.128
Mobile apps are a good value of money	1	5	3.24	1.228
My average daily consumption expenditure is reduced due to mobile apps	1	5	3.06	1.142

The Statement “Using mobile apps helps in getting market information” is given highest agreement. It can mean that respondents agree that they can get update with market information by using mobile apps. The above table also suggests that Using Mobile Apps for economic transactions gets more updates about the products/commodities/services launching in the market and the prices. The statement” My average daily consumption expenditure is reduced due to mobile apps” is given lowest agreement among the statements.

Financial Impact on Usage of Mobile Apps

	Minimum	Maximum	Mean	Std. Deviation
The type of transactions has changed due to mobile apps	1	5	3.67	1.083
The volume of transactions has increased due to ease of payment because of mobile app usage	1	5	3.65	1.104
Most of my transactions are easier due to mobile apps only	1	5	3.58	1.119

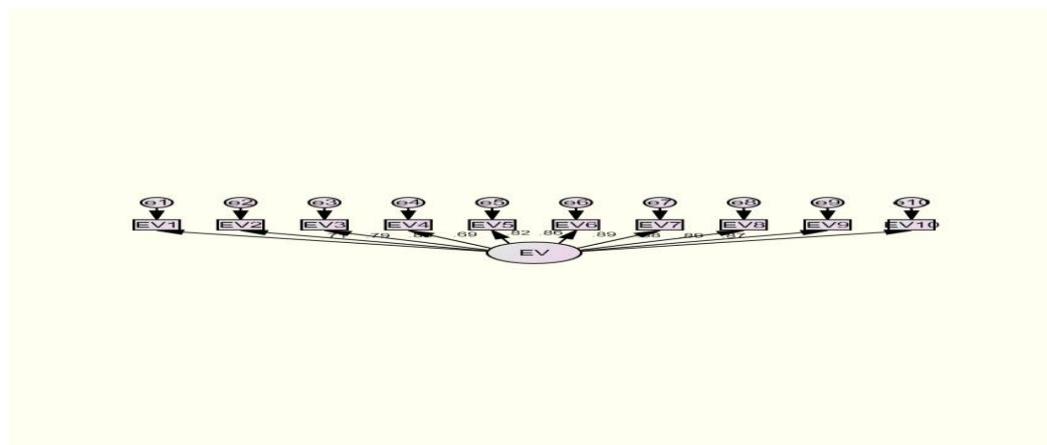
I like the idea of conducting financial transactions using mobile apps	1	5	3.53	1.078
I feel positive while conducting financial transaction through mobile apps.	1	5	3.46	1.031
Mobile apps help in taking faster saving and investment decisions	1	5	3.45	1.108
The idea of using mobile app to conduct financial transaction is appealing.	1	5	3.43	1.040

The Statement “The type of transactions has changed due to mobile apps” is given highest agreement. It can mean that respondents agree that mobile apps are helping a lot in their financial transactions. The statement” The idea of using mobile app to conduct financial transaction is appealing” is given lowest agreement among the statements.

CONFIRMATORY FACTOR ANALYSIS: ECONOMIC IMPACT ON USAGE OF MOBILE APPS

The Model under Study:

- The model of the Economic Impact on usage of mobile apps has 1 factor, as indicated by the ellipses.
- There are 10 observed variables, as indicated by the 10 rectangles.
- The observed variables load on the factors in the given pattern:
- Each observed variable loads on one and only one factor.
- Errors of measurement associated with each observed variable are also shown in the figure.



Model Showing Standardized Solution for Analysing Economic Impact

Standardized Regression Weights: The table below shows the Standardized Regression weight for each of the variables. It can be seen that all the standardized regression weights are above 0.5 indicating high level of convergent validity. It can be concluded that all variables are contributing in explaining the fair amount of variance in factors. Hence scale of Economic Impact on usage of mobile

apps is to be considered as Valid.

Standardized Regression Weights for Economic Impact

			Estimate
EV1	<---	EV	.709
EV2	<---	EV	.791
EV3	<---	EV	.831
EV4	<---	EV	.691
EV5	<---	EV	.818
EV6	<---	EV	.859
EV7	<---	EV	.892
EV8	<---	EV	.881
EV9	<---	EV	.889
EV10	<---	EV	.873

Model Fit Summary: The table below shows the Model Fit.

On the basis of all three types of-fit results, it can be concluded that the hypothesized model fits the sample data extremely well.

Absolute Fit Measure for Assessing Quality Parameters

Absolute Fit Measures		
Test	Recommended Value	Model Under Study
χ^2	p> 0.05	p=0.000
CMIN/DF	< 5	2.38
RMSEA	<0.10	0.06

Relative Fit Measure for Assessing Quality Parameters

Relative Fit Measures		
Test	Recommended Value	Model Under Study
CFI	>0.90	0.94
NFI	>0.90	0.93
RFI	>0.90	0.93
IFI	>0.90	0.93

Parsimonious Fit Measure for Assessing Quality Parameters

Parsimonious Fit Measures		
Test	Recommended Value	Model Under Study
PCFI	>0.50	0.78
PNFI	>0.50	0.77

Note : All Recommended values are based on Hair et al.(2000), Ullman (1996) recommended CMIN/DF < 5

χ^2 = Chi- Square Test , CMIN/DF = Chi square test / Degree of freedom ,

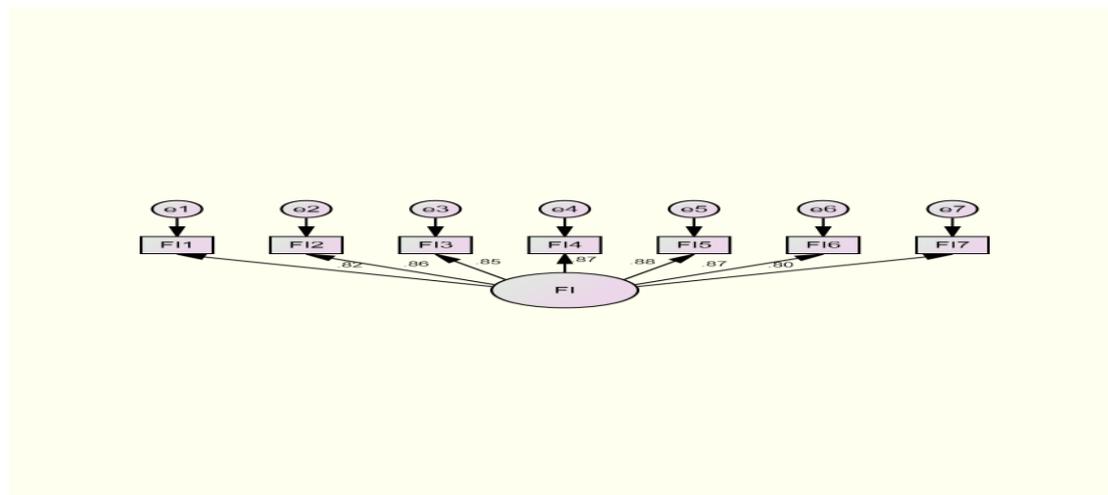
RMSEA = Root Mean Square Error of Approximation, CFI = Comparative Fit Index

NFI = Normed Fit Index, RFI = Relative Fit Index , IFI = Incremental Fit Index,

PCFI= parsimony Comparative Fit Index , PNFI= Parsimony Normed Fit Index

CONFIRMATORY FACTOR ANALYSIS: FINANCIAL IMPACT ON USAGE OF MOBILE APPS

- The model of the Financial Impact on usage of mobile apps has 1 factor, as indicated by the ellipses.
- There are 7 observed variables, as indicated by the 7 rectangles.
- The observed variables load on the factors in the given pattern:
- Each observed variable loads on one and only one factor.
- Errors of measurement associated with each observed variable are also shown in the figure.



Model Showing Standardized Solution for Analyzing Economic Impact

Standardized Regression Weights: The table below shows the Standardized Regression weight for each of the variables. It can be seen that all the standardized regression weights are above 0.5 indicating high level of convergent validity. It can be concluded that all variables are contributing in explaining the fair amount of variance in factors. Hence scale of Financial Impact on usage of mobile apps is to be considered as Valid.

Standardized Regression Weights for Financial Impact

			Estimate
FI1	<---	FI	.823
FI2	<---	FI	.855
FI3	<---	FI	.850
FI4	<---	FI	.867
FI5	<---	FI	.880
FI6	<---	FI	.867
FI7	<---	FI	.796

Model Fit Summary: The table below shows the Model Fit.

On the basis of all three types of-fit results, it can be concluded that the hypothesized model fits the sample data extremely well.

Absolute Fit Measures for Assessing Financial Impact

Absolute Fit Measures		
Test	Recommended Value	Model Under Study
χ^2	p> 0.05	p=0.000
CMIN/DF	< 5	2.92
RMSEA	<0.10	0.08

Relative Fit Measures for Assessing Financial Impact

Relative Fit Measures		
Test	Recommended Value	Model Under Study
CFI	>0.90	0.93
NFI	>0.90	0.93
RFI	>0.90	0.92
IFI	>0.90	0.91

Parsimonious Fit Measures for Assessing Financial Impact

Parsimonious Fit Measures		
Test	Recommended Value	Model Under Study
PCFI	>0.50	0.67
PNFI	>0.50	0.67

Note : All Recommended values are based on Hair et al.(2000), Ullman (1996) recommended CMIN/DF < 5

χ^2 = Chi- Square Test , CMIN/DF = Chi square test / Degree of freedom ,

RMSEA = Root Mean Square Error of Approximation, CFI = Comparative Fit Index

NFI = Normed Fit Index, RFI = Relative Fit Index , IFI = Incremental Fit Index,

PCFI= parsimony Comparative Fit Index , PNFI= Parsimony Normed Fit Index

CONCLUSION

It was found that respondents can get update with market information by using mobile apps. It was also found that using Mobile Apps for economic transactions gets more updates about the products/commodities/services launching in the market and the prices. It is clear that mobile apps are helping a lot in respondents financial transactions. In addition, the volume of transactions has increased due to ease of payment because of mobile app usage.

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