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A Simple and Convenient Fund Transfer Payment Service Model of Commercial Banks: A Study on IMPS System

Rama Krishna Mishra

ABSTRACT

A bank is a financial intermediary that accepts deposits and channels those deposits into lending activities, either directly by providing loans or indirectly through capital markets. A bank links together customers with capital deficits and those with capital surpluses. Due to their importance in the financial system and influence on national economies, banks are highly regulated in most countries. The business process is counted to use the power of computers and communication networks which are known as Internet. This can allow organisations to stay competitive and more efficient. Electronic banking, also known as electronic fund transfer, uses computers and electronic technology as a substitute for checks and other paper transactions. The study intended to establish how value can be created in business management through electronic money transfer systems in commercial banks through the Interbank Mobile Payment Service (IMPS) system. This complements an earlier study on money transfer systems. The researchers recommend an improvement in the efficiency of electronic money transfer systems so as to reap the maximum benefits out of them in IMPS.

KEYWORDS: Payment Service, Fund Transfer, Convenience, Commercial Banks, IMPS, Money, Electronic

INTRODUCTION

Banking is an essential part of our lives and it has gone online just like everything else. There are still a lot of us who visit the banks for various services such as deposits, withdrawals, cheques, etc. The use of technology in India has undergone rapid transformation. The role of technology is moving very rapidly. The trend of new technology has now become a fashion in the group of new generation. The new generation is very affectionate towards new technologies. Mobile banking is the part of new technology and its features are changing very fast. Already there are lots of features provided by the mobile technology providers. Interbank Mobile Payment Service (IMPS) is the new innovation in the field of mobile banking. These days banking operations have become part of our regular day-to-day

work. The need of banking services, especially to businessman, is very essential. So, IMPS has an option to the mobile users to use the banking facilities anywhere and anytime with the help of mobile Internet. Now transfer of funds is easy and convenient.

The last two decades have witnessed a sea change in the nature of services offered by not only banks but also by the financial sector and even the government, all of which have had a positive impact on the customers of these organisations and the general public at large. The various studies show that the maximum number of mobile Internet users in the world is from India. So, mobile banking provides a new opportunity to Indian banking industry for capturing the new customer. With this innovative and dynamic application, National Payment Corporation of India (NPCI) has

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revolutionised the mobile banking approach in an extensive way which has an immense potential of conducting financial transactions, thus leading the financial growth with a lot of convenience and much reduced cost. There is no denying the fact that there are more than 60 crores mobile phone users in India which is much higher than the number of bank accounts (30 crores). So transfer through mobile phones makes sense. Once everybody starts using IMPS, one will be able to pay even to taxi guy, local shopkeeper or subziwala using it. Mobile banking and IMPS can help in the creation of a mobile-based digital cash economy that is more efficient, transparent and inclusive. A coordinated attempt with deploy-effective services and educated potential customers will help in speeding up adoption.

Gone are those days when depositing amount in a friend/relative's bank account would take a few business days. World is moving faster and now there are various methods for fund transfer to another account within no time. Let us view some of those methods along with the associated charges in this article.

NEFT

NEFT or National Electronic Funds Transfer system has been introduced by the Reserve Bank of India (RBI) to make funds transfer between banks throughout India fast and hassle free. A bank branch has to be NEFT enabled for a user to be able to transfer funds to another user using this facility.

RTGS

Real Time Gross Settlement (RTGS) as defined by RBI is a continuous (real-time) settlement of fund transfers individually on an order-by-order basis (without netting). 'Real Time' means the processing of instructions at the time they are received rather than at some later time; 'Gross Settlement' means the settlement of funds transfer instructions occurs individually (on an instruction-by-instruction basis).

RTGS differs from NEFT in the settlement time. In the case of NEFT, there are batches defined for settlement and if a transaction crosses the stated time, it has to wait for the next batch to be processed. Transactions in RTGS are processed continuously throughout the working hours.

IMPS

IMPS is also known as immediate payment service. A cost-effective, channel-independent retail payment service, introduced by NPCI empowering customers to transfer funds in real time to another person or to a merchant, for any personal or commercial purpose. Immediate payment service is an interbank electronic instant mobile money transfer service through mobile phones in India. IMPS offers an instant, 24 × 7, interbank electronic fund transfer (EFT) service through mobile phones. IMPS facilitates customers to use mobile instruments as a channel for accessing their bank accounts and put high interbank fund transfers in a secured manner with immediate confirmation features. Mobile phone usage increasing day by day, transactions using this service is expected to be huge in the coming years. Users can transfer funds to their desired bank accounts through their mobile which have Internet access.

Unlike RTGS and NEFT, IMPS can be used 24×7 to transfer funds between bank accounts throughout India. Today's finicky banking customers will settle for nothing less. The customer has come to realise somewhat belatedly that he or she is the king. The customer's choice of one entity over another as his or her principal bank is determined by considerations of service rather than any other factor. Customer wants convenient, cost-effective applications which can fulfil their requirements processed in double quick time. He or she cherishes the convenience of fund transfer but that too should possess security, affordability and reliability. In short, a customer not only wants his or her operations to be done in real time but also minimum risk should be there; he/she wants a bank that cares and provides great services.

Unlike any other fund transferring ways, IMPS stands out to be the fastest way since the next best alternative, which is NEFT, does not transfer funds in real time as the processing is carried in batches and another drawback is that both in NEFT and RTGS, the funds can be transferred only in working hours; hence, the IMPS is probably the fastest way for transferring the funds which works Instant, 24×7 by just using your mobile phone as a medium.

IMPS services are expected to provide greater convenience at lower costs to retail customers, retail merchants and government agencies but the adoption is very low. The methodology is based around five key dimensions:

- Accessibility
- Flexibility
- Security and serviceability
- Effort
- Ease of transaction

REVIEW OF LITERATURE

Following the diverse trends in branchless banking, comes another huge development known as the 'mobile money'. The new model which takes alternative delivery channels to a whole new level provides a paradigm shift in the way more traditional financial institutions operate. The advent of mobile money, a platform which allows people to use their mobile phones like wallets to transfer money, pay for goods and services and conduct banking services, has started to have a transformative effect at a faster pace as previously envisaged (Kulabako, 2010). This platform offers the new services to move money from place to place and presents an alternative to the payment systems offered by banks, remittance firms, pawn shops, and others. Mobile money as a facility stores money on the subscriber identity module (SIM) as an identifier as opposed to an account number in the conventional banking sense (Mendes and Alampay, 2007). By complementing services offered by the banking system, such as cash books, automatic teller machine (ATM), voice mail/land line interfaces, and Internet resources, the mobile platform offers a convenient additional method of managing money without handling cash (Karjahcoto, 2002). In summary, Dahlberg and Mallat (2008) observe that mobile money services in the developing world enable users to do three things: (a) store value (currency) in an account accessible via handset, (b) convert cash in and out of stored value account and (c) transfer stored value between accounts.

According to Sivapragasam (2010) mobile money services can include but not limited to peer-to-peer (P2P) mobile money transfers, mobile or person-to-business payments for goods and services (bill and retail payments) services. Mobile money services have served as a new delivery channel to replace existing banking to the extent that some people find it worthless to pay a lot of money or travel long distances to put small amounts into an account. Increasingly, mobile money operators have struggled to find cost-effective models to expand their physical reach into poor and rural areas and to handle large volumes of low-income cash transactions traditional banks had left out.

The above argument agrees with Maurer's (2008) observation that mobile payment services are becoming increasingly associated with lower income population groups in developing countries whose level of saving is quite low. Likewise, Birch and Young (2007) observe that mobile money services, in general, offer relative advantages in terms of accessibility, convenience, speed, privacy, cost-effectiveness and control for conducting financial transactions over other money transfers or payment intermediaries such as banks and other financial institutions. In this case, mobile money networks have a potent required level of proximity and low transaction costs.

Notwithstanding the above advantages, mobile money services offer an unprecedented opportunity to significantly increase access to financial services and ease the flow of financial transactions within business environment. Other than increasing access to financial services, Radcliffe (2010) argues that mobile money reduces risks of loss inherent in handling cash and has also proven to increase savings opportunity in developing countries.

Currently, customers use financial services that they find convenient, reliable and affordable and that offer the right balance of liquidity (Mas and Morawczynski, 2009). World Bank report estimated that 3.5 billion people in the world who lacked access to formal banking services are finding convenient and cheaper financial services that are being provided by mobile money in their home (World Bank, 2009). Morawczynski and Pickens (2009) further affirm that mobile money networks have been identified by the majority as potential service conduits through which financial services can be extended to unbanked population. In addition, mobile money services have the potential to offer speedier and more cost-effective service delivery than the traditional commercial banks. The drastic increase in the number of people using mobile money could be attributed to above virtues.

Incidentally, the use of mobile money services in the informal commercial sector has been perceived by commercial banks as potential competitors who are threatening banks' survival. Indeed, mobile banking has redefined the competitive landscape of commercial banks in the country posing a threat to the growth and, even, the very survival of banks, according to experts. Initially, competition used to be only within the banks themselves, but now the unmatched outreach of mobile telecommunication companies, their dynamism and capacity to innovate have got the banks thinking hard on how to survive (Sturmius, 2012). It is suspected that significant growth in mobile commerce has disadvantaged the commercial banking sector in way that their liquidity has been indirectly stolen (Pickens, 2009). Majority of bank customers find it cheaper and convenient to use mobile money services to make payments. By doing this, the commercial banks are deprived of deposits that would otherwise increase liquidity in banks. The drastic decline in the number of loan transactions by 15% between July and December, 2011 in Ugandan Commercial Bank is attributed to reduced liquidity (Nuwagaba, 2012). Nonetheless, this assertion lacks credible empirical evidence in the banking literature.

Contrary to the great threats about the potential for

mobile money to deprive banks of their liquidity and intimidate their survival, empirical evidence in the existing literature is limited. Although some studies have addressed issues of consumer willingness to use mobile services (Dahlberg and Mallat, 2008; Szmigin and Bourne, 1999), the influence of mobile money remains unexplained (Hinman and Matovu, 2010).

RATIONALE OF THE STUDY

In the 'age of customer' delivering best of the service is considered an essential strategy for success and survival in today's competitive environment. Thus, in light of this background, the paper seeks to identify the areas where initiatives can be taken by the banks in order to instil a customer centric culture; therefore, the gap between customer's expectation, requirement and fulfilment related to different modes of fund transfer is studied. The research is undertaken to study and understand the applicability of convenience of using IMPS and areas of improvement as well and identify the critical variables that customers seek from a mode of fund transfer.

Objectives of the study

- To assess various aspects of fund transfer provided by banks in Odisha.
- To determine and compare the extent of customer's satisfaction with the services rendered.
- To suggest remedies for improvement in the quality of service of banks on the basis of findings.
- To know about customer's perception, experience and issues concerned with IMPS.

H₀: There is a significant relation between customer satisfaction and dimensions regarding fund transfer IMPS service provided by banks in Odisha.

H₁: There is no significant relation between customer satisfaction and dimensions regarding fund transfer IMPS service provided by banks in Odisha.

Research Methodology

This study is analytical in character and seeks to

examine the IMPS service of commercial banks in Odisha. For this, 70 sample respondents residing in Bhubaneswar city of Odisha and whose bank accounts were in public sector banks were selected using simple random sampling method and served a questionnaire. This questionnaire contains 13 statements and measures both expectation and perceptions of consumers with respect to the service on a scale of 1–5 i.e., from strongly disagree to strongly agree and gap score is calculated by deducting expectation.

The collected data are analysed with the help of factor analysis that too from *Kaiser–Meyer–Olkin (KMO)* and *Bartlett's Test* and multiple regression analysis for deriving meaningful conclusions out of the study.

DATA ANALYSIS AND FINDINGS

Demographic Profile of the Respondents

Data presented in Table 1 show that, out of 70 respondents, 52 people responded towards it, and out of those 52 in terms of age group, 38 (73.07%) respondents are in the age group of (20–31) followed by 10 (19.23%) in the age group of 31–42, 2 (3.84%) below and above the age group of less than 42 and more than 20, respectively. In terms of occupation, student class formed the highest portion with 28

(53.84%) respondents, 14 (26.92%) belong to the business group, and 6 (11.53%) of the respondents belong to salaried class. In terms of service 96% of the total respondent found it cost-effective, time saving and user friendly. On the other hand, 65% of respondents feel that it involves a risk factor.

Factor Analysis

Factor analysis is used to find factors among observed variables. In other words, data contain many variables; factor analysis is used to reduce the number of variables. Factor analysis groups variables with similar characteristics together. With factor analysis one can produce a small number of factors from a large number of variables which is capable of explaining the observed variance in the larger number of variables.

Kaiser–Meyer–Olkin (KMO) and Bartlett's Test: KMO test measures strength of the relationship among variables.

Table 2: KMO and Bartlett's test (factor analysis)

Kaiser-Meyer-Olkin	0.589	
sampling adequacy		
Bartlett's Test of	Approx. chi-square	310.270
Sphericity	df	78
	Sig.	0.000

Table 1: Demographic profile of the respondent

Age	Frequency	Percentage	Profession	Frequency	Percentage
>20	2	3.84	Salaried	5	11.53
20–31	38	73.07	Business	14	26.92
31–42	10	19.23	Retired	2	3.84
<40	2	3.84	Housewife	2	3.84
Total	52	100	Student	28	53.84
Frequency of Use			Total	52	100
Once a day in a week	18	34.61			
1–2 in a week	8	15.38			
2–3 a day in a week	12	23.07			
3–5 a day in a week	12	23.07			
Once a day in a week	2	3.84			
Total	52	100			

Source: Survey

Table 2 shows that the KMO measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to proceed. The KMO value of the 13 variables through factor analysis is 0.589 which shows that the factor analysis is adequate and satisfactory for this sample size.

Table 3 shows all the factors extracted from the analysis along with their eigen values, the per cent of variance attributable to each factor, and the cumulative variance of the factor and the previous factors. Output shows the table of communalities before and after extraction. The total variance explained for the above factor analysis is 77.150% and the number of factors is coming only 5 which are shown in the component matrix. The factors have been extracted through principal component analysis and rotation in the varimax method.

Rotated Component Matrix

The idea of rotation is to reduce the number factors on which the variables under investigation depend. Rotation does not actually change anything but makes the interpretation of the analysis easier. Table 4 shows the rotated component matrix (also called the rotated factor matrixin factor analysis), which is a matrix of the factor loadings for each variable onto each factor. So the component with the maximum loading will be taken.

Table 5 shows the five prominent factors out of total 13 variables that are significant and which influence the IMPS facility of State Bank of India.

Factor 1		Accessibility
Factor 2	\Rightarrow	Flexibility
Factor 3	\Rightarrow	Security and Serviceability
Factor 4	\Rightarrow	Effort
Factor 5	\Rightarrow	Ease of Transaction

(Note: Factors having maximum component loading has taken into consideration)

Multiple Regression

Regression analysis is a statistical process for estimating the relationships among variables.

Table 3: Total variance explained of factor analysis

Component	Initial eigen values				Extraction sums of squared loadings			Rotation sums of squared loadings			
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %		
1.	3.375	25.960	25.960	3.375	25.960	25.960	2.570	19.773	19.773		
2.	2.253	17.328	43.288	2.253	17.328	43.288	2.192	16.864	36.638		
3.	1.835	14.115	57.403	1.835	14.115	57.403	2.189	16.839	53.476		
4.	1.434	11.028	68.431	1.434	11.028	68.431	1.544	11.874	65.351		
5.	1.133	8.719	77.150	1.133	8.719	77.150	1.534	11.799	77.150		
6.	0.816	6.276	83.426								
7.	0.597	4.592	88.018								
8.	0.475	3.654	91.672								
9.	0.425	3.266	94.938								
10.	0.260	2.003	96.941								
11.	0.195	1.498	98.440								
12.	0.112	0.865	99.305								
13.	0.090	0.695	100.000								

Extraction Method: Principal Component Analysis.

Table 4: Rotated component matrix (factor analysis)

Variables	Component						
	1	2	3	4	5		
Is mobile application for IMPS is easy to get familiar with?	0.089	0.699	0.167	-0.484	-0.084		
Do you think IMPS provides greater flexibility?	0.126	0.781	-0.027	0.056	0.019		
Does using IMPS application requires a lot of mental effort?	-0.198	0.002	0.158	0.908	-0.126		
Through IMPS is it easy to operate interbank services?	-0.206	0.412	0.640	-0.082	-0.396		
Is IMPS inexpensive?	0.685	0.182	-0.337	-0.036	-0.131		
Is IMPS on phone clear and understandable?	0.737	0.349	0.209	-0.102	0.168		
Does one have to spend much effort in trying the IMPS?	0.263	-0.090	0.811	0.100	0.173		
Does IMPS provide quicker access to finances need for the transaction?	0.738	0.265	0.102	-0.427	0.058		
In today's financial transactions, one sees IMPS used by many people.	-0.067	-0.110	0.010	-0.277	0.829		
In using IMPS, I am concerned more about the consequences of making a mistake.	0.333	0.720	-0.368	0.109	0.078		
I did not have adequate opportunities to try the IMPS application.	-0.250	0.363	-0.056	0.421	0.676		
My mobile phone is compatible with the IMPS mobile application.	0.809	-0.129	0.042	-0.050	-0.344		
Financial transfers with IMPS application are the most affordable single type for me.	0.083	0.102	-0.872	-0.043	0.078		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation. a. Rotation converged in seven iterations.

Table 5: Factor matrix

Factor 1	Is IMPS inexpensive?
	Is IMPS on phone clear and understandable?
	Does IMPS provide quicker access to finances need for the transaction?
	My mobile phone is compatible with the IMPS mobile application.
Factor 2	Is mobile application for IMPS easy to get familiar with?
	Do you think that IMPS provides greater flexibility?
	In using IMPS, I am concerned more about the consequences of making a mistake.
Factor 3	Through IMPS is it easy to operate interbank services?
	Does one have to spend much effort in trying the IMPS?
	Financial transfers with IMPS application are the most affordable single type for me.
Factor 4	Does using IMPS application require a lot of mental effort?
Factor 5	In today's financial transactions, one sees IMPS used by many people.
	I did not have adequate opportunities to try the IMPS application.

Table 6 indicates that tolerance is more than 0.20 and the variance inflation factor (VIF) is also less than 5 which satisfies the multi-collinearity test, i.e. no multi-collinearity exists in the above regression model among the explanatory variables. Furthermore, the *R* square value in the table is coming 0.904 that is all the independent variables influenced the dependent variables by 90.4% which is a good sign of the model formulation, and the standard error estimate of 0.291, indicating 29.1% of the sampled IMPS is associated. The probability value of ANOVA i.e. p-value = 0, which reveals that the interdependency of IMPS with the five factors are significant and valid also.

The significant value of all the factors is coming less than 0.01 which signifies that all the factors like accessibility, flexibility, security and serviceability, effort and ease of transaction are highly significant that IMPS is a popular mode of fund transfer. So, all the factors are significant at the 1% level.

CONCLUSION

Based on the above results what is crucial in the current financial sector is to ensure that the high-value services at low cost are conveniently extended to the client. In this case, service providers that provide or offer relative advantages in terms of accessibility, convenience, speed, privacy and cost-effectiveness are assured of the ready market. Owing to the above findings, it is fairly enough to make a tentative conclusion that mobile commerce has contributed to the liquidity of the commercial banks. Therefore, it renders support to hypothesis H1 earlier stated in this study. Fundamentally, commercial banks should realise that the way forward is to reorganise and remobilise clients through the provision of high-value economic services which grant reasonable convenience to clients. This strategy is poised to increase bank deposits.

RECOMMENDATIONS

From my research, I would like to recommend the following things:

- People are concerned more about security, privacy, speed, as well as transparency of usage charges when using IMPS, so it should provide such type of service which will carry less cost and provide more security. Transactions should be allowed only after proper authentication of customer's details.
- IMPS can be called as 'Banking of Young Operators' because mostly it is used by youth who are more technology savvy. So it should focus more on extending the service it gives and also add some features which can attract more youth to use it.
 For example, paying the examination fee through IMPS.
- People are not so much aware about this service and its benefits so it should focus on creating

Table 6: Multiple regression coefficients

Variables		dardised icients	Standardised coefficients	t	Sig.	Colline statis	•
	В	Std. error	Beta			Tolerance	VIF
(Constant)	0.243	0.104		2.346	0.02		
Factor 1	0.193	0.021	0.285	9.346	0.000*	0.403	2.483
Factor 2	0.154	0.022	0.209	7.833	0.000*	0.526	1.903
Factor 3	0.028	0.019	0.042	1.461	0.001*	0.523	2.002
Factor 4	0.134	0.012	0.071	2.121	0.002*	0.451	2.123
Factor 5	01122	0.016	0.032	1.899	0.004*	0.541	2.155
R square	0.904	Std. error of the estimate	0.291	F-value	6.705	P-value	0.000

^{*}Significant at 1%

awareness through social media, hoardings, print media, radio, newspaper, television so that even people living in rural areas could know about this service and get benefited. For youths, promotions and advertisement through social networking sites can play a major role. For others, advertisement via SMS and calls can also create awareness.

- It is a general feedback from customers that sometimes when WI-FI or other network is slow, the transaction gets stuck and money get deducted from the account. So these types of inconvenience should be taken into consideration.
- In every branch, a person should be appointed who can deal with the issues which customers are having regarding IMPS and live demos should be given so that better services can be rendered. Bank

- staff should also tell customers about the benefits of having IMPS.
- Bank should launch a site <u>www.techstars.com</u> where customers can get solutions to their issues regarding IMPS. Customers can post their experience as well which will create a bonding between banks and customers.

The customer knows about RTGS and NEFT fund transfer. So my suggestion is that banks should create awareness and focus on its popularity about this innovative, convenient and cost-effective facility which can be of great importance to customers as well as banks. If banks will give more importance to five factors, i.e. accessibility, flexibility, security and serviceability, effort and ease of transaction, then it will be the most prominent one.

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<u>ANNEXURE – I</u> QUESTIONNAIRE

Dear Madam/Sir,

I am doing a study on "A Simple Fund Transfer Payment Service Model of Commercial Banks: A Study on IMPS system". The present topic has grown considerably over the last few year. Please take a few minutes to let us know your views. Your opinion will be kept confidential. Data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

A. Personal Information

1. Name of the Person:								
2. Sex	: Male/female	: Male/female						
3. Age group	: 18–25 yrs	26–35 yrs	36–45 yrs	46–55 yrs	55–60 yrs			
4. Profession	:							
5. Designation	:							
6. Qualification	:							

B. Subject Information

The respondents are advised to give their opinion on the following five weightages such as:

(Strongly Disagree - 1; Disagree - 2; Neutral - 3; Agree - 4; Strongly Agree - 5)

Mobile application for IMPS is easy to get familiar with			
IMPS provides greater Flexibility			
IMPS application requires a lot of mental effort			
IMPS is easy to operate inter-bank services			
IMPS inexpensive			
IMPS on phone is clear and understandable			
One have to spend much effort in trying the IMPS			
IMPS provides quicker access to finances need for the transaction			
In today's financial transactions one sees IMPS used by many people.			
In using IMPS I am concerned more about the consequences of making a mistake.			
I did not have adequate opportunities to try the IMPS application.			
My mobile phone is compatible with the IMPS mobile application.			
Financial transfers with IMPS application are the most affordable single type for me.			