

Evaluating Acceptance of Mobile Money by Poor Citizens in India: An Empirical Study

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Mobile Money - Introduction

- A financial transaction service that can be performed by mobile phones (Tobbin & Kuwornu, 2011)
- Provides low cost and speedy money transfer (Donovan, 2012; Lochan et al., 2010)
- Facilitates the financial transactions such as remittance and payment of bills (Aker & Mbiti, 2010; Pope et al., 2011)

Mobile Money - Introduction

- A large section of population in the developing countries such as India does not have access to banking facilities but hundreds of millions of them use mobile phones extensively ([Donner & Tellez, 2008](#))
- A potent tool for enabling financial inclusion ([Must & Ludewig, 2010](#); [Pope et al., 2011](#); [Aker & Mbiti, 2010](#))
- M-Pesa in Kenya is being used by more than two-third of its adult population and transfers around 25% of country's GDP ([Economist, 2013](#))

Research Questions

- Usefulness and simplicity of Mobile Money (M-money) (Dahlberg et al., 2003; Kumar et al., 2011)

How does perceived usefulness and ease of use of m-money encourage poor population of India to actually use them?

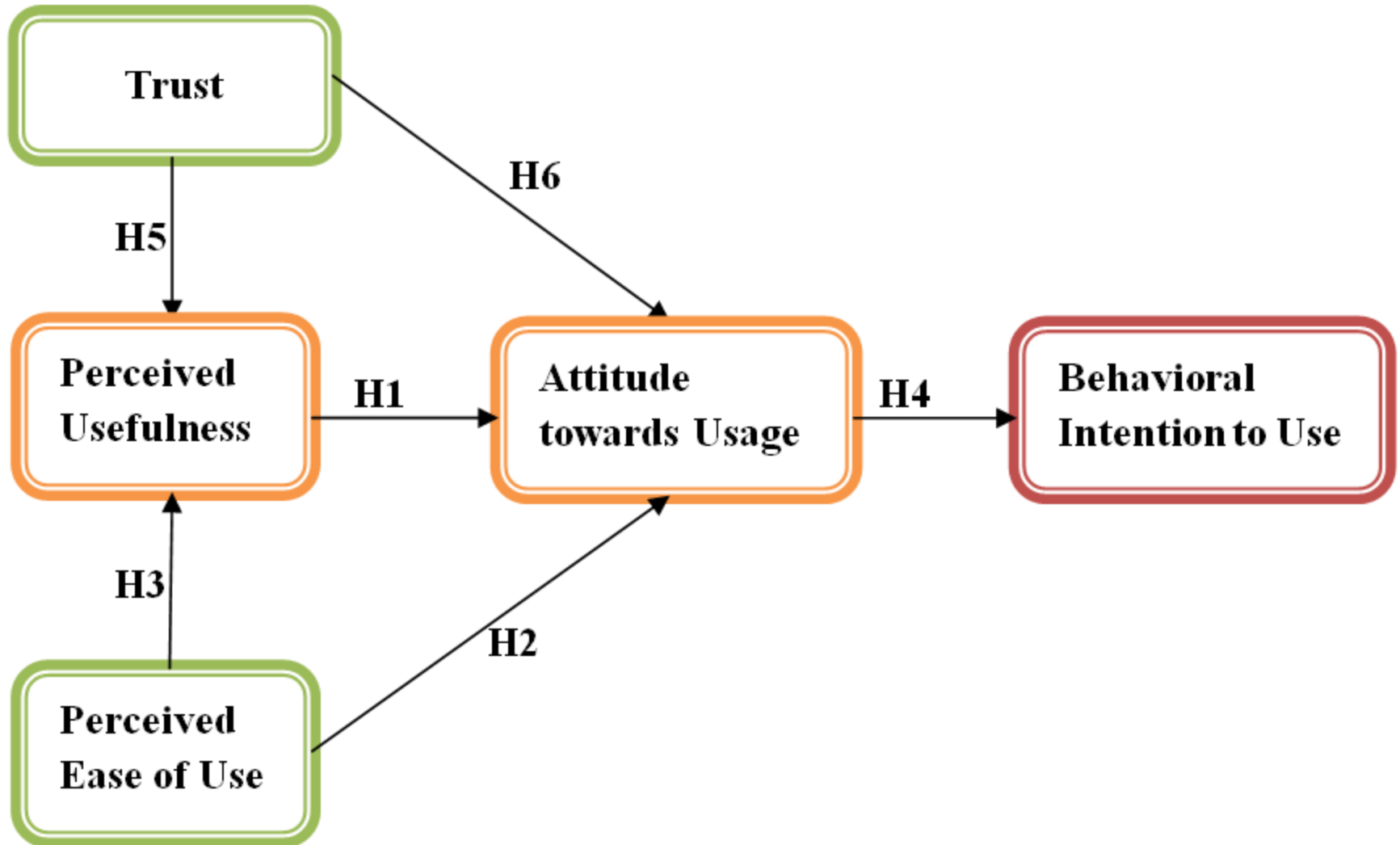
- Lack of trust may lead to the possible obstruction to their widespread adoption (Dahlberg et al., 2003; Bélanger & Carter, 2008)

How does the perceived trust in m-money impact poor Indians' intention to accept it?

Technology Acceptance Model (TAM)

- We studied the acceptance of m-money among the target population i.e. below-poverty-line (BPL) citizens in India using the TAM (Davis, 1986)
- TAM is a widely used tool for evaluating the acceptance of an information system (King & He, 2006)

Research Model



Hypotheses Building

- Cheaper alternative to transfer money quickly and safely ([Donovan, 2012](#))
- More remittance in less transaction costs, while eliminating the possibility of theft or leakage ([Jack & Suri, 2011](#))
- Improves productivity and efficiency by avoiding lengthy queue times ([Donovan, 2012](#); [Lochan et al., 2010](#))
- Users are better able to manage financial shocks due to flexibility and ease of access ([Stuart & Cohen, 2011](#))
- A payment platform where payment can be sent or received by hospitals, schools and firms ([Aker & Mbiti, 2010](#))
- PU is a major factor impacting ATU ([Davis et al., 1989](#))

H1: Perceived usefulness of m-money has a positive effect on the user's attitude.

Hypotheses Building

- Should be simple and easy to understand because of low technological sophistication and literacy rate in India (Mas & Morawczynski, 2009; Pope et al., 2011; UNICEF, 2006)
- It is highly important to educate the users of m-money at the point of sale as the ease of use of an information system can impact its usefulness and user's attitude (Davis et al., 1989)
- A number of studies demonstrate the positive and direct impact of the PEOU on ATU and PU and the ATU on BI to use (Chen et al., 2002; Hung et al., 2005; Davis et al., 1989; Schierz et al., 2010; Lee & Kim, 2009; Yang & Yoo, 2004)

H2: Perceived ease of use of m-money has a positive effect on the user's attitude towards usage.

H3: Perceived ease of use of m-money has a positive effect on its perceived usefulness.

H4: User's attitude toward using m-money positively affects behavioural intentions to use.

Hypotheses Building

- Uneasiness of parting with own money (Donovan, 2012)
- Belief that the use of m-money will keep their hard-earned money safe can impact its adoption (Tobbin & Kuwornu, 2011)
- M-money maintains privacy and autonomy because of invisibility of cash which in turn leads to reduction in the cases of mugging (Donovan, 2012)
- Women can save money from any interference of their male counterparts and vice versa (Morawczynski, 2009)
- A number of studies employed trust in the TAM (Pavlou, 2003; Gefen et al., 2003; Ha & Stoel, 2009)

H5: Trust in the m-money has a positive effect on its perceived usefulness.

H6: Trust in the m-money has a positive effect on the user's attitude.

Research Methodology

- Items were adapted to fit to the context of our study (Davis et al., 1989; Wu, 2011; Igbaria et al., 1997; Venkatesh et al., 2003; Venkatesh & Davis, 2000; López-Nicolás et al., 2008; Fogel and Nehmad, 2009)
- Finalized a total of 17 items after discussion with experts
- 225 responses collected from below-poverty-line card holders on 7-point Likert scale
- Data analysis using a structural equation modeling technique called partial least square using the SmartPLS 2.0 software (Lai et al., 2009; Wixom & Watson, 2001)
- Reliability and validity of the model were confirmed

Path coefficients, t-statistics, and p-value

Hypotheses	Paths	Coefficient Path	T-Statistics	Results
H1	PU→ATU	0.26	4.04**	Supported
H2	PEOU →ATU	-0.09	1.17	Not Supported
H3	PEOU→PU	-0.07	0.78	Not Supported
H4	ATU→BI	0.34	5.86**	Supported
H5	TR→PU	0.18	2.99*	Supported
H6	TR→ATU	0.22	3.87**	Supported

** p<0.001; * p<0.05

Findings and Recommendations

- If poor people are made aware of m-money's usefulness such as transferring money quickly and safely at low cost, they will be inclined to start using it
- The service providers should strive to incorporate features that users find useful and there should be an effort to spread the message of usefulness of m-money to its potential users through a consciously focused marketing strategy

Findings and Recommendations

- M-money's ease of use does not automatically lead to its acceptance
- However, intuitively ease of use is important for the poor and less literate or illiterate people and this paper does not recommend ignoring ease of use completely but instead suggests the relative importance of other factors

Findings and Recommendations

- A tighter controlled regulatory policy around security of transactions, leading to lack of fraud cases, will contribute to enhanced trust in m-money
- Mobile companies should invest in the safety infrastructure to ensure user trust in m-money
- As poor people are prone to be skeptical about safety of money and hence, there should be a conscious effort to educate users on m-money's safety feature

Constructs	Measurement Items	Description
Perceived Usefulness (PU)	PU1	I believe m-money reduces turnaround time to transfer money.
	PU2	I believe m-money is useful.
	PU3	I believe m-money enables the transfer of money at low cost.
	PU4	I believe m-money makes money transfer easy.
Perceived Ease of Use (PEOU)	PEOU1	I believe m-money is easy to use.
	PEOU2	I believe m-money is simple and understandable for performing transactions.
	PEOU3	I believe that the use of m-money is trouble-free.
Attitude Toward Using (ATU)	ATU1	I have a favorable attitude toward using m-money.
	ATU2	I believe that the use of m-money is beneficial.
	ATU3	I like the idea of transferring money through m-money.
Behavioral Intention to Use UID (BI)	BI1	I will certainly use m-money to send money.
	BI2	If I were asked about my opinion on m-money, I would say something favorable.
	BI3	I intend to use m-money as often as possible.
Trust (TR)	TR1	M-money is a trustworthy service.
	TR2	I can count on m-money to protect my money.
	TR3	I can count on m-money to transfer my money safely.
	TR4	The m-money can be relied on to keep its promises.

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Thank you!!

Appendix 1: Average variance extracted and Cronbach's α

Construct	Average Variance Extracted (AVE)	Cronbach's α
ATU	0.76	0.84
BI	0.77	0.85
PEOU	0.70	0.80
PU	0.66	0.83
TR	0.61	0.79

Appendix 2: Inter-construct correlations

Construct	ATU	BI	PEOU	PU	TR
ATU	0.87	0	0	0	0
BI	0.34	0.88	0	0	0
PEOU	-0.12	-0.02	0.84	0	0
PU	0.31	0.21	-0.08	0.81	0
TR	0.28	0.36	-0.08	0.19	0.78