

# Adoption of M-Banking Service Apps for Rural Consumers: An Empirical Analysis

Debarun Chakraborty<sup>1</sup>

## Abstract

The Banking industry is one of the most important sectors of any nation. There have been so many advancements implemented till date in the area of online banking with many more yet to come. In developing countries, online banking is speedily improving. The introduction of smart phones and 4G facilities in India have taken online banking a step ahead. People residing in urban areas are already adopting and enjoying online banking. The aim of this study is to find out the primary factors that influence rural consumers' adoption behaviour towards mobile banking. Technology acceptance model has been

applied for this study. Responses have been gathered from rural consumers of West Bengal and multistage sampling procedure has been implemented to conduct the research. 287 samples were selected and multiple regression analysis was conducted to find the outcome of the study. Perceived convenience has a significant and highest impact whereas perceived cost and risk does not have any significant impact towards adoption of mobile banking apps.

**Keywords:** *M-app, Convenience, Trust, Cost, Adoption, Usefulness, TAM*

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<sup>1</sup> Associate Professor, Symbiosis Institute of Business Management, Nagpur; Constituent of Symbiosis International (Deemed University), Pune

## Introduction

A World Bank report states that the level of grown-ups without ledgers tumbled in the last few years. This pattern is to a great extent driven by the increase in accounts in various banks among developing nations and the role of innovation. Notwithstanding the lower number of individuals on the planet without a ledger, there are still so many unbanked grown-ups in rural India. Among the few reasons for this is neediness, absence of education and absence of proper infrastructure in developing nations. In developing nations like India, North Korea, Russia, etc., monetary organizations, for example, banks and insurance agencies regularly forget rural areas as target markets. In light of the extent of study, further outline is constrained related to banking operations. Banks are not enthusiastic about providing banking services to India's rural citizens and prefer to limit their services to urban regions (Mohan and Potnis 2015). The number of banks in rural areas is far lower as compared to urban areas. As a result, the rural population has less access to banking as compared to their urban counterparts.

Increasing usage of smart phones has facilitated banks to reach out to the unbanked citizens. Utilization of cell phones is progressively making people aware about various services of banks who never exposed towards this kind of services before. Financial and non-financial institutions such as telecommunications companies, have developed various services for mobile users who do not have a bank account. There are three different ways by which a client can manage account administrations with a cell phone. The client gets to manage an account benefit through an internet browser, a downloaded application or by sending a SMS message (Donner and Tellez, 2008). Embracing a transformational model of keeping money administration can help change the lives of poor people and the unbanked through monetary chances and market openings that can be gotten from access to

budgetary administrations (Mohan and Potnis, 2015). As a stage, cell phones can be utilized for saving money in rural zones in this manner making managing an account reasonable (Donner and Tellez 2008). Versatile managing of an account benefit gives a viable way to spare and have simple access to funds which gives a wellbeing net in crisis circumstances; for example, instalment for emergency clinic charges in dangerous circumstances. Receiving new innovations in various areas of a nation brings enhancement and modernization of various segments; for example, keeping money, trade and government. New innovations help to enhance the lives of individuals and society. The degree to which they convey change relies upon how much such society acknowledges and embraces the advances (Tahini et al., 2015).

As indicated by Tahini et al. (2015), web advancements have extraordinarily affected how banks work and how they serve their clients. Their article explicitly talked about selection of web-based banking services with regard to the web. Accessibility of the web gives the alternative of managing an account through the internet to clients which empowers them to pay charges, check account data and exchange assets from anyplace and whenever. Banks and their clients both profit by the selection of web-based managing an account. Web-based managing an account can enable banks to spare expense, enhance the nature of administration and increment income. Along the line, mobile banking rose in which banks offered clients a way to bring out budgetary exchanges through telephone calls. Research on the use of Internet technology in the mid-1990s and mobile telecommunication technology have led to the creation of electronic books with Internet banks as a channel for the conduct of financial activities on the global web platform. High infiltration of cell phones and an expansive nearness of media transmission organizations in urban and country zones makes cell phone based managing an account a

suitable and promising type of branchless saving money. Regardless of the focal points that portable advances convey to the clients, banks and the Indian economy, the utilization and selection of these advances in India is still growing contrasted with many developing nations. In Indian urban areas, a few people are still not using mobile banking apps so one can imagine the condition of rural India easily. A portion of the issues that hinder the reception of versatile/web based managing an account recognized in research are security, trust, trouble in the use, absence of familiarity with the advantages, religion or social trusts (Tarhini et al., 2015).

### **Existing Review of Literature**

A literature review on mobile banking adoption uncovered that 42% of the studies surveyed connected Technology Acceptance Model in their hypothetical methodology (Shaikh and Karjaluo, 2014). Technology Acceptance Model as a hypothesis started from the TRA (Theory of Reasoned Actions) which depends on subjective brain science (Silva, 2007) and is broadly connected in the field of information technology. The TRA has been connected in social brain science to effectively foresee smoking goals and practices among smokers (Grube et al., 1986). In a comparative way, the use of Technology Acceptance Model in data frameworks field has been credited to help in structuring better and easy-to-understand interfaces and setting accentuation on how beneficial and applicable a data framework is to a client (Silva, 2007). Technology Acceptance Model is commonly used to address why clients acknowledge or dismiss an innovation as verified by Davis (1993). Technology Acceptance Model suggests that a person's apparent convenience usability decides the social goal and acknowledgment to utilize such innovation. Seen convenience is excluded in the model. There have been a few analyses on the irregularities of convenience not having any impact on utilization goals (Li, 2010). One investigation found that there was no noteworthy

connection between usability and selection of portable managing an account among non-clients (Jeong and Yoon, 2013). According to Kumar & Kaushal (2017), the observed price, perceived quality, perceived risk and perceived brand seemed to have a significant impact on attitude and buying intensity. Understanding consumers is one of the toughest jobs and it becomes more difficult when they actually want to purchase something (Verma & Rojhe, 2018). According to Bhadra & Rego (2019), there is a relationship between customer parity and all the magnitudes with customer loyalty. There was a noteworthy relationship when tried on clients in the same investigation. Another quantitative investigation directed in rustic Ghana did not discover apparent usability to have a huge effect on frame of mind towards versatile keeping money (Crabbe et al., 2009). As referenced in the presentation and foundation section, rustic occupants are to a great extent still unbanked. There is low attention to what individuals can do with their telephones; for instance, getting to bank administrations is still in its crude stage (Tobbin 2012). Consequently, the vast majority in provincial zones cannot identify with the usability of utilizing an administration they don't know about or maybe they can relate with choosing if such administration will be valuable, helpful, cost cash or deserving of trust.

### **Perceived usefulness & adoption of M-banking services**

Perceived usefulness has been an extremely noteworthy development in inspecting an individual's expectation to receive different sorts of innovation (Davis 1989; Venkatesh 2000; Tang and Chiang, 2009). Seen value as utilized in this setting alludes to the degree to which an individual trusts that the utilization of portable managing an account administration would be gainful in one limit or the other; for example, reserve funds and access to advances. Seen helpfulness as a build in TAM has appeared to reliably impact a person's expectation to receive portable

managing an account (Jeong and Yoon 2013; Crabbe et al. 2009; Wang et al. 2006). Seen value is a type of outward inspiration. A person's inspiration is viewed as outward when the person in question sees that playing out an action would be instrumental in accomplishing esteemed results that are independent from the movement itself. Tobbin (2012) recommends that the most imperative keeping money benefit that provincial tenants might want to have is investment funds and credits. Provincial tenants can thus have the inspiration to have a conduct aim to receive portable keeping money on the off chance that they figure it will encourage less demanding access to getting credits from the banks. Other portable managing account administrations featured in the investigation is directing run-of-the-mill bank exchanges. Once more, Tobin's investigation shows that provincial inhabitants' conviction that portable managing an account would be valuable in making exchanges; for example, cash exchange. Exchanging cash to individual or accepting cash would turn out to be simple and an exceptionally valuable component that could impact reception of portable keeping money. It is extremely regular for loved ones to send money and sorts to help individuals in country zones. This is an exceptionally helpful component since it enables people in rustic zones to have simple access to funds. Bhatt (2016) contemplates and likewise demonstrates that clients see they would spare time and exertion in exercises; for example, charge instalment by utilizing versatile managing an account administration. These sorts of elements would emphatically impact their conduct expectation to embrace portable saving money. In view of the past exact proof of the hugeness of saw value in portable saving money, the accompanying speculation is displayed:

H1: Perceived usefulness is having a significant & positive influence on adoption of M-banking services.

## **Perceived convenience & adoption of M-banking services**

The idea of comfort has been utilized in showcasing to portray the time and exertion customers use when purchasing an item or administration instead of the qualities of the item (Tang and Chiang, 2009). Accommodation is adjusted as a build in connection to mobile banking adoption as having two measurements which are time and place. Concerning the space measurement, there is restricted access to managing an account benefit in rustic zone (Oluwatayo, 2013) and a mind-boggling expense related with heading out to bank areas or ATM administrations. With regard to the temporary dimension, mobile banking can significantly affect the time and effort that rural areas do not devote to their banking activities. Certain managing account administrations can be completed at various occasions that are helpful to a client. Rustic zones that are separated from a great deal of establishments however approach versatile systems can, without much of a stretch, utilize portable keeping money benefits inside their networks.

The discoveries of Dalhatu et al., 2014 demonstrated that accommodation had a critical association with seen value. Be that as it may, another investigation of appropriation of portable saving money did not locate a huge connection between an assembled build of convenience & cost and social expectation to utilize. It has been shown that comfort indirectly affects users' behavioural intentions to adopt mobile knowledge management by influencing useful utility (Tang and Chiang 2009). In another investigation that analysed elements that affected the goal to utilize portable instalments, comfort was observed to be fundamentally basic (Kim et al. 2010). Late adopters of the innovation saw it significantly more valuable contrasted with early adopters. Provincial tenants are commonly late in tolerating advances than their urban

partners due to slower entrance of those innovative foundations in rustic territories. Along these lines, this prompts the accompanying theory:

H2: Perceived convenience is having a significant & positive influence on adoption of M-banking services.

### **Perceived cost & adoption of M-banking services**

Seen budgetary expense has been coordinated in TAM as an anticipating factor for selection. It is characterized as the degree to which an individual trusts that utilizing portable managing an account administration will cost cash (Luarn and Lin, 2005; Wang et al., 2006). This perspective of saw cost is coordinated as build to the examination model to give a point of view of a person's monetary inspirations concerning how it impacts their social goal to utilize portable managing an account. Individuals in country regions regularly need to head out to the bank to spare or pull back cash. The sum they spend voyaging is a piece of the boundaries they confront while considering opening a financial balance. With regards to versatile managing an account, an individual may trust that there is related expense to utilizing the administration which may fill in as an obstruction to having a social aim. As seen by Tobbin (2012), an individual in rustic zone would address if such administration is reasonable.

There is a difference in the noteworthiness of saw money related expense as a factor that impacts social expectation to receive versatile managing an account. This could be because of contrasts in components; for example, culture, infrastructural conditions, monetary conditions that win in various areas that the examinations have been directed (Jeong and Yoon 2013). The discoveries of Luarn and Lin (2005) bolstered the thought that cost is a huge obstruction to be viewed as while embracing versatile saving money. A portion of the general population interviewed by Tarhini et al. (2015) who highlighted that cost was a factor that frustrated their entrance to web based managing an account. The cost of Internet access, if imposed by the mobile banking service, would be an adverse factor particularly among low salary

individuals. The discoveries of Mustafa (2016) uncover that apparent budgetary expense is fundamentally emphatically associated to the reception of telecom-drove branchless portable saving money administrations. Be that as it may, the adjustment of the term apparent budgetary expense as utilized by Mustafa (2016) repudiates the creator's reference to its adjustment from Luarn and Lin's (2005) think about. Luarn and Lin (2005) in their examination characterize apparent budgetary expense as the degree to which an individual trusts that the utilization of portable saving money will cost cash in this manner contrarily impacting social goal. A larger part of the general population reviewed in the investigation directed in Pakistan utilized versatile managing an account benefits and trusted that they could set aside extra cash and slice cost contrasted with customary keeping money administrations (Mustafa, 2016). Regardless of the inconsistency in the phrasings, the two discoveries of Luarn and Lin (2005) and Mustafa (2016) have suggestions that apparent budgetary expense can have a noteworthy effect on conduct goal or utilization. In any case, different investigations have appeared and there is no noteworthy connection between seen monetary expense and social expectation (Ramlugun and Issuree 2014; Jeong and Yoon 2013). Given the abnormal state of neediness and low pay among other restraining factors in Indian provincial zones, the accompanying speculation is proposed:

H3: Perceived cost is having a significant & positive influence on adoption of M-banking services.

### **Perceived trust & adoption of M-banking services**

Earlier investigations in online selection of portable keeping money have included trust and trust-based builds; for example, saw hazard and saw believability into TAM models (Faniran and Odumeru 2015; Luarn and Lin 2005). Albeit saw trust, saw chance and saw believability are said to be theoretically discernible (Luarn and Lin 2005). Trust is characterized as a mental desire that a believed gathering won't carry on craftily. With regards to versatile managing an account benefit,

trust speaks to the conviction that different gatherings engaged with giving the administration are happy to carry on dependent on a client's desire and won't act craftily (Kim et al. 2009; Gu et al. 2009). Kim et al. (2009) separates this sort of trust that impacts conduct expectation as introductory trust. Beginning trust is a type of trust that expects that the clients don't have valid significant data since they have related knowledge of utilizing the administration. By the by, their affinity to trust may be affected by related knowledge or familiarity with components; for example, the innovation being offered, the versatile system administrators and the human operators that may be associated with giving the administration.

In view of the discoveries of Kim et al., (2009), starting trust as a variable clarified 32% of the varieties of a client's expectations to utilize portable managing an account in Korea. The discoveries of Kim et al. are in accordance with Zhou's (2011) experimental investigation whose outcome demonstrated that underlying trust and saw handiness are foreseeing elements of utilization goals of portable keeping money in China. The exploration result of Gu et al. (2009) additionally shows that trust, saw helpfulness and saw convenience were observed to be a critical part of a client's expectation to receive portable saving money. Bankole et al. (2015) analysed the impact of Trust and protection among different elements. They expressed in their investigation that it was astonishing their examination results did not locate a critical impact of trust and security on social goal. Faniran and Odumeru (2015) included apparent hazard, a TAM based trust develop to their examination demonstrate. Seen hazard was found to affect selection of versatile managing an account. Likewise, this investigation proposes the accompanying speculation:

H4: Perceived trust is having a significant & positive influence on adoption of M-banking services.

## **Perceived Ease of Use & adoption of M-banking services**

With the headway of innovation, the endeavours to look at a person's acknowledgment in new innovation have risen as a standout amongst the most quickly developing territory in information system examined (Hsu, and Lu, 2004). As indicated by Davis (1989), the acknowledgment and dismissal of innovation, acknowledgment can be anticipated by utilizing TAM which shows the relationship associating conviction, frame of mind (utilization of a specific data framework) and activity reason (a standard to quantify if work force would utilize the framework). In any case, Mathieson (1991) contended that it is lacking to depend just on the two developments of apparent helpfulness and saw usability in examining a client's innovation acknowledgment. Hsu and Lu (2004), in their investigation, upheld that the two variables of TAM demonstrate was not actually mirroring the acknowledgment of portable keeping money. Thus, Riquelme et al. (2010), recommended there are other conceivable variables that may influence portable saving money selection; for example, saw hazard (Chung and Kwon, 2009), saw vulnerability (Laforet and Li, 2005), saw framework quality, money related cost (Yang, 2005), saw helpfulness and saw usability (Chung and Kwon, 2009). This examination thinks about these components.

H5: Perceived ease of use is having a significant & positive influence on adoption of M-banking services.

## **Social Norms & adoption of M-banking services**

Pedersen and Ling (2002) underlined that the development of social impact can't be disregarded in any reception show. In this manner, it isn't amazing that social standards have been broadly approved in gathering focused IT (Taylor and Todd, 1995) email acknowledgment, web based recreations (Hsu, and Lu,



2004), web saving money (Chan and Lu, 2004) and portable managing an account reception (Riquelme and Rios, 2010). In some examination, social standards are otherwise called abstract standards. It is characterized as a person's "recognition that the vast majority who are critical to him figure he ought to or ought not to play out the conduct being referred to" (Fishbein and Ajzen, 1975).

H6: Social norms are having a significant & positive influence on adoption of M-banking services.

### **Perceived Risk & adoption of M-banking services**

Seen hazard is the vulnerability about the result of the utilization of the development (Gerrard and Cunningham, 2003). Actually, view of hazard among people has been demonstrated in innovation reception writing as a critical component in gaining new innovation or administrations (Laforet and Li, 2005). With the contemplations of security issues, Riquelme and Rios (2010) further bolstered that hazard factor is an essential component in exploring portable innovation selection. As portable saving money is reformed from web saving money, in this way versatile managing an account will in general have comparable dangers as web saving money. In spite of the dangers, the issues of loss and burglary of everyday exchanges by means of cell phones lead to the most serious hazard when contrasted with web managing an account (Riquelme and Rios, 2010). Cell phone robbery and reuse issue is a noteworthy issue in numerous nations around the world. Definitely, such a pattern is wide spreading and expanding in Kenya. This suggests a more prominent capability of loss of robbery coming about higher observations towards security hazard (Mitchell, 1999). In this manner, this disheartens clients to embrace new innovation. An ongoing investigation directed by Luo et al. (2010) found that the client's view of hazard is a pivotal driver to decide inventive innovation acknowledgment. The

discoveries demonstrate that apparent hazard has negative noteworthy relationship towards social goal on portable keeping money appropriation.

H7: Perceived risk is having a significant & positive influence on adoption of M-banking services.

### **Research Methodology**

The exploration has been structured as it gives a coherent and methodical arrangement that guides us towards the examination and its targets. It is a plan that outlines the techniques and systems to be embraced for social affair, estimation and investigation of information (Krishnaswami and Ranganatham, 2018) and makes an interpretation of the romanticized structure into down to earth working methods (Bhandarkar and Wilkinson, 2015).

As the examination includes an unequivocal meaning of the issue, development of speculations, and gathering of organized information (Bajpai, 2013) and is conveyed with a specific target to infer a very much characterized end (Panneersevam, 2016) distinct research has been led with a cross sectional review as the investigation is completed on explicit bit of populace at a solitary minute in time (Chawla and Sondhi, 2016). The present investigation depends on the essential information which is gathered from various buyers staying in rustic regions of West Bengal, India. Recognizing and characterizing the factors explores comprehensively, considers the basic relationship and drives the examination procedure. In the examination, eight factors have been recognized and refined for the study. Poll structures frames a necessary piece of the study and is the main purpose of contact with that of the respondents. Formal organized and institutionalized inquiries have been utilized as speculation should be tried exactly and factual investigation must be directed and derivation need to be drawn (Mohan, 2016). A 7-point Likert scale has been utilized to quantify the level of positive or un-

idealness towards the issue (Kothari, 2004).

A pilot test has been directed with the survey examined previously. The poll should be tried that would investigate the issues which would adversely affect the study. Distinguishing those would prompt critical enhancement in the poll (Taylor, Sinha, Ghoshal, 2016). Along these lines, a pilot test has been directed to test the possibility of the investigation and giving the preparation (Hassan, Schattner, Mazza, 2006). Testing configuration is an exact arrangement, which helps in getting test from a given populace. It is to be chosen before information is gathered and gives a procedure that can be grasped in choosing things for the example (Kothari and Garg, 2019). The investigation has been led in the territory of West Bengal. Four divisions have been picked randomly from among the five divisions of West Bengal and the examination is confined to these four divisions - to be specific, Burdwan, Medinipur, Presidency and Jalpaiguri - and after that, the country zones of these divisions have been chosen. Multi-stage sampling procedure has been conducted and from all the four divisions, the researcher has picked Rampurhat, Mekhliganj, Tehatta and Egra. The specialists have guaranteed the respondents that whatever reactions they are giving will be kept confidential in future. The specialist has dispersed 340 polls to different respondents. At that point, 287 appropriately filled polls have been returned to the analysts.

The testing procedure which has been utilized in choosing the example in this examination is multistage inspecting, which has been done consecutively crosswise over at least two various levelled arrangements (Kulkarni, 2015) relating to an extensive geographic zone (Thamilarasan, 2015). In social research, there are three sorts of information gathering - through overviews and meetings, perception or by concentrate the report questions (Flick, 2017). The most basic type of information

accumulation is through poll which has been utilized in the investigation for accepting equivalent answers from the respondents through review strategy, which has allowed us to gather information at one time. Information that has been gathered from an essential asset is known as essential information (Mishra and Alok, 2011) and for the examination, information has been gathered from various rural respondents of West Bengal.

### **Data Analysis & Interpretations**

To make certain about the investigation instrument and likewise the data assembled, authenticity is checked. For this examination, face authenticity, content authenticity, discriminant and simultaneous authenticity were checked for certification of the instrument. In face authenticity, experts choose if their instrument is adequately generous to measure what is relied upon to evaluate and this is done by completely confiding in the authenticity of the instrument. In order to support the instrument, academicians, specialists and potential respondents were exhibited the review to totally review and separate the substance. Content that was unfit and may have caused issues later on, was deleted or changed. In substance authenticity, the substance of the overview was checked and composed with the speculative framework. Three requests were deleted consequent to separating the substance to guarantee that the instrument is significant. Along these lines, here both face and substance authenticity have been checked.

The assemble authenticity contains joined together and discriminant authenticity. Here, between the diverse components strong co-association coefficient is present and most of the co-association coefficients regards are in higher scopes. Along these lines, here it shows that the joined authenticity exists. Regardless of the way that there are high co-association coefficients between the elements of a particular factor, there are



incredibly fragile relationships between the one factor's variable to another factor's variable. Here, in like manner it exhibits that discriminant authenticity exists.

**Table 1: Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .898             | 8          |

Cronbach's alpha is a champion among the most predominant and ordinary techniques to find the trustworthiness of the study (Field, 2009). Cronbach's alpha was generally used to find the internal consistency between the diverse data and to see how the variables are related with each other (Leedy and Ormrod, 2013). Beyond what many would consider possible is 0.6 and underneath this measurement the

data isn't strong or more this regard it is commendable (Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L., 2011). It is furthermore evident that in case Cronbach's alpha is more than 0.8, it is logically strong or ideal for the examination (Nunnally and Bernstein, 1994). Table 1 illuminates that Cronbach's Alpha is 0.898 which is more imperative than 0.8 for all the 5 things and it is extremely sufficient. Table 1 furthermore illuminates that all of the characteristics are more than 0.7 in each and every factor and it is extremely strong also (Leedy and Ormrod, 2013).

From the literature review, seven hypotheses have been extracted. In this study, adoption of M-banking services will work as a dependent variable and the other seven factors as independent variables.

**Table 2: Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1     | .892 <sup>a</sup> | .796     | .793              | .404                       | 1.738         |

a. Predictors: (Constant), Perceived trust, Perceived usefulness, Perceived cost, Perceived convenience, Perceived ease of use, Social norms, Perceived risk

b. Dependent Variable: Adoption of M-banking services

**Table 3: Coefficients<sup>a</sup>**

| Model                        | Unstandardized Coefficients |             | Standardized Coefficients | t             | Sig. | Collinearity Statistics |       |
|------------------------------|-----------------------------|-------------|---------------------------|---------------|------|-------------------------|-------|
|                              | B                           | Std. Error  | Beta                      |               |      | Tolerance               | VIF   |
| (Constant)                   | .261                        | .157        |                           | 1.658         | .098 |                         |       |
| Perceived trust              | .047                        | .022        | .053                      | 2.126         | .004 | .882                    | 1.134 |
| Perceived risk               | .015                        | .021        | .017                      | .710          | .087 | .947                    | 1.056 |
| <b>Perceived convenience</b> | <b>.806</b>                 | <b>.023</b> | <b>.862</b>               | <b>34.745</b> | .000 | .889                    | 1.125 |
| Perceived usefulness         | .031                        | .024        | .032                      | 1.318         | .091 | .954                    | 1.049 |
| Perceived cost               | .044                        | .021        | .051                      | 2.140         | .123 | .946                    | 1.057 |
| Perceived ease of use        | .025                        | .059        | .027                      | .426          | .000 | .136                    | 1.367 |
| Social norms                 | .021                        | .059        | .023                      | .362          | .012 | .135                    | 1.394 |

a. Dependent Variable: Adoption of M-banking services

Table 2 elucidates that, to test the multiple regression, at first, the authority has found 0.892 is the Correlation coefficient (R) for Model 1; it underlines a proportion of association between the free factors and ward variable (adoption). The R square regard illuminates the 0.796 or 79.6% which is exceptionally commendable for the examination. The Durbin-Watson indicates that there is no auto-connection anyway the regard is well below 2. Table 3 lays out that multi-collinearity has been checked through Variance Inflation Factor (VIF) which ought to be under 3 for value run. Here, all VIF regards are in sufficient range and it presumes that the variables are free from multi-collinearity.

From the coefficient table, the investigator has found that perceived convenience has the most bewildering un-institutionalized B estimation of .806 and furthermore t regard is also high. So it is the most supported factor on adoption of M-banking services.

$$\text{Adoption} = .261 + (.047) X_1 + (.031) X_2 + (.806) X_3 + (.044) X_4 + (.025) X_5 + (.021) X_6 + (.015) X_7$$

[Perceived trust=  $X_1$ , Perceived usefulness=  $X_2$ , Perceived convenience =  $X_3$ , Perceived cost=  $X_4$ , Perceived ease of use =  $X_5$ , Social norms =  $X_6$ , Perceived risk =  $X_7$ ]

## Findings

The examination adjusts the TAM & TRA model to foresee a person's utilization or acknowledgment of data frameworks. Be that as it may, the outcomes from this examination propose that reception of versatile keeping money in rustic setting varies from the customary use of TAM. Seen value, essential TAM exogenous factors does not disclose the goal to utilize portable managing an account in provincial regions of a creating nation. Seen convenience, another essential TAM exogenous variable, was excluded in the model. There was absence of observational proof in writing to legitimize incorporating the build in the model when the qualities of country zones where considered. In any case, the comfort that portable saving money gives and the trust that rustic occupants have on the

After that, the second most imperative will be perceived trust with the B estimation of .047. The outcomes demonstrate that theories H2, H4, H5 and H6 were upheld while speculation H1, H3 and H7 isn't bolstered. Social goal to utilize portable saving money was anticipated by apparent accommodation and saw trust. Seen handiness and saw monetary expenses don't have a critical relationship to conduct expectation to utilize portable managing an account. Perceived trust and perceived convenience are affecting rural clients to adopt the M-banking services. It is also observed from the study that perceived ease of use & social norms are significantly affecting the adoption behaviour. The study also reveals that perceived risk does not affect the adoption behaviour. It has been moreover found that both the factors are exceptionally noteworthy on 1% or 5% significance level. So, here the multiple regression equation can be expressed as,

specialist co-ops and innovation is emphatically identified with their desire on future use.

In view of the model utilized in this examination, saw accommodation is found to have the highest impact in anticipating social goal to receive portable saving money. Earlier examinations have demonstrated that accommodation has backhanded impact through seen convenience or usability on portable based data frameworks (Tang and Chiang 2009; Kim et al. 2010). Seen accommodation in this investigation affects conduct expectation. Be that as it may, speculation H1 - saw convenience has positive effect on social goal to embrace portable keeping money was not upheld in this examination. This discovery underscores that individuals living in rustic territories would see

versatile keeping money to diminish the obstruction in time and exertion to get to saving money administrations. The capacity to utilize cell phones to lead exchanges, for example, purchasing of portable broadcast appointment, sending cash, accepting caution of instalment into one's record at comfort paying little mind to reality is financially enabling to a country occupant. Many individuals in rustic zones are less mindful of versatile managing an account as clear in this investigation. Conveying the simplicity of opening a financial balance and making mindfulness with a message that features the accommodation that portable managing an account bears particularly to individuals in country zones can be a powerful crusade to diminish the unbanked populace.

Seen trust in this investigation is upheld not surprisingly in H4 to have a positive association with the social expectations. The outcome bolsters other earlier examinations that trust emphatically impacts conduct goals to receive portable or web based managing an account (Zhou 2011; Gu et al. 2009; Kim et al. 2009). A person's penchant to confide in the specialist co-ops and the innovation behind portable saving money administrations is fundamental. It displays an open door for banks and telecom administrators to advance more administrations custom-made to the address the issues in country zones.

The perceived usefulness in this study did not have a positive influence on the adoption of mobile banking services. This contrasts with previous studies by mobile banks, where perceived utility has a significant influence on the adoption of mobile banking services (Jeong and Yoon 2013; Olasina 2015; Faniran and Odumeru 2015; Crabbe et al. 2009; Wang et al. 2006). This proposes individuals in rustic zones don't mean to utilize versatile saving money administrations dependent on its handiness. This factual outcome bolsters the story uncovered in the discourse with a

portion of local people. Some of them communicated that they want to set aside extra cash by keeping them in some protected or well-concealed spot. They guaranteed there was no good reason for keeping cash in the bank when they could have physical access to their cash at whatever point they need. In any case, it was conceded that there were times the cash kept in a safe turned sour because of long haul introduction to dampness. However, some of the locals who spoke to the writer claimed that they deserved to be saved at the bank to avoid wasting money or risk of robbery if it suited them better.

The investigation found that the majority of the respondents were in one type of a relationship or another and were in some valuable type of work. The investigation likewise discovered that the respondents utilized versatile managing an account since they thought that it was shabby, protected and dependable to a more noteworthy degree. The investigation additionally discovered that the respondent's partners, loved ones impacted the respondents to receive and utilize versatile managing an account while the impact of the media on the appropriation of portable keeping money isn't clear towards mobile banking. The examination additionally discovered that versatile managing an account has a scope of administrations, is helpful in doing bank exchanges and access to the bank administration, spares time and has a decent association speed. The bank's clients anticipate that portable managing an account should continue with their desires and to be secure. The clients likewise expect not to lose any security and any measure of cash while doing versatile managing an account exchanges. The respondents were additionally eager for innovation and knew about portable keeping money administrations.

On the business banks, the investigation discovered that they knew innovation and knew about versatile saving money administrations. The respondents

additionally utilize versatile keeping money since it is advantageous and portable managing an account lessens exchange charges. The examination additionally discovered the preferences for utilizing versatile managing an account gives simple access towards ledger data. Portable saving money is more secure than conventional keeping money, and it is simple to figure out how to utilize the versatile saving money compare to portable saving money and versatile saving money framework is easy to understand. On the difficulties to versatile managing an account, the respondents demonstrated that they can't execute when the cell phone is down, now and again exchanges are not on the web, a few administrations are not accessible on portable saving money stage and telephone programming can't get to a few utilities of portable keeping money. On saw chances the respondents showed that they probably won't utilize versatile keeping money since they chance in portable managing an account, concurred that their banks don't acknowledge obligation in the event of misfortune, the innovation of portable saving money isn't straightforward and data concerning wireless saving money exchanges can be messed with by others.

The outcomes additionally demonstrate that there is no critical connection between seen money related expense and social expectations to utilize portable keeping money. This finding is upheld by past examinations, for example, Bankole, et al., (2011); Jeong and Yoon (2013), and Ramlugun and Issuree (2014). It demonstrates that the respondents don't see budgetary expense as a hindrance to their desire to utilization of portable keeping money. It may be the case that individuals in provincial territories think that the advantages of sparing time and exertion by utilizing portable saving money exceeds the related expense. Then again, the expense of utilizing portable saving money through dialling short codes for administrations, for example, acquiring versatile

broadcast appointment, financial records, accepting instalment alarms and exchanging cash is truly reasonable. A few banks don't charge to utilize administrations, for example, purchasing broadcast appointment or financial records. The budgetary cost reasonableness by just dialling short codes or content in versatile saving money is of criticalness to country territories where the vast majority possesses cell phones. The outcome on saw money related expense is conversely with past investigations that observed apparent monetary expense to be a hindrance to social goal to utilize portable keeping money (Luarn and Lin, 2005; Wang, et al., 2006).

### **Managerial Implications**

The multiplication of cell phones in India including provincial zones displays an accommodation divert through which individuals in rustic territories can be incorporated into computerized budgetary administrations. The administration of money related establishments and portable system administrators should focus on the setting in country regions. This examination has discovered that accommodation effects on the expectation for country occupants to embrace portable keeping money benefit. The confinement in the quantity of individuals without ledgers can be overwhelmed by making a familiarity with the simplicity of opening a financial balance, the comfort that versatile saving money gives and the moderate expense in utilizing it. Another perception made while directing this investigation is the issue of dialect. It was seen that bank clients are regularly served in their nearby dialect in the event that it is a progressively agreeable alternative. Most banks likewise give an alternative to get client benefits in one of the significant neighbourhood dialects by means of phone. In any case, these choices are not conveyed in ATMs or SMS based financial balance or versatile cash account. Banks and money related establishments can send portable administration channels with nearby dialect alternatives. While this might test convey on a

more extensive scale in light of the fact that there are more than thousand dialects in India and few of them are institutionalized or in composed shape. Presenting a dialect choice in versatile administration channels can start with the three noteworthy dialects in India. Regardless, the ATMs nearest to provincial networks can be sent to have the dialect choices of the fundamental dialect in the district.

This investigation presents commitments to existing writing in information system and different fields that review the acknowledgment of versatile advancements. To begin with, the outcomes make commitment to existing writing on versatile saving money by giving knowledge on the selection portable managing an account from India's rustic point of view. Seen comfort and trust were found to fundamentally impact aim to utilize. The outcomes likewise demonstrate that apparent money related expense does not adversely impact expectation to utilize. Second, considering past examinations on appropriation of versatile advancements in information system, comfort and trust ought to be considered as critical hypothetical builds that foresee reception of portable frameworks. Seen comfort ought to clarify the viewpoint in sparing time and exertion which versatile frameworks manages a client when connected specifically to social goals. What's more, while inspecting a setting that apparent helpfulness is a critical anticipating factor, saw accommodation can likewise be utilized as an indicator of saw handiness.

Thirdly, the consequences of this examination feature the constraint of the essential Technology Acceptance Model show (Davis 1989) in exploring selection of portable managing an account in a generally unbanked populace. Seen convenience, an essential Technology Acceptance Model exogenous build did not have a noteworthy way with expectation to utilize. Seen convenience, the other essential Technology

Acceptance Model exogenous build was prohibited from the model utilized in this examination. The prohibition of saw usability in the model was advocated because of absence of hypothetical proof in writing when attributes of rustic zones where considered. One key attribute of the rustic setting in this investigation is that the populace is to a great extent unbanked showing the vast majority of the general population are non-clients of portable keeping money.

Essentially, Ease of Use was found to have a positive relationship to receive portable saving money. This is predictable with the earlier investigations, for example, Chung and Kwon (2009). Chan & Lu (2004) contended that brokers need to move past reasoning of versatile keeping money as a subset of exchanges from web based managing an account that they can essentially move to the cell phone. Truth be told, banks ought to streamline the utilization of versatile keeping money administrations and keep on structuring more easy to understand framework interface. Likewise, banks ought to give satisfactory data and clearer direction to urge clients to utilize the administration.

Social standards were found to have an irrelevant relationship towards the expectation to receive the administration. The outcomes were negated with the discoveries from Puschel & Mazzon (2010). One conceivable clarification to the outcomes may be because of the impacts from social powers, for example, wilfulness. In the investigation of Lu et al. (2005) and Venkatesh and Davis (2000), they bolstered the marvel that subjective norms will in general have less impact if the utilization of administration is on deliberate base. In this manner, Barnes, S. J., & Corbitt, B. (2003) additionally uncovered a similar finding that social standards have just slight effect on conduct goal; curiously, their examination likewise discovered that individual demeanour is a directing variable for social standards to impact conduct expectation in receiving portable managing an account.

Despite the fact that few examinations found that security issues are not the principle inhibitor in versatile managing an account selection, Laukkanen, T., & Pasanen, M. (2007) demonstrate that there is negative noteworthy connection between seen hazard and versatile managing an account appropriation. Fundamentally, these discoveries were observed to be predictable with Luo, Li, Zhang & Shim (2010) in which saw hazard is one of the basic variables to be engaged while structuring and building up a versatile keeping money administration. Along these lines, it is vital for banks and specialist organizations to extend higher security while giving portable keeping money benefits so as to yield higher purchasers acknowledgment. Truth be told, banks and specialist organizations ought to ceaselessly advance and offer better security and solid applications to upgrade clients' certainty towards versatile managing an account administration.

Trust, Convenience, Ease of use & Social norms were observed to be the elements that impact customers' conduct goal in embracing versatile saving money, administration designers and programming specialists should concentrate on the advancement of portable keeping money offices.

This can be accomplished by growing better capacities as far as adaptability, security and openness highlights to upgrade customers' certainty to embrace portable managing an account administrations. Since the apparent hazard incredibly impact purchasers' conduct expectation, therefore security is one of the critical components to animate clients' certainty level to embrace portable saving money administrations. The portable keeping money specialist organizations should upgrade the security includes reliably by rehearsing straightforwardness the executives amid the procedure of fiscal exchanges. In this sense, it is vital to manufacture reliable business notoriety in a long haul viewpoint. In conclusion, in the perspectives on close to home inventiveness exhibits a positive-

noteworthy relationship towards versatile saving money reception; subsequently the banks can elevate and make attention to people in general through featuring the advantages or points of interest that can be picked up from the portable managing an account administrations to invigorate the selection level among the portable clients. Rather, such advancement likewise gives better introduction and attention to the non-versatile managing an account, clients to have positive impression towards portable keeping money benefits and use the application in future.

## Conclusion

More advancement is expected to diminish the quantity of individuals without ledgers in developing nations. One of the predicaments that banks and other money related organizations confront is to think and solidify the development of their organizations in urban zones. This leaves a vulnerable side in the open doors that possess large amounts of connecting with the provincial zones. The expansion of cell phones including rustic regions exhibits a setting that can be utilized in giving monetary administrations to the country populace. This examination analysed the components that impact the selection of versatile keeping money in rustic zones with regards to India as a creating nation. The consequences of the examination give a view purpose of appropriation of versatile counts on an adjusted TAM display. Up until this point, the vast majority of the exploration on versatile keeping money has been predominately inspected from urban areas. More research on versatile managing an account in provincial setting is expected to concretize a hypothetical model for research in the theme region. The discoveries from this exploration demonstrate that apparent comfort and trust are essential components for the appropriation of versatile managing an account. It likewise demonstrates that rustic occupants don't think about the budgetary expense as a boundary to utilizing it. Be that as it may, the vast majority in rustic zones don't know about portable saving money administrations.



## Limitations & Future Scope of Research

At first, the impact of statistic qualities, for example, sexual orientation, training and financial balance proprietorship on the aim to utilize portable managing an account was excluded in the model. The model adjusted in this investigation was just used to look at the auxiliary connection among builds and social expectation got from hypothesis. Secondly, the exploration show adjusted in examining reception of versatile saving money has low informative influence. It clarifies only few of the changes in social goal to embrace versatile managing an account. Extra factors rising up out of a subjective report directed in provincial settings and connected to hypothesis would be expected to additionally build up a model for leading quantitative research on rustic reception of versatile managing an account.

Thirdly, the outcomes from this investigation depends on a solitary review contemplate. The forerunners to social aim may change after some time as mindfulness and use of versatile keeping money in these country zones increments. Future research may utilize longitudinal investigations in giving experiences into changes in the precursors to aim to embrace portable saving money after some time.

At last, alert ought to be taken to consider the rustic setting of this examination while summing up the appropriation of portable managing an account. The social, financial, mechanical and political factors in single setting contrasts from another specific situation. Along these lines, there is a constraint to sum up the consequences of this examination outside of country zones in developing nations. More research is required in rustic regions to investigate the appropriation of versatile keeping money given its commitment to help enhance the unbanked populace on the planet.

## Applicability & Generalizability

The study has been conducted mostly in West Bengal and four divisions have been chosen to conduct the study. But simultaneously it is also true that findings of these studies are really applicable to other rural parts of India also. It may also have implication towards the emerging economies like India, China, etc. Rural consumers are always looking for convenience whenever they use mobile apps, especially banking apps. The researcher has also observed that risk and cost have an insignificant relationship towards adoption behaviour of the consumers. It certainly explains that risk and cost do not have any kind of relationship towards adoption of mobile banking services. The factors which have been used in this study are universal and this model can be applicable to developed as well as developing countries. Whether the Technology Acceptance Model can be considered or not in all the countries needs to be checked. The sources of data from where the responses have been collected are from rural areas and most of the people are in the age group of 20-29 years and most of them are students or working in private firms. The respondents are somewhat educated and they are rural residents only. The profile of the people may be comparable with any other Asian countries' rural people. In this regard, it is also true that responses might also be generalized across other regions or countries.

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**Debarun Chakraborty** has completed Ph.D in Management, qualified UGC NET in Management (twice), an MBA in Marketing & BE in Chemical. He has rich cross-functional exposure across various organizations in India for more than 11 years with 9 years in academics & 2 years in industries. He has written five books on Management (published by various national level publishers) and two more are in-progress (with International publishers). He has also written more than ninety research articles on Management in various International & National Journals (many of them are indexed in Scopus, WOS, ABDC) and writing many more. He has also participated in forty international & national seminars/conferences. Dr. Chakraborty is a paper setter for various reputed Universities of India, won 'Best Paper' award on UGC sponsored International Seminar (twice), won the "Best Thesis Award (Ph.D.)" for the year 2017 & 2018 in the National & International conferences, Best Young Researcher Award - 2018, reviewer & editorial board member of various internationally reputed journals (indexed in Scopus & ABDC). He can be reached at [debarun84@gmail.com](mailto:debarun84@gmail.com)