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A Mediating Effect of Business Correspondent Model towards Adopting Mobile Banking Technology-A Roadmap for Achieving Financial Inclusion

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Abstract--- From several banking services, Mobile banking technologies plays a significant role in financial intensifying mainly in rural areas. It is a very simple and easily manageable payment system constructed for the bank customers for doing money transactions in translucent manner. This study has done an examination on the drivers that describes the access of Mobile Banking Technology among the rural bank customers by analyzing the significant relationship and analyzed the mediating effect of business correspondent model on attitude and behavioral intention to use Mobile Banking Technology. Technology Acceptance Model (TAM) has been adopted for this study to construct the theoretical framework. The theory describes that when the person or a user is presented with a new system or technology, there survives a number of factors that have a higher impact about their resolution about how to access the technology. The findings from the study has highlighted that Perceived Usefulness, attitude, Perceived Ease of Use and Business Correspondent Model are the evaluated variables for the behavioral intention of the rural bank customers for utilizing mobile banking technology. The findings from the research have shown that the resolved model has ideal fit. Structural equation modeling (SEM) was used to determine causal relationship between dependent variable, Mediating Variable and Independent Variable. The result highlights that Business Correspondent Model is Partially Mediating the association between attitude and behavioral intention of rural customers for accessing mobile banking technology. This paper has proposed Business Correspondent Model as a mediating variable in technological acceptance model. This finding has enables that Business Correspondent Model should comes out with a high quality best practices to ensure mobile banking services among the people in rural areas.

Keywords--- Rural Bank Customers, Business Correspondent Model, Mobile Banking Technology, Financial Inclusion, Technological Acceptance Model.

I. Introduction

Financial Inclusion is defined as the delivery of banking services to the rural people from unreached segments in the society¹. Utilizing banking services by the low income group people plays a significant role in encouraging a development for handling bank related transactions. As per RBI (Reserve Bank of India) 2015, tapping of Mobile Phones in India has been increased by nearly 80%. Thus it has been stated that banking services to the rural people could be easily delivered at an affordable cost through Mobile Banking Technologies². In 2014, World Bank has stated that financial needs of the rural people could be easily convinced and attained by the low income group people through mobile payment system in an effective manner³. Banking Services such as bill payments, money transactions and balance enquires has been done through mobile banking technologies⁴. Mobile Banking Technology could be called as an intrinsic part of current banking system in many dissimilar countries⁵. It can also be defined as usual mobile money ideas that enable the customers to utilize various banking transactions⁶. To provide small credit loans to poor people in rural areas, mobile banking technology has been set up by the government to magnify the access of banking services by the unreached people in the society⁷. Hence this study has done an examination among the rural bank customers in Thoothukudi district towards the intention for utilizing mobile banking technology by acquiring Technological Acceptance Model.

II. Objectives

1. To determine the drivers of mobile banking usage among the rural customers
2. To Examine the association among the variables in the model by using SEM(Structural Equation Modeling)

3. To analyse the mediating effect of Business Correspondent Model towards the adoption of mobile banking technology among the rural customers.

A. Drivers of Mobile Banking Usage

Perceived Usefulness

Perceived Usefulness is described as the presumption of the person or an individual that his or her work achievement will be strengthened by using a certain system⁸. The study has made an examination on the outcome of perceived usefulness concerning the mediation effect of Customers attitude for accessing Internet Banking services. The primary data has been collected from nearly 227 bank customers in country of Bangladesh. The study has highlighted that Perceived Usefulness and customer's attitude are positively correlated regarding the usage of Internet Banking Services⁹. A Study has demonstrated a conceptual framework by identifying the factors which has an effect on Mobile Banking Adoption among the customers in Thailand. The study has founded that Perceived Usefulness is positively related with the behavioral intention of customers of Thailand for adopting Mobile Banking Services¹¹. Another Study has investigated the adoption of Mobile Banking Services among 165 respondents. The study has found that perceived usefulness is said to be the most influential factor that explains the adoption of Mobile banking services among the customers¹².

Perceived Ease of Use

Perceived Ease of Use refers the person or an individual accepts that deploying a specific system will be free of ventures. Later it has been signified that Perceived Ease of Use decides the level to which the certain system will not be hard to learn, interpret or to work¹³. A study has adopted Technology Acceptance Model for examining the usage of Mobile Baking Services among the University Students. Perceived Ease of Use is said to be one among the construct for the study. The study has stated that there is a positive association between perceived ease of use towards intention of university students for adopting mobile banking services¹⁶. A study has empirically analyzed the factors that are highly influential regarding the usage of mobile banking services in Pakistan. The primary data has been collected by circulating the questionnaire to nearly 372 respondents. The study has concluded with the findings by stating that perceived ease of use has positively influencing the usage of mobile banking services in the main cities of Pakistan¹⁷.

Attitude

Attitude is defined as the positive and negative feelings of a person or an individual about accomplishing a specified behavior²⁸. The study has highlighted that attitude acts as a mediator between the factors and the intentional behavior of the customer for utilizing the internet banking services³⁰. The authors have determined the factors that have a greater influence towards the behavioral intention on utilizing mobile banking services in the country of Malaysia. The study has proved that the construct attitude has a mediating affect of all the factors that determines the usage of Mobile Banking Services. And also it has been derived from the study by stating that attitude has a significant effect on behavioral intention on Internet Banking usage³¹. The survey has been conducted among the retail banking clients of South Africa regarding intentional behavior of client in South Africa towards the usage of mobile banking services. Theoretical framework has been developed by utilizing technological acceptance model. The study has confirmed through regression analysis by stating that there is a positive relationship between attitude and behavioral intention of the customers in South Africa for accessing mobile banking services³².

Behavioural Intention

Theory of planned behaviour describes Behaviour intention as the predictor of future behaviour of an individual or a person concerning the usage of specific system³³. The researchers have tested the behavioral intention of using mobile banking services with the mediating effect of attitude through structural equation modeling. The finding of the study has revealed that there is a direct effect for the factors such as Perceived usefulness and attitude towards the behavioral intention of the bank customers³⁵. The authors has addressed that convenience and self-efficacy are the two new factors that determines the behavioral intention of customers towards mobile knowledge management. The results of the study have been proved by the researcher by confirming that convenience and self-efficacy has a direct effect on behavioral intention for mobile knowledge management³⁶.

Business Correspondent Model

In the year 2006 Reserve Bank of India (RBI) has acquired the technology rooted bank Model as an substitute banking structure for facilitating banking services to the rural people. The notable role of this model is to facilitate banking services at the doorstep for the unreached rural people in the society²². Business Correspondent is the

legalized agent of the banks for making transactions on behalf of the bank²³. They can bridge a gap between the service seekers such as rural clients and Service providers called Banks²⁴. The features of Business Correspondents is to recognize the borrowers, collection and confirmation of several loan applications, originating awareness about the various banking products and services which are available and most suitable to the rural people, collection of small value deposits & loans and post sanction monitoring²⁵. The Business Correspondent Model has been seen as an inventive way of facilitating people in unbanked areas and moreover the BC Model provides incentives to the rural customers above the bank deposit accounts and basic savings. The drive for financial inclusion has been done by our Indian Government that has increased the level of activities by the banks especially in rural areas²⁶. The Business Correspondents can be called as a grass root of Financial Inclusion Plan. They are directly concerned with the problems faced by the rural people for accessing the credit facilities. The Business Correspondents suggests the improvements on financial inclusion plan such as increasing the cash limit for poor people, facilitating smart card to the rural people with a week, solving device problem as early as possible and conducting workshops to create awareness about the banking products²⁷.

III. Research Methods

A. Sampling Techniques

The Perception of Rural customers towards Mobile Banking Usage has been studied by using well defined structured questionnaire. This study comprises of three dependent variables such as Perceived Usefulness, Perceived Ease of Use and Attitude. The Construct named Business Correspondent Model is said to be a mediating variable for this study. There are entirely 25 items in this study. The sample for the study comprises of rural bank customers in the district of Thoothukudi. The Study has acquired Simple Random Sampling Techniques. This Research Study is Descriptive in Nature.

B. Data Collection

Primary Data for the study has been collected from 300 rural bank customers in Thoothukudi District. Table 1 highlights the demographic profile of the respondents. By randomly selecting the group of respondents the questionnaire has been circulated among the bank customers in rural areas. Statistical Package of Social Sciences has been used for analyzing the data. To analyse the validity of the questionnaire Reliability Test has been done its value is 0.94 and Structural Equation Modeling has been done to analyse the association between the variables that determines the usage of Mobile Banking Services.

Table 1: Demographic Profile of the Respondents

Demographic Variables	Frequency	Percentage
Age Group		
18-25	24	8.0
26-30	52	17.3
31-35	91	30.3
40 Above	133	44.3
Gender		
Male	131	43.7
Female	169	56.3
Level of Education		
Illiterate	187	62.3
Secondary	96	32.0
Degree	17	5.7
Occupation		
Farmer	73	24.3
Job	27	9.0
Own Business	34	11.3
Land Labor	128	42.7
Others	38	12.7
Annual Income		
<25K	16	5.3
25K-50K	124	41.3
>50K	160	53.3

Data Analysis & Results

Hypothesis

Table 2 shows the relationship between the constructs has been shown in

H1: Perceived Usefulness is positively associated with attitude – Accepted

H2: Perceived Ease of Use is positively associated with attitude – Accepted

H3: Attitude is positively associated with Business Correspondent Model – Accepted

H4: Business Correspondent Model is positively associated with Behavioral Intention – Accepted

Table 2 shows that the Critical Ratio as high as 25.961 in absolute value lesser than 0.001 and also the displays that all the items were related with the measure of the constructs. The Connections were also with only one construct.

Table 2: Regression Weights

Dependent Variable		Independent Variable	Estimate	S.E.	C.R.	P
Attitude	<---	Perceived_Usefulness	0.230	0.025	9.285	***
Attitude	<---	PerceivedEaseofUse	0.265	0.038	7.052	***
BusinessCorrespondentModel	<---	Attitude	1.869	0.127	14.682	***
Behavioral_Intention	<---	BusinessCorrespondentModel	0.825	0.032	25.961	***

IV. Model Fit Assessment

To analyse the causal relationship between the variables in the study and to confirm the evaluated model fit Structural Equation Modeling (SEM) has been used. Significance has been give to the values of RMR (Root Mean Square Residual), Goodness of Fit Index (GFI), Root mean square error of approximation (RMSEA), Adjusted Goodness of Fit Index (AGFI), Comparative Fit index (CFI), Probability Value (P-Value) and Chi-Square (CMIN/DF). Table 3 highlights that the P- Value of Chi Square is 5.464 (>0.05) and it determines the Model Fit. The Values of TLI, IFI, NFI, AGFI, GFI and CFI is greater than 0.90 and it represents the goodness of fit. The Values of RMSEA and RMR is less than 0.08 that nominates the Model Fit.

Structural Equation Modeling (SEM) for Proposed Model

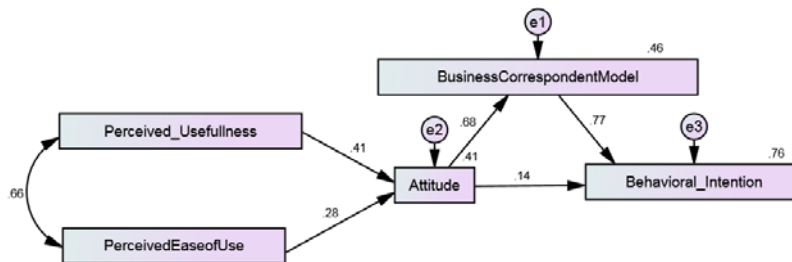


Table 3: Model Fit Summary for Structural Equation Modeling

Fit Indices	Results	Suggested values
Chi-square	5.464	P-value >0.05
Chi-square/degree of freedom (x2/d.f.)	2.678	≤ 5.00 (Hair et al., 1998)
Comparative Fit index (CFI)	0.987	>0.90 (Hu and Bentler, 1999)
Goodness of Fit Index (GFI)	0.978	>0.90 (Hair et al. 2006)
Adjusted Goodness of Fit Index (AGFI)	0.900	> 0.90 (Daire et al., 2008)
Normated Fit Index (NFI)	0.985	≥ 0.90 (Hu and Bentler, 1999)
Incremental Fit Index (IFI)	0.987	Approaches 1
Tucker Lewis Index (TLI)	0.958	≥ 0.90 (Hair et al., 1998)
RMR	0.008	<0.08
Root mean square error of approximation (RMSEA)	0.062	< 0.08 (Hair et al., 2006)

V. Mediating Effect

Mediation is said to be existing only when the direct path between the dependent and independent variable decreases when the indirect path through the mediator is constructed in the model. The direct path is assessed

without attachment of the mediator and with the attachment of the mediator. The standardized beta value was 0.663 shown in Table 4 and after introducing the mediation the beta value changes to 0.139 shown in Table 5. The decrease of relationship between attitude and behavioral intention accounted by the Mediator called Business Correspondent Model was 0.524 and that represents 79.03% of direct effect.

Direct Effect between Attitude and Behavioral Intention

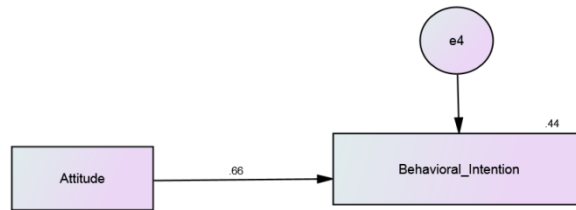


Table 4: Standardized Regression Weights

Dependent Variable		Independent Variable	Estimate
Behavioral_Intention	<---	Attitude	0.663

Indirect Effect Attitude and Behavioural Intention after Mediation

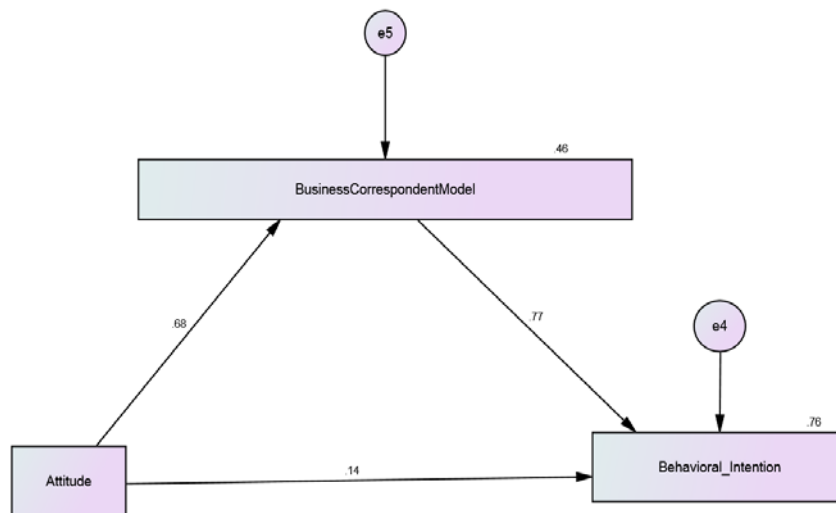


Table 5: Standardized Regression Weights

Dependent Variable		Independent Variable	Estimate
Business Correspondent Model	<---	Attitude	0.682
Behavioral_Intention	<---	Attitude	0.139
Behavioral_Intention	<---	Business Correspondent Model	0.769

Mediation Effect significance was measured by using Sobel test with the bootstrapping technique application in which a specific model with both direct and indirect paths will be included. The result of Sobel test from Table 6 and Table 7, highlights the significance at 0.01(two tailed). Table 8 shows the Total effect of the variables included in the study and it also highlights the significance between the variables at 0.01(two tailed). This shows that Business Correspondence Model partially mediates the association between attitude and behavioral intention.

Sobel Test

Table 6: Direct Effects - Two Tailed Significance

Variables	Attitude	Business Correspondent Model
Business Correspondent Model	.001	...
Behavioral_Intention	.001	.001

Table 7: Indirect Effects-Two Tailed Significance

Variables	Attitude	Business Correspondent Model
Business Correspondent Model
Behavioral_Intention	.001	...

Table 8: Total Effects-Two Tailed Significance

Variables	Attitude	Business Correspondent Model
Business Correspondent Model	.001	...
Behavioral_Intention	.001	.001

VI. Discussion and Conclusion

The objective of this study is to construct the mediating effect of Business Correspondent Model on Attitude and Behavioral Intention of rural people for accessing mobile banking services. The study has established the causal relationship between the variables such as Perceived Ease of Use, Perceived Usefulness, Attitude, Behavioral Intention and Business Correspondent Model. The Model has revealed that Attitude has a positive and significant effect on Behavioral Intention. Business Correspondent Model has been added as a Mediating Variable between Attitude and Behavioral Intention. The Proposed Model has been empirically examined and the direct relationship between the variables is validated. The relationship between attitude and behavioral intention is validated. The direct path coefficient between attitude and business correspondent model is 0.682 and it is significant. The direct path coefficient between Business Correspondent Model is 0.769 and it is significant. Thus the study has analyzed the mediating effect of Business Correspondent Model on attitude and Behavioral Intention. The standardized beta value was 0.663 and after introducing the mediation the beta value changes to 0.139. The decrease of relationship between attitude and behavioral intention accounted by the Mediator called Business Correspondent Model was 0.524 and that represents 79.03% of direct effect. This shows that Business Correspondence Model partially mediates the association between attitude and behavioral intention²⁸. This finding has enables that Business Correspondent Model has comes out with a high quality best practices to ensure mobile banking services among the people in rural areas.

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