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Factors Identification of Banking Penetration and Financial Empowerment: Application of Confirmatory Factor Analysis

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***Abstract* - Banking plays a very important role in the development of the economy. In order to develop the rural areas various schemes were introduced by the government of India and Reserve bank of India. The people must make use of those schemes. Banking penetration must be followed by the customer behaviour towards the banking products and services. This customer behaviour leads to the financial empowerment of the people which enhances the financial planning, financial awareness and financial literacy. This paper studies about the identification of the factors assigned for the variables of banking penetration, customer behaviour and financial empowerment of the rural people.**
***Keywords:* Banking Penetration, Customer Behaviour and Financial Empowerment**

I. INTRODUCTION

Financial sector plays an important role in the development of the economy. Especially in the developing countries like India, Banks' contribution to the development of the economy will be more. Reserve Bank of India Act was passed in 1934 in which it was constituted as the apex body without major government ownership and all the public sector and private sector banks were wholly came under the control of RBI. Banking Regulations Act was passed in 1949. This regulation brought RBI under government control. Under the act, RBI got all the powers over the banks in India. The Act also vested licensing powers & the authority to conduct inspections by RBI (Krishna, 2012). Financial development of the rural areas is considered very important as because India comprises of many rural areas with agriculture as their prior occupation. Hence in order to develop the rural areas and agriculture banks of India are offering a wide number of schemes.

Major part of the rural areas in India was financially excluded. Financially excluded people were mostly uneducated which includes many numbers of farmers, labourers, self-employed people, senior citizens, tribal people, urban slum dwellers, socially excluded groups and women. The important causes of financial exclusion are relatively low extension of institutional credit in the rural areas which have a high risk factor, cost of its assessment and management, lack of infrastructure in the rural areas (Anurag, 2012).

In order to make the country economically developed, the reserve bank of India with support of government have introduced many schemes for the development of the rural people, but majority of the rural people were not aware of such schemes. It is possible to make them utilize the schemes only through the way of banking penetration. Many steps have been initiated in order to make the people utilize the bank products and services. The following were some of the measures taken by the Reserve bank of India for making the banking products and services penetrated

1. The basic banking account / No Frill or Basic Savings Bank Deposit Account (BSBDA)
2. Simplified KYC norms
3. Opening of Branches and ATMs in rural areas
4. Business Correspondents
5. RuPay debit cards were launched in 2012 by NPCI.
6. Financial Literacy Programme
7. Kisan Credit Cards (KCC) and General Credit Cards (GCC)
8. BHIM App
9. PMJDY: Pradhan Mantri Jan Dhan Yojana
10. EBT: Electronic Benefit Transfer
11. Unified Payment Interface
12. Aadhaar enabled payment scheme

II. REVIEW OF LITERATURE

Dhananjay Bapat (2010) studied about the "Perception of the banking services in rural India: An empirical study" in which it was found that though the banks and government have taken many initiatives, it doesn't have a greater impact over the banking habits of the people in the rural areas. It was suggested that according to the differing village and demographic profile the bank may follow approach that was suitable for the particular area.

Anurag B Singh & Priyanka Tandon (2012) studied about the "Financial Inclusion in India: An analysis", they found that financial literacy was very low in India. Even the educated college students were not able to full the cheques. And many people were not maintaining proper books and records of accounts.

Seema Malik (2014) has done a research on "Technological research in Indian Banking Sector: Changed face of bank", it was found that the number of ATMs in the country was doubled 70 per cent in the urban areas and it was also

estimated to be double in the year 2016. It was suggested to introduce sophisticated technology with low cost technology.

Sangeeta Gupta (2017) made an attempt "To measure the levels of financial literacy among individuals of Delhi", association among the socio economic profile of the respondents and the financial literacy level were analysed and it was concluded that there was a low literacy level among the individuals in the study area.

Dhanavelpandi and Revathi Murali (2017) studied about the "Indian Retail industries: opportunities and challenges", the studied revealed that some of the challenges faced by the banking sector. Though the banks were providing technological products and services such as ATM and internet banking, people hesitates to use it and they prefer to have personal touch with the neighborhood bank branches. It was also suggested that the unbanked areas must be concentrated more and the rural credit and agricultural credit must be concentrated more.

III. STATEMENT OF THE PROBLEM

Banking penetration is the process by the way of which the banking products and services are made reachable to the people in the rural areas. So that they may make use of the schemes rendered for their welfare. Only by the use of banking products and services the rural people can develop themselves. Banking penetration refers to the banking products and services such as ATMs, E – Banking, Mobile Banking, Card services etc., and its usage by the rural people. It has to be identified as because the utilization of the products may have a major impact over the development of the life style of the rural people.There is a need for analyzing the customer behaviour as because simply providing the financial products and services to the people won't make any changes in the economy. It matters when the real user that is the customer make use of those products and services.

Financial empowerment refers to the financial growth and development of the people in the rural areas. It is the real outcome of the utilization of the banking products and services. The rural people by the way of proper utilization of the financial products and services may become financially empowered. Financial decisions, financial planning, financial awareness and literacy can be gained through financial empowerment. Virudhunagar District comprises a huge number of fireworks, match works, mills, small scale, cottage industries etc. It consists of a huge number of rural villages. Hence the researcher intends to study the banking penetration and banking penetration in the Virudhunagar District.

IV. METHODOLOGY

The study covers both the primary and the secondary data. The research work was done with the 405 respondents in the study area, but in this paper replicates the pilot study done with 50 respondents. The data were collected with the help of the well-structured interview schedule. The secondary data were further collected from standard text books of related topic, journals, magazines, websites, dissertation, thesis and so on.The objective of the study is to identify the factors influencing the banking penetration and financial empowerment in the study area. The factors identified through the confirmatory factor analysis with the help of IBM AMOS version 22 software.

V. RESULTS AND DISCUSSION

A. *Measurement of Variables*

In the Present paper banking penetration consists of four dimensions like basic banking services, card services, electronic banking services and value added services. The first order confirmatory factor analysis has applied for the each dimension of banking penetration.

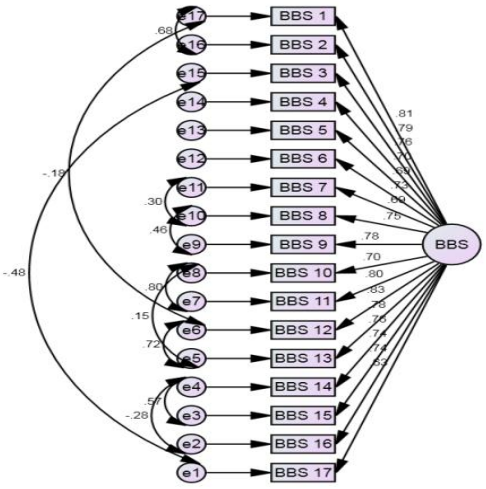

Fig.1 Basic Banking Services – First order CFA (After M.I.)

Fig.1 displays the first order CFA measurement model of basic banking services. It contains 17 statements and the each statement has validated through the reliability analysis. The cronbach's alpha reliability value is 0.956. The fit indices of the measurement model are explained in the Table I.

TABLE I FIT INDICES OF BASIC BANKING SERVICES

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
147.132	109	0.009	1.350	0.750	0.649	0.949	0.936	0.074

Source: AMOS Text output

Note: DF = Degree of Freedom, CMIN = chi-square fit statistics, GFI = Goodness of Fit Index, AGFI = Adjusted Goodness of Fit Index, RMSEA = Root Mean Square Error Approximation, TLI = Tucker Lewis Index, CFI = Comparative Fit Index.

Table I clears the fit indices of basic banking services, the results indicates the output values are fitted with the threshold values suggested by the hair et al (1998). Here, the CMIN/DF value is less than 3.0 and the RMSEA value has less than 0.08. The baseline comparison values are the CFI & TLI is more than 0.9.The second dimension of the banking penetration is card services. It includes 20 items and each item has confirmed with the reliability analysis. The total item reliability value is 0.944. The first order CFA of card services is depicted in the Fig. 2.

Fig.2 expresses the first order CFA measurement model of the card services. The model results are exhibit in the Table II.

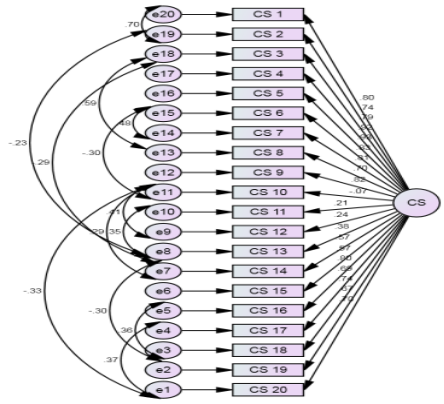

Fig.2 Card Services – First order CFA (After M.I.)

TABLE II FIT INDICES OF CARD SERVICES

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
204.786	157	0.006	1.304	0.741	0.654	0.937	0.924	0.079

Source: AMOS Text output

In Table II, the second dimension result indicates CMIN/DF value is 1.304, which is less than the base value of 3.0. The GFI, AGFI, CFI and TLI values are 0.741, 0.654, 0.937 and 0.924 respectively. The RMSEA value is 0.079, which is less than the threshold value of 0.08. The second model of the banking penetration also has a good fit.The third dimension of the banking penetration is electronic banking services. It has covered 24 statements and the same every statement has test out the reliability. The reliability value of the card services is 0.889. The dimension measurement model of the card services workout is represented in the Fig.3.

The Fig.3 shows the first order CFA measurement model of the E-banking services. The workout model results exhibits the following Table III.

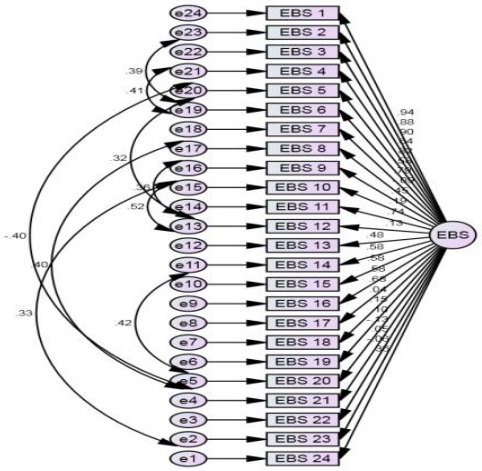

Fig.3 E-banking Services – First order CFA (After M.I.)

TABLE III FIT INDICES OF E-BANKING SERVICES

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
316.665	243	.001	1.303	0.700	0.630	0.864	0.846	0.079

Source: AMOS Text output

As it can be seen from Table III, goodness of fit of the e-banking services of banking penetration indicates the reasonable fit of the fit indices. The RMSEA value is 0.079<0.08 and CMIN/DF value is 1.303<3.0. Moreover, the GFI, AGFI, CFI and TLI fit indices are achieve the normal fit of the suggested fit index.

Finally, the last element (Value added services) of the banking penetration confirmatory factor analysis model contains 18 statements and each statement has consent with the reliability statistics. The cronbach's alpha value of the last part of the banking penetration of value added services is 0.806. This model AMOS workout is exposed in the Fig.4. Fig.4 articulate the first order CFA measurement model of the value added services. The model results are exhibit in the Table II.

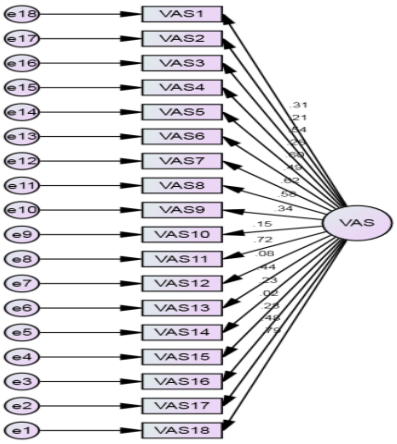

Fig.4 Value Added Services – First order CFA (After M.I.)

TABLE IV FIT INDICES OF VALUE ADDED SERVICES

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
172.444	135	0.016	1.277	0.738	0.669	0.754	0.721	0.075

Source: AMOS Text output

Table IV shows that the CFA value for value added services is, GFI=0.738, AGFI=0.669, CFI=0.754 and TLI=0.721 which are satisfied in the minimum value of the model was achieved. The CMIN/DF=1.277 and the RMSEA=0.075 which have less than 3.0 and 0.08 respectively. The final model of the banking penetration also has a good fit with the suggested fit indices.

The individual measurement model of customer behaviour has presented in the following Fig. 5.

Fig.5 convey that the first order CFA measurement model of the banking behavior of the rural customers. This model (23 statements) cronbach's alpha value statistics is 0.743. The model results are reveals in the Table V.

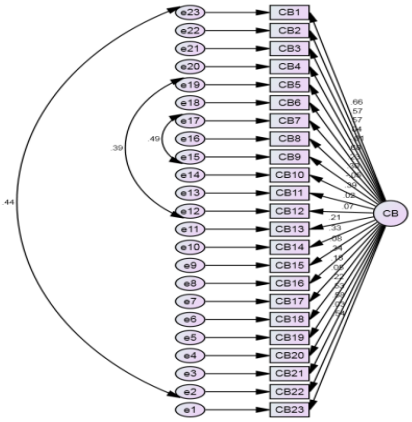

Fig.5 Customer Behaviour – First order CFA (After M.I.)

TABLE V FIT INDICES OF BANKING BEHAVIOUR

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
287.625	227	0.004	1.267	0.703	0.639	0.630	0.588	0.074

Source: AMOS Text output

The individual dimension customer behaviour outcome has expressed that, the GFI value is 0.703; AGFI value is 0.639; CFI value is 0.630 and TLI value is 0.588. The Chi-square minimum index/degrees of freedom value have 1.267. The RMSEA value is 0.074. The model fit of the customer behaviour is strongly fit with the recommended fit index.

The financial empowerment model measurement variables are deals with the following pages. The financial empowerment has 5 constructs. The first construct of the financial empowerment is financial information, education and counseling. It's model measurement is enlighten in the Fig.6.

Fig.6 presents the first order CFA measurement model of financial information, education and counseling. It contains 15 statements and the each statement has validated through the reliability analysis. The cronbach's alpha reliability value is 0.685. The fit indices of the measurement model are explained in the Table VI.

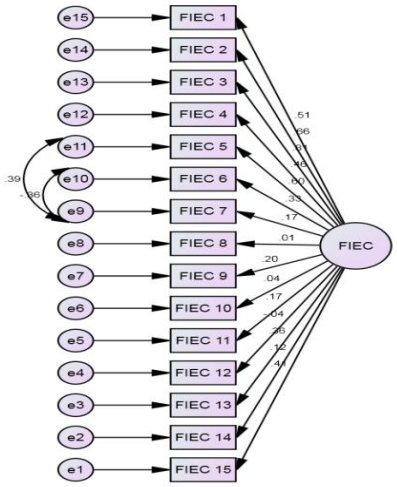

Fig.6 Financial Information, Education and Counseling – First order CFA (After M.I.)

TABLE VI FIT INDICES OF BASIC BANKING SERVICES

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
98.005	88	0.219	1.114	0.812	0.743	0.879	0.855	0.048

Source: AMOS Text output

Table VI clears the fit indices of FIEC, the results indicates the output values are fitted with the threshold values suggested by the previous literatures. Here, the CMIN/DF value 1.114 which is less than 3.0 and the RMSEA value has less than 0.08, the original value is 0.048. The baseline comparison values are the CFI, GFI, AGFI & TLI is 0.812, 0.743, 0.879, and 0.855 respectively.

The second dimension of the financial empowerment is help accessing, income boosting and tax benefits. It includes 16substances and each thing has confirmed with the reliability analysis.

The total item reliability value is 0.506. The first order CFA of help accessing income boosting and tax benefits is portrayed in the Fig.7.Fig.7 state that, the first order CFA measurement model of the help accessing income boosting and tax benefits. The model results are reveals in the Table VII.

In Table VII, the second dimension result indicates CMIN/DF value is 1.258, which is less than the base value of 3.0. The GFI, AGFI, CFI and TLI values are 0.815, 0.745, 0.759 and 0.708 respectively. The RMSEA value is 0.073, which is less than the threshold value of 0.08. The second model of the financial empowerment also has a good fit.

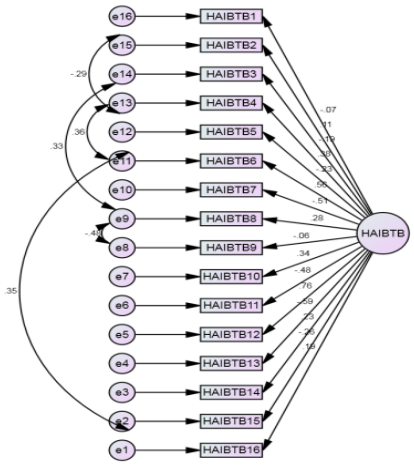

Fig.7 Help Accessing, Income Boosting and Tax Benefits – First Order CFA (After M.I.)

TABLE VII FIT INDICES OF HAIBTB

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
124.570	99	0.042	1.258	0.815	0.745	0.759	0.708	0.073

Source: AMOS Text output

The third dimension of the financial empowerment is safe and affordable financial products and services. It has covered 12 statements and the same all statement has test out the reliability. The reliability value of the SAFPS is 0.559. The dimension measurement model of the SAFPS workout is represented in the Fig.8.

The Fig.8 shows the first order CFA measurement model of the Safe and Affordable Financial Products & services. The workout model results demonstrate the following Table VIII.

As it can be seen from Table VIII, goodness of fit of the safe and affordable financial products and services of financial empowerment indicates the reasonable fit of the fit indices. The RMSEA value is 0.071<0.08 and CMIN/DF value is 1.244<3.0. Moreover, the GFI, AGFI, CFI and TLI fit indices are achieve the normal fit of the suggested fit index.

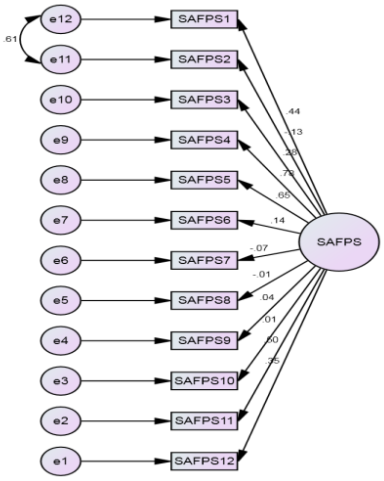

Fig.8 Safe and Affordable Financial Products & Services – First order CFA (After M.I.

TABLE VIII FIT INDICES OF SAFPS

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
65.928	53	0.109	1.244	0.832	0.753	0.783	0.730	0.071

Source: AMOS Text output

TABLE IX FIT INDICES OF ASABO

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
54.758	54	0.446	1.014	0.863	0.802	0.942	0.929	0.017

Source: AMOS Text output

The fourth dimension of the financial empowerment is access to savings and asset building opportunities. It includes 12 statements and each statement has confirmed with the reliability analysis. The total item reliability value is 0.540. The first order CFA access to savings and asset building opportunities is present in the Fig.9.

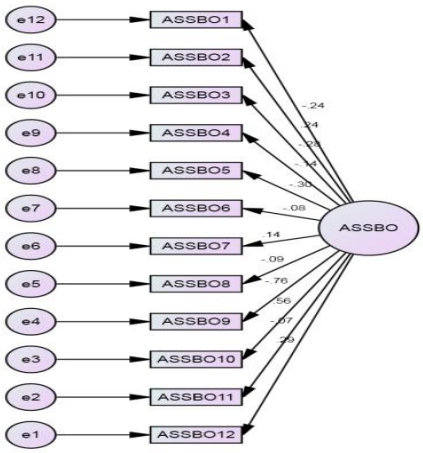

Fig. 9 Access to Savings and Asset Building Opportunities – First Order CFA (After M.I.)

Fig.9 expressive the first order CFA measurement model of the access to savings and asset building opportunities. The model results are exhibit in the Table IX.

Table IX shows that the CFA value for access to savings and asset building opportunities is, GFI=0.863, AGFI=0.802, CFI=0.942 and TLI=0.929 which are satisfied in the minimum value of the model was achieved. The CMIN/DF=1.014 and the RMSEA=0.017 which have less than 3.0 and 0.08 respectively. The final model of the financial empowerment also has a good fit with the suggested fit indices.

As a final point, the last component (consumer awareness and protection) of the financial empowerment confirmatory factor analysis model holds 12 statements and each statement has consent with the reliability statistics. The cronbach's alpha value for the last part of the financial empowerment of consumer awareness and protection is 0.562. This model AMOS workout is exposed in the figure 10.

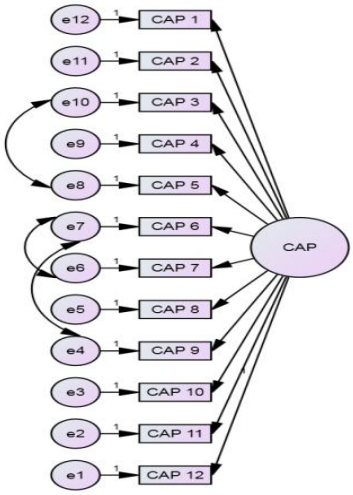

Fig. 10 Consumer Awareness and Protection – First order CFA (After M.I.)

Fig.4 lucid that, the first order CFA measurement model of the consumer awareness & protection results are put on display in the Table X.

TABLE X FIT INDICES OF CONSUMER AWARENESS AND PROTECTION

CMIN	Df	P value	CMIN/DF	GFI	AGFI	CFI	TLI	RMSEA
55.479	51	0.310	1.088	0.833	0.745	0.928	0.906	0.042

Source: AMOS Text output

Table X prove that the CFA value for consumer awareness and protection is, GFI=0.833, AGFI=0.745, CFI=0.928 and TLI=0.906 which are satisfied in the minimum value of the model was achieved. The CMIN/DF=1.088 and the RMSEA=0.0042 which have less than 3.0 and 0.08 respectively. The final model of the financial empowerment also has a good fit with the suggested fit indices.

VI. SUGGESTIONS AND CONCLUSION

By the application of the confirmatory factor analysis, it is concluded that the factors have the impact over the corresponding variables. Banking penetration consists of four variables namely basic banking services, card services, e-banking services and value added services. Financial empowerment includes the variables Financial Information, Education and Counseling, Help Accessing Income Boosting and Tax Benefits, Safe and Affordable Financial Products & Services, Access to Savings and Asset Building Opportunities and Consumer Awareness and Protection. These factors further can be used for predicting the variables banking penetration, financial empowerment and customer behaviour.

REFERENCES

[1] Dhananjay Bapat (2010). Perception of the banking services in rural India: An empirical study, *International Journal of Rural Management*, *6*(2), 303 – 321.

[2] Anurag B. Singh., & Priyanka Tandon (2012), Financial Inclusion in India: An Analysis, *International Journal of Marketing, Financial Services & Management Research*, *1*(6), 41 – 54.

[3] Seema Malik (2014). Technological Innovations in Indian Banking Sector: Changed face of Banking, *International Journal of Advance Research in Computer Science and Management Studies*, *2*(6), 122 – 128.

[4] Sangeeta Gupta (2017). To measure the levels of financial literacy among individuals of Delhi, *Paripex - Indian Journal of Research*, *6*(1), 833 – 837.

[5] Dhanavelpandi. V & Revathi Murali(2017). Indian Retail Banking Industry: Opportunities & Challenges, *International Journal of Current Engineering and Scientific Research (IJCESR)*, *4*, 30 – 35

[6] Krishna A. Goyal & Vijay Joshi (2012), Indian Banking Industry: Challenges and Opportunities, *International Journal of Business Research and Management (IJBRM)*, *3*(1), 18 -28.

[7] Hu & Bentler (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives, *Structural Equation Modeling*, *6*, 1-55.