

Determinants of cross selling through mobile apps in Indian Banks – A Factor Analysis Approach

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Abstract

With the release of world economic forums report on “New physics of financial services”, the financial ecosystem of India will adapt to digital transformation and artificial intelligence. This will change the competitive dynamics and operating models of Indian Banking Sector creating opportunities to procure and secure customers. The steadiest path to address the challenge is Cross selling. From reduced customer acquisition cost to increase in the wallet share, the economics and financials of cross selling are very compelling and hence have become the strategic priority for Indian banking sector. Banks are placing greater emphasis on providing improved services to their clients, upgrading their expertise to augment customer’s overall experience thereby earning competitive edge. The banking complexity that spans multiple lines of products, diverse serviceable areas and distinct technologies and business processes must be coordinated using mobile banking apps to deliver effective cross-sell programs which the present study proposes.

Key words: Banks, Customers, Cross selling, Financial services, Mobile banking

Introduction

“In a bid to gain a bigger share of the customer’s wallet, banks are ramping up their cross-selling initiatives”(Abhijit Lele and Raghu Mohan). Cross selling is taken up by Indian banks with a belief ‘what you sell matters and how you sell matters even more’. About 80% of retail assets of Indian banks are sourced through cross selling. Private Bank like Axis has floated a new scheme called ‘Aarambh’ to focus on personalized banking and cross selling. The income from cross-selling has grown 30 per cent year-on-year for the last three years (Dinesh Kara – State Bank of India, Chairman). In spite of the fact that every saving account cross sells a personal loan or vehicle loan, the retail credit growth is slowing down — growth in Financial Year 20 was 14.6 per cent, down steeply from 20.3 per cent in Financial Year 18. The announcement of Finance Ministry dated 24 February, 2021, to lift prohibition on grant of Government businesses to all private banks has enhanced database customer convenience and given additional opportunity to tap the new customers paving the way to higher cross sells.

Cross selling demands for tailored customer interactions reflecting an understanding of their needs. The success of cross selling strategies depends upon actionable segmentation and initiatives taken by the performers to the promises. The study addresses this very objective and proposes to identify the relationship between the initiatives taken by bank employees and cross selling strategies specifically when physical interactions were curtailed during Pandemic times (2019-2021)

The research is specific to the three Public and Private Banks each from among the Indian Banking Industry having coverage in terms of maximum branches while operating in the state Chhattisgarh. The Public sector banks for study are State Bank of India, United Commercial Bank and Industrial Development Bank of India and the three private sector banks are Housing Development Finance Corporation Bank, Industrial Credit and Investment Corporation of India and AXIS Bank.

Related works

Anurag Kumar carried out incremental research to check the applicability of cross selling to other sectors like automobile, insurance, footwear and garment sector in

India. The paper describes the benefits and limitations of cross selling across these identified sectors.

Miller Heiman (Korn Ferry) Group invented the concept of modern selling and are embraced by the world's most successful sales and service organizations. In an article they concluded that the success of cross selling can be measured in terms of escalating the number and quality of relationships between organization and customers. The group strongly advocates through its database of over 1,250,000 alumni, 10,000 client engagements, Drivers translated in 17 languages and engaging in over 35 countries that a three step approach to cross selling begins with identifying cross selling opportunities, developing the determinants and evaluating the efficacy on selected customer base.

Jatin Pandey and Sanjana Mutt in their research compared the cross selling practices adopted by Indian public and private sector banks located at Mysore and the hurdles witnessed. The research concluded that technical up gradation utmost desired to retain the customers generated by such cross sell initiatives.

Sanjay Sinha, Subhadeep Mukherjee in their research carried out in Indian private sector banks concluded that as their study is confined to private banks, generalizations for the entire Industry would be too early, yet inferences can be drawn for the sales strategies of private sector banks in India. Findings can help the banks identify the gap between the perception of employees and customers towards the importance of different sales strategies.

Ananth.A, Ramesh.R and B.Prabaharan (2010) in the paper A Service Gap Analysis of Private Sector Banks- is an Empirical Study of Customer Expectations with Perceptions. The researchers have used SERVQUAL model to identify the gap between expectation and perception and concluded that empathy plays a vital role in assessing service quality of banks.

Dr. K. Ravichandran, S.Prabhakaran, and Kumar Arun studied on Bayesian Structural Regression (BSR), is a paradigm for modeling service quality of banking services using the Servqual model. This study has identified the interrelationship among service variables to develop a structural model based on Bayesian theory.

The research results of Surabhi Singh and Renu Arora 2011 indicate that the customers dissatisfaction is dependent on employee behavior, ambience and infrastructure for Indian nationalized banks whereas service charges, accessibility and communication drive customer dissatisfaction in case of Indian private banks.

The literature review suggests that cross selling calls for explicit understanding of the concepts related to sales strategies, Gap analysis and SERVQUAL model as well. The SERVQUAL Model, developed by Zeithaml, Parasuraman and Berry, is used to compare performance of service by employees with the service quality needs expected by customers. It is used to do a gap analysis of an organization's service quality performance against the expectations of services by its customers. SERVQUAL was initially applied to service quality- reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer, and tangibles. The review of literature cited makes us conclude that cross selling is also dependent on the service performance parameters and hence necessitates the identification of the determinants of cross selling offering that too through mobile banking, as scope to explore through this study.

Mobile banking requisites to cross sell -

- Timing Game -Several studies by MailChimp, Experian, MailerMailer and others discovered that promotional messages should be circulated in midweek with the preference of Tuesday and Thursday. The study reveals that customers perform financial activities at dinner time and so apart from 10 in the morning to 8 in the evening, that can be better option for timing game.
- Define frequency- The SMS are believed to be harmless as they pop on the screen and do not hinder activities of customers. But too much pops can irritate the customer and so banks should strategise for the frequency of not more than twice a day.
- One click solution – when ads related to products is displayed on the screen, the customers should be allowed to access the facility with a single click to enhance cross sell.
- User friendly – Fonts appeal when not overloaded, easy to read and pleasant to see on screen. Lot of cross sell campaigns relay on A/B testing, find which of them is better.

- How and what you display – The language appreciated by customer is the one which is his replica. Thus choice of words and how they are used influences cross selling strategy.

Proposed Methodology

The study is carried out to identify the determinants/factors of cross selling in banks. The factor analysis is used for extraction of factors favoring cross selling in selected public and private sector banks. When the subject to be investigated depends highly on the responses of the parties involved in investigation, the research work undertaken seeks to explore cross selling practices and so primary data is collected from the employees of the selected banks.

Objective -

The employees are the promoters of banks and they take up the responsibility of increasing the goodwill, customer relationship, vigorous business and revenues for the banks. As cross selling is the practice used by the banks with an objective to increase the customer relationship with maximum number of products to a single customer.

The study focuses to give insight on the objective:

- To study link between employee's initiative and cross selling strategy in public and private sector banks through mobile banking.

To attain the aforesaid objective, certain variables to cross sell through mobile banking are constructed, by grouping the factors as central parameters by using a statistical technique. The statistical tool used for this research is factor analysis. It is applied to the cross selling endeavor as the basis for methodology.

Factor analysis is a statistical tool to identify factors which can be used to represent relationships among interrelated variables. The significance of correlation matrix is conducted using Bartlett's test of sphericity.

Factor analysis here is used to extract factors that will simplify the task of handling too many factors and reduce to the required determinants of cross selling strategy.

Research Sample

The data collection tool used in the study is questionnaire. The employees are aware of cross selling as it is practiced by all banks. The questionnaire is approached to 614 employees of six banks stated above. 102 respondents from each bank are taken out of six banks, three public sector banks and three private sector banks. The questions were built on five point likert scale. The likert scale used started from strongly agree= 5 and strongly disagree = 1

Factor Analysis

To uncover underlying dimensions and to establish content and for discriminate validity data was subjected to factor analysis. The normality of the data was checked. Further the factor analysis is taken up. In the era of mobile apps to perform cross selling during pandemic times, the determinants of mobile banking cross selling are sorted to extract the factors from the 34 factors identified under four groups – perceived benefit, Initiative, Effectiveness and Barriers.

The idea behind the research is to find out that can the factor analysis be applied to extract the factors contributing to cross selling from the set of given data where 614 bank employees initiative for cross selling is questioned.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.900
	Approx. Chi-Square	10596.362
Bartlett's Test of Sphericity	Df	561
	Sig.	.000

Table 2: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.235	30.102	30.102	10.235	30.102	30.102	3.954	11.631	11.631
2	3.222	9.477	39.579	3.222	9.477	39.579	3.336	9.812	21.442
3	1.993	5.861	45.440	1.993	5.861	45.440	3.299	9.703	31.145
4	1.786	5.253	50.693	1.786	5.253	50.693	2.815	8.280	39.426
5	1.449	4.262	54.955	1.449	4.262	54.955	2.808	8.260	47.685
6	1.348	3.966	58.920	1.348	3.966	58.920	2.650	7.795	55.481
7	1.321	3.884	62.804	1.321	3.884	62.804	2.105	6.191	61.671
8	1.010	2.970	65.774	1.010	2.970	65.774	1.395	4.103	65.774
9	.917	2.696	68.470						
10	.851	2.502	70.972						
11	.784	2.307	73.279						
12	.710	2.090	75.369						
13	.660	1.940	77.309						
14	.598	1.759	79.068						
15	.584	1.717	80.785						
16	.525	1.545	82.330						
17	.518	1.525	83.855						
18	.479	1.409	85.265						
19	.455	1.338	86.603						
20	.433	1.274	87.876						
21	.423	1.243	89.119						
22	.409	1.203	90.322						
23	.384	1.129	91.451						
24	.367	1.078	92.529						
25	.338	.995	93.524						
26	.319	.937	94.461						
27	.301	.884	95.345						
28	.279	.820	96.166						
29	.272	.801	96.966						
30	.251	.737	97.703						
31	.234	.688	98.391						
32	.214	.630	99.021						
33	.180	.528	99.549						
34	.153	.451	100.000						

Extraction Method: Principal Component Analysis

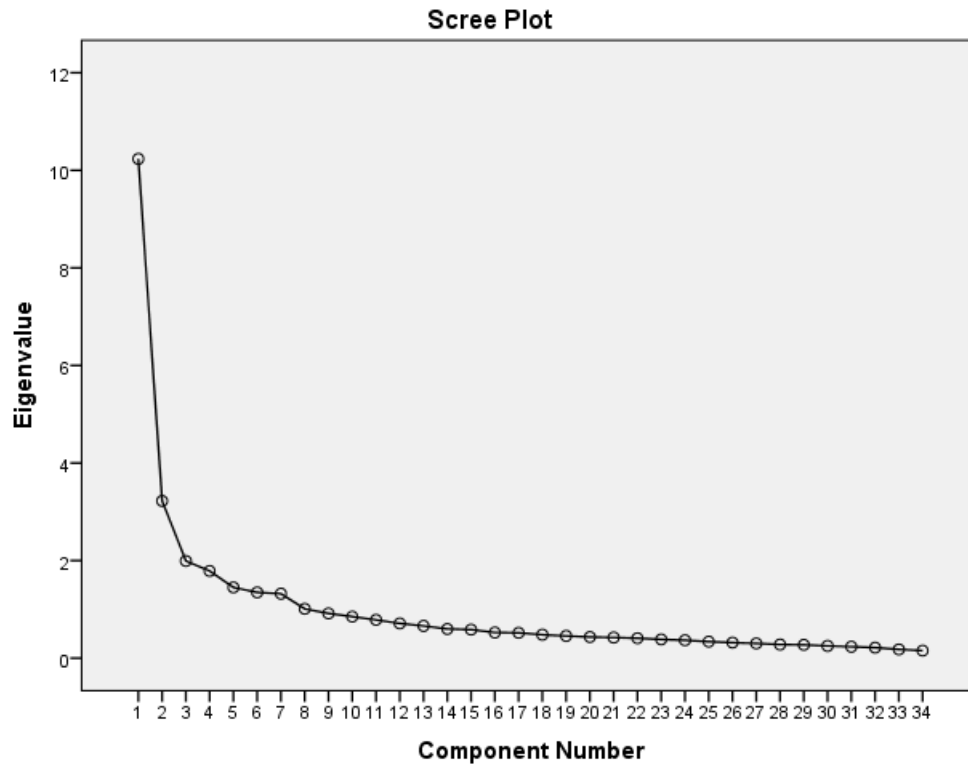


Fig 1: Scree Plot

Table No 3: Rotated Component Matrix^a

	Component							
	1	2	3	4	5	6	7	8
PB 1	.702							
PB 2								
PB 3								
PB 4	.744							
PB 5	.781							
PB 6	.646							
IN 1	.566							
IN 2	.561					.525		
IN 3						.692		
IN 4						.753		
IN 5						.621		
IN 6				.837				
IN 7				.860				
IN 8				.658				
IN 9					.759			
IN 10					.797			
IN 11					.637			
IN 12					.581			
IN 13								.823

IN 14								.550
IN 15		.531						
EF 1		.750						
EF 2		.735						
EF 3		.736						
EF 4		.648						
EF 5								
EF 6							.699	
EF 7							.778	
EF 8							.577	
HD 1			.573					
HD 2			.529					
HD 3			.798					
HD 4			.803					
HD 5			.798					

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Interpretation:

The value of KMO statistics is 0.900 which is greater than 0.5, it indicates factor analysis could be used for the given set of data. The p value is 0.000, which is less than 0.05, the assumed level of significance, indicating the rejection of the hypothesis that the correlation matrix of the variables is insignificant. This shows the sample size of 614 is more than 5 times the number of variables that is 34 variables. Eight factors are extracted from the data with Eigen values greater than one. The total variance explained by eight factors is 65.774. The Rotated component matrix cut-off point taken is 0.5 the eight variables corresponding to 34 factors appear as one factor does not appear in other. Therefore variance explained by eight factors individually has changed slightly after rotation; the total variance explained by the eight factors together has remained same.

Results and Discussions

The implementation of cross selling is of vital role as its implementation has to be step by step in a particular system in order to satisfy customers. The cross selling involves the task of superiority showing right approach to identify relevant person,

time and product or services for cross selling. So to investigate cross selling realization the employee perspective is primary. The study explains how managers can sort and weigh cross selling challenges that arises from intrusive online and less physical banking system. The study brings out which system plays the most critical role and which can be neglected. The ideal state is analyzed by the factor analysis which extracted eight factors precedent for the implementation of cross selling strategy. The eight factors identified by the study are E- Commerce Practices and training, Technology and incentives, Obstacles, Inventiveness, CRM and customer needs, Internet acquaintance and knowledge, Data mining tools, Position and progress.

The study concludes that the prime responsibility of the employees is to attain the huge customers and satisfy each customer appropriately so bank encourages cross selling aggressively and initiates that no customer to be left unattained. The research concludes that in banks, during pandemic covid-19, fewer technologies were available at the initial and assimilation of customer data base was the only mean to target cross selling. But with the greater emergence of it enabled products in banks, and to sell the group products may not be way challenging.

The study gives an insight to the employees that cross selling has to be shaped by indulgent dynamics of banks environment and to bestow a profound perspective of what actually cross selling stands for the banks.

Conclusion

The study has attempted to fulfill the objective of identifying the link between employee's initiative and cross selling strategy in public sector banks and private sector banks.

The analysis found that the eight variables extracted are not merely the determinants but requisites to perform cross selling through mobile apps. It can be concluded that practices and training, technology and incentives, obstacles, inventiveness, CRM and customer needs, IT acquaintance and knowledge, data mining tools, and position and progress are to be included while implementing the cross selling strategy.

Suggestions

For the banks, to exploit and implement cross selling activities, it must view it as customer centric approach rather than product centric. Cross-sellers should depend on a customer-centric opportunity and take the responsibility of specific customer segments, working with the product marketing teams and sales channels to coordinate on execution. The motto of the bank ought to be to serve best solutions for customers by searching for more customers' needs to satisfy and prefer customer oriented way rather than traditional operation oriented ways. The employees should focus on realizing the cross selling potential and banks should shift from incentive schemes to individual rating system to motivate employees. The bank should follow the changes as per legislative framework and in accordance customer demand whenever the changes may be introduced to be in alignment to capture market share. Certain apparent, value building and creativity oriented activities to be included in the existing policies. The banks will have to adapt to changing and ever demanding customer dynamics by nurturing employee strength on the service parameters identified through this research. The initiatives should be promoted, and adeptness be added to capture the customers. The study insists to reinforce some measures in fidelity and receptiveness.

The banks should construct the employees rating system, encourage interface between various levels and promote frequent training programs as a part of initiatives. The individual traits, behavior, and attitudes work in congruence with the determinants proposed by this research which can influence the cross selling programs extensively. In the short-run, the determinants of cross selling are creating challenges and offering opportunities to acquire satisfy and retain customers. This is especially true for cross-selling and customer retention. If the banks aren't accurately expecting the needs of their customers they are at a greater risk of threat of new entrants in the banking industry. It is quite obvious that these trends will change the functional models of Indian banks and continue to influence the competitive characteristics of the industry in a number of different ways in the medium and long term.

Scope for future Research – The factors extracted from this study can further be used as independent variables and customer satisfaction be used as dependent variable for regression analysis.

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