CRM INDEX DEVELOPMENT & VALIDATION IN INDIAN BANKING SECTOR

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ABSTRACT

This study caters to developing a reliable and valid CRM (Customer relationship management) index specifically catering to Indian banking sector. An exhaustive review of literature on CRM was followed by depth interview and questionnaire survey of customers of different banking organizations all across India. Exploratory factor analysis was followed by confirmatory factor analysis which was presented in three forms; the single factor model, covariance model and the structural model. The covariance model shows CRM in Indian banking sector as a multidimensional construct comprising of factors namely organisational structure and customer support, service quality, trust, technology, personalisation and market orientation. The structural model validates the previously extracted factors along with their indicators. Further to this the validation of CRM scale is done through a case based method for development of CRM Index along with the customer and service provider weights with the help of questionnaire design and survey conducted. The proposed index can serve as a strategic tool in enhancing the customer responsiveness and overall performance of the banking organizations.

KEY WORDS: CRM Index, Indian banking sector, exploratory factor analysis, confirmatory factor analysis, structural equation modelling.

1. INTRODUCTION

Reforms initiated in 1991 have changed Indian economy significantly in a span of 20 years and is expected to reach top league in coming years, according to McKinsey research report, 2009. In most emerging economies the regulatory changes are structured to facilitate a threefold agenda which includes liberalisation, privatisation and globalisation. The banking index has shown a highly impressive compounded annual growth rate of more than 51% since April, 2001. As on 31st March, 2010 there were 167 commercial banks operating in India out of which 163 are scheduled commercial banks and 4 were non-scheduled commercial banks. Out of 163 scheduled commercial banks 82 are regional rural banks (RBI Report, 2011). Apart from the public sector/nationalised banks there are private and foreign players which are contributing significantly to Indian banking sector. Foreign banks also grow faster at 30 per cent due to a relaxation in regulations. The contribution of banking sector in GDP increases to over 4.7 per cent. In the current Indian banking scenario of intense competition, deregulation and the availability of internet, the customers have a diversified array of banking and financial products and services to choose from. Indian rural banking sector contributes only 3 percent of the market of Indian banks (Kamath, 2007). Dynamic changes in the competition as well as customer expectations have resulted in a dramatic shift from one time transaction based approach to long term relationship orientated approach.

Increasing demands of the customers as well as the intense competition in the marketplace forced banks to device their strategies accordingly to tap the growing market potential. One example of such strategy that has been adopted by banks in varying degrees is the implementation of a superior market orientation. Market orientation draws its relevance from marketing concept which clearly indicates that to maintain the consistency in the success; firms should do the need assessment of its customers and satisfy them more effectively

than their competitors in the marketplace (Day, 2000). Initially the financial services industry believed less in the marketing philosophy (Howcraft and Durkin, 2003). The past decade has seen substantial and rapid changes in the way the customer relationship is dealt with in financial services (Berger, 2009). Indian banks are realising the importance of implementing customer relationship management (CRM) for acquiring and retaining their customers. This clearly indicates the need for identifying and addressing the major dimensions that plays a crucial role in the effective CRM implementation. This study has three fold objectives comprising of Identification of the current status, preparedness, implementation and other related issues of CRM through the survey of Indian banks; Development and empirical validation of CRM scale from customers point of view and Development of CRM index through a case based method.

2. LITERATURE REVIEW

A fairly developed Indian commercial banking system is in existence since the time of independence in 1947. Indian banking sector has traditionally been one of the most stringently regulated sectors in the country. Since the beginning of deregulation of the financial sector in the late 1980s banks have started operating in the six segments namely retail banking, corporate banking, investment banking, asset management, life insurance and general insurance (Deol, 2009). Indian banking system comprises of commercial and cooperative banks, out of which the commercial banks account for more than 90% of the assets of the banking system. There are two types of categories within the commercial banks.

These are schedule commercial banks (which are listed in RBI Act, 1934 under schedule II) and non-scheduled commercial banks. Schedule commercial banks have been further categorised into public sector banks, private sector and foreign banks and rural and local banks. The figure-1 shows the composition of Indian banking system.
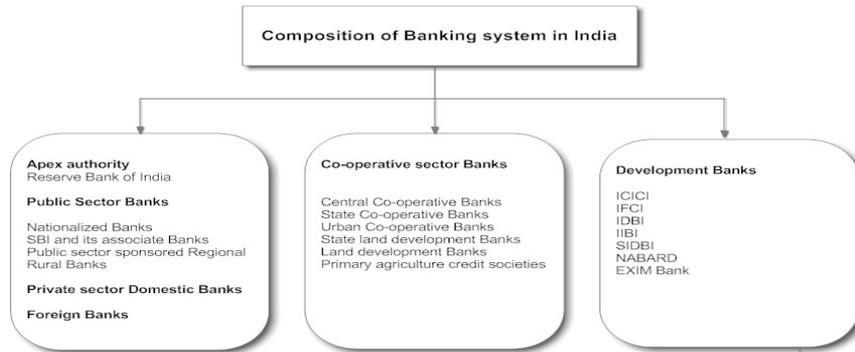
Figure 1 : Composition of Indian banking system (Kamath, 2007)

The recent studies on Indian banking industry have concentrated only on the efficiency measurement of banks in terms of utilisation of resources (i.e. operating efficiency), but the main aspects of effectiveness of banks in achieving their pre-determined policy objectives is completely ignored (Sathye, 2003; Ram Mohan and Ray, 2004; Shanmugam and Das, 2004; Sanjeev, 2006; Sensarma, 2006; Debnath and Shankar, 2008). As indicated from the work of prominent authors it can be safely concluded that the overall performance of the organisation appraisal should take into consideration both the criteria i.e. resource utilisation efficiency and effectiveness in achieving pre-decided goals (Asmild et al. 2007; Mouzas, 2006). Many of the researchers have already validated the positive associations between performance outcomes and levels of market orientation (Kumar et al. 1998; Narver and Slater, 1990; Jaworski and Kohli, 1993). However some of the researchers have found that performance is related to market orientation only under moderate environmental conditions (Harris, 2000). Customers do complain when they are not satisfied with the products or services of the organisations which clearly indicates the absolute number or percentage of the dissatisfied customers.

Like zero defects in manufacturing organisations, if the organisations succeed in reducing the customer complaints to zero, this itself will indicate that customer dissatisfaction is eliminated. However the organisations have to recognise that reduction in customer dissatisfaction not always be considered as same as achieving satisfaction (Brige, 2006). Rowley (2005) urges researchers to focus on managing the value offered to the customer. The institutional characteristics along with the behaviour of the managers are the major factors influencing customer satisfaction, service innovation, market orientation and outreach performance within regional rural banks (Megicks et al. 2005). As validated by the previous researchers that the main pillar of organisational success is the market-led approach which has triggered the necessity for investing the nature of market orientation (Siguaw and Diamantopoulos, 1995; Deshpande et al. 1993), the barriers and antecedents faced while implementation (Harris, 2000; Avlonitis and Gounaris, 1999; Slater and Narver, 1995), its key components (Kumar et al. 1998) and the relationship of performance outcomes with it (Doyle and Wong, 1998; Pelham, 1999; Harris, 2001). In the service firms the market orientation is now considered as a failure-prevention factor sometimes called as a hygiene factor (Barnabas and Mekoth, 2010). Similar to the concept of zero defects in the manufacturing industries, some of the researchers have suggested the concept of flawless performance during service encounters for service industries (Berry and Parasuraman, 1991). Some of the research findings from hospitality sector clearly indicate that disposition and behaviour of the service provider are crucial in the final determination of consumer's evaluation of the services delivered as well as the level of satisfaction and sometimes act as a part of the product experience itself (Reisinger, 2000; Collie and Sparks, 1999). For financial services sector especially the banks the above suggestion holds true (Sobti, 2003). As identified by previous researchers that the employees of the organisations i.e. internal customers have a crucial role in influencing the end customers perceptions i.e.

external customers about the quality service (Bitner et al. 1990; Berry et al. 1983).

This is the main reason because of which the concept of market orientation is getting momentum (Narver and Slater, 1990; Jaworski and Kohli, 1993), as it deals with the implementation of the marketing concept through the generation, dissemination and responsiveness to market intelligence throughout the organisation. Moreover, employees of an organisation have the tendency to replicate the same behaviour to the customers as they receive from the organisation (Straughan and Cooper, 2002; Carter and Gray, 2007). The terms relationship marketing and customer relationship management are almost used interchangeably in many of the previous works of prominent authors. Still there exist differences between the concepts of relationship marketing and customer relationship management as highlighted by Sin et al. 2005. Fournier et al. 1998 have pointed out in his study that without a precise understanding of when and why consumers respond favorably and strongly to the relationship-building efforts of the business organizations, customer relationship management remains elusive. The study done by Kumar and Gulati, 2010 clearly indicates that high efficiency does not stand for high effectiveness in the Indian public sector banking industry. One of the research study on Indian banking shows that the private and foreign banks are performing relatively better in offering a diversified range of products and services including e-banking facilities as compared to public sector banks. The experience, size, financing pattern and ownership of the bank were found out to be major factors influencing the extent of e-banking services for urban customers (Malhotra and Singh, 2010). Das et al. 2009 has proposed a list of 29 CRM best practices, for helping the business organisations in achieving comprehensive CRM deployment. The findings also indicate that going for CRM deployment may not be a profitable strategy for Indian retail banks.

Recent study done by Riadh et al. 2011 clearly indicates that service quality perceptions vary for the customers of the different geographical and cultural context. In the marketing literature the concept of CRM has emerged since more than a decade and interest in CRM has been gaining momentum among both academic and business researchers (Rigby and Ledingham 2004; Srivastava et al. 1999). The focus now is shifted on to how firms implement CRM to enhance profits (Crosby and Johnson 2001; Kennedy 2004). Various prominent authors (Berry et al. 1983; Gummenson 1990; Gronroos, 1996; Sin et al. 2005; Ndubisi et al. 2007; Chahal and Kumari, 2010; Lo et al. 2010; Basar et al. 2011; Mamoun et al. 2011) have identified different defining constructs in the area of customer relationship management pertaining to several industrial and national contexts. Interestingly, there is still much debate over what exactly constitutes CRM (Nevin, 1995; Parvatiyar and Sheth, 2001; Sin et al. 2005). For developing a comprehensive list of CRM practices, there is an essential requirement for identification of the key constructs of CRM. Thus relationship marketing as an emerging discipline is in need of further theoretical development (Gummesson, 2002). CRM success mainly depends on understanding the needs and desires of the customers which can be achieved by placing these needs at the top-priority and integrating the same with the people, processes, technology and strategy of the business organisations (Heygate, 1999).

In Indian banks CRM is gradually picking up and is definitely considered as a viable proposition in improving services to their customers (Gupta and Shukla, 2002). Although there are a lot of promises on the role of customer relationship management (CRM) in enhancing the performance of business organisations, but the practical guidelines on how to design and implement CRM effectively are few, and academicians as well as business analysts have been struggling because of this (Lindgreen and Antiaco, 2005). Although CRM has now become as a powerful concept to align the interests of a firm and its customers (Boulding et al. 2005), its success depends upon the appropriateness of the firms CRM

strategy as well as the effectiveness of CRM implementation. There is very little research which has been done on defining constructs of CRM and development of index specifically catering to Indian banking sector. Table-1 briefly enumerates the select list of scale development studies carried out in last decade.

Table 1 : A select list of scale development studies (2000-2010)

S.No.	Author	Context
1.	Arjan et al.(2000)	Scale for identification of key customer expectation dimensions with regard to call centre representative (CCR) behaviour in Netherlands.
2.	Sweeney and Soutar (2001)	Scale development in the context of customer perceived value by taking consumer durable as a product category in UK.
3.	Sin et al.(2002)	Measurement scale to capture the dimensions of RMO (Relationship Marketing Orientation) in the financial services sector in China.
4.	Zhilin et al.(2004)	Scale for Measuring customer perceived service quality in online banking context in USA and seventeen other countries.
5.	Jurgen and Yu (2005)	Scale development for Organisational use of the internet in small technology based firms in Germany.
6.	Rosalind (2005)	A multiple-item scale for measuring customer loyalty development from the customer's perspectives of a leading passenger ferry company in UK.
7.	Sin et al.(2005)	Scale development for CRM in financial service sector in Hongkong.
8.	Clement and Selvam (2007)	Service quality scale development in Indian retail banking sector.

9.	Scott et al.(2008)	Development and nomological testing of a 17-item scale measuring the five dimensions of service convenience in the context of consumers use of personal cellular telephone services and personal internet services in Canada.
10.	Harmeen and Sandhu (2008)	Scale for CRM in manufacturing industries in India i.e. FMCG, automobile, textile, chemicals and fertilisers etc.
11.	Wang and Feng (2008)	Scale for assessing CRM capability in service industries in China.
12.	Ekiz et al.(2009)	Service quality scale in the context of car rental services in the context of tourism industry in North Ciprus.
13.	Francis (2009)	Scales for Four category-specific quality measurement scales (or RECIPE scales) were developed, one for each Fulfilment-Product type of Internet retailing from the online customer's perspectives in USA.
14.	Sharma and Gassenheimer (2009)	Scale development and validation in a personal selling context from the insurance agent's perspective in USA.
15.	Chien-Ta and Lin(2010)	Multiple item scale for measuring internet banking service quality in Taiwan.

3. SECTION-I: CRM RESPONSIVENESS IN INDIAN BANKS (CUSTOMER PERSPECTIVE)

The researcher has developed 50 scale items for identifying CRM constructs from relevant literature review; followed by depth interviews with the customers of different banks all across India. A total of 21 customers were interviewed for

major issues that exist while availing banking services, this resulted in pruning and fine tuning the items. In the subsequent questionnaire survey a total of 448 responses were received. The exploratory factor analysis is performed with the first half of the data (224) to identify the major CRM dimensions based on which authors have proposed a construct, which is confirmed through confirmatory factor analysis and validated through Structural equation modelling by using the other half(224) of the data.

3.1. Depth Interview

Depth Interview was conducted of length with 21 high valued customers of different banks all across India. The duration of depth interview varied anywhere between 15 to 20 minutes. A list containing 50 dimensions extracted from the literature review is given to interviewee along with a brief description of each dimension. Based on the results of the depth interview the questionnaire was modified.

3.2. Key Findings of Depth Interview

The initial list of 50 dimensions collected from literature review was further reduced to 36 after this phase of depth interview. Findings of depth interview shows, 90% of the respondents were aware of all the banks operating in their region. The main facilities they were availing from there bank are cheque book, ATM card, investment facilities, credit card and e-banking facilities. The major issues identified were related to *responsiveness of the bank employees, behaviour and attitude of the bank staff, technological infrastructure, wealth management, security, privacy, one-stop banking, service recovery, tailor-made products and services, round the clock availability of banking services, customer support and services* and *image in the market place.*

3.3. Questionnaire Survey

The modified questionnaire is based on these 36 dimensions followed by a pilot survey of the questionnaire to assess the *content validity. Content validity* can be evaluated by a panel of persons, sometimes experts, who judge whether a scale logically appears to accurately reflect what it purports to measure (Zikmund, 1991). From the result of the pilot survey 12 dimensions are removed as a result, the revised questionnaire contained 24 dimensions (survey items). The revised questionnaire structure comprises of:

Section-1: Demographic information of the respondents and

Section-2: Items measuring the respondent's perceptions on specific characteristics of banking services and overall banking services quality.

The respondents were requested to select the response that best indicates their experiences or perceptions on each statement, using a five point Likert-type scale (From 1= strongly disagree to 5= strongly agree).

3.4. Key results of questionnaire survey

Responses to the revised questionnaire were received through online as well as offline from the respondents all across India. The respondents of this study were the customers of different banks all across India. A total of 448 responses were received. Furthermore the reliability analysis, sampling adequacy analysis and exploratory factor analysis was carried out with the first half of the data (Sample size: 224) to identify the major constructs, subsequently confirmatory factor analysis was carried out with the second half of the data (Sample size: 224) to confirm the factor structure as well as to provide evidence of scale reliability, dimensionality and validity and finally the structural equation modelling was carried out to validate the results. SPSS-15 and AMOS-7 software were used for carrying out statistical analysis mentioned above. The demographic profile of the respondents is given in Table-2. The reliability of the

data is checked by calculating Cronbach-α value which is found 0.936. The calculated value is in the quite acceptable range (> 0.7) (Nunnally, 1978). Further to this Kaiser Mayer Oklin statistics is calculated for checking the sampling adequacy, the calculated value is 0.914 (>0.5) which is found quite suitable for carrying out exploratory factor analysis.

Table 2 : Demographic Profile of the Respondents

S.No.	Demographic Criteria		%
1	Gender	Male	59.60%
		Female	40.40%
2	Age	Between 18 -30 years	42.18%
		Between 30-45 years	34.82%
		Above 45 years	23.00%
3	Marital Status	Single	35.71%
		Married	64.29%
4	Education Level	Undergraduate	23.00%
		Graduate	42.63%
		Post Graduate and above	34.37%
5	Monthly Salary	Less than 20,000 Rs.	37.27%
		20,000-30,000 Rs.	30.14%
		More than 30,000 Rs.	32.59%
6	Association with the bank	Less than 1 Year	14.06%
		Between 1-3 Years	52.68%
		More than 3 Years	33.26%

Exploratory factor analysis was carried out and based on the rotated component matrix a total of 6 factors were extracted along with 19 indicators contributing towards 67% of the variance. Based on these factors the authors

have proposed the CRM models. The extracted factors along with their indicators are shown in Table-3. In the first model (Figure-2) CRM is represented as a uni-dimensional construct and all the extracted dimensions from the factor analysis are leading to CRM. This model is verified through confirmatory factor analysis by using the second half of the data (Sample size: 224). This model is discarded because of poor fit based on the calculated absolute measures, incremental fit measures and parsimonious fit measures. The calculated statistics of these measures is shown in Table-4.

Table 3: Exploratory factor analysis (Rotated component matrix)

	Component					
	OSCS	SEQU	TRUS	TECH	PERS	MAOR
MAOR1: Competitor orientation						.802
MAOR2: Brand/market image						.752
TRUS1: Reliability			.571			
TECH1: Technological infrastructure					.680	
TECH2: Knowledge management and dissemination system					.583	
SEQU1: Promise fulfilment		.581				
SEQU2: Empathy/customer orientation		.743				
SEQU3: Commitment		.669				
TRUS2: Privacy and security			.511			
TRUS3: Interdependence			.523			
TRUS4: Benevolence			.741			
SEQU4: Service recovery		.503				
OSCS1: Working conditions of staff	.555					
OSCS2: Responsiveness	.828					
OSCS3: Assurance	.696					
TECH3: Information analysis system					.555	
OSCS4: Conflict handling	.762					
PERS1: Collaboration in product design				.801		
PERS2: Customer life time value identification				.846		

OSCS: Organisational structure and customer support, SEQU: Service quality, TRUS: Trust, TECH: Technology, PERS: Personalisation, MAOR: Market orientation.
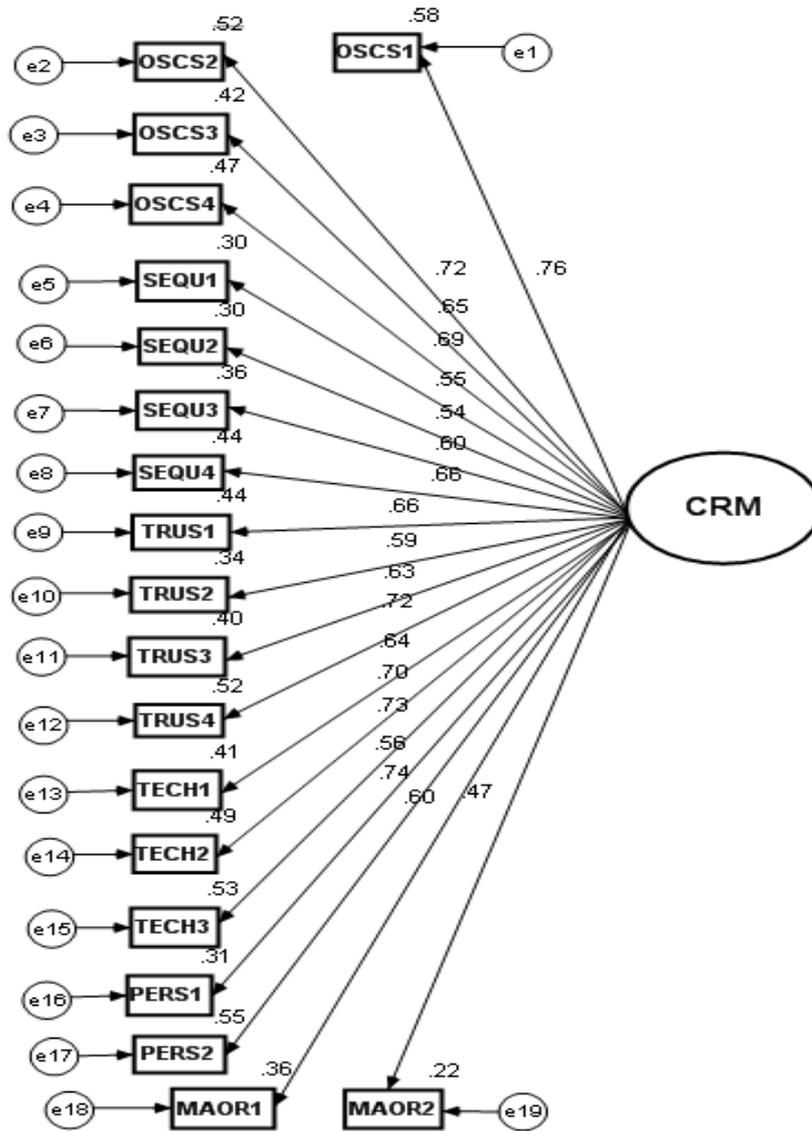

Figure 2 : Model 1-CRM as an Unidimensional Construct

In the second model (Figure-3) CRM is represented as a multi-dimensional construct explained by the six factors extracted through exploratory factor analysis. This measurement model is verified through confirmatory factor analysis by using the second half of the data (Sample size: 224). This model is accepted because of much improved level of fit as compared to model-1 based on the calculated absolute measures, incremental fit measures and parsimonious fit measures (Anderson and Gerbing, 1988). The comparative calculated statistics of these measures are shown in Table-4. In addition to this all the indicators loaded significantly on the corresponding latent constructs. The values of the fit indices indicate a reasonable fit of the measurement model with the sample data (Byrne, 2001).
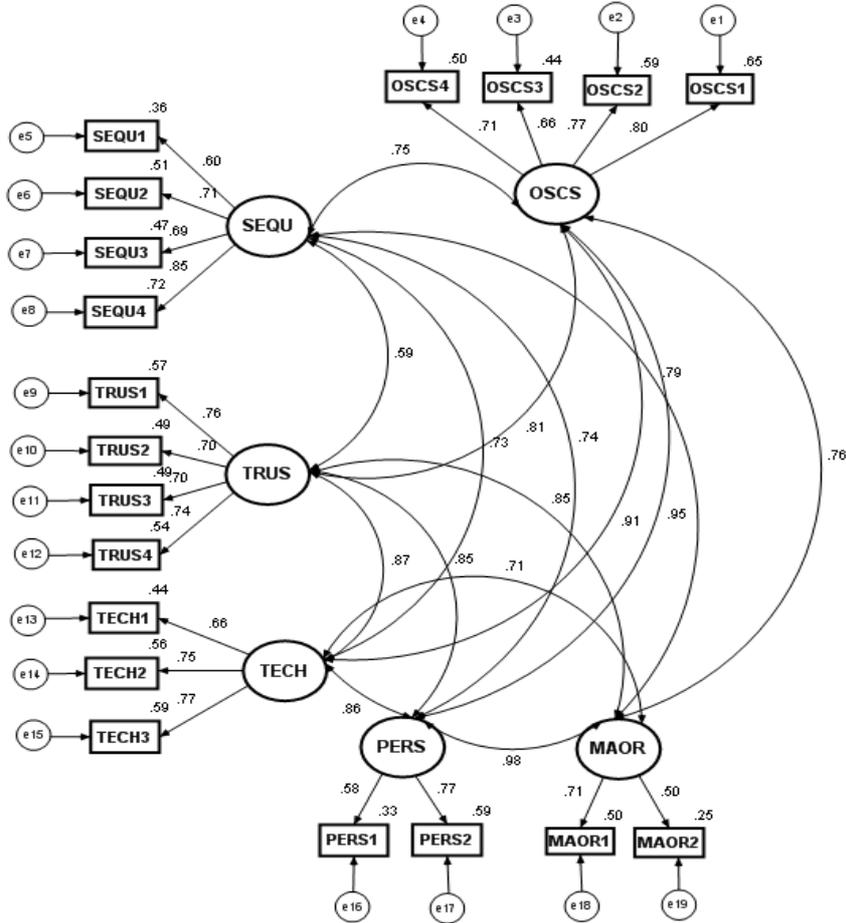
Figure 3 : Model 2-Six factor model (Measurement Model)

Table 4 : Comparison of the calculated statistics of the models

S.No.	Model Fit		Absolute Measures			Incremental fit Measures		Parsimonious fit Measures	RMSEA
	χ^2	χ^2/ df	RMR	GFI	AGFI	CFI	TLI	PCFI	
Model 1	491.49	3.24	0.05	0.81	0.76	0.84	0.82	0.74	0.10
Model 2	305.18	2.23	0.04	0.88	0.84	0.92	0.90	0.74	0.07

Table 5 : Composite reliability of the constructs

Construct	Composite Reliability
OSCS	0.79
SEQU	0.79
TRUS	0.80
TECH	0.75
PERS	0.67
MAOR	0.66

The Table 5 clearly indicates that the composite reliability of all the constructs is more than 0.6, which is quite acceptable (Carmines and Zeller, 1988). Construct validity is established in this study by establishing the content validity, convergent validity and discriminant validity. Content validity is verified through existing literature and expert's interaction in the area of CRM. Convergent validity is assessed by examining the average variance extracted and factor loadings (Fornell and Larcker, 1981). All the indicators have shown significant loadings onto their respective latent constructs with values varying in between 0.51 to 0.85. In addition, the average variance extracted (AVE) for each construct is greater than or equal to 0.50, which further supports the convergent validity of the constructs. As suggested by Fornell and Larcker (1981) the discriminant validity can be assessed by comparing the average variance extracted (AVE) with the corresponding inter-construct squared correlation estimates. AVE values for each latent construct were found more than the square of the inter-construct correlations. Thus, the measurement model reflects good construct validity and desirable psychometric properties (Ganguli and Roy, 2011). In the third model (Figure-4) the structural CRM model is validated by using structural equation modelling. In short, the structural model confirms the six-factor structure of Customer relationship management (Table-6).
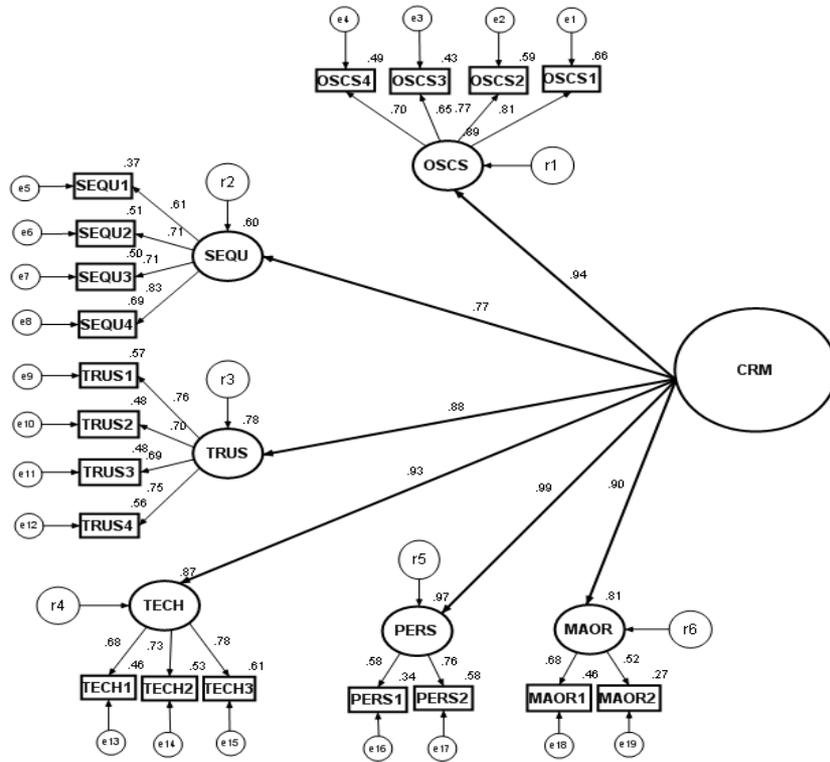
Figure 4 : Model 3-Six factor model (Structural Model)

Table 6 : Calculated Statistics of Model-3

S.No.	Model Fit		Absolute Measures			Incremental fit Measures		Parsimonious fit Measures	RMSEA
	χ^2	χ^2/ df	RMR	GFI	AGFI	CFI	TLI	PCFI	
Model 3	348.13	2.38	0.04	0.87	0.83	0.91	0.88	0.77	0.07

4. SECTION-II: CRM INDEX DEVELOPMENT USING THE CASE BASED METHOD IN THE PUBLIC AND PRIVATE SECTOR BANKS IN INDIA

On the basis of section I and II this section includes the validation of CRM scale through a case based method and development of CRM Index along with the customer and service provider weights with the help of questionnaire design and survey conducted.

4.1. CRM Index derivation

Steps

- Identification of factors leading to CRM (Section I: Empirically validated factors along with their indicators)
- 19 indicators
- Questionnaire development
- Survey
- Respondents score
- Calculation of weights (Customers as well as service provider's perspective)
- Development of CRM Index (Customers as well as service provider's perspective)
- Gap analysis

4.2. Questionnaire Design

The questionnaire structure comprises of:

Section-1: Demographic information of the respondents (Table-7) and

Section-2: 19 Items measuring the respondent's perceptions on specific characteristics of banking services

The respondents were requested to select the response that best indicates their experiences or perceptions on each statement, using a five point Likert-type scale (From 1= strongly disagree to 5= strongly agree).

Table 7: Demographic profile of the respondents (Customers of Private sector bank)

S.No.	Demographic Criteria		Public Sector Bank (%)	Private Sector Bank (%)
1	Gender	Male	70.15%	69.07%
		Female	29.85%	30.93%
2	Age	Between 18 -30 years	34.33%	27.84%
		Between 30-45 years	50.75%	51.55%
		Above 45 years	14.92%	20.61%
3	Marital Status	Single	26.86%	25.77%
		Married	73.14%	74.23%
4	Education Level	Undergraduate	16.42%	23.71%
		Graduate	65.67%	55.67%
		Post Graduate and above	17.91%	20.62%
5	Monthly Salary	Less than 20,000 Rs.	29.85%	31.96%
		20,000-30,000 Rs.	41.79%	41.24%
		More than 30,000 Rs.	28.36%	26.80%
6	Association with the bank	Less than 1 Year	Nil	Nil
		Between 1-3 Years	64.18%	59.79%
		More than 3 Years	35.82%	40.21%

4.3. Sample selection

For generation of weights for CRM index, the researcher has used non-probability sampling. A judgement sample (Deming, 1960) is selected on the

basis of the judgement of the researcher. The customers were selected on the basis of their understanding and experience with the CRM practices in the banks. A total of 67 and 97 responses were received from the customers of public and private sector bank respectively. Whereas 11 and 17 responses were received from the marketing, public relation officers and branch managers of public and private bank respectively.

Public sector Bank: State Bank of India

Private sector Bank: ICICI

4.4. Mathematical model for ranking

CRM Index can be evaluated with the help of the following mathematical model:

CRM Index $_{Score}$ = (W_{A1}* S_{A1}+ ....+W_{A6}* S_{A6})

Where:

W_{A1}-W_{A5}: are the calculated weights for the CRM constructs.

S_{A1}-S_{A5}: are the scores corresponding to the CRM constructs.

4.5. Data analysis

A sample size of 67 and 97 responses and 19 questions led to a total of 1273 and 1843 data points which are actually the preferences of the customers of public sector and private sector bank.

Table 8 : For public sector bank (Customers point of view)

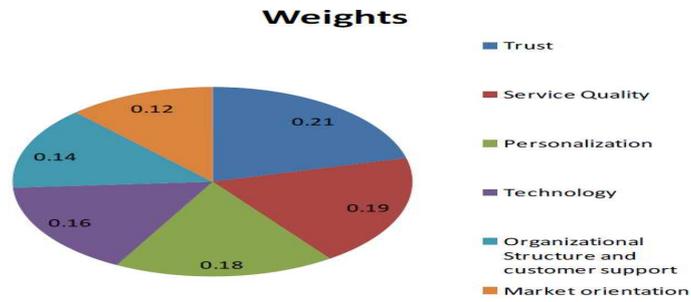| S. No.	CRM sub-element	Average Score	Average Score (S_{Ai})	Weights (W_{Ai})
1.	TRUS1	4.38	4.35	0.21
2.	TRUS2	4.19		
3.	TRUS3	4.46		
4.	TRUS4	4.37		
5.	OSCS1	3.14	2.94	0.14
6.	OSCS2	3.23		
7.	OSCS3	2.97		
8.	OSCS4	2.43		
9.	SEQU1	4.14	3.99	0.19
10.	SEQU2	4.23		
11.	SEQU3	3.84		
12.	SEQU4	3.77		
13.	MAOR1	2.34	2.55	0.12
14.	MAOR2	2.77		
15.	TECH1	3.29	3.28	0.16
16.	TECH2	3.18		
17.	TECH3	3.39		
18.	PERS1	3.89	3.77	0.18
19.	PERS2	3.65		

Figure-5: Weightage given by public sector bank (Customers perspective)

Table 9: For public sector bank (Service provider's point of view)

S. No.	CRM sub-element	Average Score	Average Score (S_{Ai})	Weights (W_{Ai})
1.	TRUS1	2.55	2.73	0.14
2.	TRUS2	2.73		
3.	TRUS3	3.18		
4.	TRUS4	2.45		
5.	OSCS1	4.73	4.53	0.23
6.	OSCS2	4.45		
7.	OSCS3	4.27		
8.	OSCS4	4.36		
9.	SEQU1	3.55	3.47	0.18
10.	SEQU2	3.45		
11.	SEQU3	3.27		
12.	SEQU4	3.64		
13.	MAOR1	2.09	1.91	0.09
14.	MAOR2	1.73		
15.	TECH1	4.18	3.97	0.21
16.	TECH2	3.91		
17.	TECH3	3.82		
18.	PERS1	2.82	2.95	0.15
19.	PERS2	3.09		

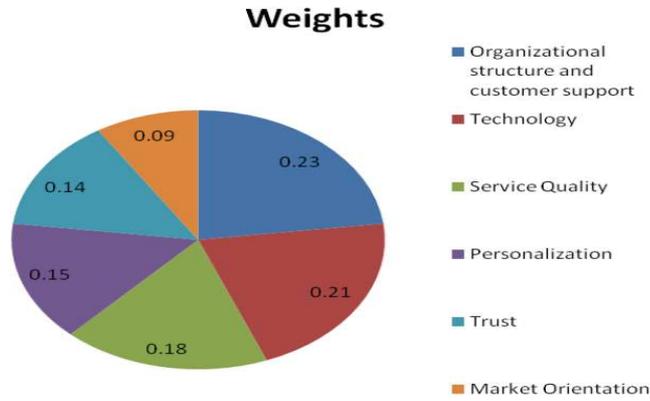**Figure 6 : Weightage given by public sector bank (Service providers perspective)**

Table 10 : For private sector bank (Customers point of view)

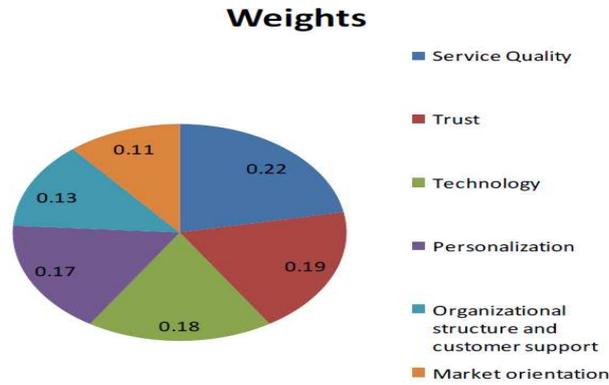| S. No.	CRM sub-element	Average Score	Average Score (S_{Ai})	Weights (W_{Ai})
1.	TRUS1	4.26	4.03	0.19
2.	TRUS2	4.16		
3.	TRUS3	3.36		
4.	TRUS4	4.37		
5.	OSCS1	3.07	2.80	0.13
6.	OSCS2	2.76		
7.	OSCS3	2.79		
8.	OSCS4	2.61		
9.	SEQU1	4.59	4.62	0.22
10.	SEQU2	4.47		
11.	SEQU3	4.67		
12.	SEQU4	4.75		
13.	MAOR1	2.51	2.35	0.11
14.	MAOR2	2.19		
15.	TECH1	3.64	3.74	0.18
16.	TECH2	3.72		
17.	TECH3	3.85		
18.	PERS1	3.38	3.48	0.17
19.	PERS2	3.58		

Figure 7 : Weightage given by private sector bank (Customers perspective)

Table 11: For private sector bank (Service provider's point of view)

S. No.	CRM sub-element	Average Score	Average Score (S_{Ai})	Weights (W_{Ai})
1.	TRUS1	4.76	4.69	0.23
2.	TRUS2	4.65		
3.	TRUS3	4.88		
4.	TRUS4	4.47		
5.	OSCS1	1.94	2.18	0.11
6.	OSCS2	2.35		
7.	OSCS3	1.82		
8.	OSCS4	2.64		
9.	SEQU1	3.35	3.53	0.17
10.	SEQU2	3.70		
11.	SEQU3	3.47		
12.	SEQU4	3.58		
13.	MAOR1	4.29	4.12	0.21
14.	MAOR2	3.94		
15.	TECH1	2.76	2.56	0.13
16.	TECH2	2.41		
17.	TECH3	2.53		
18.	PERS1	3.17	3.12	0.15
19.	PERS2	3.06		
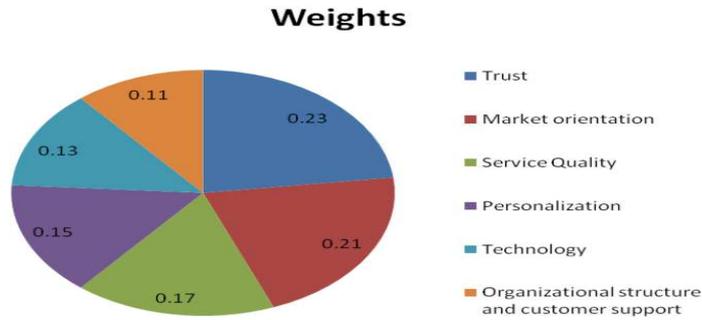
Figure-8: Weightage given by private sector bank (Service providers perspective)

Table 12 : Comparison Matrix (Public Sector Bank)

S. No.	Factors of CRM	Public Sector Bank		Private Sector Bank	
		Customers perspective	Bank Perspective	Customers perspective	Bank Perspective
		Weights (W_{Ai})	Weights (W_{Ai})	Weights (W_{Ai})	Weights (W_{Ai})
1.	Trust	0.21	0.14	0.22	0.23
2.	Service Quality	0.19	0.18	0.19	0.21
3.	Personalization	0.18	0.15	0.18	0.17
4.	Technology	0.16	0.21	0.17	0.15
5.	Organizational structure and customer support	0.14	0.23	0.13	0.13
6.	Market orientation	0.12	0.09	0.11	0.11

The comparison matrix (Table-12) clearly indicate that there exist a gap between the importance given to the factors by customers and service providers. The weights given by the customers should be duly taken care of and the bank

should work upon to minimize the gaps as indicated from the table by devising proper CRM strategies so as to get the maximum benefit of CRM implementation and side by side use this index from time to time to get the feedback of the customer to check the level of effectiveness of the devised and implemented CRM strategies.

5. INFERENCES AND STRATEGIC IMPLICATIONS

The study verified the long held belief that CRM is a multi dimensional construct. The critical factors that explain CRM in Indian banking sector have been identified as organisational structure and customer support, service quality, trust, technology, personalisation and market orientation.

5.1. Organisational structure and customer support

This factor includes dimensions such as *working conditions of staff* i.e. the workload and satisfaction level of the employees, so banks have to ensure that there is reasonable workload and proper incentives and career growth policy so as to increase the satisfaction level and foster the sense of belonging to the organization in the employees. R*esponsiveness* i.e. willingness of bank employees to help the customers and providing prompt service to them*, assurance i.e.* The competence and courtesy of employees and their ability to foster confidence and trust in the minds of the customers*, conflict handling i.e.* includes the top management ability to avoid conflicting situation by creating a favourable work culture and in case of any unavoidable conflict solve it before it create problems and the ability of discussing the same openly, practicing them in the organisation will attract large number of customers in future and propagate a positive word of mouth improving the goodwill of the company. This will also play a big role in retaining the customers of the companies.

5.2. Service quality

This factor is of vital importance in the light of more enlightened and demanding customers than ever before who put lot of emphasis on getting a better quality of service which they avail from a particular bank. They in fact are even prepared to pay a premium for getting a better quality service from their bank but will not compromise on inferior or poor service quality. This factor includes dimensions such as *promise fulfilment i.e.* it is the experience of the customer with the bank that whatever has been promised earlier is always fulfilled*, empathy/market orientation i.e.* It is the individualised care and attention provided to the customers, *commitment i.e.* The extent to which a customer perceives the demand to maintain a relationship*, service recovery* i.e. Banking organisation response in case of service failure and all of them play a pivotal role in improving the service quality.

5.3. Trust

Customers now-a-days being more enlightened and assertive than ever before, expect consistency in the services which they receive from their bank. Additionally by embarking upon benchmarking and rendering the services which are compared with those of the best in class companies in the world, the banks can maintain its competitive posture and in turn improve its reputation in the eyes of its customers. The dimensions such as *reliability i.e.* It is the ability of the bank to perform the promised service dependably with accuracy*, privacy and security i.e.* privacy is the claim of customers to determine for themselves how, when and to what extent information about them is shared or communicated with others whereas security refers to freedom from doubt/risk during the service delivery process, *interdependence i.e.* indicates if two or more persons e.g. between the customer and the bank, want to achieve their objectives, in such a scenario they have to consider each other *and benevolence i.e.* it is the belief of the customer that the bank cares about and is motivated to act in one's interest,

may infuse a positive feeling in the mind of its customers because this is what they expect from their bank in today's fiercely competitive global scenario.

5.4. Technology

Banking sector requires sound and effective technological requirements in meeting and/or exceeding the expectations of its customers. Dimensions such as *technological infrastructure, knowledge management and dissemination system & information analysis system i.e. data mining tools to analyse the patterns and other important information* are some of the parameters which today's customer expect from their banks. Apart from this, use of various analytical tools like cause and effect analysis for prompt/timely exploration of probable causes of problems and barriers to success, and the customers feeling about latest technology in services being used, also play a lead role in enhancing the customers expectations of their bank.

5.5. Personalisation

This factor comprises of dimensions such as *collaboration in product design* and *customer life time value identification* i.e. it is the measure of expected future value of profit to a business derived from customer relationships from the current time to some future point, has a positive impact on the customers' perceptions about the services which they receive from their bank.

5.6. Market orientation

Banks customers rely heavily upon the reputation of their banking organisation while choosing it as their banking service provider. Some of the dimensions upon which the customers usually rely when reputation is the deciding factor are – *competitor orientation* coupled with *brand/market image* may tilt the balance in favour of a particular banking organisation in the eyes of its customers.

6. CONCLUSION

The proposed CRM Index indicates the importance of empirically validated CRM factors/ indicators being perceived by the customers as well banking service providers. The gaps have been identified between the perspectives of customers and banking service providers. Academically this study gives an holistic value of CRM in Indian banking sector by analyzing the service providers as well as customers point of view and finally resulted into the CRM index which can be used as an strategic tool for capturing the customers preferences from time to time and designing and implementing newer marketing strategies for effective customer relationship management. Managerially the proposed index will serve as a step by step guideline for the banking organizations to check and measure the effectiveness of their CRM initiatives from time to time. For customers of different banking organizations it can be used as a instrument to give their opinions about the CRM practices. Taking the customers views through the index the banking organizations can devise and follow appropriate CRM strategies with more inclination towards favourable indicators or the factors carrying maximum weightage as shown in the results whereas putting less emphasis on factors/ indicators having less weightage. As the customers preferences are captured through the proposed index which is of paramount importance in the current business scenario. The factors weightage along with the conclusion drawn can serve as the proper guidelines to keep in mind while devising CRM strategies so as to achieve the competitive advantage as well as the maximum benefits by satisfying the needs of the customers in an efficient and effective manner. The proposed CRM index can also be used as a tool for differentiation as it takes care of both the perspectives customers as well as service providers thereby creating a balancing situation between the two and can serve as the foundation for better and effective CRM practices leading to win-win situation for all the stakeholders of the business organizations. This will ultimately have a positive impact on Indian economy as the banking system

serves as a backbone. Novelty of this work lies in the fact that considering the views of customers as well as service providers of different banks all across India and proposing a comprehensive index for better implementation of CRM in banking sector. The proposed CRM index can serve as a diagnostic tool to identifying the problem areas as well as exploring new business opportunities in a much better way than even before.

7. LIMITATIONS AND FUTURE RESEARCH LINES

The sample sizes itself were relatively small, which is one of the limitations of this study. Large and more diversified samples can be taken for the further enhancement as well as validation of this research work. The applicability, validation and generalizability of the proposed index can be done by replicating this study in CRM aspects of other business segments at a national level.

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