Exploring customer perception and behavior towards CRM practices in banking sector: An empirical analysis

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Abstract: Globalization and competition on the one hand has created unlimited opportunities in each sector including the banking sector; but on the other hand has added many new challenges and threats too. “Survival of the fittest” is the truth of today’s global market. To be more competitive, productive and profitable, today banks are changing their way of doing business; they are shifting from a transactional based marketing approach to a relationship based approach. Customer relationship management (CRM) has emerged as a new paradigm of marketing. The recent rush of publications in the area may give rise to the impression that CRM can be applied in any context, yet there is little empirical evidence to support it. CRM is, probably, one of the least clearly defined business acronyms, as there is no single definition for it. It is probably easier to say what CRM is not. Unfortunately, in many cases CRM has become a misnomer. Many a times, the companies who practice it never look at whether it is really pleasing their customers or irritating them. Do their customers have some serious issues and concern for it, which needs to be addressed? In most of the cases, companies feel that all their CRM approaches are working fine and are making their customers happy, but in reality it might not be true. The present study attempts to understand the customer perception and behavior towards CRM practices in banking sector in India-an emerging economy. It offers some insights and assistance to banking industry in planning their CRM strategies.

Keywords: Customer Relationship Management, Customer Loyalty, Relationship Retailing, Services Marketing

Introduction

ECONOMIC GLOBALIZATION HAS intensified the competition in many folds and has created a climate of continuous change. This new dynamic environment at one hand offers immense opportunities to grow but on the other hand poses new challenges each day. Historically, banking sector operated in a relatively stable environment and for long, Indian banks had presumed that their operations are customer focused, simply because they had customers. These banks ruled the roost, well protected by regulations that did not allow free entry into the banking sector. But this misconception changed very soon after the opening up of banking sector. Today this sector is facing a forceful competition and many banks have lost a substantial share of their decade old customers to comparatively newly entered private banks and foreign banks.

Due to economic liberalization, the era of lazy banking has reached to its end; the mesh of rules that propped up the Indian banking industry is dismantling quite rapidly. India has
developed a highly competitive banking market since last few years. Therefore, it is imperative that Indian banks wake up to this competitive reality of banking sector and re-focus on their core asset—the customer. Although customer relationship management is considered as a very effective tool through which banks can protect their market shares and boost growth, but it needs to be applied very carefully, otherwise it can irritate the customers very easily if it is not considered important by them or not applied by the bankers in the right way.

Although relationships are as old as mankind and businesses of yester years also relied on relationship for their success, but its strategic role is realized much later. In the early 90s the concept of relationship marketing was formally introduced into the field of services marketing. It was established that building closer relationship with customers resulted in better returns to companies (Reichheld, 1993). Customer relationship management is a process of organizing business activities around customers, who are company’s real assets and hence need to be managed effectively for deriving continuous and sustainable profit over their lifetime.

Most of Indian banks have realized that purpose of their business is to “create and keep a customer” and to “view the entire business process as consisting of a tightly integrated effort to discover, create, and satisfy customer needs”. CRM is a simple philosophy that places the customer at the heart of a business organization’s processes, activities and culture to improve his satisfaction of service and, in turn, maximize the profits for the organization.

A successful CRM strategy aims at understanding the needs of the customer and integrating them with the organization’s strategy, people, technology and business processes. According to the report, ‘IT Efficiency in Financial Services: European Financial Services Technology Survey 2002’, 42% of the retail banks surveyed state they are still increasing their spending on CRM. However it does not happen just by increasingly investing on CRM, or by simply buying the software and installing it. For CRM to be truly effective it requires a well-thought out initiative involving strategy, people, technology, processes and above all it requires the realization that CRM philosophy of doing business should be adopted incrementally with an iterative approach and learn customer attitude and response at every stage of development.

The customer relationship management (CRM) is essential and vital function of customer oriented marketing. Its functions include gathering and accumulating customer-related information in order to provide effective services. CRM is a combination of IT sector but also the key strategy to electronic commerce. The basic aim of CRM is to improve customer service, develop a relationship and retain valuable customers. The strategy which helps in developing building effective business relationships with the customers is termed as CRM. One who wins customer trust will be a front runner. CRM is a process to organize the business activities around the customer.

The market is becoming highly competitive day by day. Many organizations are losing their customer base and leadership in the market. In order to sustain in a competitive environment, relationship marketing is emerging as the core marketing activity. Due to increase in competition, acquiring new customers is much more difficult as well as costlier affair; hence many organizations are diverting its focus on retention of existing customers through CRM and adding new customers through positive word of mouth and promotions.

Gone are the days when customers at a bank did not mind the long serpentine queues and waited patiently for their turn with a token in their hand. In today’s Internet era, no one has the leisure to wait. In this context, online banking is assuming a great significance. Banks are well aware that their success is predominantly dependent on the CRM strategies adopted
by them. Service providers have recognized that good CRM bonds customers with the organization for a longer term, resulting in increased revenues. The challenge is for the banks to work towards ensuring that customers prefer their products and services over that of competing brands; and their CRM approaches offer additional value (augmented product) to their customers and generate loyalty.

Review of Literature

Banking industry historically operated in a relatively stable environment for decades. However, today the industry is facing a forceful competition and banks have lost a substantial proportion of their domestic business to essentially non-bank competition (Hussain, Sajid et al, 2009). These days customers have a lot more choices and they do not have to be loyal to any company. Companies are now trying to figure out ways to manage customer relationships effectively, not only to acquire new customers but also retain their existing customers. CRM is more than identifying who your customers are, providing quality service and analyzing their preferences. It is to improve customer loyalty and customer profitability (Cockburn, Dec 2000).

Bose, (2002) described the customer relationship management (CRM), essential and vital function of customer oriented marketing. CRM involves attainment analysis and use of customer’s knowledge in order to sell goods and services. According to Guenther Hartfeil (1996), vice president and director of customer information and analysis at Bank One Corporation, in Columbus, Ohio, “Products are not profitable; customers are, and we analyzed our customer base, segment by segment, we found that each required a different strategy to maximize its profitability to the bank”. He also noted the importance of the need to measure profitability by customer as about 20 percent of the customers’ account for more than 100 percent of its profits (Guenther, 1996).

Massey et al. (2001) believes that CRM is about attracting, developing, maintaining and retaining profitable customers over a period of time. The best definition of CRM is developed by Payne and Frow (2005) by stating that ‘CRM is a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments. CRM provides enhanced opportunities to use data and information to both understand customers and create value. This requires a cross-functional integration of processes, people, operations, and marketing capabilities that is enabled through information, technology, and application’ (Boulding et al 2005).

Below given are a few illustrations (Source: www.celent.com) of some global banking institutions who have deployed CRM in their institutions.
<table>
<thead>
<tr>
<th>Global Banks</th>
<th>CRM Strategy</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of America</td>
<td>Provide service representatives with 360-degree view of customer relation-</td>
<td>Improve customer experience, retention</td>
</tr>
<tr>
<td></td>
<td>ship for corporate and retail banking</td>
<td></td>
</tr>
<tr>
<td>FleetBoston</td>
<td>Segment customer base into six different groups based on demographics and</td>
<td>Attain cross-sell revenues, maximum</td>
</tr>
<tr>
<td></td>
<td>banking behavior</td>
<td>lifetime value</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>Deploy CRM system across branch network, integrating with central office,</td>
<td>Improve customer experience, cross-sell</td>
</tr>
<tr>
<td></td>
<td>link multiple customer databases</td>
<td></td>
</tr>
<tr>
<td>Societe Generale</td>
<td>Integrate call center, branch, and central office; link 80 banking applications</td>
<td>Improve customer experience, support</td>
</tr>
<tr>
<td></td>
<td>to support unified view of customers</td>
<td>consistent message</td>
</tr>
</tbody>
</table>

The benefits of CRM include reduction in travel expenses, speedy communications, improved collaboration with customer, improved customer service, cross-selling and smarter decision making. CRM software allows and supports banks to collect data on their customers. With this, banks can create a customer profile or view, such as: wallet share, assets, accounts, credit history and more; to offer more and more customer centric services.

Customer relationship profitability is the difference between relationship revenues and relationship costs, both adjusted for risk (Rose, 1991; Storbacka, 1993; Hartfeil, 1996; Foster et al, 1996). Literature is replete with studies on improving profits and many banks are turning towards customer relationship management tools in their efforts to address day-to-day challenges for profitable banks in order to gain competitive advantage (Adam and Michael, 2005; Bill, 2006; Timothy et al, 2006).

Richa S. Vyas and Nijaguna R. B. Math (2006) in a comparative study of cross-selling practices in public and private banks in India concluded that despite the differences in public and private sector banks, it was found that both the sectors are effectively using cross-selling for profitability. The findings also show that customer relationship management is very important as Indian customers prefer personalized services, and are interested in long-term relations with their bank and are willing to seek expert opinion of bank officials.

A number of authors have highlighted the importance of targeting on customers, building relationships with them and keeping them (Christopher et al, 1991; Johnson, 1992; Storbacka, 1993; Peck, 1997; Intindola, 1991; Reichheld, 1993). Similar evidence is given by Taylor (1996), for relationship building with community customers and mentioned the example of Cole Taylor bank of Chicago. A survey of 300 American and Australian general managers and accounting/finance managers conducted by Foster and Young (1997) found “customer profitability / satisfaction to be the “single most important current management priority”.

CRM is a sound business strategy to identify the bank’s most profitable customers and prospects, and devotes time and attention to expanding account relationships with those customers through: (a) Individualized marketing, (b) Re-pricing, (c) Discretionary decision making and (d) Customized service. All delivered through the various sales channels that the bank uses.
Levitt (1960) gave the idea that for firms to stay in existence they should not focus on selling products rather on fulfilling needs. Again Levitt (1969) introduced the concept of the augmented product, stressing that consumers are interested in the total buying experience, not just the core product. Concept such as market orientation (Kohli and Jaworski 1990; Narver and Slater 1990), market focus (Day 1994), and market-based learning (Vorhies and Hunt 2005) were developed to understand the needs and wants of customers, thus making firms more efficient and effective in managing customer relationship. In addition, there was an evolution from product, or brand, management to customer management (Sheth 2005) and from product portfolio management to customer portfolio management (Johnson and Selnes 2004).

Reasons for CRM coming into existence are the changes and developments in marketing environment and web technology. These days maintaining relationship with customers is being used as a key point to set competitive power of an organization, hence CRM lies at the heart of every business transaction. Massey et al. 2000 believes that CRM is about attracting, developing maintaining and retaining profitable customers over a period of time. Trust, cooperation and satisfaction have to be seen as the face of assurance between both the parties, for a long lasting relationship with customers.

According to Huang and Lin (2005) personalization is a strategy that can be easily differentiated and which cannot be simulated by competitors in the market. A good personalized idea will enhance in the increase of sales, improves the customer relationship. Personalization can be defines as serving the unique needs of individual customers. By improving the customer conversations the organization can improve the customer relationships.

Personalized services are not only limited in cheering new sales, but successful implementation allows the organization to improve its effectiveness and efficiently in serving the customers established already. According to Mark.L (2004) identifying the needs of the customers and providing them a best solution before he makes a request shows excellence in service of the customers. Presently customers do not visit their banks for other kind of additional services such as finance, credit cards etc. Customers still see the banks as providing bank services. Customer of the banks is becoming choosier and the success of the banks does depend upon this.

According to Wong and shoal (1998) it is an attitude of trust among the partners of substitute. It’s a vital aspect for understanding the potency of marketing relationships. Trust is an essential relationship structure, which is found in most of all relationship models. Trust factor can be seen in many ways like motivation to depend on a substitute partner and one who sees confidence in him.

The transaction process involves engaging both bank and customers in common satisfying terms. The bank should know what exactly the client wants; at the same time client should also make sure that has enough knowledge about the bank offerings. Social exchange involves more of maintaining long-term relationship with the customers. Confidence, trust, ethics and friendship to some extent are the aspects of the social exchange (Mosad, 1995). According to James (1998) with the increasing knowledge and superiority, of the customers banks are now trying to woo the customer by determining the aspects, which are really vital for them. Thus the aspects may include facilities, reputations, service, operation hours, interest on savings, location of the bank adding to convenience, ambience of the banks as well as friendliness, responsiveness and efficiency of employees.
The extent of influence of the convenience on the customer is that it can also make the loyal customers to switch the brands (Jennifer, R 2005). Location is considered to be convenient if it helps the customer to reduce the travel costs. Location also has broader impact on convenience includes time, place, acquisition etc. A convenient location is often considered to be an additional service aspect of the core services. (Michael, A. et al., 2003). According to Mohini Singh (2002), Faster processing the transaction by e-CRM, the fact that e-responses to customer queries, order acknowledgement, delivery and payment information via e-mail or automated responses are greatly appreciated by customers.

According to a study conducted in the sector of banking, convenience of location, price, recommendations from others and advertising are not important selection criteria for banks. From customers’ point of view, important criteria are: account and transaction accuracy and carefulness, efficiency in correcting mistakes and friendliness and helpfulness of personnel. Thus CRM, high-quality attributes of the product /service and differentiation proved to be the most important factors for customers (Zineldin, M. 2005). Another study conducted in a European bank shows that with CRM, the bank was able to focus on profitable clients through efficient segmentation according to individual behavior.

CRM results both in higher revenue and lower costs, making companies more effective and efficient; effective in targeting the right customer base with the right services via the right channels, and efficient in doing this at the lowest costs. Banks attempt to re-orientate themselves around customers, individual employees will have to come to terms with changing cultural norms, organizational structures and the way that their performance is measured and rewarded. Effective leadership is important. (Galbreath and Rogers, 1999). According to Chen and Popovich (2003), Plakoyiannaki and Tzokas (2002), the relative success of CRM initiatives are strongly influenced by the interplay between three key organizational elements: people, process and technology to ensure success.

In this study researchers have tried to measure the customer perception and attitude towards the use of CRM approaches in banking sector by including above discussed dimensions and benefits to form the basis of study. In the background the conceptual framework given by Shanmuganathan et al. (2003) was used in addition to above literature review. A structured questionnaire was developed to perform the study on customers dealing with four categories of banks and their behavior and attitude was measured towards the CRM practices being used by their bankers to serve them effectively and efficiently.

**Methodology**

The study was carried out in National Capital Region of Delhi, Ghaziabad and Gurgaon (NCR-India) by using an exploratory research design. Structured questionnaire was used in this personal survey, and a five point balanced Likert Scale was developed for measuring customer perception towards CRM approaches practiced by four categories of banks i.e. global banks, national banks, cooperative banks and rural banks. After conducting a pilot survey questionnaire was modified accordingly.

Following hypothesis were formulated to articulate the objectives of the present research:

1. H1: Customers prefer the bank which maintains relationship with them by giving respect and recognition
2. H2: Customers expect customized approach and customized solution from their bank
3. H3: Convenience, confidentiality and CRM (3 Cs) are the major parameters for selecting their bank
4. H4: Inappropriate CRM efforts of bank irritates them and will cause them to change their bank

Validity and reliability of hypothesis and corresponding questions (5 relevant questions for each hypothesis) put in the questionnaire was checked by cronbach alpha value; and for each hypothesis it was found on the upper side (0.769, 0.812, 0.716 and 0.864 for H1, H2, H3 and H4 respectively). A few open ended questions were also put in the questionnaire to get the overall view of bank customers towards their respective banks and attitude for CRM practices used by banks.

Primary data was collected from 225 bank customers (75 from each location i.e. Delhi, Ghaziabad and Gurgaon) by using the personal survey method. Out of which 214 responses were included in the study, as 11 responses were found invalid/incomplete and discarded from the study. Non probability approach of sampling was adopted by the researchers, and Judgment and convenience sampling methods were used in selecting the subjects to ensure the heterogeneity, a detail of sample profile is given below in Table-1. The collected data was analyzed by using Parametric Tests (independent samples equal variance-T Test).

Table-1: Sample Profile (N=214)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Category</th>
<th>Numbers (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Customer</td>
<td>Personal Account Holder</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>Corporate Account Holder</td>
<td>79</td>
</tr>
<tr>
<td>Principal Component of Banking Services</td>
<td>Traditional Services*</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Multi Channel Banking**</td>
<td>132</td>
</tr>
<tr>
<td>Type of Bank</td>
<td>Global Bank</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>National Bank</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>Cooperative Bank</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Rural Bank</td>
<td>9</td>
</tr>
</tbody>
</table>

*In the traditional services: Teller, Fixed Deposit, Demand Draft, Money Transfer, Locker and ATM facilities are included
**In Multi-channel Banking: Credit Card, Debit Card, D-mat, Tele-banking and Internet Banking facilities are included

Findings and Analysis

The data collected from 214 customers was segregated on the basis of sample profiles shown above in Table-1 and weighted mean scores were calculated for each hypothesis (for 5 relevant questions in each hypothesis) and are tabulated below in Table 2 A, 2B and 2C with respect to the each category; and descriptive statistics is being given below in Table-3.
### (2-A) Type of Customer (Weighted Average Value)

<table>
<thead>
<tr>
<th></th>
<th>A. Personal A/C (135)</th>
<th>B. Corporate A/C (79)</th>
<th>Total Average (N=214)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYP1</td>
<td>3.86</td>
<td>4.02</td>
<td>3.92</td>
</tr>
<tr>
<td>HYP2</td>
<td>4.2</td>
<td>4.34</td>
<td>4.25</td>
</tr>
<tr>
<td>HYP3</td>
<td>4.16</td>
<td>4.2</td>
<td>4.18</td>
</tr>
<tr>
<td>HYP4</td>
<td>4.02</td>
<td>4.13</td>
<td>4.02</td>
</tr>
</tbody>
</table>

### (2-B) Principal Component of Banking Services (Weighted Average Value)

<table>
<thead>
<tr>
<th></th>
<th>A. Traditional Service (82)</th>
<th>B. Multi Channel Banking (132)</th>
<th>Total Average (N=214)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYP1</td>
<td>4.4</td>
<td>4.12</td>
<td>4.26</td>
</tr>
<tr>
<td>HYP2</td>
<td>3.96</td>
<td>4.32</td>
<td>4.14</td>
</tr>
<tr>
<td>HYP3</td>
<td>4.44</td>
<td>4.36</td>
<td>4.4</td>
</tr>
<tr>
<td>HYP4</td>
<td>4.04</td>
<td>4.28</td>
<td>4.16</td>
</tr>
</tbody>
</table>
Table-3: Descriptive Statistics

<table>
<thead>
<tr>
<th>Proposition/Statement</th>
<th>Weighted average (Mean Score)</th>
<th>Standard Deviation</th>
<th>Standard Error of the Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Customers prefer the bank which maintains relationship with them by giving respect and recognition</td>
<td>4.1</td>
<td>0.44397</td>
<td>0.02831</td>
</tr>
<tr>
<td>H2: Customers expect customized approach and customized solution from their bank</td>
<td>4.2</td>
<td>0.44866</td>
<td>0.02639</td>
</tr>
<tr>
<td>H3: Convenience, confidentiality and CRM (3 Cs) are the major parameters of customers for selecting their bank</td>
<td>4.3</td>
<td>0.38333</td>
<td>0.02247</td>
</tr>
<tr>
<td>H4: Inappropriate CRM efforts of bank irritate customers and will cause them to change their bank</td>
<td>4.1</td>
<td>0.43216</td>
<td>0.02680</td>
</tr>
</tbody>
</table>

Levene’s test for equality of variances (t-test) indicate that results are highly significant at 1% for H1 as p-value is 0.0 even less than 0.01, and t-calculated is 18.276 (much higher) as compared to t-critical at 1% (2.326), hence H0 is rejected and H1 is supported. These results provide strong evidence to conclude that these days customers prefer the bank which maintains relationship with them and gives them recognition and respect. Results indicate that these days customers expect from their bankers to offer them customized solution by using customized approach, as analysis supports H2 (p-value is 0.0 and t-calculated is 20.288). Test is highly significant for H3 (p-value is 0.0 and t-calculated is 18.686), which supports the view that 3 Cs: the convenience, confidentiality and CRM are the major parameters used by customers in selecting their bank. Results also reveal that if customers find the CRM efforts of the bank inappropriate (i.e. not adding value in their service delivery) they will not mind changing their banks, as results are highly significant for H4 (p-value is 0.0 and t-calculated is 20.862).

Further, researchers applied Z test on both the categories of customers i.e. personal account holders and corporate account holders (Annexure-1) and results indicate that there is no significant difference between the behavior and attitude of both type of customers i.e. both have a positive outlook on CRM approaches being practiced by their banks; however corporate customers are relatively more concerned about CRM practices, may be because of their quantum of business with banks.

Similarly, the Z test was applied on types of banking services i.e. traditional services and multiple services (Annexure-2) and results reveal that there is a significant difference between the attitude and behavior of customers who avail each type of service. The customers of multiple services (multi channel banking) are relatively more concerned about CRM practices of banks as compared to customers of traditional services; this clearly shows that the customers who use credit cards, debit cards, D-mat, tele-banking and internet banking in addition to traditional services; have more concern for CRM practices of banks because of the stated dimensions of safety and security, procedures and time taken, trustworthiness and overall convenience.

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To check the attitude and behavior of customers towards CRM practices across all the four categories of banks i.e. Global banks, National banks, Co-operative banks and Rural banks; researchers applied One Way ANOVA (Annexure-3) and results show that there is no significant difference between the opinion of customers of all the four banks i.e. they all have positive attitude towards CRM in banks and expect from their bankers that they should give them proper recognition and respect, offer them personalized services and customized solutions. Also they have concern for convenience, confidentiality and CRM (3 Cs) offered by their banks and inappropriate CRM efforts of bankers may cause them to change their banks.

Conclusion and Managerial Implications

CRM is the new paradigm of marketing. Due to globalization and increased competition in banking sector, today banks are changing their way of doing business; they are shifting from a transactional based marketing approach to a relationship based approach that has at its core the recognition of the lifetime value of the customer. Due to increased competition, customers these days have wider choices and have higher expectations from banks. All these forces make it necessary for banks to intensify the relationship with their customer and offer them the services they need via the channels they prefer.

CRM permits businesses to leverage information from their databases to achieve customer retention and to cross-sell new products and services to existing customers (Foss, B. and Stone, M. 2001). Companies that implement CRM make better relationships with their customers, achieve loyal customers and a substantial payback, increased revenue and reduced cost (Roh et. al.2005). Results of this study also support that customers these days expect a higher level of service and support from their bankers. Customers prefer to deal with the bank where they get respect, recognition and customized solution to their needs. Gone are the days when they used to wait in the long queues in bank to interact with the bank employee and get their work done. Now these same customers expect that banker should come to their door step to serve their needs. They have realized their real customer power and have enough options available to get their needs served in a more personalized manner.

Further, results of this study confirm that while selecting a bank; customers first look at whether the “3 Cs” are ensured by the bank i.e. Convenience, Confidentiality and Customer Relationship. Also they know that what kind of relationship should be maintained by the bankers with them which mainly revolve around activities relating to efficient and timely service, minimizing cost, energy and efforts, and above all ensuring safety and confidentiality. If the bank fails in meeting these requirements, they will not mind to shift to other bank. Customers these days don’t appreciate just the lip service; they want quick and efficient results. If CRM activities of bank are not found appropriate and are offered just for the sake of it, they get irritated and plan to shift to other available options. Here the positive word-of-mouth about a bank plays a vital role in selecting a bank.

It is very clear and evident from the above results that customer needs and expectations are on rise and will continue rising; therefore banks need to think and act much before the customer ask, i.e. bankers need to be more futuristic in their approach, they must understand the changing needs of their customers and must offer them a perfect solution much before the competitor realize it. CRM by banks can be applied as a very useful and effective tool in developing the data base of customers and categorizing them in groups based on their
potentiality, unique needs and expectations and then serving them efficiently to maintain a strong relationship with them. Also collecting customer feedback on continuous and regular basis to have a track on their changing attitude and behavior; and to assess their response towards CRM practices of banker to ensure whether these approaches are actually pleasing them or irritating them. The most challenging and crucial task of bankers is to design and implement CRM in a truly customer friendly manner to gain maximum positive results out of it. CRM should not be taken as a tool for granting success; it should be implemented as a philosophy, practiced as a culture of the organization revolving around customers to provide them the maximum value through tangible and intangible attributes of service. It will create a brand, enhance the brand image, gaining competitive advantage, ensuring customer loyalty and ensuring life time value for customers.

References
Cronbach, L. J., (1951), Coefficient Alpha and the internal structure of tests, Psychometrika.


Annexure-1

Z TEST FOR TYPE OF CUSTOMER

$X_p =$ Average score value on a 5 point agreement scale for Personal Account Holder

$X_c =$ Average score value on a 5 point agreement scale for Corporate Account Holder

<table>
<thead>
<tr>
<th>CUSTOMER</th>
<th>Personal Ac</th>
<th>Corporate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.00</td>
<td>4.17</td>
</tr>
<tr>
<td>Known Variance</td>
<td>0.46</td>
<td>0.31</td>
</tr>
<tr>
<td>Observations</td>
<td>136.00</td>
<td>79.00</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>1.81</td>
<td></td>
</tr>
<tr>
<td>P(Z ≤ z) one-tail</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>z Critical one-tail</td>
<td>1.64</td>
<td></td>
</tr>
<tr>
<td>P(Z ≤ z) two-tail</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>z Critical two-tail</td>
<td>1.96</td>
<td></td>
</tr>
</tbody>
</table>

Null hypothesis: $H_0 : X_p = X_c$

Alternate hypothesis: $H_1 : X_p \neq X_c$

Rule: if $Z$-Critical $\geq Z$ Calculated, then Accept Null Hypothesis

Decision: ACCEPT NULL HYPOTHESIS

Check for Consistency (Co-efficient of Variation = Standard Deviation x 100 / Mean)

CV for personal 16.71
CV for corporate 13.32

Note: CV = Co-efficient of variation

Conclusion:
There is no significant difference between the overall average ratings of personal and corporate account holders responses; corporate account holders are more concerned about CRM practices used by their banks. It can be seen from the mean scores of customers of personal and corporate account holders, moreover co-efficient of variable is also less in case of corporate account holders.
Annexure-2

Z TEST FOR PRINCIPAL COMPONENT OF BANKING SERVICES

$X_{tr}$ = Average score value on a 5 point agreement scale for Traditional Services

$X_{mc}$ = Average score value on a 5 point agreement scale for Multi Channel Banking Services

<table>
<thead>
<tr>
<th>BANKING SERVICES</th>
<th>Traditional</th>
<th>Multiple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.21</td>
<td>4.27</td>
</tr>
<tr>
<td>Known Variance</td>
<td>0.45</td>
<td>0.29</td>
</tr>
<tr>
<td>Observations</td>
<td>82.00</td>
<td>132.00</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>$z$</td>
<td>4.07</td>
<td></td>
</tr>
<tr>
<td>P(Z ≥ z) one-tail</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>$z$ Critical one-tail</td>
<td>1.64</td>
<td></td>
</tr>
<tr>
<td>P(Z ≥ z) two-tail</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>$z$ Critical two-tail</td>
<td>1.96</td>
<td></td>
</tr>
</tbody>
</table>

Null Hypothesis $H_0: X_{tr} = X_{mc}$
Alternate hypothesis $H_1: X_{tr} ≠ X_{mc}$
Rule: if Z-Critical > Z Calculated, then Accept Null Hypothesis

Decision: REJECT NULL HYPOTHESIS

Check for Consistency (Co-efficient of Variation = Standard Deviation x 100 / Mean)

CV for Traditional Services 16.96 %
CV for Multi Channel Services 12.36 %

Conclusion:
There is a significant difference between the Overall Average ratings of responses from customers of traditional service customers and multi channel customers.
Customers of Multi Channel banking services are more concerned about CRM practices of banks. It can be seen from the mean scores of both the categories. Moreover, they have less coefficient of variation than traditional services customers.
Annexure 3

ONE WAY ANOVA FOR BANK CATEGORY

\[ X_1 = \text{Average score value on a 5 point agreement scale for responses from customers of global bank} \]

\[ X_2 = \text{Average score value on a 5 point agreement scale for responses from customers of national bank} \]

\[ X_p = \text{Average score value on a 5 point agreement scale for responses from customers of cooperative bank} \]

\[ X_n = \text{Average score value on a 5 point agreement scale for responses from customers of rural bank} \]

**SINGLE FACTOR ANOVA APPLIED**

<table>
<thead>
<tr>
<th>Customers of</th>
<th>Count</th>
<th>Sum</th>
<th>Average</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Bank</td>
<td>107</td>
<td>494.03</td>
<td>4.22</td>
<td>0.18</td>
</tr>
<tr>
<td>National Bank</td>
<td>37</td>
<td>366.31</td>
<td>4.13</td>
<td>0.27</td>
</tr>
<tr>
<td>Cooperative Bank</td>
<td>11</td>
<td>44.83</td>
<td>4.06</td>
<td>0.16</td>
</tr>
<tr>
<td>Rural Bank</td>
<td>3</td>
<td>37.63</td>
<td>4.20</td>
<td>0.14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>71.31</td>
<td>3</td>
<td>23.77</td>
<td>1.08</td>
<td>0.36</td>
<td>2.63</td>
</tr>
<tr>
<td>Within Groups</td>
<td>71.31</td>
<td>3</td>
<td>23.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71.31</td>
<td>3</td>
<td>23.77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Null hypothesis \( H_0: X_1 = X_2 = X_p = X_n \)

Alternate hypothesis \( H_1: \) At least one \( X_p \) is different from one or more of the others.

Rule: If \( F \)-Critical > \( F \) Calculated, then Accept Null Hypothesis.

**Decision:** ACCEPT NULL HYPOTHESIS

Check for Consistency (Co-efficient of Variation = Standard Deviation \times 100 \div Mean)

- CV for global bank: 16.21%
- CV for national bank: 12.88%
- CV for cooperative bank: 9.52%
- CV for rural bank: 6.85%

**Conclusion:**

There is no significant difference between the overall average ratings of responses from different types of banks.
About the Authors

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Dr. Ravindra P. Saxena is a faculty of Strategic Marketing at University of Wollongong in Dubai. He has a masters degree in Economics and a masters degree in Business Administration. He did his Ph. D. in Economics in the field of marketing of financial services. Dr. Saxena has his research interest in the area of Consumer Behavior, CRM, Green Marketing and Marketing Communications. He has presented his research work in a number of National and International conferences. He has a large number of publications in reputed journals and is on the editorial board of a few journals.

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