

# **Bank Products and Services Importance Through Multidimensional Scaling: A Study of Indian Small Enterprise Customers**

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*Scheduled Commercial Banks between 1995 and 2008 indicates that out of the priority sector activities, Small Scale Industries receive a less attention in terms of number of accounts, credit outstanding and ratio of credit outstanding to total priority sector credit and total bank credit. The various empirical and descriptive studies have established various factors that are influences the business customers in the selection of their banks for their operations and major influences are vary from study to study. An attempt is made to examine the following objectives: (a) To study the level of importance attached by small enterprise customers on the various products and services offered by the bank; and (b) To map the importance level of two groups of customers having association with banks with greater than 10 years and less than 10 years. It is concluded that products are pushed back by the services in general, self-service technologies in particular. These two business customer groups have difference with somewhat high importance level for startup financing (Factor 2) also endorse this and arm length services with safety (factor 1). The other factor or dimensions, it is noticed that between the two groups of customers there are no difference.*

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## **INTRODUCTION**

Obviously, Commercial Banking System in India like developed world has been playing vital role and acts as a catalyst agent in providing variety products and services to all the sections in the economy. Since 1991, Scheduled commercial banks in general and Public Sector Banks in particular made remarkable achievements in terms of several banking related growth indicators like branch, deposits, and loans and more importantly taking the banking services to the door-step of customers through adapting technology.

One of the major reason why the banks were nationalized in the years 1969 and 1980 in India was that uplifting and promoting the hitherto neglected sectors like agriculture, Small scale industries, etc and as a result the concept of 'priority sectors' was born to lend, extent and provide support to these sectors. The number of branches of Indian Scheduled Commercial Banks (SCBs) was only 8262 in 1969 with deposit amount of Rs.4646 crore and Rs.3599 crore amount of loans and advances. As compared to 1969, as on March 2008, Indian SCBs had 72752 branches with deposit amount of Rs.33,20054 crore and loans and advances amounted to Rs.24,77,039 crore.

Despite the recommendation of the Committee on Financial System (1991), Scheduled Commercial Banks in general and Public Sector Banks in particular largely support these priority sectors by providing 40 per cent of its total credit at subsidized rate of interest, in stead of lending for profit. Nevertheless, the recent data between 1995 and 2008 indicates (the authors computed from various sources: Statistical Banks Related to Banks in India – Various source) that out of the priority sector activities, Small Scale Industries receive a less attention in terms of number of accounts, credit outstanding and ratio of credit outstanding to total priority sector credit and total bank credit. For instance, the small scale industries' number of accounts registered an annual growth rate of -4.586 during 1995 - 2007 as against 19.45 per cent of agriculture and allied activities and 0.298 of priority sector advances' accounts. The credit

outstanding was 10.68 per cent per annum compared to that of agriculture (18.92), other priority sector (28.15), total priority sector (23.06) and total bank credit (17.87). The ratio of loans and advances of small scale industries to total priority sector also declined from 42.21 per cent in 1995 to 20.50 per cent in 2007.

Despite this phenomenon, Small scale industries and small retail business are playing an important role (Economic Survey 2008, Government of India) in the economy like India in providing large scale employment (263.68 lakh in 2003 and 312.52 lakh in 2007), production (Rs.306771 crore in 2003 and Rs.471663 crore in 2007) and export (Rs.86013 crore in 2003 and Rs.150242 crore in 2005).

## **EARLIER STUDIES**

A service is a process consisting of a series of more less intangible activities that normally, but not necessarily always, take place in interactions between the customer and service employees and / or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems (Gronroos, C., 1990). Services are relatively intangible, produced and consumed simultaneously, and often less standardized than goods (Leonard L. Berry, 1980; Bowen, D.E. and Schneider, B., 1988). Banking services can be defined as intangible products that are labor- or skill-intensive, and tangible products such as computers and buildings are used mainly to support this provision of labor (Joo-Gim Heaney, Ronald E. Goldsmith, 1999). The following earlier studies highlights the determinants of bank choice by the individual as well as business customers.

Mosad Zineldin (1996) portrays from the bank customers' point of view, factors relating to functional quality such as friendliness and helpfulness of personnel, accuracy in account transaction management, efficiency in correcting mistakes, and speed of service and decision making clearly emerged as the most important determinants of bank selection. In his 2005 study, Mosad Zineldin reconfirmed the earlier findings with service quality. Nielsen et al (1998) also emphasized the same variables with business banking in Australia. Mols et al (1997) identified that the service quality is the most important criterion for choice of domestic cash management banking, followed by pricing and relationship.

Madill et al (2002) reveal about the role of bank's account managers and their relationship influences the SME's customers' long term relationship with banks. Ibbotson and Moran (2003) noticed that the bank charges and errors made in relation to the charges is the main gripe that they would have with their banks and subsequently this was the main reason provided by those businesses that they have considered moving their business to another banks. Yuvas (2004) studied the Bank choice behavior of small and medium-sized construction firms and reveal that search, credence and experience are the dimensions influence the bank choice behaviour.

Regan Lam and Suzan Burton (2006) reveal that perceived service quality and the length of business relationship appear to have strong associations with loyalty behaviour, in terms of customers' willingness to continue to use a bank and/or to recommend the bank to others. Stuart Locke and Zachariah Boulanouar (2007) emphasize that both price and non-price competition between banks and the potential lost opportunities faced by small business through their inability to filter the signals in a manner that leads to value adding changes.

Burk Ulengin (1996) indicate that the banks in Turkey earned high level of satisfaction from customers by offering different financial products, but finding difficulty in differentiating their products among their competitors. The author emphasizes the delivery channels and customer relationships gain importance in the bank choice process. Athanassopoulos and Labroukos (1999) study identified and mapped three banking products on the basis of customer perceptions: (a) long-term loan and exchange loan, (b) short-term loan and import & export loan and (c) insurance services, warranties and handling drafts. Mark

Durkin et al (2004) reveal that the retail bank customers prefer to use the remote channel, however the customer still value branch services. The study findings also supported by Geoffrey Bick et al (2004).

In summary, all the study have established various factors that are influences the business customers in the selection of their banks for their operations and major influences are vary from study to study. However, a very little research (Athanasopoulos and Labroukos, 1999) has been conducted on the bank's product and services importance with small enterprises customers. In this context, an attempt is made to examine the following objectives: (a) To study the level of importance attached by small enterprise customers on the various products and services offered by the bank; and (b) To map the importance level of two groups of customers having association with banks with greater than 10 years and less than 10 years

## **METHODOLOGY AND TOOLS**

The study is intended to analyze the perceived importance on products and services, and perception level between two groups of customers: who are greater than with 10 years of association with banks and who are less than with 10 years of association. The study design is descriptive in nature. Descriptive research is marked by prior formulation of specific research questions. Since the population (total number of bank customers in selected public sector bank) is large and difficult to get from the bank (branch), the sample units viz., business customers were selected based on non-probability sampling method. Convenience sampling design was adopted for the study. It was determined and decided to collect the information from more than 200 business customers of Indian Public Sector Banks. The structured questionnaire was designed to collect the information regarding the products and services of the banks (the products and services were identified through the brochures and materials collected from the leading public sector banks and questionnaire discussed with bank's officials). The questionnaire was self-administered by the business customers. The level of importance on the product and service was studied by using 4-point scale (4 as very important and 1 as not at all important). Two hundred questionnaires were distributed to the customers and 152 were received, and finally 138 completed questionnaires have been used for the analysis. Factor analysis was employed to bring out the important products and service dimensions, and multidimensional scaling was used to bundle, assess and compare the importance level attached on bank products and services dimensions derived from factor analysis by and between two different groups of business customers.

## **RESULTS AND DISCUSSION**

The banking products and service variables and its importance level given by the small enterprise customers were analysed through the exploratory factor analysis through principal component analysis. KMO and Bartlett's Test results shows that there is no correlation (Chi-square =1349.84, p=0.000) between identified banking products and services. The Kaiser-Meyer-Olkin Measure of Sampling adequacy (KMO=.876) is higher than the suggested .6 value indicating that the correlation matrix may be difficult to factor. Cronbach's alpha has indicated 0.908 to be an acceptable reliability coefficient (Nunnally, J. 1978). The PCA extracted 5 factors, which describes the products and services importance level through the varimax rotation method and the extracted factors accounted 69.417 per cent variance and clearly indicates that above banking products and services are important in explaining the small enterprises Customer to prefer the banks and strong association with the selected bank(s). Cronbach's alpha test was also performed to measure the internal consistency of each factor and it was found 5 factors values are more or less equal to the suggested cutoff value(factor loading above 0.40), revealing an acceptable level of reliability.

**Factor 1:** Armlength services with Safety indicates electronic fund transfer, online banking, recurring deposits, banking by phone, ATM, safety lockers, credit card, and multicity cheque facility. Higher factor scores of the scaled items and % of variance signify the variables and the scaled item explains 26.081 per cent of variance. The internal consistency value (0.907) exceeds the suggested level value. Equipment and/or Construction loans, project finance and letter of credit with **Factor 2:** Start-up financing. This factor accounts 12.218 per cent of variance. The internal consistency value (0.777) exceeds the suggested level value. **Factor 3:** Current Account with Very-short term credit facility converged with current account facility, Over-Draft facility, bills discount and bank guarantees. The dimensions accounted 11.523 per cent of variations. The internal consistency value (0.728) exceeds the suggested level value. **The factor 4** Loan products dimension includes: car loan and term loan. This dimension attributed the variance to the level of 110.395 per cent. The internal consistency value (0.729) exceeds the suggested level value. **Factor 5:** bank statement with Demand Draft and Pay order facility. This dimension attributed the variance to the level of 9.200 per cent. The internal consistency value (0.524).

**Table I: Important Dimensions of Banking Products and Services**

	Factor Score	% of Variance	Cronbach Alpha	Factor Mean	Factor Variance
<b>Armlength Services with Safety</b>		26.081	0.907	2.967	1.717
Electronic fund transfer	.783				
Online banking	.776				
recurring deposits	.772				
Banking by phone	.759				
ATM	.705				
Safety lockers	.681				
Credit loan card	.671				
Multicity cheques	.651				
<b>Startup Financing</b>		12.218	0.777	2.954	1.514
Equipment/construction loans	.840				
Project finance	.674				
Letter of Credit	.542				
<b>Current A/C with Short-term Finance</b>		11.523	0.728	3.315	1.420
Current A/C	.732				
OD facility	.631				
Bills discount	.556				
Bank Guarantees	.554				
<b>Loan Products</b>		10.395	0.729	2.761	1.291
Car loan	.815				
Term loan	.802				
<b>Bank Statement with DD/Pay Order</b>		9.200	0.524	3.699	1.301
Bank statement	.764				
DD/pay order	.749				
<b>Cronbach Alpha</b>			0.908		
<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>			0.876		
<b>Bartlett's Test of Sphericity</b>			1349.84*		

### Mapping the Customers importance level on the products and services

This study uses the ALSICAL procedure in SPSS 12 (Alternating Least-Squares Algorithm) to perform Multi-Dimensional Scaling (MDS). Iteration history for the two dimensional solutions (in squared distances) has been obtained. Stress measures indicate the proportion of the variance of the disparities not accounted for by the MDS model (Hair et al, 2003). Stress values are indicative of the quality of MDS solutions. Whereas R-square is a measure of goodness of the optimally scaled data (RSQ), stress measures badness of fit (Malhotra, 2004). Thus, by using both stress values and R-square values the results indicates that the calculated RSQ values of two group of customers (greater than 10 years of association = 0.95309 and less than 10 years of association = 0.96890) are well above the suggested value, thus indicating fitness of the variables for solution.

It is noticed from Figure 1 that the customers with greater than 10 years of association attached high positive importance level for loan products (factor 4) with dimension 1, on the other hand, bank statement and DD/pay order facility (factor 5) and startup financing (factor 3) are lies at the negative side. With dimension 2, current account with short-term financing (factor 3) and loan products (factor 4) are lies on the positive side with arm length services (factor 1) and safety and startup financing (factor 2) are positioned on the negative side.

Figure 2 indicates that arm length services with safety (factor 1), startup financing (factor 2) and loan products (factor 4) are with strong positive side and current account with short-term financing (factor 3) and bank statement with DD / pay order facility (factor 5) positioned on negative side with dimension 1. With dimension 2, services with safety (factor 1), startup financing (factor 2) are positioned very closely on positive side. Current account with short-term financing (factor 3) and bank statement with DD / pay order facility (factor 5) are with middle range and loan products (factor 4) on negative side.

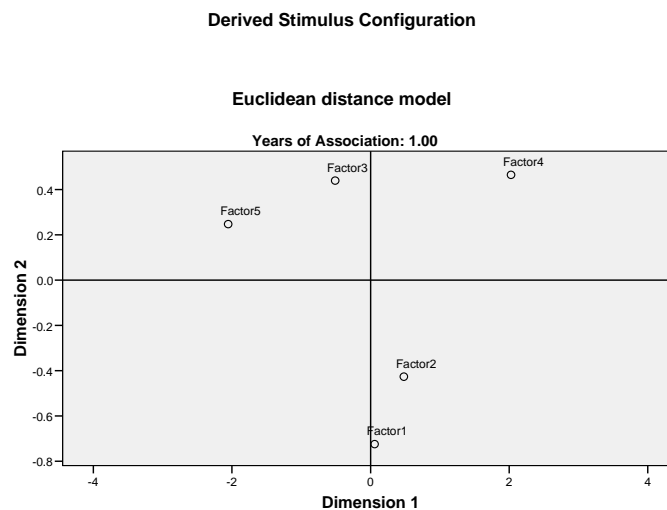


Figure 1: Customers with greater than 10 years of Association

Stress= .09572

RSQ= .95309

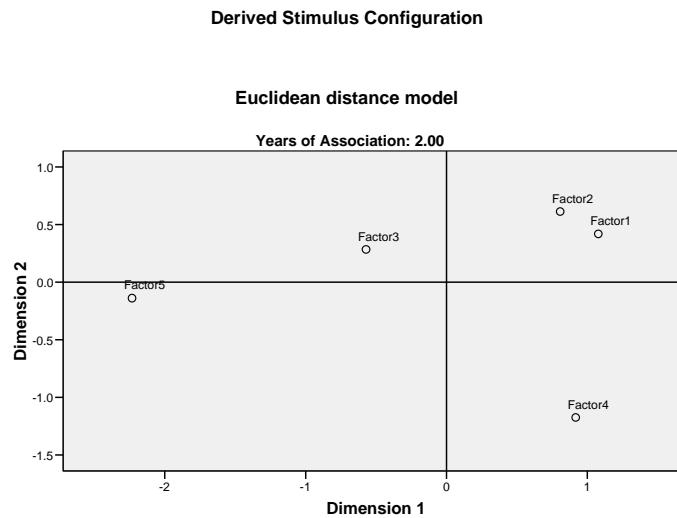


Figure 2: Customer with less than 10 years of Association

Stress= .07840

RSQ= .96890

Therefore, it is important to note that with both groups of customers, the arm length services with safety (factor 1), startup financing (factor 2) and loan products (factor 4) are with strong positive side and short-term financing (factor 3) and bank statement with DD / pay order facility (factor 5) are placed on the negative side with dimension 1. However, the difference in the importance level was noticed with dimension 2. Loan products (factor 4), short-term financing (factor 3) and bank statement with DD / pay order facility (factor 5) are with strong positive side, followed by the arm length services with safety (factor 1), startup financing (factor 2) are positioned strongly with negative side for the customers with greater than 10 years of association, where as only loan products (factor 4) for the customers with less than 10 years of association with the bank.

## **CONCLUSION AND POLICY IMPLICATION**

This research article is a common departure from the earlier studies on identifying the underlying determinants of bank choice for the business customers. Rather concentrating on the determinants, the study mainly focused on the level of importance attached by the small enterprise customers on the various products and services offered by the banks in Indian Economy. The first part of the study indicates the level of importance attached by the two groups of customers associated with banks: greater than 10 years and less than 10 years on the products and services bundling. It is noticed that products are pushed back by the services in general, self-service technologies like electronic fund transfer, online banking, banking by phone, ATM, multicity cheque facility etc., compared to traditional services and products like current account, OD facility, bank statement, DD and / or pay order, etc.

The importance level of product and services bundling of small enterprises customers who have greater than 10 years of association with the banks. These customers have attached more importance for the loan products (Factor 1: car loan and term loan) and the result is tally with the findings of Athanassopoulos and Labroukos (1999). It is noticed that these types of customers with the long experience with their

business activity intended to have more loan for the modernization of their business activity and look for vehicle loan.

The importance level on product and services bundling of the customers who have less than 10 years of association with banks. It is noted that these customers also given importance for the loan products (Factor 1) as seen in the case of greater than 10 years of customers. However, these customer have attached more importance to factor 2 (startup financing) and factor 1 (arm length services). The customers started their business activity with less than 10 years and their demand and need are mainly of equipment and/or construction loans, financial need for other project related activity and letter of credit. The next level of importance to arm length service indicate the small enterprise clients necessarily spend their time with their business to establish their name and this force to minimize their transaction costs on their visits to banks frequently. The greater than 10 years customers with somewhat high importance level for startup financing (Factor 2) also endorse this and arm length services with safety (factor 1). The other factor or dimensions, it is noticed that between the two groups of customers there are no difference.

It is the time to understand the small enterprise customers that their demand and need should be addressed by the bankers at the local level and corporate level. In other words, banks role is more than just providing the providing products and services. It is the policy makers at the national level, India is definitely leveraging its ITC in banking sector too, however, the sector that is contributing more interims of employment, production and export is not able to utilize effectively and efficiently utilize the ITC for its productive purposes.

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