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in Indian Banking Services:  
Service Quality Variables in Hybrid  
Service Delivery Scenario**

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**Abstract:** This research seeks to empirically evaluate the influence of the underpinnings of service quality on the loyalty of bank-customer relationship in the Indian banking sector. For quality, it has been considered that service is delivered in a hybrid scenario i.e. the service is delivered using both technology and human channels. Purpose of this study is to find how service quality discriminates between the loyal and *disloyal* customers. A survey of Indian bank customers using both modes of service delivery was conducted. The data were factor-analysed to determine the key dimensions of hybrid service quality. The resulting dimensions were applied in the subsequent discriminant analysis conducted to determine which factors discriminate between customers on the basis of perceived bank-customer loyalty relationship. The results show eight dimensions of service quality, viz. Employee Competence (EC), *Call-Centre Customer Service (CCS)*, Technology Reliability (TR), Technology Convenience (TC), Tangibles (TAN), Price (PRI), Technology Information Usage (TIU) and Subscription Ease (SE). Discriminant analysis results show that all the service quality dimensions discriminate between the loyal customers and customers who are not loyal, i.e. perceived quality is discriminating the loyalty relationship of the bank customers. However the quality dimensions which discriminates most are EC, CS and TC, in that order while the least effect is that of Tangibles.

**Keywords:** Customer Loyalty-Indian Banking Services; Service Quality Variables- Indian banks; Hybrid Service Delivery- banks

## Underpinnings of Customer Loyalty in Indian Banking Services - Service Quality Variables in Hybrid Service Delivery Scenario

### 1. INTRODUCTION

In today's complex business environment, it has become very crucial for companies to attain high customer loyalty for long term sustainable growth. Just like companies of other business domains, Indian banking service providers also consider their customers as the most important asset. But the most critical issue is that whether this customer orientation is reflected in their strategies. The customers of dynamic banking services have moved ahead and started using the banking services like retail services. So it has become necessary in today's business to understand the fact that customers' being a company's most important asset is not just a theory, but also an economic fact. So in current business scenario, the research on Customer Loyalty in business domain of banking services is quite important and also critical for the understanding of customer psychology in order to retain the customers. In the light of the importance of customer loyalty and retention, it is very crucial for any company to learn what actually differentiates the loyal customers from the *disloyal* ones. Also to judge delivery of the services, the most crucial part is the service quality. To fight the competition in the marketplace service quality becomes a crucial weapon, because delivery of superior service quality is considered to be a sure way of success as well as a method of differentiation in most of the service oriented businesses (Parasuraman et al, 1988).

For quality, it has been considered that service is delivered in a hybrid scenario i.e. the service is delivered using both technology and human channels (Ganguli and Roy, 2010). This is because with the advent of Information Technology (IT), banking services has been revolutionized. It is delivered using both human channels (branch banking) as well as technology channels (ATM, Phone banking, Internet banking etc.). So, the service quality has been looked at from human delivery angle (Parasuraman et, 1988) as well as technology-based delivery angle (Parasuraman et al, 2005), but here it is considered from the angle of customer-perceived service quality when a bank is using both to deliver its services. This research seeks to empirically evaluate the influence of the underpinnings of service quality on the loyalty of bank-customer relationship in the Indian banking sector. Service quality impacts customer loyalty (Zeithaml et al, 1996). But how does the service quality discriminate between the loyal and *disloyal* customers is the purpose of this research study.

The paper has the following sections: next section is the literature review where service quality and customer loyalty literature has been discussed; next, the article discusses the research methodology used in the paper as well as the survey instrument used in data collection. Finally, the results of the analysis is presented followed by a discussion of the findings.

### 2. LITERATURE REVIEW

Service quality has been conceptualized as an overall assessment of service by the customers. It is a key decision criterion in service evaluation by the customers (Lewis and Booms, 1983). Perceived service quality is believed to be resulting from comparison between customers' prior expectations about the service and their perceptions after actual experience (Asubonteng et al., 1996). Besides service outcomes, service quality perceptions also involve evaluation of the

service delivery process (Parasuraman et al., 1985). Hence, conceptualization of service quality ought to include both the process as well as the service outcomes (Lehtinen and Lehtinen, 1991). In fact, Lehtinen and Lehtinen (1991) offered a comprehensive model with three dimensions of service quality: physical, interactive and corporate. Gronroos (1984) offered a service quality model with dimensions of technical quality (what consumer gets), functional quality (how consumer gets the service) and corporate image (how consumers perceive the firm and its services).

In conventional services, human interactions (interactions between customers and service firm employees) during delivery and consumption of a service are the major elements for measuring service quality. SERVQUAL (Parasuraman et al., 1988) is perhaps the most widely-known and researched scale of service quality. It focuses on human interactions during the service encounter. It consists of five dimensions: reliability, tangibility, responsiveness, assurance and empathy. However, Cronin and Taylor (1992) criticized SERVQUAL and proposed an alternative scale called SERVPERF. It includes all the SERVQUAL scale dimensions, but uses only service performance (perception) as a measure of customer perceived service quality instead of the gap (between expectation and perception) approach of SERVQUAL. Further research works have been carried out with SERVQUAL, which either modified the dimensions or added new dimensions to the original five in order to accommodate for uniqueness of different types of service settings (Asubonteng et al., 1996; Babakus and Boller, 1992; Buttle, 1996; Carman, 1990; Lai et al., 2007).

In the context of conventional services, most of the studies have focused on human-human interactions in measuring service quality. Service quality dimensions obtained for retail banking were core quality, relational quality and tangibles (Levesque and McDougall, 1996). Caruana et al. (2000) identified reliability, assurance and responsiveness as factors of service quality for audit firms. In the context of retail stores, physical aspects, reliability, personal interaction, problem solving, policy, convenience, product quality and selection emerged as dimensions of service quality (Burke, 2002; Dabholkar et al., 1996).

In case of technology-enabled services, the conventional method of measuring service quality was no longer relevant. As a result, research has identified new dimensions of service quality, such as automated search, communication among customers, information acquisition, content, mass customization, and ease of use (Bailey and Pearson, 1983; Doll and Torkzadeh, 1988; Peterson et al., 1997). Consumers' perception of technology related service quality is also affected by their willingness to use and adapt to the new technologies. Thus, unique scales such as Technology Anxiety (Meuter et al., 2003) and Technology Readiness Index (Parasuraman, 2000) are being used for the measurement of service quality in technology-enabled services. Also Parasuraman et al. (2005) developed E-S-QUAL, which is a multi-item scale for assessment of electronic service quality. The four dimensions of E-S-QUAL are efficiency, fulfillment, system availability and privacy. As service recovery is an important aspect affecting service quality perception of customers, Parasuraman et al. (2005) also developed a scale for electronic service recovery quality (E-RecS-QUAL), which consists of three dimensions - responsiveness, compensation and contact.

Van Riel et al. (2001) identified user interface, core service and supplementary services as the crucial dimensions of e-service quality in the case of internet-enabled businesses. Collier and Bienstock (2006) found that e-service quality consists the dimensions of process, outcome and

recovery quality. Other dimensions of e-quality are web site appearance, ease of use, linkage, layout and content, reliability, efficiency, support, communication, security, incentives, performance, feature, storage capability, serviceability, trust, responsiveness, customization, web store policies, reputation, assurance and empathy (Madu and Madu, 2002; Santos, 2003). In case of electronic banking researchers identified accuracy, feedback/complaint management, efficiency, queue management, accessibility, customization, customer service, secure and flexible service, ease and convenience, quality of ATM, telephone and internet banking, product portfolio and price as important dimensions of service quality (Al-Hawari et al., 2005; Joseph et al., 1999; Joseph and Stone, 2003; Yang et al., 2004).

One of the most important customer metric to judge the customer behaviour towards a company is customer loyalty. Many researchers have used service recommendation to other customers as a proxy for customer loyalty (Caruana, 2002; Collier and Bienstock, 2006; Dabholkar et al., 2000; Ganesh et al., 2000; Reichheld, 2003). Besides recommendation other items which have been used extensively for measurement of customer loyalty are consideration of the company as the first choice service provider (Caruana, 2002; Zeithaml et al., 1996) and continuing to do business with the same company (Caruana, 2002; Ganesh et al., 2000; Johnson et al., 2001; Olorunniwo and Hsu, 2006; Van Riel et al., 2001; Zeithaml et al., 1996). Besides recommendation being used in many studies as a proxy for customer loyalty (Caruana, 2002; Collier and Bienstock, 2006; Dabholkar et al., 2000), it has been shown empirically that service quality has a direct effect on recommendation (Johnson and Sirikit, 2002; Levesque and McDougall, 1996; Parasuraman et al., 2005; Zeithaml et al., 1996). The effects of different service quality dimensions on loyalty has also been tested in different service contexts of package tour operators (Andreassen and Lindestad, 1998), call centers (Dean, 2002), multi-service scenario (Zeithaml et al., 1996) and internet services (Parasuraman et al., 2005). Previous research has suggested that the quality of customer's service experience aids them to develop positive value perceptions about the service provider. The cognitive evaluation of the different service quality dimensions will lead to a favourable behavioural response from the customer (Brady et al., 2002; Carrillat et al., 2009).

*So, it is evident from the literature that research has been done both from human-based service delivery and technology-based service delivery on the topic of service quality. But, there is lack of research on the area of hybrid service delivery (both using technology and human). And this paper is trying to address the gap by exploring how service in such hybrid scenario is affecting the loyalty of the customers.*

### 3. METHODOLOGY

#### 3.1 Sampling and Measurement Instrument

A survey of Indian bank customers using both modes of service delivery was conducted using a questionnaire (both in offline and online modes). Final usable sample size was 595. The sample comprises of 56.1 percent male and 43.9 percent female respondents. 16.6 percent of respondents have annual household income of less than Rs. 2 lakhs, 24.3 percent between Rs. 2 to 4 lakhs, 22.3 percent from Rs. 4 to 6 lakhs and 36.8 percent comprises of people having income more than Rs. 6 lakhs per annum. 18.6 percent of the respondents belonged to the age group of 25 years and below, 29.5 percent to the age group of 26-30 years, 30.9 percent in the age group 31-40 years, 10.2 percent to the age group of 41-50 years and the rest 10.8 percent

are above 50 years of age. 41.6 percent of the respondents belong to the business/self-employed group, 42.9 percent are in the salaried class while rest 15.5 percent belong to the unemployed class comprising of students, housewives and retired people. 37.3 percent are graduates, 9.5 percent are non-graduates while rest 53.2 percent are in the education group of post-graduate or above.

All questions were asked to be responded in a Likert scale of 1 to 7 (1 being “strongly disagree” to 7 being “strongly agree”). The survey instrument was developed based on literature review. The variables shown in Table 1 have been adapted from the existing literature. The following Table 1 lists out the 38 service quality items and the 3 customer loyalty items with their Descriptive Statistics of Mean and Standard Deviation (S.D.).

**TABLE 1: Descriptive Statistics of Measurement Items**

S. No.	Item	Mean	S.D.
SQ1	The technology provided by my bank is user friendly	5.68	1.11
SQ2	The technology provided by my bank works accurately and is error free	5.02	1.38
SQ3	My bank’s technology is reliable	5.39	1.20
SQ4	My bank’s technology generally do not fail	4.41	1.62
SQ5	I feel safe using my bank’s technology	5.36	1.22
SQ6	I feel the risk associated with my bank’s technology is low	5.03	1.39
SQ7	My personal information exchanged while using technology is not misused by my bank	5.26	1.41
SQ8	My bank’s technology provides sufficient (enough) information	5.29	1.19
SQ9	My bank’s technology provides the reports I need	5.16	1.30
SQ10	My bank’s technology gives me more freedom of mobility i.e. using the banking services while on move	5.51	1.30
SQ11	I find it more convenient to use technology than interacting with branch employees	5.37	1.56
SQ12	My bank’s technology allows me to complete transactions quickly	5.72	1.18
SQ13	My bank’s technology saves me a lot of time, especially when I am pressed for time	5.79	1.24
SQ14	It is easy to open a bank account with my bank	5.04	1.57
SQ15	It is convenient and hassle free to open a bank account with my bank	4.95	1.53
SQ15	My bank’s physical facilities are visually appealing	4.94	1.46
SQ17	My bank’s printed materials (e.g. brochures, forms) are visually appealing	4.99	1.42

<b>SQ18</b>	My bank's promotional campaigns are effective in building a positive reputation	5.02	1.39
<b>SQ19</b>	The fees that my bank charges are acceptable and reasonable	4.59	1.61
<b>SQ20</b>	The fees charged by my bank are competitive	4.62	1.49
<b>SQ21</b>	Within each basic service (e.g. savings account or loans) my bank provides a variety of options	5.08	1.34
<b>SQ22</b>	My bank employees are competent	4.92	1.48
<b>SQ23</b>	My bank employees are easily approachable	4.94	1.53
<b>SQ24</b>	My bank employees are courteous, polite and respectful	5.12	1.45
<b>SQ25</b>	My bank employees are willing to help customers	5.07	1.44
<b>SQ26</b>	My bank employees are pleasant and friendly	5.03	1.48
<b>SQ27</b>	My bank employees are caring	4.71	1.48
<b>SQ28</b>	Employees of my bank understand my specific needs	4.53	1.50
<b>SQ29</b>	Employees of my bank pays personal attention to me	4.44	1.58
<b>SQ30</b>	My bank offers its services promptly with very little waiting time	4.40	1.65
<b>SQ31</b>	My bank's operating hours are convenient for me	4.79	1.67
<b>SQ32</b>	When I contact my bank's customer service (call centre), my requests are understood properly	4.51	1.57
<b>SQ33</b>	When I contact my bank's customer service (call centre) with any problem or request, the representatives explain the steps to be taken to solve the problem or address the request	4.53	1.52
<b>SQ34</b>	When I contact my bank's customer service (call centre), the representatives are supportive (treats me with empathy)	4.61	1.51
<b>SQ35</b>	When I contact my bank's customer service (call centre), the representatives offer personalized help (information and offers)	4.39	1.53
<b>SQ36</b>	When I contact my bank's customer service (call centre), my calls are always answered promptly (without much waiting)	4.16	1.64
<b>SQ37</b>	My bank employees have enough knowledge and skill to resolve my problems	4.71	1.47
<b>SQ38</b>	My bank resolves my complaints quickly	4.49	1.52
<b>CL1</b>	I would recommend my bank to others	5.13	1.45
<b>CL2</b>	I will always consider this bank as my first choice	4.87	1.60
<b>CL3</b>	I expect to do more business with my bank in the future	5.02	1.50

### 3.2 Data Analysis and Results

The data was analysed in two steps. First it was factor-analysed to determine the key dimensions of hybrid service quality. The resulting dimensions were applied in the subsequent discriminant analysis conducted to determine which factors discriminate between customers on the basis of perceived bank-customer loyalty relationship.

#### 3.2.1 Exploratory Factor Analysis (EFA)

Exploratory factor analysis was performed on the sample using the 38 variables related to the service quality of hybrid services. Principal component analysis with varimax rotation was used. The criteria used for factor extraction is twofold i.e. the Eigen value should be greater than one but more importantly the factor structure should be meaningful, useful and conceptually sound (Pett et al., 2003). Eight factors were extracted accounting for 67.5% of the total variance explained. The results of *KMO* (0.938) and *Bartlett's Test of Sphericity* (*Chi-square* – 14725.52 and *significance* – 0.000) indicate that Factor Analysis done is effective. One item (SQ31) was removed because of low loading. Results of the factor analysis are shown in Table 2.

**TABLE 2: Results of EFA**

Factors	Measurement Items	Factor Loadings	Cronbach's Alpha
Employee Competence (EC)	SQ22	0.709	0.948
	SQ23	0.756	
	SQ24	0.829	
	SQ25	0.839	
	SQ26	0.828	
	SQ27	0.818	
	SQ28	0.705	
	SQ29	0.728	
	SQ30	0.662	
	SQ37	0.546	
Call-Centre Customer Service (CCS)	SQ32	0.786	0.920
	SQ33	0.814	
	SQ34	0.815	
	SQ35	0.787	
	SQ36	0.705	
Technology Reliability (TR)	SQ1	0.506	0.845
	SQ2	0.762	
	SQ3	0.715	
	SQ4	0.784	
	SQ5	0.701	
	SQ6	0.574	

<b>Technology Convenience (TC)</b>	SQ10	0.525	0.712
	SQ11	0.647	
	SQ12	0.743	
	SQ13	0.754	
<b>Tangibles (TAN)</b>	SQ16	0.694	0.782
	SQ17	0.754	
	SQ18	0.613	
<b>Price (PRI)</b>	SQ19	0.815	0.754
	SQ20	0.844	
	SQ21	0.693	
<b>Technology Information Usage (TIU)</b>	SQ7	0.568	0.778
	SQ8	0.647	
	SQ9	0.625	
<b>Subscription Ease (SE)</b>	SQ14	0.856	Corr. Coefficient = 0.873 (Significant at 0.01 level)
	SQ15	0.841	

The eight factors were labelled as Employee Competence (EC), **Call-Centre Customer Service (CCS)**, Technology Reliability (TR), Technology Convenience (TC), Tangibles (TAN), Price (PRI), Technology Information Usage (TIU) and Subscription Ease (SE) as per the variables which loaded into the factors. Reliability of the factors was calculated using the Cronbach's alpha. A Cronbach's alpha value of greater than or equal to 0.7 is considered acceptable for the factor to be reliable (Hair et al., 2006). In our case all the factors had satisfactory value of Cronbach's alpha. For the 2-item factor of SE we checked the correlation coefficient. Hence the factors are reliable.

### 3.2.2 Discriminant Analysis

All the customers are classified into 2 groups – *Loyal* (average value of the three variables measuring customer loyalty above 4) and *Disloyal* (average value of the three variables measuring customer loyalty 4 or below 4). The predictor discriminating variables for the discriminant analysis are the eight factors that we have got above from the EFA. Factor scores of the 8 factors were considered. The results of the discriminant analysis are as follows –

On the basis of means and standard deviations 2 groups are most widely separated in terms of Employee Competence (EC), **Call-Centre Customer Service (CCS)**, Technology Convenience (TC), in that order while the least effect is that of Tangibles (TAN). Pooled within group correlation matrix does not show any high correlation; so, problem of multi-collinearity will not be there. Wilks' Lambda (0.654) is also acceptable (Chi-square – 250.16, significance – 0.000). Canonical correlation associated with the discriminant function is 0.588, which means approximately 35% ( $0.588^2 = 0.35$ ) of the variance in the dependent variable (customer loyalty) is accounted for by this model.

**TABLE 3: Univariate F ratios (Tests of Equality of Group Means) for Factors**

Variables	Wilks' Lambda	F	df1	df2	Significance
EC	0.858	97.753	1	593	.000
CS	0.931	44.185	1	593	.000
TR	0.975	15.193	1	593	.000
TC	0.961	24.128	1	593	.000
TAN	0.991	5.189	1	593	.023
PRI	0.978	13.620	1	593	.000
TIU	0.984	9.546	1	593	.002
SE	0.976	14.667	1	593	.000

So, all the dimensions (at 5% level of significance), are significantly differentiating between the loyal and **disloyal** customers. Standardized Canonical Discriminant Function Coefficients (*EC – 0.733, CS – 0.534, TC – 0.407, TR – 0.328, SE – 0.323, PRI – 0.311, TIU – 0.262, TAN – 0.195*) and Structure Matrix (*EC – 0.558, CS – 0.375, TC – 0.277, TR – 0.220, SE – 0.216, PRI – 0.208, TIU – 0.174, TAN – 0.129*) also support these results. EC, CS, TC, TR, SE and PRI differentiate loyal from **disloyal** customers in that order; also TIU and TAN contribute to the discrimination but at a lesser level.

**TABLE 4: Classification Matrix for Discriminant Analysis**

		Loyalty	Predicted Group Membership		Total
			Loyal	<b>Disloyal</b>	
Original	Count	Loyal	446	19	465
		<b>Disloyal</b>	62	68	130
	%	Loyal	95.9	4.1	100.0
		<b>Disloyal</b>	47.7	52.3	100.0

Correctly classified =  $(514 \times 100 / 595) \% = 86.4\%$ . Even with the cross validation correctly classified is 85.2%. So discriminant is good and acceptable.

#### 4. IMPLICATIONS

In this study for exploring which of the underlying constructs or dimensions of service quality in Indian banking services (in hybrid service delivery scenario) discriminate between loyal and **disloyal** customers, according to the perception of the banking customers the important dimensions are *Employee Competence* (proving the fact that in spite of usage of so much technology it is the human touch which makes the customers loyal – i.e. how the employees are behaving while delivering the service is most important to the customers); **Call-Centre**

**Customer Service (CCS)** (the importance of having efficient call centers with efficient customer service representatives is evident); followed by *Technology Convenience* (convenience of using technology makes the customers loyal); *Technology Reliability* (banking being an important financial service reliability of the technology being used by the banks is vital); *Subscription Ease* (easiness of subscribing to the banking services); and *Price* (importance of the fees charged by the banks for the services provided). The other 2 dimensions are not that much important *Technology Information Usage* (information dissemination and usage through technology) and *Tangibles*.

Findings suggest that banks can create more loyal customers by improving the competence of the employees who are in direct contact with the customers and also the call centre based customer service. This shows the importance of human touch even in the technology dominated business like banking. Loyalty is also influenced if the customers see the convenience of using technology banking and if the technology is reliable. Also being a financial service pricing the products properly will increase loyalty besides the easiness of subscribing to the service. However tangibles and using the information (during delivery through technology) are something which are not actually loyalty-boosting service strategy for the Indian bank customers.

All research has its limitations and this study is no exception. The results pertain to the samples chosen through convenience sampling method and so this study is a direction for future research as generalization from this study to a wider population of customers should be done with some caution. Also, this study was conducted in a bank setting, and may not be generalised in other industries. It has also not considered the direct impact of the service quality on customer loyalty. Similar type of study can be used to discriminate between customer groups who are satisfied and unsatisfied. Also to make this study more robust and general in nature, instead of banking services on the whole categories of services (loans, savings accounts, current accounts) or types of banks (government vs. private) can be considered separately. However, by employing these constructs, and replicating this study in other industries, researchers would be able to unveil the factors that discriminate between loyal customers and those who are not, and also produce more generic results.

Interest in the subjects of service quality (especially in hybrid delivery scenario) and customer loyalty is evergreen and has been growing among marketing researchers and practitioners. This study adds value by unveiling the key dimensions of service quality (in hybrid delivery scenario) and analysing how these dimensions discriminate between loyal customers and those who are not. The findings can be used by both the management practitioners and academicians in order to understand the psyche of loyal customers and design strategies which will help to leverage the service quality to build up loyal customer base.

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## Faculty Profile



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Associate Professor

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## Biography

- Prof. Shirshendu Ganguli has done training Workshops on Structural Equation Modeling (SEM) and Research Methodologies for faculty members of eminent institutes as well as corporate people – conducted a special workshop for only faculty members of Symbiosis International University, Pune in March, 2014
- Reviewer of several journals viz. Marketing Intelligence and Planning; Total Quality Management & Business Excellence; The Service Industries Journal; Sport, Business and Management: an International Journal; The International Journal of Human Resource Management and Jaico Publishing House

## Research

- Services Marketing in Banking & Telecommunications and other hybrid services; Customer Satisfaction and Loyalty in Services; Service Quality; Customer Relationship Marketing

## Publications

### Research Papers (International)

- (Co-authors Manish Gupta & Abhilash Ponnampal) “Factors Affecting Employee Engagement in India: A Study on Offshoring of Financial Services”, Qualitative Report, Vol. 20 No. 4, April 2015, pp. 498-515.

- Co-author Sanjit K. Roy) “Conceptualisation of Service Quality for Hybrid Services: A Hierarchical Approach”, *Total Quality Management & Business Excellence*, Vol. 24 No. 9-10, September 2013, pp. 1202-1218.
- (Co-author S.K. Roy) “Generic technology -based service quality dimensions in banking – Impact on customer satisfaction and loyalty”, *International Journal of Bank Marketing*, Vol. 29 No. 2, February 2011, pp. 168-189.
- Co-author S. K. Roy) “Service quality dimensions of hybrid services”, *Managing Service Quality*, Vol. 20 No. 5, September 2010, pp. 404-424.
- (Co-authors Abdolreza Eshghi & S. K. Roy) “Service Quality and Customer Satisfaction: An Empirical Investigation in Indian Mobile Telecommunications Services”, *Marketing Management Journal*, Vol. 18 Issue 2, Fall 2008, pp. 119-144.

## **Research Papers (National)**

- (Co-authors – R. R. Jha, C. Priyadarshini & Abhilash Ponnamp) “Factors influencing Finance as a Career Choice among business school students in India: A Qualitative Study”, *The IUP Journal of Soft Skills*, Vol. 7 No. 4, December 2013, pp. 48-56.
- (Co-authors – Nada Nasr & Abdolreza Eshghi) “Service Quality in Hybrid Services: A Consumer Value Chain Framework”, *Journal of Services Research*, Vol. 12 No. 1, April 2012, pp. 115-130.
- “Focus of Human Resource in Indian Iron and Steel Industry”, *Presidency Journal of Management Thought & Research*, Vol. 2 No. 3, January 2012, pp. 11-17.
- “Performance Comparison of Group Firms and Individual Firms in the Indian Iron and Steel Industry”, *The IUP Journal of Business Strategy*, Vol. 7 No. 3, September 2010, pp. 26-36.
- (Co-author Mohit Kumar) “Modeling Inventory Management Improvement: Criticalities and Recommendations”, *The ICFAI University Journal of Supply Chain Management*, Vol. 6 No. 1, March 2009, pp. 36-48.
- “Impact of R&D versus Marketing on Sales Growth in Indian Industrial Sectors”, *The ICFAIAN Journal of Management Research*, Vol. 8 No. 2, February 2009, pp. 55-64.
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- “Underpinnings of Customer Satisfaction in Indian Cellular Services: Service Quality, Service Features, Demographics and Cellular Usage Variables”, *The ICFAI Journal of Services Marketing*, Vol. 6 No. 3, September 2008, pp. 69-84.
- “Drivers of Customer Satisfaction in the Indian Cellular Services Market”, *The ICFAIAN Journal of Management Research*, Vol. 7 No. 6, June 2008, pp. 51-69.
- “Effect of Strategic Factors on Firm Performance -A Comparison of Group firms and Stand-alone firms in Indian Iron and Steel Industry”, *Abhigyan*, Vol. 25 No. 4, January-March 2008, pp. 32-39.

- (Co-author E. M. Punnoose) “Management Games – An Effective Pedagogic Tool”, The ICFAI Journal of Higher Education, November 2007, pp. 75-82.
- “Coopetition Models in the context of Modern Business”, The ICFAI Journal of Marketing Management, Vol. 6 No. 4, November 2007, pp. 6-16.
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- “Drivers of Customer Satisfaction and Effect of Customer Satisfaction and other Factors on Churn among Indian Cellular Services Users”, The ICFAI Journal of Services Marketing, Vol. 5 No. 3, September 2007, pp. 7-17.
- (Co-author Harsh Arora) “Supply Chain Effectiveness strengthen Relationship”, The ICFAI Journal of Supply Chain Management, Vol. 4 No. 3, September 2007, pp. 57-67.
- (Co-author Harsh Arora) “Impact of Price and Promotion on US Beer Brands”, The ICFAIAN Journal of Management Research, Vol. 6 No. 8, August 2007, pp. 47-62.

### **Magazine Articles / Case Studies / Book Reviews (Selected)**

- by Kotler, Keller, Koshy & Jha (Pearson Education India) customized for ICFAI University “Marketing Management” (14th edition)
- Case Study titled “Tata Teleservices – Pioneer of Growth”, published in edited book “Case Studies in Management: Contemporary Perspectives”, Humming Words Publishers, Faridabad, India, April 2011.
- “Living Brands: Collaboration + Innovation = Customer Fascination”, Tata McGraw-Hill, 2007 by R. Nadeau, Published in GITAM Journal of Management, October-December 2009.
- “Changing Face of Relationship Marketing – Evolution of CRM to EMM”, Effective Executive, April 2008.
- “Breathing Brands – Use of Advertisement to Create Lifestyle Brands that Live Like Human Beings”, Advertising Express, February 2008.
- “Marketing in Indian Cellular Services – Story of Innovations, Retaliations and use of Technology”, Effective Executive, August 2007.
- “Customer Value Creation through Handshake with Customers – For an Everlasting Impact”, Effective Executive, May 2007.
- “Perfect Pitch – The Art of Selling Ideas and Winning New Business”, John Wiley & Sons, 2007 by Jon Steel, Published in Marketing Mastermind, May 2007.
- “Coopetition – Cooperate with Competition for Value Creation”, Marketing Mastermind, April 2007.
- “The Bully of Bentonville – How The High Cost of Wal-Mart’s Everyday Low Prices is Hurting America”, Currency Doubleday, 2006 by Anthony Bianco, Published in Best Books, April 2007.

## Conferences and Workshops

Seminars / Conferences:

- “Word-of-Mouth, Trust and Perceived Risk in Online Shopping: An extension of the Technology Acceptance Model” International Conference on Evidence Based Management (BITS Pilani) held from 20th – 21st March, 2015
- “Generic Service Quality Dimensions in Technology Based Banking: Comparison between Private & Government Banks in India” – 6th International Conference on Excellence in Research & Education (IIM Indore) held from 8th – 11th May, 2014
- “A Hierarchical Model for Hybrid Service Quality [Coauthor – Sanjit K. Roy]” – 5th IIM Ahmedabad Marketing Conference (Marketing in Emerging Economies) held from 9th – 11th Jan, 2013
- “Impact of Service Value Dimensions on Customer Satisfaction and Loyalty across Different Service Setups [Coauthor – Rik Paul]” – 4th IIM Ahmedabad Marketing Conference (Marketing in Emerging Economies) held from 5th – 7th Jan, 2011
- “The Effect of Tangibles, Employees and Process on Customer Opinion in Banking Services: Mediating Role of Customer Experience [Coauthor – Sunny Bose]” and “Service Quality, Customer Satisfaction and Behavioural Intention: An Empirical Study in Indian Mobile Telecommunication Industry [Coauthors – Sanjit K. Roy and Rik Paul]” – International Marketing Conference MARCON 2010 held at IIM Calcutta from 27th – 29th Dec, 2010
- Dissertation proposal titled “The Impact of Service Quality on Customer Experiences in Hybrid Services: The Indian Context” – 3rd Doctoral Colloquium of Indian Institute of Management, Ahmedabad from 8th – 9th Jan, 2010
- “Dimensions of Service Quality in Hybrid Services: A Consumer Value Chain Framework [Coauthors – Abdolreza Eshghi and Nada Nasr]” – Art & Science of Service V Conference held at Bentley University, Waltham, MA, USA from 17th – 19th June, 2009
- “Relationship Marketing: A Critical Evaluation of Research Streams [Coauthors – Abdolreza Eshghi and Nada Nasr]”

## Awards

Not Applicable