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CRM Scale Development and Validation in Indian Insurance Sector

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Abstract

This research study aims at developing and validating CRM scale for Indian insurance sector. A robust scale development methodology is followed which ultimately results into Six-factor CRM scale comprising of claim payment security, product knowledge, personalization, transparency in product selling and service quality. The generalizability of the proposed scale can be tested by replicating the study in other nations. The proposed scale will serve as a strategic tool for effective and efficient pre and post CRM implementation outcomes. Apart from this it can also be used to identify the opportunities and bottleneck areas requiring attention. A fair amount of research studies have been done in Indian insurance sector but no such study is catered towards proposing a comprehensive measure of CRM effectiveness. In this direction this study aims to bridge this gap in the existing literature.

Keywords: CRM scale; Indian insurance sector; CRM implementation, Strategic tool

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INTRODUCTION

There is a worldwide debate over the rapidly growing integration of financial services along with increasing globalization of economics and the gradual liberalization of the financial sector around the globe. Emerging markets such as India, China, Singapore, Indonesia and Philippines are added to the picture. The Indian economy has shown an impressive growth rate of 7.4% in 2009-10 as compared to 6.7% in 2008-09. A dramatic shift has been seen in the Indian financial markets during the past few years. The interest among the Indian companies towards entering in financial services segment is gaining momentum as some of the Indian manufacturing companies are entering in the financial services segment whereas the existing players of financial services market are diversifying into other sectors depending on the markets.

A well-developed and evolved insurance sector is a pre-requisite for the economic development of the country as it provides long-term funds for infrastructure development and at the same time enhancing the risk taking ability of the country. Life insurance business in India can be traced back to 1818 with the formation of the Oriental Life Insurance Company in Calcutta. Furthermore the Government of India had started publishing the returns of the Indian Insurance Companies from 1914. The first statutory measure to regulate the life business was The Indian Life Assurance Companies Act, 1912. The Indian Insurance Companies Act was ordained to enable the Government to collect statistical information about both life and non-life business transacted in India by Indian and foreign insurers including provident insurance societies in 1928.

24 general insurance companies including the Agriculture Insurance Corporation of India and ECGC and 23 life insurance companies are operating in the country according to IRDA Annual Report, 2009-10. Indian insurance sector is growing at a speedy rate of 15-20%. In financial services sector insurance services add about 7% to the country's GDP along with banking services.

The development of insurance industry in the country can be measured by two major factors namely insurance density and insurance penetration. Since the entry of the private players in Indian insurance sector the insurance sector has witnessed the rapid increase in both the insurance density as well as the insurance penetration however approximately the entire chunk is contributed by life insurance sector.

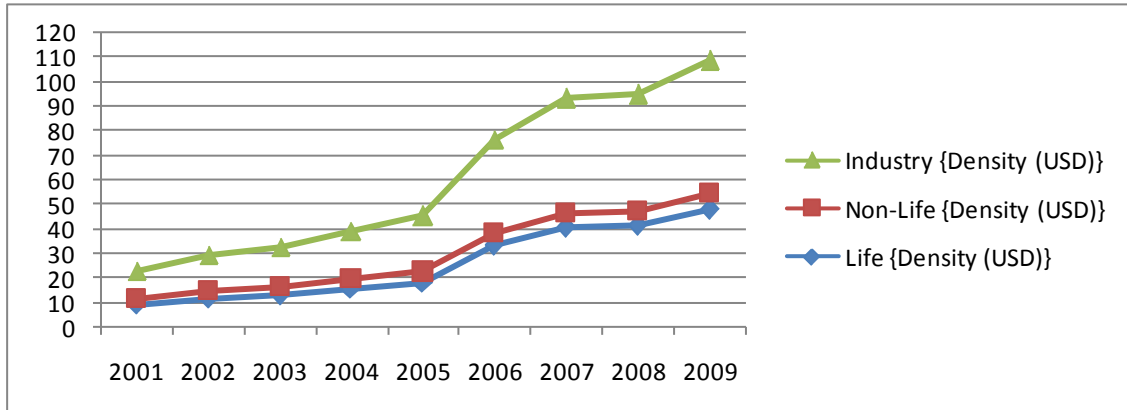


Figure 1: Insurance density is measured as ratio of premium (in US \$) to total population.
Source: Swiss Re (2008-09)

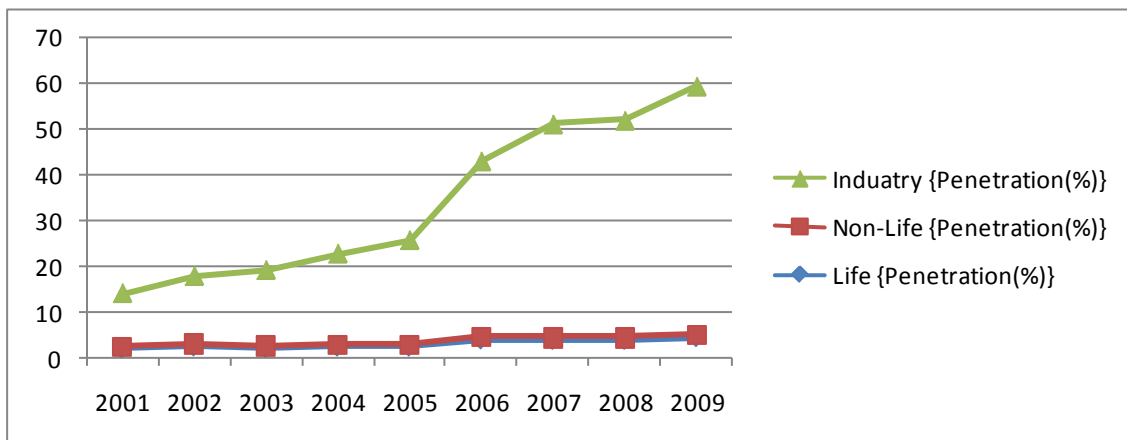


Figure 2: Insurance penetration is measured as ratio of premium (in US \$) to GDP (in US \$).
Source: Swiss Re (2008-09)

Table 1: Market Share of Life Insurers

Market Share of Life Insurers		
Percent (%)		
Insurer	2008-09	2009-10
Total Premium		
LIC	70.92	70.10
Private Sector	29.08	29.90
Total	100.00	100.00

Source: IRDA Report 2009-10

LITERATURE REVIEW

The government of India has opened up the entry of the private players in the insurance industry on 24th October, 2000 after a restricted period of 34 years. This entry was facilitated through the Insurance Regulatory and Development Authority (IRDA). Hess (2002) stated that insurance plays an important role in the economic development of the country and its role is more pronounced in the developing countries. The IRDA is the regulatory authority in the insurance sector, trusted with protecting the interests of holders of insurance policies and ensuring, promoting and regulating orderly growth of the insurance industry in India. India has the highest number of life insurance policies in force around the globe (Pasha, 2004). There is an tremendous growth seen over the past decade in terms of diversification of different companies in insurance segment e.g. Tata AIG's alliance with HSBC, ICICI Prudential alliance with ICICI Bank and ICICI Direct, Birla Sun Life's with Citibank and IDBI, LIC alliance with Corporation Bank, Kotak Life Insurance has an alliance with Kotak Bank. Through the alliances with the banks and appropriate CRM strategy the insurance providers get benefitted in terms of getting the details of the high net worth individuals of the bank (Mishra, 2006). India has achieved 9th rank in the life insurance business among the 156 countries.

Indian contribution has increased to 2.45% in the global insurance market in 2009 from 1.98 % in 2008. In non-life insurance premium the Indian contribution is merely 0.46% of the global non-life insurance market and ranked 26th (Swiss Re Report, 2009). There is a dramatic shift that has been seen in the role of marketing from the telling and selling point of view to communicating and sharing knowledge with customers (McKenna, 1991). Watkins, 1988 has investigated the major industry marketing trends in the insurance sector specifically catering to the areas of advertising, new product development, distribution and price. The role of IT is highlighted and future trends in the use of marketing methods by insurance companies as part of their competitive strategies are discussed. The insurance providers in India are offering a diverse range of insurance products and services. Customer centric products and services as well as the expert guidance have become the backbone of the Indian insurance industry. The insurance service providers are now offering a diverse range of innovative products because of the customized solutions requirements of the problems from the customers at the competitive prices because of which the situation of cut-throat competition is prevailing in the Indian insurance market. Insurance companies which have established operations in the life segment after post opening up of the sector, sixteen are in collaboration with the foreign partners whereas twenty are in joint venture with foreign partners and the companies (including health insurers) who have commenced operations in the non-life segment. The three standalone health insurance companies have been set up in collaboration with foreign joint venture partners.

Thus as per the report of IRDA (2009-10) thirty six insurance companies in the private sector are operating in the country in collaboration with established foreign insurance companies across the globe. The insurance providers have also started to focus on low income segment of Indian population by offering micro insurance products e.g. cattle/livestock insurance, personal accidental policy etc. The major aim of the micro insurance is mainly to keep the transaction costs to minimum. The organizations operating in insurance segment are mainly focusing to provide the best service possible to win over the customers, whether it in the selection of different policies or making a claim (Gopi, 2004).

The insurance providers should give more attentions to the needs of their customer base and should keep on updating based on the changing preference patterns. Furthermore they should monitor the level of satisfaction of the customer base on a continuous basis (Joseph et al. 2003). Perceived service quality plays a crucial role in forming the positive attitude towards obtaining insurance (Arora and Stoner, 1996), which is the need of the hour. There has been an unprecedented revitalisation of academics as well as practitioners in the area of CRM (Romano and Fjemestad, 2001; Ryals and Payne, 2001). The rapid growth of information technology has dramatically changed the way in which relationships between companies and their customers are being managed and increased the opportunities for marketing (Bauer et al. 2002). Cooperative and collaborative relationships between the firm and its stakeholders are the focal themes of all CRM perspectives. Moreover, some of the authors have characterized such relationships as being long term oriented and interdependent rather than discrete and short term transactions (Dwyer et al. 1987).

All the customers of a company are not equally profitable for it (Storbacka, 2000). The major aspects the organizations have to take care are customer relations, core relations and information technology by centralizing customer analysis for establishing an integrated CRM structure (Taung, 2000). The organizations capacity in reacting towards the market will enhance enormously after introducing CRM (Wu, 2000). The benefits for the sales force are from the enhancement of speed of response, better internal synergy in serving the customer, more value-adding service, and cost-effective (Campbell 2003). The greatest advantage of the CRM strategy may be the information availability for meliorating the coordination of various functions of customer service (Pullig et al. 2002). Table-2 briefly enumerates the select list of studies carried out in the financial service sector in the last decade.

Table-2: A select list of studies in Financial Services Sector (2001-2012)

S. No.	Authors	About the study
1.	Verhoef and Donkers (2001)	Authors have proposed a model for predicting the potential value of an existing customer in the insurance industry. Additionally different modelling strategies were also discussed for predicting the potential value of the customers.
2.	Eastman et al. (2002)	The authors have compared the insurance sales agents scores on an subjective knowledge scale (Flynn and Goldsmith 1999) and opinion leadership scale (Flynn, Goldsmith, and Eastman 1996) and with their attitudes toward the Internet. The findings of the study indicate that a higher level of subjective knowledge about the internet leads the insurance sales agents to behave like an opinion leader about the internet. Additionally the results also indicate that the perceived knowledge and willingness to discuss the internet is more among the younger insurance agents.
3.	Laster and Raturi (2002)	The authors have identified and described the forces that drive financial innovation in the insurance industry, as it relates to the intersection

		between capital and insurance markets. The analysis was based on general principles of supply and demand underlying financial intermediation and innovation, e.g., regulation and taxation. Practical examples are provided from both the capital and insurance markets perspectives. Furthermore the feasibility analysis of capital markets-based insurance solutions and inherent challenges for future innovation are proposed.
4.	Bodendorf and Schobert (2005)	The authors have proposed an approach for planning customer contacts and developing e-services with the usage of mobile technology in the insurance sector. The approach is described in detail by taking relevant illustrations.
5.	Chen and Hu (2005)	In this study the authors have taken the insurance trade as an example, and made an attempt to put data mining technology into CRM systems and proposes the data mining model for the customers classification, customers value etc. The authors have used the simulated mining approach in the SAS enterprise with the customer's data, which can be useful for insurance industry while implementing data mining.
6.	Sin et al. (2005)	Authors have developed CRM Scale for financial services sector in Hongkong.
7.	Geib et al. (2006)	The authors have identified key issues and successful patterns for collaborative customer relationship management (CRM) in Swiss and German financial services networks. The identified key issues were privacy constraints, redundant competencies of partnering companies, customer information exchange CRM process integration and CRM systems integration. For addressing these issues the partnering organizations have to give their consensus on well defined responsibilities in the collaborative processes. Other issues such as data privacy protection law, process integration, web services and internet-based standards and data integration were also explored in the study.
8.	Athma and Kumar (2007)	Authors have identified the factors which play a crucial role while selecting insurance policies and determined the extent to which these factors were taken into consideration for choosing the life insurance products.
9.	Gupta (2007)	Author has reviewed the reports available on Indian health insurance and given a global

		comparison of selected Asian countries regarding their health expenditure and national incomes in public and private sectors.
10.	Sinha (2007)	In this study the performance of 12 general insurance companies was compared with respect to scale efficiency, technical efficiency and total factor productivity using data envelopment analysis and highlighted the dominance of public and private general insurance companies in the respective aspects mentioned above.
11.	Aduloju et al. (2008)	The authors have done a survey to identify the challenges faced by Nigerian insurance industry. Furthermore the insurance underwriters reactions towards the recapitalization in Nigeria were also analyzed. The findings clearly indicate that recapitalization is enhancing the development of the Nigerian insurance industry and mergers and acquisitions are the only viable options for companies to survive in business.
12.	Thanasegaran and Shanmugam (2008)	The authors have highlighted the major threat caused by money laundering that is exploiting the Malaysian insurance industry. The findings indicate that the majority of the cases (two-third) associated worldwide with money laundering are related to life insurance segment whereas the rest (one-third) is related to general insurance segment. Furthermore the other insurance intermediaries e.g. brokers and agents involved in direct distribution are easily subject to exploitation by money launderers in the Malaysian insurance industry.
13.	Hu et al. (2009)	The authors have analyzed the efficiencies of China's life insurance providers (Domestic as well as Foreign players) and explored the relationship between the efficiencies of insurers and ownership structure while taking into consideration the other attributes of the firm. The findings clearly indicate that for all the insurers the average efficiency scores are cyclical. The findings also indicate that distribution channels used, market power of insurers and the ownership structures are the major factors for the variation in the efficiencies.
14.	Huang and Wang (2009)	In this study the authors puts forward a service-oriented CRM framework for insurance enterprises and have analyzed the composition of the system including system supporting layer, resource base layer, function service layer, business process layer, application presentation

		layer and services integration layer. Additionally some enabling technologies for realizing the service-oriented CRM system and approaches are provided.
15.	Nath et al. (2009)	Authors have proposed a framework for planning and implementing an optimized set of strategies for making the firms more customers centric and helping to overcome the emerging challenges and showing the importance of CRM implementation for the maximization of customer satisfaction and thereby enhancing overall profitability.
16.	Park et al. (2009)	The authors have investigated the coexistence of multiple distribution systems in the U.S. property-casualty (P/C) insurance industry. The results of the study clearly indicate that the insurers with multiple distribution systems are more cost-efficient as compared to the independent agents. But in terms of revenue efficiency the independent agents were found better as compared to their long counterpart, the exclusive agent insurers. Furthermore the higher cost and revenue efficiencies can be achieved by direct writing system as indicated from the findings of the study.
17.	Soopramanien and Hong (2010)	In this study the authors have described the construction process of a marketing decision support tool and proposed that companies should pay more attention to studying their context in which the exchange is happening and its unique features while developing analytical models to support marketing decisions. The case of a company engaged in the direct marketing when faced the need to implement a better targeting model is provided.
18.	Furtmueller et al. (2011)	The authors have examined the service behaviours of highly committed consultants engaged in direct (face-to-face) service provision with customers in the Austria financial-services industry. A total of 15 behaviours were identified. All of which belong to either "in-role" behaviours category or "extra-role" behaviours category. In addition to this the findings also indicate that the behaviour of the consultants change over time. Self-employed as well as employed financial consultants have shown similar high-commitment behaviours. However self-employed consultants have experienced conflicting situation between the interests of their customers and own self interest whereas employed consultants have

		experienced the conflicting situation between customer commitment and organisational commitment.
19.	Gera (2011)	Author has identified and discussed the key conceptual and empirical inter-relationships between overall customer satisfaction, service encounter variables of perceived agent service quality and perceived value and their relationships with repurchase intentions, word of mouth and intentions to complaint in the Indian life insurance services.
20.	Agariya & Singh (2012a)	CRM scale development & validation in Indian banking sector.

Although CRM plays a crucial role in enhancing the organizational performance but there is paucity of practical guidelines on effective design and implementation of it which is the main reason for the struggle of academicians as well as business analysts (Lindgreen and Antiaco, 2005). Although CRM has now become as a powerful concept to align the interests of a firm and its customers (Boulding et al. 2005), its success depends upon the appropriateness of the firms CRM strategy as well as the effectiveness of CRM implementation. There is very little research which has been done on defining constructs of CRM and development of scale specifically catering to Indian insurance sector.

METHODOLOGY

For this study, authors initially developed 63 scale items for identifying CRM constructs from relevant literature review (Agariya & Singh, 2011; Agariya & Singh, 2012b). This was followed by depth interviews with the customers of different insurance providers all across India. A total of 27 customers were interviewed for major issues that exist while availing insurance services, this resulted in pruning and fine tuning the items. In the subsequent questionnaire survey a total of 414 responses were received. The exploratory factor analysis is performed with the first half of the data (207) to identify the major CRM dimensions based on which authors have proposed a construct, which is confirmed through confirmatory factor analysis and validated through Structural equation modelling by using the other half(207) of the data.

Depth Interview

Depth Interview was conducted of length with 27 high valued customers of different insurance providers all across India. The duration of depth interview varied anywhere between 15 to 20 minutes. A list containing 63 dimensions extracted from the literature review is given to interviewee along with a brief description of each dimension. Based on the results of the depth interview the questionnaire was modified.

Key Findings of Depth Interview

The initial list of 63 dimensions collected from literature review was further reduced to 41 after this phase of depth interview. Findings of depth interview shows, 80% of the respondents were aware of all the insurance providers operating in their region. Mainly

they are having the life insurance, health insurance and vehicle insurance. The major issues identified were related to *claim payment security, transparency in product selling, responsiveness of the insurance providers, behaviour and attitude of the staff, technological infrastructure, one stop insurance services, service recovery, tailor-made products and services, customer support and services and image in the market place.*

Questionnaire Survey

The modified questionnaire is based on these 41 dimensions followed by a pilot survey of the questionnaire to assess the *content validity*. *Content validity* can be evaluated by a panel of persons, sometimes experts, who judge whether a scale logically appears to accurately reflect what it purports to measure (Zikmund, 1991). From the result of the pilot survey 13 dimensions are removed as a result, the revised questionnaire contained 28 dimensions (survey items). The revised questionnaire structure comprises of:

Section-1: Demographic information of the respondents and

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

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

Key results of questionnaire survey

Responses to the revised questionnaire were received through online as well as offline from the respondents all across India. The respondents of this study were the customers of different insurance providers all across India. A total of 414 responses were received. Furthermore the reliability analysis, sampling adequacy analysis and exploratory factor analysis was carried out with the first half of the data (Sample size: 207) to identify the major constructs. Subsequently confirmatory factor analysis followed by structural equation modeling was carried out with the second half of the data (Sample size: 207). Confirmatory factor analysis shows the evidence of scale reliability, dimensionality and validity of whereas structural equation modeling validates the results. SPSS-15 and AMOS-7 software were used for carrying out statistical analysis mentioned above. The demographic profile of the respondents is given in Table-3.

Table-3: Demographic Profile of the Respondents

S.No.	Demographic Criteria		%
1	Gender	Male	70.77%
		Female	29.23%
2	Age	Between 18 -30 years	46.61%
		Between 30-45 years	32.37%
		Above 45 years	21.02%
3	Marital Status	Single	30.67%
		Married	69.33%

4	Education Level	Undergraduate Graduate Post Graduate and above	26.81% 39.13% 34.06%
5	Monthly Salary	Less than 20,000 Rs. 20,000-30,000 Rs. More than 30,000 Rs.	36.47% 32.37% 31.16%
6	Association with the insurance provider	Less than 1 Year Between 1-3 Years More than 3 Years	14% 61.12% 24.88%
7	Type of Insurance	Life Insurance General Insurance	70.77% 29.23%
8.	Type of Insurance Provider	Public Private	38.88% 61.12%

ANALYSIS OF RESULTS

The reliability of the data is checked by calculating Cronbach- α value which is found 0.943. The calculated value is in the quite acceptable range (> 0.7) (Nunnally, 1978). Further to this Kaiser Mayer Oklin statistics is calculated for checking the sampling adequacy, the calculated value is 0.924 (>0.5) which is found quite suitable for carrying out exploratory factor analysis. Exploratory factor analysis was carried out and based on the rotated component matrix a total of 5 factors were extracted along with 22 indicators contributing towards 64% of the variance. Based on these factors the authors have proposed the CRM models. The extracted factors along with their indicators are shown in Table-4.

In the first model (Figure-3) CRM is represented as a uni-dimensional construct and all the extracted dimensions from the factor analysis are leading to CRM. This model is verified through confirmatory factor analysis by using the second half of the data (Sample size: 207). This model is discarded because of poor fit based on the calculated absolute measures, incremental fit measures and parsimonious fit measures. The calculated statistics of these measures is shown in Table-5. In the second model (Figure-4) CRM is represented as a multi-dimensional construct explained by the five factors extracted through exploratory factor analysis. This measurement model is verified through confirmatory factor analysis by using the second half of the data (Sample size: 207). Four dimensions namely CPS4, KAP3, TPS2 and SEQ3 were removed because of inadequate standard loadings. This model is accepted because of much improved level of fit as compared to model-1 based on the calculated absolute measures, incremental fit measures and parsimonious fit measures. The comparative calculated statistics of these measures are shown in Table-5. The measurement model indicated an acceptable model fit of the data ($\chi^2 = 266.03$, $df = 125$, $p < .05$; $\chi^2/df = 2.13$; GFI=0.881; AGFI= 0.838; CFI = 0.923; TLI = 0.906; PCFI = 0.754 and RMSEA = 0.07) (Anderson and Gerbing, 1988). In addition to this all the indicators loaded significantly on the corresponding latent constructs. The values of the fit indices indicate a reasonable fit of the measurement model with the sample data (Byrne, 2001).

Table-4: Exploratory factor analysis (Rotated component matrix)

	Component				
	CPS	KAP	PER	TPS	SEQ
CPS1: Reliability	.581				
CPS2: Honesty	.650				
CPS3: Confident in claims to payment ratio	.758				
CPS4: Low cost of withdrawal	.597				
CPS5: Minimum psychological effort	.521				
KAP1: Detailed and updated information		.674			
KAP2: Competitor orientation		.658			
KAP3: Availability		.505			
KAP4: Excellent rapport with the personnel		.638			
KAP5: Expert opinion		.767			
PER1: Collaboration in product design			.804		
PER2: Customer life time value identification			.699		
PER3: Customized policies			.662		
PER4: Customer support			.529		
TPS1: Clear and transparent investment policies and guidelines				.700	
TPS2: Timely statement of fund value				.515	
TPS3: Responsiveness				.603	
TPS4: No hidden clauses				.635	
SEQ1: Empathy					.744
SEQ2: Service recovery					.638
SEQ3: Promise fulfillment					.538
SEQ4: Benevolence					.608

CPS: Claim payment security, KAP: Knowledge about products, PER: Personalization, TPS: Transparency in product selling, SEQ: Service quality

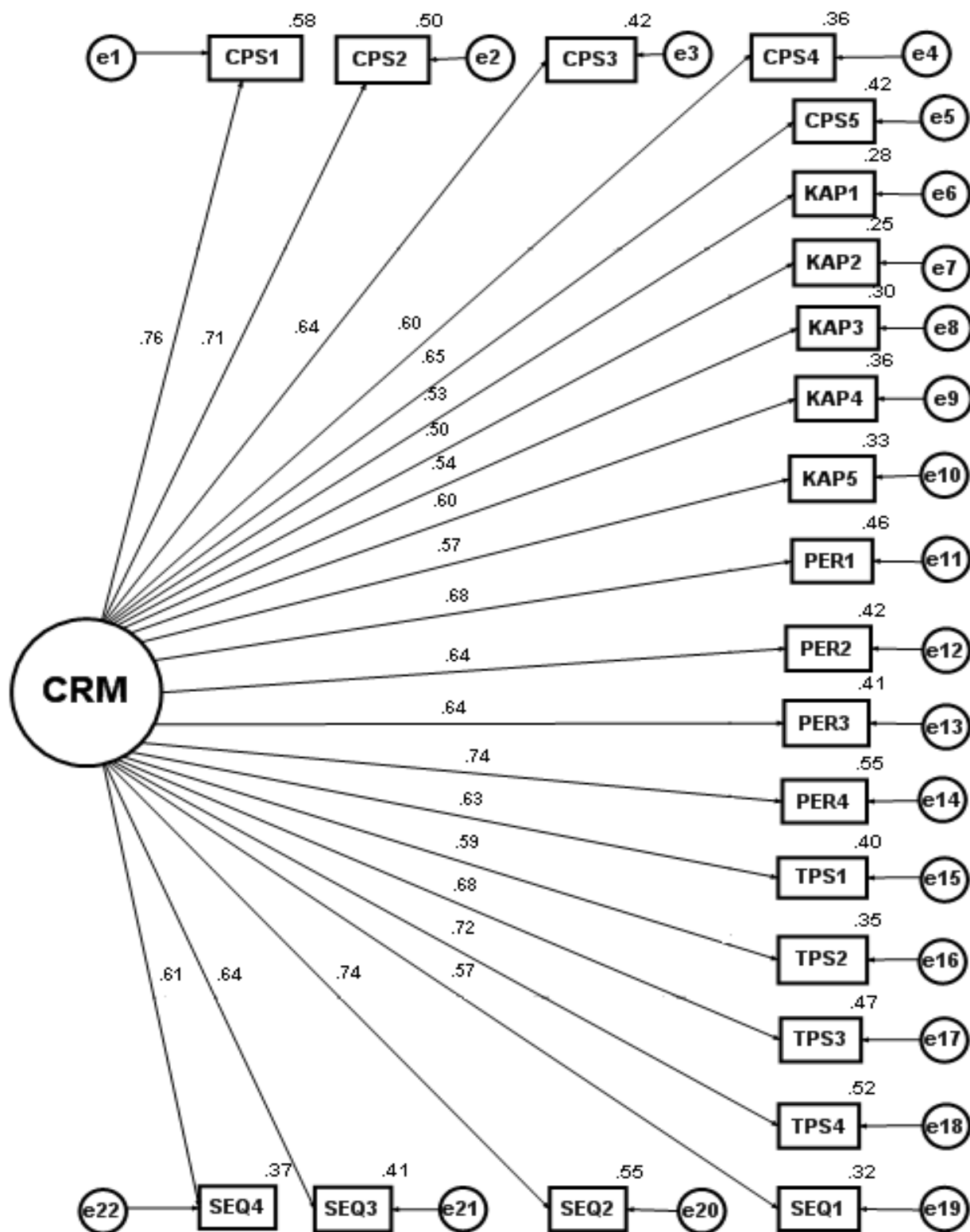


Figure 3: CRM as an Unidimensional Construct

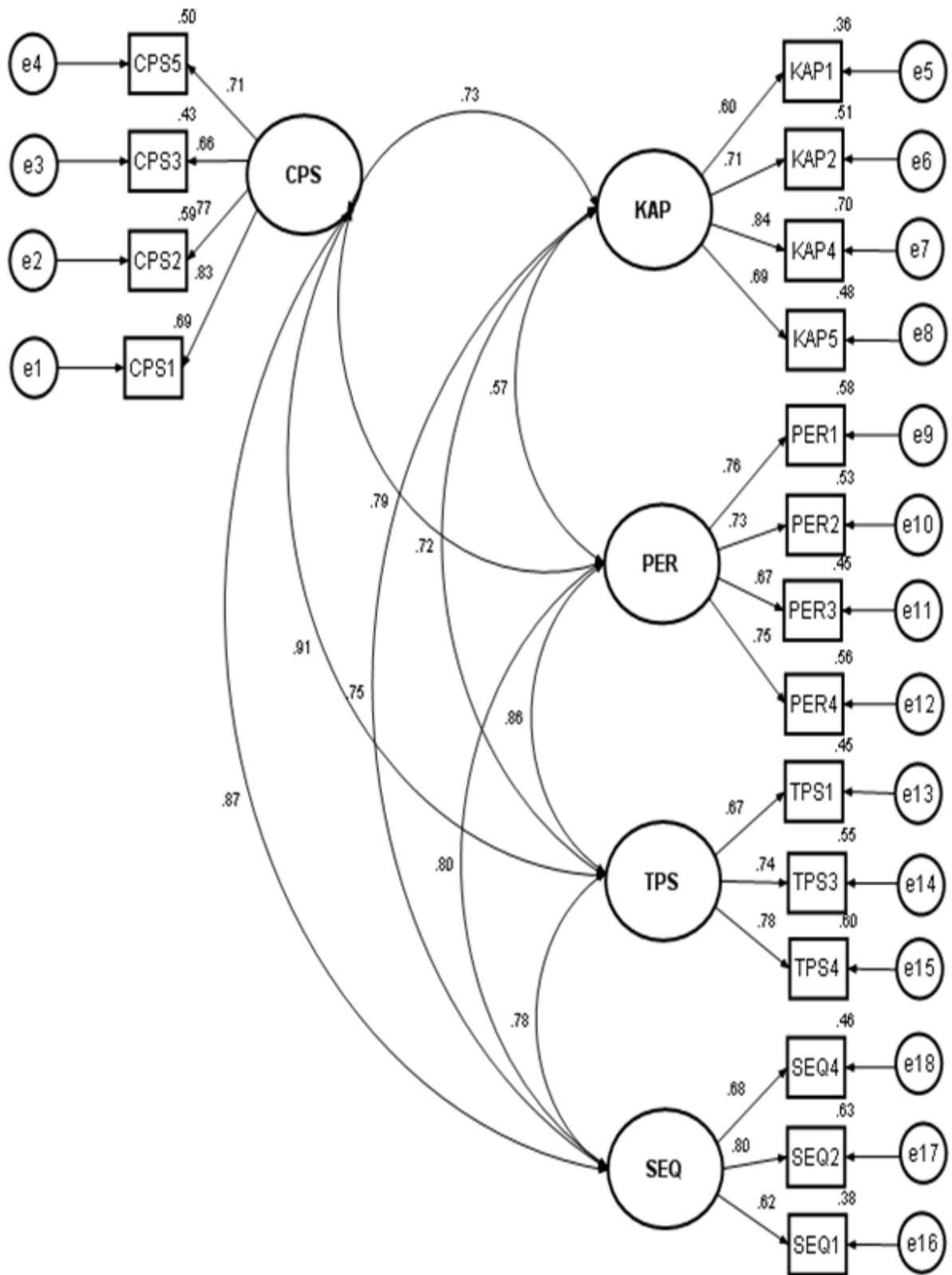


Figure 4: Model 2-Five factor model (Measurement Model)

Table-5: comparison of the calculated statistics of the models

S.No.	Model Fit		Absolute Measures			Incremental fit Measures		Parsimonious fit Measures	RMSEA
	χ^2	χ^2/df	RMR	GFI	AGFI	CFI	TLI	PCFI	
Model 1	706.82	3.39	0.06	0.73	0.66	0.78	0.76	0.72	0.11
Model 2	266.03	2.13	0.04	0.88	0.84	0.93	0.91	0.75	0.07

Table-6: Composite reliability of the constructs

Construct	Composite Reliability
CPS	0.80
KAP	0.79
PER	0.80
TPS	0.75
SEQ	0.75

The Table-6 shown above clearly indicates that the composite reliability of all the constructs is more than 0.6, which is quite acceptable (Carmines and Zeller, 1988). Construct validity is established in this study by establishing the content validity, convergent validity and discriminant validity. Content validity is verified through existing literature and expert’s interaction in the area of CRM. Convergent validity is assessed by examining the average variance extracted and factor loadings (Fornell and Larcker, 1981). All the indicators have shown significant loadings onto their respective latent constructs with values varying in between 0.62 to 0.84. In addition, the average variance extracted (AVE) for each construct is greater than or equal to 0.50, which further supports the convergent validity of the constructs. As suggested by Fornell and Larcker (1981) the discriminant validity can be assessed by comparing the average variance extracted (AVE) with the corresponding inter-construct squared correlation estimates. AVE values for each latent construct were found more than the square of the inter-construct correlations. Thus, the measurement model reflects good construct validity and desirable psychometric properties (Agariya & Singh, 2012a).

In the third model (Figure-5) the structural CRM model is validated by using structural equation modelling. The calculated statistics of absolute measures, incremental fit measures and parsimonious fit measures is shown in Table-7. The structural model indicated an acceptable model fit of the data ($\chi^2 = 284.16$, $df = 130$, $p < .05$; $\chi^2/df = 2.18$; GFI=0.873; AGFI= 0.833; CFI = 0.916; TLI = 0.902; PCFI = 0.779 and RMSEA = 0.07) (Anderson and Gerbing, 1988). In addition to this all the indicators loaded significantly on the corresponding latent constructs. The values of the fit indices indicate a reasonable fit of the structural model with the sample data (Byrne, 2001). In short, the structural model confirms the five-factor structure of Customer relationship management.

Table-7: Calculated Statistics of Model-3

S.No.	Model Fit		Absolute Measures			Incremental fit Measures		Parsimonious fit Measures	RMSEA
	χ^2	χ^2/df	RMR	GFI	AGFI	CFI	TLI	PCFI	
Model 3	284.16	2.18	0.04	0.87	0.83	0.92	0.91	0.78	0.07

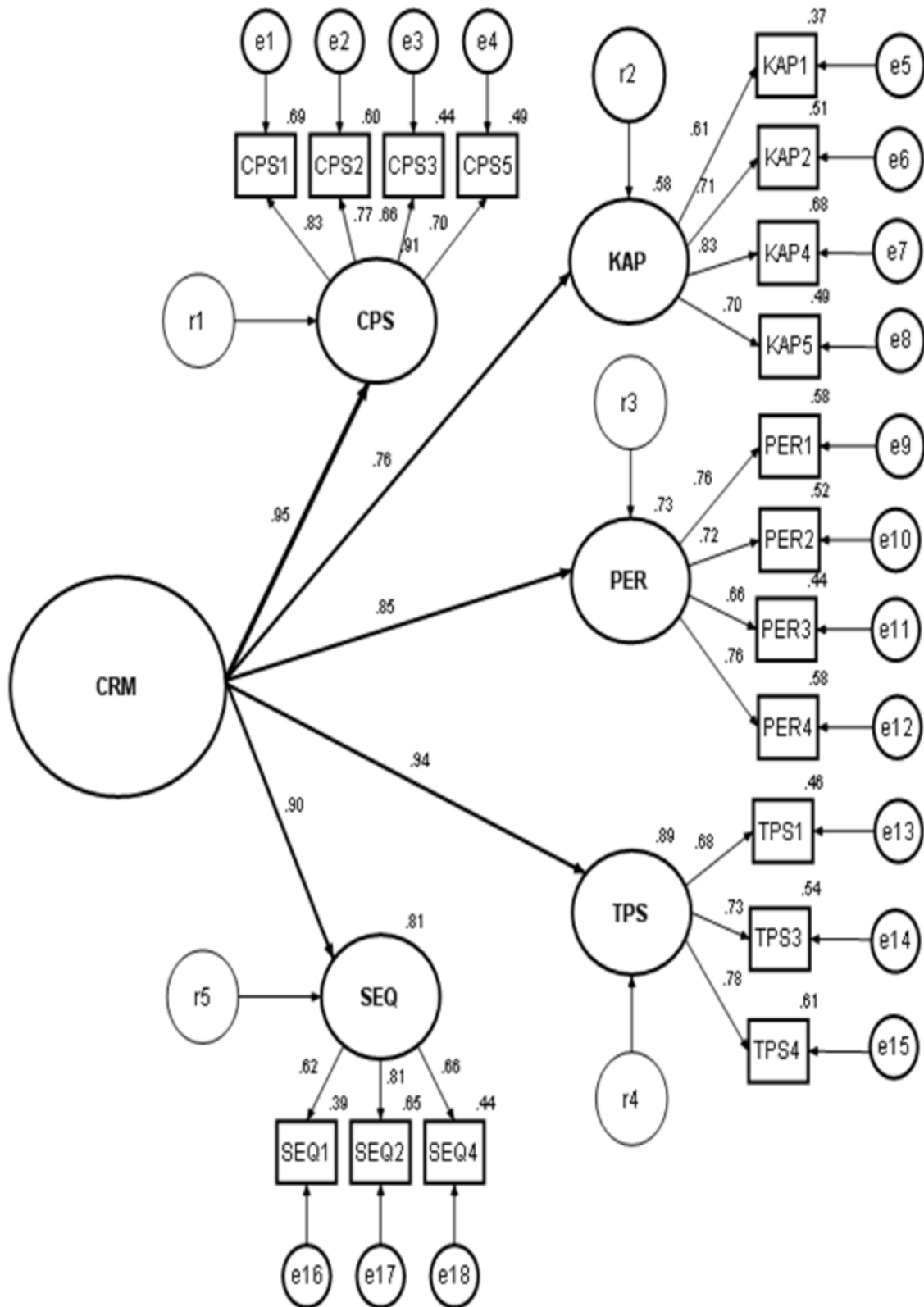


Figure 5: Model 3-Five factor model (Structural Model)

CONCLUSION

The study verified the long held belief that CRM is a multi dimensional construct. The critical factors that explain CRM in Indian insurance sector have been identified as claim payment security, knowledge about products, personalization, transparency in product selling and service quality.

Claim payment security

Customers now-a-days being more enlightened and assertive than ever before, expect consistency in the services which they receive from their insurance service provider. Additionally by embarking upon benchmarking and rendering the services which are compared with those of the best in class companies in the world, the insurance providers can maintain its competitive posture. Which in turn will improve the reputation in the eyes of its customers by making them confident about the claim payment as and when required? The dimensions such as *reliability* i.e. it is the ability of the insurance provider to perform the promised service dependably with accuracy; *honesty*; *confidence in claims to payment ratio* i.e. making the customer confident about getting the appropriate payment of the amount claimed and *minimum psychological efforts* while claiming the amount and getting payment. These dimensions may infuse a positive feeling in the mind of its customers because this is what they expect from their insurance service provider in today's fiercely competitive global scenario.

Knowledge about products

This factor consists of dimensions such as *Detailed and updated information* i.e. the employees of the insurance provider should have the sound knowledge about the insurance products and services offered from their organization and they should keep on updating it with the recent changes and amendments made in the respective segment. *Competitor orientation* i.e. keeping the eye on the competitors move in the respective segment and a sound knowledge about their products and services offerings; *excellent rapport with the personnel* i.e. a relationship of mutual understanding or trust and agreement with the customers and *expert opinion* i.e. expert advice by the insurance professionals to the customers at the time of decision making for insurance products and services. All of these dimensions in turn will play a lead role in enhancing the customer's satisfaction level with the insurance service provider.

Personalization

This factor comprises of dimensions such as *collaboration in product design* i.e. taking the views from customers about their needs and requirements while designing new policies. *Customer life time value identification* i.e. it is the measure of expected future value of profit to a business derived from customer relationships from the current time to some future point, *Customized policies* i.e. tailor-made policies to suit the specific requirements and *Customer support*. All this will have a positive impact on the customers' perceptions about the services which they receive from their insurance service provider.

Transparency in product selling

This factor consists of *Clear and transparent investment policies and guidelines* i.e. clear indication of the investment pattern going to be followed by the insurance provider and providing the prompt information to customers in case of any changes made.

Responsiveness i.e. willingness of insurance provider to help the customers and providing prompt service to them and *no hidden clauses* i.e. clear description of the different terms and conditions regarding charges, maturity claim amount etc. These dimensions altogether may tilt the balance in favor of a particular insurance service provider in the eyes of its customers.

Service quality

This factor is of vital importance in the light of more enlightened and demanding customers than ever before who put lot of emphasis on getting a better quality of service which they avail from a particular insurance service provider. They in fact are even prepared to pay a premium for getting a better quality service from their insurance service provider but will not compromise on inferior or poor service quality. This factor includes dimensions such as *empathy* i.e. it is the individualised care and attention provided to the customers. *Service recovery* i.e. response of insurance service provider in case of service failure and measures for quick recovery and *benevolence* i.e. the insurance provider think about the welfare of its customers. Altogether these dimensions play a pivotal role in improving the service quality.

These factors should be duly considered by the Indian insurance service providers in order to achieve a high degree of customer satisfaction and business performance which are the primary and compulsive goals for any business organization in the current competitive scenario. Academically this research work bridges the gap in the existing literature by proposing a comprehensive scale for CRM specifically catering to Indian insurance sector. Managerially by implementing the proposed model by Indian insurance service providers can enhance their customer acquisition, customer retention and overall profitability. This will ultimately have a positive impact on Indian economy as the insurance sector serves as a backbone by providing the long term funds as well as enhancing the risk taking ability of the country. Novelty of this work lies in the fact that considering the views of customers of different insurance providers all across India and proposing a comprehensive model for better implementation of CRM in insurance sector. The proposed CRM scale can serve as a diagnostic tool to identifying the problem areas as well as exploring new business opportunities in a much better way than even before.

LIMITATIONS AND FUTURE RESEARCH LINES

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

REFERENCES

- Agariya, A.K. and Singh, D. (2011). What Really Defines Relationship Marketing? A Review of Definitions, General and Sector-Specific Defining Constructs. *Journal of Relationship Marketing*, 10(4), 203-237.
- Agariya, A.K. and Singh, D. (2012a). CRM Scale Development and Validation in Indian Banking Sector. *Journal of Internet Banking & Commerce*, 17(1), 1-21.
- Agariya, A.K. and Singh, D. (2012b). CRM Index Development and Validation in Indian Banking Sector. *International Journal of Customer Relationship Marketing & Management*, 3(2), 10-32.
- Aduloju, S.A., Awoponle, A.L., & Oke, S.A. (2008). Recapitalization, mergers, and acquisitions of the Nigerian insurance industry. *Journal of Risk Finance*, 9(5), 449 – 466.
- Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411–423.
- Arora, R. & Stoner, C. (1996). The Effect of Perceived Service Quality and Name Familiarity on the Service Selection Decision. *Journal of Services Marketing*, 10 (1), 22-34.
- Athma, P. & Kumar, J. (2007). An Explorative Study of Life Insurance Purchase Decision Making: Influence of Product and Non-Product Factors. *The ICFAI Journal of Risk and Insurance*. 4(4).
- Bauer, H.H., Grether, M. & Leach, M. (2002). Building Customer Relations Over the internet. *Industrial Marketing Management*, 31(2), 155-163.
- Bodendorf, F. and Schobert, A. (2005). Enhancing e-CRM in the insurance industry by mobile e-services. *IEEE International Conference on e-Technology, e-Commerce and e-Service*, EEE-05, 235-239.
- Byrne, B.M. (2001). *Structural Equation Modeling with AMOS: Basic Concepts, Applications and Programming*, Lawrence Erlbaum Associates, Mahwah, NJ.
- Campbell, A. J. (2003). Creating customer knowledge competence: managing customer relationship management programs strategically. *Industrial Marketing Management*, 32(5), 375-383.
- Chen, Y. and Hu, L. (2005). Study on data mining application in CRM system based on insurance trade. *ACM International Conference Proceeding Series*, 113, 839-841.
- Dwyer, F. R., P.H. Schurr and S. Oh, S. (1987). Developing buyer-seller relationships. *Journal of Marketing*, 51(2), 11-27.
- Fornell, C. and Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measure. *Journal of Marketing Research*, 18, 39-50.
- Furtmueller Elfi, Rolf van Dick and Celeste Wilderom (2011). Service behaviours of highly committed financial consultants. *Journal of Service Management*, 22(3), 317 – 343.
- Gera, R. (2011). Modelling the service antecedents of favourable and unfavourable behaviour intentions in life insurance services in India: An SEM study. *International Journal of Quality and Service Sciences*, 3(2), 225 – 242.
- Gopi, K. (2004). Growth of ICICI Lombard General Insurance Company. *Insurance Chronicle*, 4(13), 11.
- Gupta, H. (2007). The role of insurance in healthcare management in India. *International Journal of Health Care Quality Assurance*, 20(5), 379 – 391.

- Hess, Thomas (2002). The Role of Insurance in the Development Process. *National Insurance Chronicle*, August, 47-49.
- Huang, Y. and Wang, J. (2009). Services-oriented CRM system and enabling technologies for insurance enterprises. *Proceedings - 2009 2nd International Workshop on Knowledge Discovery and Data Mining, WKKD 2009*, art. no. 4772041, 737-740.
- Hu Xiaoling, Zhang C., Hu Jin-Li and Zhu Nong (2009). Analyzing efficiency in the Chinese life insurance industry. *Management Research News*, 32(10), 905-920.
- Jacqueline K. Eastman J. K., Eastman Alan A. D. and Eastman Kevin L. (2002). Insurance Sales Agents and the Internet: The Relationship between Opinion Leadership, Subjective Knowledge, and Internet Attitudes. *Journal of Marketing Management*, 18(3/4), 259-285.
- Joseph M, Stone G and Anderson K. (2003). Insurance Customers Assessment of Service Quality: A Critical Evaluation. *Journal of Small Business and Enterprise Development*, 10(1), 81-92.
- Laster D. and Raturi M. (2002). What Drives Financial Innovation in the Insurance Industry. *Journal of Risk Finance*, 3(3), 36-47.
- Malte Geib, Lutz M. Kolbe and Walter Brenner (2006). CRM collaboration in financial services networks: a multi-case analysis. *Journal of Enterprise Information Management*, 19(6), 591-607.
- Mc Kenna, R (1991). *Relationship Marketing: Successful Strategies for the age of the Customer*. Addison-Wesley.
- Mishra, Ashwani (2006). Cabling the Connect in Insurance Business. Network Computing-Solutions for connected enterprise, *Jasubhai Digital Media* (April 01). Retrieved from <http://www.ncindia.com/casestudies/stories/63627.html> on 18th August 2006.
- Morgan, R. M. and D.H. Shelby (1994). The Commitment-Trust Theory of Relationship marketing. *Journal of Marketing*, 58(3), 20-38.
- Nath, Vikas, Gugnani, Ritika, Goswami, S. and Gupta, Nimit (2009). Management Practices in Selected Indian Service Industries. *Journal of Marketing and Communication*, 4(3), 18-40.
- Nunnally, J. C. (1978). *Psychometric theory*. 2nd edition Tata McGraw-Hill: New York.
- Park Jin, Lee Sukho and Kang Han Bin (2009). The insurance distribution systems and efficiency in the property-casualty insurance industry. *Managerial Finance*, 35(8), 670 – 681.
- Pasha, Akhtar (2004). Insurance sector to drive Indian CRM market. *Express Computer* (February, 16). Retrieved from: <http://www.expresscomputeronline.com/20040216/indiatrends02.shtml> on 21st September 2006
- Pullig, C, J. Maxham and J. Hair (2002). Sales force automation systems an exploratory examination of organizational factors associated with effective implementation and sales force productivity. *Journal of Business Research*, 12(1), 55.
- Romano, N. C., Jr. and J. Fjermestad (2001). Electronic commerce customer relationship management: An assessment of research. *International Journal of Electronic Commerce*, 6(2), 61-113.
- Ryals, L. and Payne A. (2001). Customer relationship management in financial services: towards information-enabled relationship marketing. *Journal of Strategic Marketing*, 9, 3-27.

- Sin, Leo Y.M., Tse, Alan C.B. and Yim Frederick H.K. (2005). CRM: Conceptualisation and scale development. *European Journal of Marketing*, 39(11/12), 1264-1290.
- Sinha R. P. (2007) 'Productivity and Efficiency of Indian General Insurance Industry', *ICFAI Journal of Risk and Insurance*, Vol. 4 No. 2.
- Soopramanien, D. and Hong Juan, L. (2010) 'The importance of understanding the exchange context when developing a decision support tool to target prospective customers of business insurance', *Journal of Retailing and Consumer Services*, Vol. 17, No. 4, pp.306-312.
- Storbacka, K. (2000) Customer Profitability: Analysis and Design Issues. In: *Handbook of Relationship Marketing*, pp.565-586.
- Thanasegaran Haemala and Shanmugam Bala (2008). Exploitation of the insurance industry for money laundering: the Malaysian perspective. *Journal of Money Laundering Control*, 11(2), 135-145.
- Taung, C.C. (2000). *Development situation and trend of Call Centre*. Information and Computer Press.
- Verhoef, P.C. and Donkers, B. (2001). Predicting customer potential value an application in the insurance industry. *Decision Support Systems*, 32(2), 189-199.
- Watkins, T. (1988). Developing trends in the marketing of life insurance. *Journal of Marketing Management*, 4(1), 71-87.
- Wu, Shinying (2000). Research on Enterprise's Introduction of CRM. *Master's thesis of Department of Business Management*, National Taipei University, Taiwan.
- Zikmund, W.G. (1991). *Business Research Methods*. 3rd edition, The Dryden Press, Chicago, IL.