

# The Intellectual Structure of Customer Relationship Research

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### Abstract

To explore the intellectual structure of customer relationship research in the last decade, this study identified the most important publications and the most influential scholars as well as the correlations among these scholar's publications. In this study, bibliometric, social network analysis and factor analysis techniques are used to investigate the intellectual pillars of the customer relationship literature. By analyzing 99,995 citations of 2,119 articles published in SSCI and SCI journal in customer relationship area between 2000 and 2009, this study maps a knowledge network of customer relationship studies. The results show that major research themes in customer relationship have shifted in the last decade from research on service quality and satisfaction to customer loyalty. The results of the mapping can help identify the research direction of customer relationship research and provide a valuable tool for researchers to access the literature in this area.

**Keywords-** customer relationship; customer loyalty; service quality; marketing networks; trust; citation analysis

### 1. Introduction

Customer relationship management (CRM) helps broaden the understanding of customer relationship and its role in enhancing customer value (Netzer, Lattin and Srinivasan 2008; Payne, 2005; Rust, 2006). CRM systems are parameter-adjustable software packages that are intended to integrate and manage all aspect of customer interactions within the organization, and so considerably improve the ability of the organization to handle customer service, sales, marketing, online transactions, and orders (Gefen, 2003). Relationship marketing implies a consideration of not just better relationships with markets but the development and enhancement of relationships with customer, supplier, employee, and referral. Musalem and Joshi (2009) would argue that companies need to have some form of customer relationship strategy to address each of these markets. The past decade has especially seen extensive research on customer relationship. Yet even though customer relationship has established itself as an academic discipline, its establishment has been a fast process because researchers in this area prefer to publish their best work in more established journals. Another major obstacle to the development of customer relationship lies in the subject's unusually high degree of interaction with other disciplines. This overlapping blurs the

boundaries of customer relationship and as a result its distinct theoretical model and analytical tools are unjustly attributed to other competing fields. With limited resources contributing to the development of customer relationship, the cross-fertilization of ideas between scholars of customer relationship will be much more difficult to obtain. Consequently, while there is no doubt that there is an area or field of customer relationship, the question remains somehow unclear on what it is, how good its work is, and what are its prospects and needs for future development.

The purpose of this study is to provide customer relationship researchers with a unique map to better understand customer relationship related publications and to provide a systematic and objective mapping of different themes and concepts in the development of customer relationship field. This study also attempts to help identify the linkage among different publications and confirm their status and positions in their contribution to the development of customer relationship field.

Bibliometric methods can both complement and validate expert judgments by experienced scholars in the field. The techniques refers to the mathematical and statistical analysis of patents that used in this appear in the publication and use of documents (Diodato, 1994). The techniques used in this paper are known as citation and co-citation analysis. Citation analysis is based on the premise that authors, journal and article cite documents they consider to be important in the field. Therefore, frequently cited documents are likely to have exerted a greater influence on the discipline than those less frequently cited (Culnan, 1987; Etemad and Lee, 2003; Ramos-rodriguez and Ruiz-navarro, 2004). Similarly, co-citation analysis of documents records the number of papers that have cited any particular pair of documents and it is interpreted as a measure for the two documents. The approach is instrumental in identifying groupings of authors, methods, concept, or themes and use social networks analysis and factor analysis, which is performed to identify the invisible network of knowledge generation underlying the customer relationship literature (Ma, Lee and Yu, 2007; Wang, McLee and Kuo, 2011).

The present paper divided into four main sections. The first is a review of literature; the second contains a description of bibliometric methodology for set of relevant publications or papers, in particular, the citation and co-citation technique. In the following section presents and discusses the results of the empirical study. The fourth section presents a summary and discussion of the conclusions to be drawn from this investigation, indicates its limitations, and suggests future research.

## **2. Studies of Academic Literature- citation and co-citation**

There are a number of techniques that can be used to study a body of literature. Most frequent is the simple literature review where a highly subjective approach is used to structure the earlier work. Objective and quantitative techniques have recently become popular with more databases available online for use. These techniques adopt author citations, co-citations, and systematic review (Compain, 2001; Lin, McLee and Kuo, 2011) to examine the invisible knowledge network in the communication process by means of written and published works of a given field. These techniques are attractive because they are objective and unobtrusive (Garfield, 1979; Wang, Lee and Kuo, 2011).

Several studies have used the bibliometric techniques to study the literature of management research. For example, Chabowski, Mena and Gonzalez-Padron (2011) focused marketing-related journals and assess the intellectual structure of sustainability articles from 36 journals over 51 years (1958-2008). Ponzi (2002) explored the intellectual structure and interdisciplinary breadth of knowledge management in its early stage of development, using principle component analysis on an author co-citation frequency matrix; Etemad (2004) identified the most influential authors and studies in electronic commerce field by using citation analysis; Ramos-Rodriguez and Ruiz-Navarro (2004) examined the intellectual structure change of strategic management research by conducting a bibliometric study of the Strategic Management Journal; Acedo and Casillas

(2005) explored the research paradigms of international management research by applying factorial analysis techniques in an author co-citation study. Chan, Seow and Tam (2009) used citations from accounting dissertations completed during 1999-2003 to provide a ranking of accounting journals. To the best of our knowledge, no similar study has been conducted on the current research of customer relationship. Therefore this study aims to fill a gap in customer relationship literature by applying citation and co-citation analysis to a representative sample of recent research on customer relationship collected by the Science Citation Index and Social Sciences Citation Index.

### **3. Methodology**

The citation data used in this study included journal articles, authors, publication outlets, publication dates, and cited references. Based on the objective of this study, the authors explored the intellectual structure of customer relationship between 2000 and 2009. This time period was chosen because contemporary customer relationship studies of the last five years represent the most update and probably also the most important research on customer relationship. Citation and co-citation analysis is the main method for this study. First, the databases were identified as the sources of customer relationship publications. Then data collection and analysis techniques were designed to collect information about topics, authors, and journals on customer relationship research.

In the second stage, the collected data were analyzed and systematized by sorting, screening, summing, sub-totaling, and ranking. After a series of operations, key nodes in the invisible network of knowledge in customer relationship were identified and the structures developed. In the final stage, the co-citation analysis was used and the knowledge network of customer relationship was mapped to describe the knowledge distribution process in customer relationship area.

In this study, the Science Citation Index (SCI) and Social Sciences Citation Index (SSCI) were used for analysis. The SCI and SSCI are widely used databases, which include citations published in over 8000 world's leading scholarly journals. While there are arguments that other online databases might also be used for such analysis, using SCI and SSCI provided the most comprehensive and the most accepted databases of customer relationship publications.

Unlike other prior studies, the data used in this study were not drawn from journals chosen by peer researchers (Walstrom, 2000). Instead, the entire databases of SCI and SSCI from 2000 to 2009 served as the universe for analysis. In order to collect the data, we used "key word" method which utilizes the SCI and SSCI databases key word search in article's title, abstract and key word. Using "Customer" and "relationship" as key word, this study collected 2,119 journal articles which further cited 99,995 publications as references. The cited references in these papers included both books and journal articles.

### **4. Results**

#### **4.1 Citation Analysis**

To identify the key publications and scholars that have laid down the ground work of customer relationship research, citation data were tabulated for each of the 1,224 source documents and 67,723 references using the *Excel* package. The citation analysis produced interesting background statistics, as shown in the following tables. Table 1 lists the most cited journals in customer relationship area in the decade years, among which *Journal of Marketing*, and *Journal of Marketing Research* and *Journal of the Academy of Marketing Science* are the top three most cited journals, followed by *Journal of Retailing* and *Harvard Business Review*. The general pattern of the most cited journals shows that customer relationship research features marketing, retailing, psychology, management and service specific journals.

The most influential documents with the most citation and the most influential scholars were then identified by their total counts of citation within the selected journal articles. As shown in Table 2, the most cited customer relationship publication between 2000 and 2004 (the first five years ) was Morgan’s paper *The commitment-trust theory of relationship marketing* , followed by Dwyer’s paper *Developing buyer-seller relationships* , and Parasuraman’s paper *Customer relationship civic* (see Table 2).

For the second five years (2000-2009), the most cited customer relationship publications were the same as in the first five years. The first most cited was Morgan’s paper *The commitment-trust theory of relationship marketing* , followed by Fornell’s paper *Evaluating Structural equation models with unobservable variables and measurement error* and Anderson’s paper *Structural equation modeling in practice: A review and recommended two-step approach* (See Table 3).

Table 1. The most frequently cited journals: 2000-2009.

Journals	Total Citations	2000-2004 Citations	2005-2009 Citations
Journal of Marketing	8,077	2,014	6,063
Journal of Marketing Research	3,650	942	2,708
Journal of the Academy of Marketing Science	2,374	502	1,872
Journal of Retailing	1,710	414	1,296
Harvard Business Review	1,632	437	1,195
Journal of Applied Psychology	1,393	375	1,018
Journal of Business Research	1,357	242	1,115
Industrial Marketing Management	1,318	205	1,113
Journal Consumer Research	1,272	373	899
Management Science	1,178	277	901
Academy Management Review	1,109	316	793
Academy Management Journal	1,077	317	760
Marketing Science	1,046	243	803
European Journal of Marketing	871	145	726
Journal of Service Research	854	89	765
Strategic Management Journal	791	67	724

Table 2. Highly cited documents: 2000-2004.

Total Citations	Full Citation Index For Document
95	Morgan RM, (1994), Journal of Marketing, V58, P20
63	Dwyer FR, (1987), Journal of Marketing, V51, P11
52	Parasuraman A, (1988), Journal of Retailing, V64, P12
44	Crosby LA, (1990), Journal of Marketing, V54, P68
43	Parasuraman A, (1985), Journal of Marketing, V49, P41
42	Kohli AK, (1990), Journal of Marketing, V54, P1
42	Narver JC, (1990), Journal of Marketing, V54, P20
41	Fornell C, (1981), Journal of Marketing Research, V18, P39
40	Ganesan S, (1994), Journal of Marketing, V58, P1
39	Anderson JC, (1988), Psychological Bulletin, V103, P411
38	Jaworski BJ, (1993), Journal of Marketing, V57, P53

Table 3. Highly cited documents: 2005-2009.

Total Citations	Full Citation Index For Document
226	Morgan RM, (1994), Journal of Marketing, V58, P20
200	Fornell C, (1981), Journal of Marketing Research, V18, P39
169	Anderson JC, (1988), Psychological Bulletin, V103,
120	Zeithaml VA, (1996), Journal of Marketing, V60, P31
118	Dwyer FR, (1987), Journal of Marketing, V51, P11
114	Parasuraman A, (1988), Journal of Retailing, V64, P12
105	Garbarino E, (1999), Journal of Marketing, V63, P70
103	Crosby LA, (1990), Journal of Marketing, V54, P68
101	Baron RM, (1986), Journal of Personality and social Psychology, V51, P1173
100	Oliver RL, (1999), Journal of Marketing, V63, P33
99	Doney PM, (1997), Journal of Marketing, V61, P35
94	Bagozzi RP, (1988), Journal of Academy Marketing, V16, P74

Journal articles and books combined, the top five most cited scholar between 2000 and 2004 (the first five years) were Oliver, Anderson, Parasuraman, Zeithaml and Schneider (See Table 4). For the second five years, the status of the most important scholars changed. The top five most cited scholars were Anderson, Oliver, Fornell, Zeithaml, and Parasuraman (See Table 5). These scholars have the most influence in the development of customer relationship area and thus collectively define this field. Their contributions represent the focus of the main research in the field and thus give us an indication of the popularity of certain Customer relationship topics as well as their historical values.

Table 4. Highly cited authors: 2000-2004.

Author	Frequency
Oliver RL	194
Anderson JC	165
Parasuraman A	157
Zeithaml VA	135
Schneider B	129
Fornell C	126
Anderson EW	117
Gronroos C	105
Rust RT	102
Morgan RM	101
Day GS	98
Bitner MJ	96
Reichheld FF	95
Bolton RN	93
Bagozzi RP	92
Berry LL	85
Dwyer FR	82

Slater SF	82
Churchill GA	74
Crosby LA	67

Although the citation analysis does not eliminate the bias against younger scholars, a paper-based ranking (as in Table 2 & 3) places more emphasis on the quality (as opposed to the quantity) of the documents produced by a given scholar than a ranking of authors based on the frequencies with which a particular author has been cited (as in Table 4 & 5). In addition, Table 2 and 3 represent the key research themes in a field and give us an indication of the popularity of certain customer relationship topics. The readers can find high citations are associated to what can be termed field-defining titles and they lay down the ground work for the understanding of customer relationship as a distinct phenomenon. A comparison between Table 2 and 3 reveals some interesting patterns from the first five years (2000-2004) to the second five years (2005-2009). First, the top five most influential publications in the last five remain the same, indicating their dominant status for the past decade in customer relationship studies. This is also true for the top five most influential scholars in the last five years. Second, on the one hand, the most cited publications in the first five years have relatively smaller number of citations, comparing with the publications in the second five years.

Table 5. Highly cited authors: 2005-2009.

Author	Frequency
Anderson JC	445
Oliver RL	437
Fornell C	434
Zeithaml VA	405
Parasuraman A	365
Rust RT	360
Anderson EW	294
Bolton RN	284
Bagozzi RP	278
Gronroos C	273
Schneider B	267
Reichheld FF	262
Morgan RM	241
Bitner MJ	240
Day GS	208
Berry MJ	206
Cronin JJ	162
Crosby LA	150
Dwyer FR	147
Slater SF	147

The gradual increase in the total citations supports the evolving process of customer relationship research as an academic field and the process of gaining more and more recognition in the literature. On the other hand, the most influential papers in the first five years and the second five years change much. This indicates the development in customer relationship is fast and a few classical works and influential authors still dominate the customer relationship research. More efforts and theoretical breakthrough are thus needed in order to further advance the development of customer relationship research.

## 4.2 Co-citation Analysis

In this stage, data mapping was conducted and an intellectual structure of current Customer relationship studies was revealed. Co-citation analysis is a bibliometric technique that information scientists use to map the intellectual structure of an academic field. It involves counting documents from a chosen field - paired or co-cited documents. Co-citation analysis compiles co-citation counts in matrix form and statistically scales them to capture a snapshot at a distinct point in time of what is actually a changing and evolving structure of knowledge (Small, 1993).

Co-citations were tabulated for each source documents by using the *Excel* package. Many of the authors had very few co-citations that were either unlikely to have had a significant impact on the development of the field or were too new to have had time to impact on the literature. To facilitate analyses and improve the probability of its success, it was made sure that all authors in the final set had at least 30 citations in the first ten years and 30 in the second five years. Based on the total number of citations in the selected journals, the top scholars were identified, and then a co-citation matrix was built before a pictorial map was drawn to describe the correlations among different scholars. In doing so, we were following the procedures recommended by White and Griffith (1981).

Social network analysis techniques were used to graph the relationships in the co-citation matrix and identify the strongest links and the core areas of interest in customer relationship (Ma, Lee and Yu, 2007). Figure 1 and Figure 2 show the core research themes in customer relationship studies, based on sampled articles with links of greater than or equal to ten co-citations shown in the network. This is produced using UCINET software (Borgatti, 2002) and shows graphically the core areas of interest. Different shapes of the nodes result from performing a faction study of these authors. This method seeks to group elements in a network based on the sharing of common links to each other. The diagrams show that current research in customer relationship area is concentrating on the interactions of real quality services, dynamics of trust, service encounter and structural equation modeling.

The few scholars in Figure 1 and 2 with the most links (co-citation) are the super stars in customer relationship research. Their heavy citations and intensive interlinks with each other undoubtedly indicate their prestigious status in customer relationship research and their publications and research work collectively define the future research directions of customer relationship studies. While the diagrams in Figure 1 and Figure 2 provide a clear picture, their foci are only on the very core areas and only a limited amount of information is revealed. By taking the co-citation matrix and grouping the authors using factor analysis of the correlations between the entries, we can determine which authors are grouped together and therefore share a common element. According to this, the closeness of author points on such maps is algorithmically related to their similarity as perceived by citers. We use r-Pearson as a measure of similarity between author pairs, because it registers the likeness in shape of their co-citation count profiles over all other authors in the set (White, 1995).

The co-citation correlation matrix was factor analyzed using varimax rotation, a commonly used procedure, which attempts to fit (or load) the maximum number of authors on the minimum number of factors. The diagonals were considered missing data and were applied the criterion of omitting the two cases (McCain, 2000).

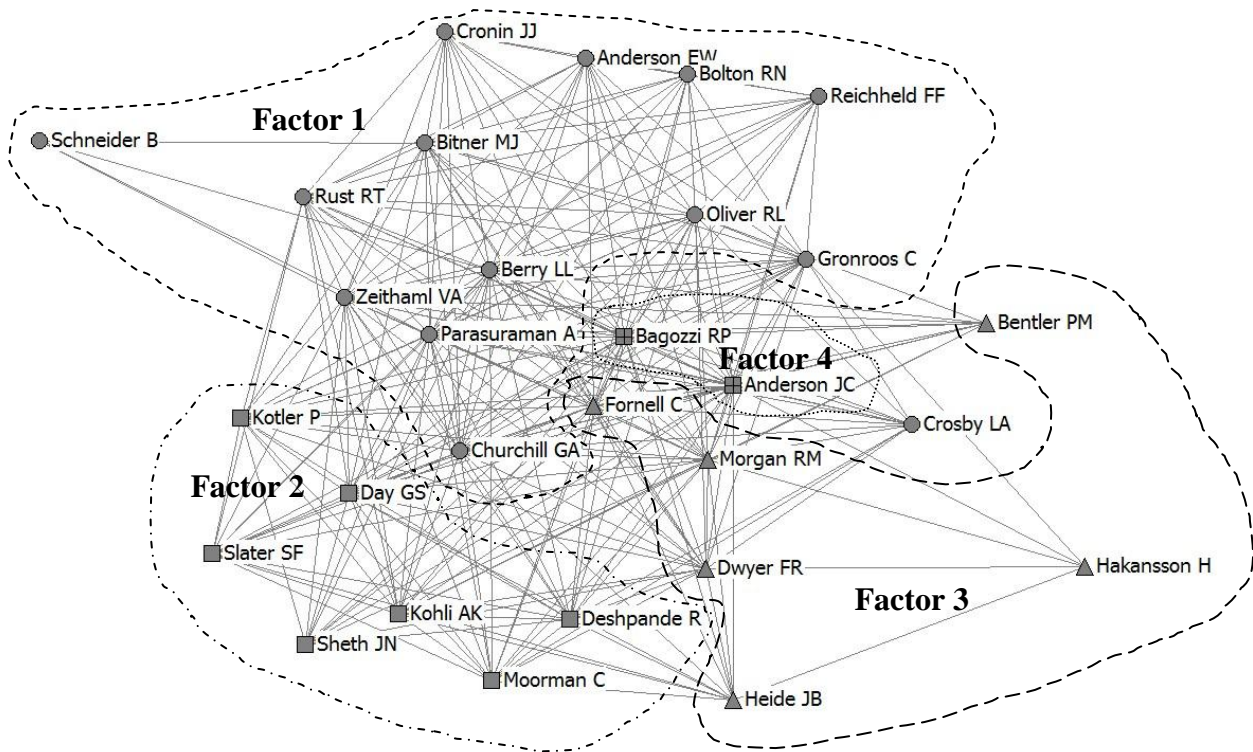


Figure 1. Key Research Themes in Customer Relationships: 2007-2010 (Frequency  $\geq 40$ ).

Four factors were extracted from the data in the first five years (2000-2004) and together they explained over 70.2% of the variance in the correlation matrix. Table 6 lists the four most important factors along with the authors that had a factor loading of at least 0.5. As is usual in this type of analysis, authors with less than a 0.5 loading or with cross-loadings were dropped from the final results (White, 1981). We tentatively assigned names to the factors on the basis of our own interpretation of the authors with high loadings. Our interpretation of the analysis results is that customer relationship research in this period is composed of at least four different sub-fields: service quality & satisfaction, market orientation, marketing networks and qualitative research method (Please see Figure 1). We made no attempts to interpret the remaining factors due to their small eigenvalues. They have also been excluded from Table 6.



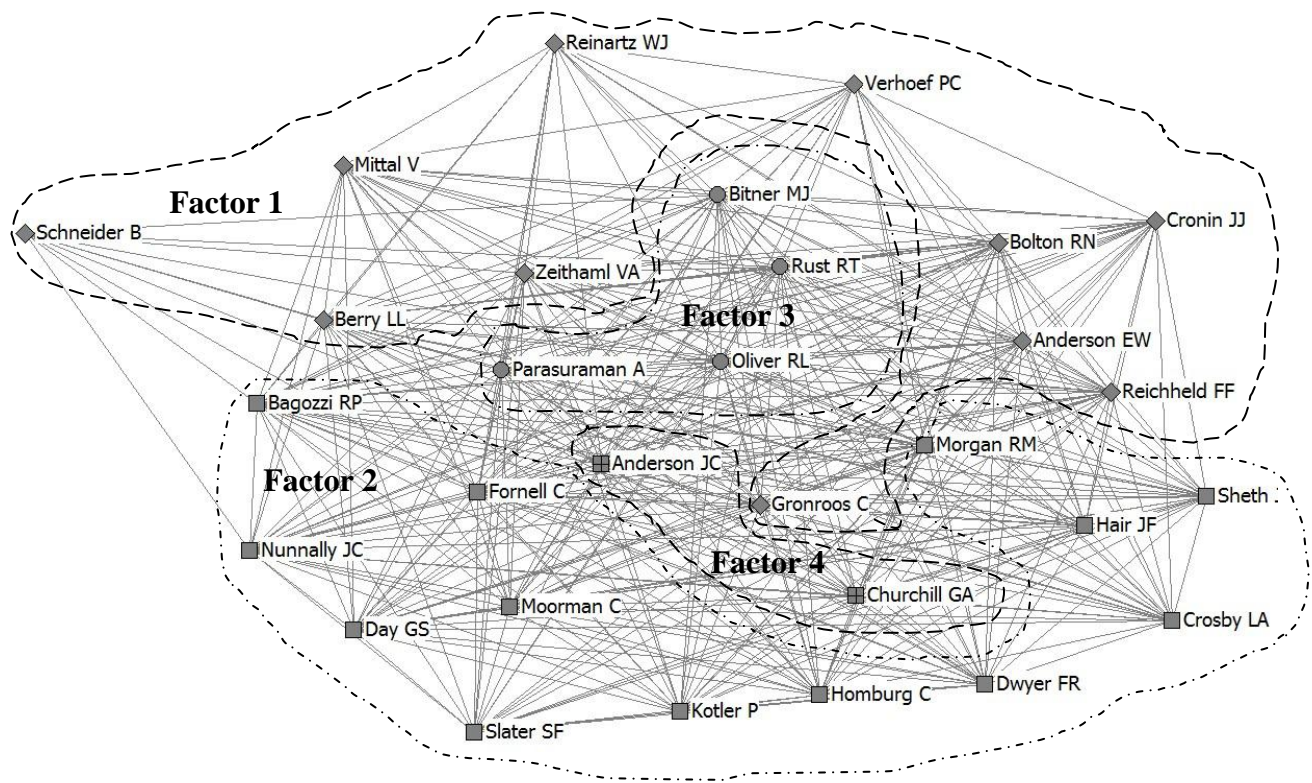


Figure 2. Key Research Themes in Customer Relationships: 2007-2010 (Frequency  $\geq$  40).

Similarly, studies on customer relationship also clustered on different research themes between 2005 and 2009 and together they explained over 74.4% of the variance in the correlation matrix of the second five years, as pictured in Figure 2. Table 7 lists the four most important factors along with the authors that had a factor loading of at least 0.5. We also tentatively assigned names to the factors on the basis of our own interpretation of the authors with high associated loadings. Our interpretation of the analysis results is that customer relationship research at this stage is also composed of at least four key subfields: customer loyalty, trust, quality services and satisfaction, and qualitative research method.

Figure 1 and Table 6 clearly indicated that the most influential authors in customer relationship studies between 2000 and 2004 clustered together. The first factor in Table 6 appears to define service quality and satisfaction by Cronin, Bolton and Schneider. Cronin (1992) suggest that a performance-based measure of service quality may be an improved means of measuring the service quality construct, service quality is an antecedent of consumer satisfaction, consumer satisfaction has significant effect on purchase intentions and service quality has less effect on purchase intentions than does consumer satisfaction. While many studies have investigated service and satisfaction, Baker, Cronin and Hopkins (2009) represents the effort to determine whether the relationship between these two variables differs based on a consumer characteristic.

Factor 2 is defined by Day, Moorman, Slater, and Kotler appears to represent market orientation research. Day (1994) emerging capabilities approach to strategy offers a valuable new perspective on how to achieve and sustain a market orientation. Factor 3 represents marketing networks is defined by Hakansson, Bentler, and Heide. A marketing network has a specific and intense structure with social dimensions, technical and economic (Hakansson and Ford, 2002). Factor 4 represents qualitative research method is defined by Anderson and Bagozzi.

Table 6. Author factor loadings: 2000-2004.

Factor 1: Service quality & satisfaction	Variance 36.2%	Factor 2: Market orientation	Variance 23.9%	Factor3: Marketing networks	Variance 5.8%	Factor4: Qualitative research method	Variance 4.3%
Cronin JJ	0.959	Day GS	0.741	Hakansson H	0.834	Anderson JC	0.855
Bolton RN	0.928	Slater SF	0.719	Bentler PM	0.799	Bagozzi RP	0.655
Schneider B	0.926	Kotler P	0.703	Heide JB	0.719		
Bitner MJ	0.909	Moorman C	0.702	Dwyer FR	0.648		
Reichheld FF	0.889	Deshpande R	0.700	Morgan RM	0.608		
Gronroos C	0.879	Kohli AK	0.678	Churchill GA	0.530		
Rust RT	0.875	Sheth JN	0.602	Fornell C	0.523		
Oliver RL	0.855						
Parasuraman A	0.776						
Anderson EW	0.760						
Berry LL	0.745						
Zeithaml VA	0.717						
Churchill GA	0.618						
Crosby LA	0.607						

Table 7. Author factor loadings: 2005-2009.

Factor 1: Customer loyalty	Variance 51.6%	Factor 2: Trust	Variance 14.1%	Factor 3: Service quality and satisfaction	Variance 4.8%	Factor 4: Qualitative research method	Variance 3.8%
Reichheld FF	0.926	Moorman C	0.866	Bitner MJ	0.907	Anderson JC	0.538
Reinartz WJ	0.872	Dwyer FR	0.856	Rust RT	0.805	Churchill GA	0.513
Bolton RN	0.753	Homburg C	0.797	Oliver RL	0.672		
Schneider B	0.731	Slater SF	0.784	Parasuraman A	0.657		
Cronin JJ	0.705	Day GS	0.770	Cronin JJ	0.572		
Gronroos C	0.701	Churchill GA	0.717				
Mittal V	0.685	Hair JF	0.708				
Verhoef PC	0.657	Morgan RM	0.703				
Anderson EW	0.634	Sheth JN	0.678				
Zeithaml VA	0.581	Nunnally JC	0.674				
Berry LL	0.567	Bagozzi RP	0.650				
Crosby LA	0.528	Crosby LA	0.643				
		Fornell C	0.541				
		Kotler P	0.531				

For the second five years, Figure 2 and Table 7 clearly indicated that the most influential authors in customer relationship studies between 2005 and 2009 also clustered together. The first factor in Table 7 appears to define the customer loyalty of customer relationship is defined by Reichheld, Reinartz and Bolton. Customer loyalty is too important to delegate. It has a

crucial effect on every constituency and aspect of a business system; it drives business success. Consistently high retention can create tremendous competitive advantage, boost employee morale, produce unexpected bonuses in productivity and growth, and even reduce the cost of capital (Reichheld, 2001). Customer loyalty programs have become prevalent across a variety of service industries (Bolton, Kannan and Bramlett, 2000; Zhang, 2011).

Factor 2 is defined by Moorman, Dwyer, and Homburg appears to represent trust on customer relationship. Dwyer, Schurr and Oh (1987) describe trust as a feature of relationship quality, along with satisfaction and opportunism. Trust has been conceptualized as a determinant or relationship quality. Moorman (1992) view trust having indirect effects through other relationship processes, as opposed to important direct effects on research utilization.

Factor 3 represents service quality and satisfaction of customer relationships are defined by Bitner, Rust and Oliver. Binter (1990) study deepens general knowledge and understanding of service encounter satisfaction influence service quality. Factor 4 represents qualitative research method that is defined by Anderson and Churchill.

## **5. Future research and Conclusion**

### **5.1 Future research directions**

The change of key research themes between the first 5 years (2000-2004) and the second 5 years (2005-2009) reveals some important insights on future research directions in customer relationship. First, one of the future research themes will be more likely to concentrate on customer loyalty. A shift emphasis from services quality and satisfaction to customer loyalty appears to be a worthwhile change in strategy for most firms because businesses understand the profit impact of having a loyal customer base (Chen, Narasimhan and Zhang, 2001; Lai, Griffin and Babin, 2009; Morgeson *et al.*, 2011; Oliver, 1999). While customer loyalty have been important topics in the last decade in customer relationship studies (please refer to Figures 2 and Table 2), the impact of customer relationship on online shopping and real shopping have become a key determinant of promoting customer relationship in many markets. Future studies are more likely to explore the relationship between customers loyalties on mobile commerce, with an emphasis on what benefit of customer relationship could bring to the firm. Future studies will continue in this direction of inquiry.

Second, introduction of trust into the study of customer relationship will become another major research theme in future. As shown in figure2 and table 7, the works of Moorman have appeared as one of the key nodes in the knowledge network of contemporary customer relationship research. Moorman, Zaltman, and Deshpande (1992) defined the trust as a willingness to rely on an exchange partner in whom one has confidence. Trust are the central tenets in building successful long-term relationships in the online business context (Gefen, Karahanna and Straub 2003; Mukherjee and Nath 2007).

A third related topic for customer relationship research in future will be theory refinement and theory development. Given that theory development in customer relationship has been an important research topic in the past years, such as the early efforts on service quality and satisfaction, it is expected that the development process in customer relationship will keep searching for a better framework. New theories could integrate different concepts in customer relationship and could be applicable across different markets and research disciplines. In addition, the majority customer relationship theories are developed in the marketing relationships, a significant skill-biased technological change affecting customer relationship results. For example, service quality attributes that impact the satisfaction of newly acquired customers may have little influence on the satisfaction of long-term clients (Falk, Hammerschmidt and Schepers 2010).

## 5.2 Conclusion

The past decade have extensive research on customer relationship. This investigates customer relationship research using citation and co-citation data published in SCI and SSCI between 2000 and 2009. With a factor analysis of the co-citation data, this study maps the intellectual structure of customer relationship research, which suggests that the contemporary customer relationship research is organized along different concentrations of interests: customer loyalty, trust, service quality and satisfaction, and qualitative research method. The mapping of the intellectual structure of customer relationship studies indicates that customer relationship has somehow created its own literature and that it has gained the reputation as a legitimate academic field, with customer relationship specific journals gaining the status required for an independent research field, such as *Journal of Marketing*, *Journal of Marketing Research* and *Journal of the Academy of Marketing Science*. Given that the customer relationship is still young and our analysis has shown that it has an evolving structure, it is believed that customer relationship publication outlets will gain more popularity and prestige that is required to become a more prominent academic field when we learn more about current paradigms and the key research themes in customer relationship studies, how they relate, and what they stand for. With more scholars and more resources contributing to the customer relationship area, a better academic environment conducive for research ideas' cross-fertilizing will be formed and customer relationship, as a field, will gain more momentum for further development.

A comparison of different stages of customer relationship research also shows that there are more key nodes entering the customer relationship research map in the most recent 5 years. Closer ties and more associations among customer relationship scholars have been established in the past years (please refer to figure 2 and table 7). The appearance of new and relevant theoretical and conceptual frameworks helps to strengthen the core research themes when newly attracted scholars start to use them to build even stronger theory and theoretical frameworks, which in turn helps customer relationship field to deal with more complex issues and concerns. With this increasing dynamism and the emergence of a continuously consolidating paradigm to lead both academic inquiry and industrial practice, and through such an evolving process, the field of customer relationship is growing and its knowledge network is developing. This study is on journal publications as the primary means of dissemination of research results, citations to proceedings of conferences are not included in the co-citation counts. Customer relationship field is rapidly changing. Conference proceedings are often more timely indicator of new emerging research. An examination of research themes in the major marketing or management conference proceedings would be a worthwhile area of future research.

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