

The causal relationship between aspects of customer capital to improve customer relationship management and increase customers' loyalty (case study: food industry of Jey industrial town in Isfahan)

Zahra Fatehi*, Dr. Hassan Ghorbani

Department of Management and Accounting, Islamic Azad University, Mobarakeh Branch, Isfahan, Iran

Abstract: This study aimed to investigate the causal relationships between aspects of customer capital to improve customer relationship management and increase customer's loyalty. In this regard, by providing a conceptual framework including different aspects of customer capital (i.e. customer targeting, ability to identify customer's need, construction and management of customer information system, customer service capability, customer's loyalty, and customer relationship management) and using statistical tests like structural equation modeling and Friedman test through SPSS and Lisrel software, hypotheses were examined. This was an applicable research in terms of its purpose, and a descriptive-survey research in terms of its methodology. Data were collected through library resources and field resources using questionnaire. Questionnaire validity and reliability were confirmed through content validity using supervisor professor's opinion and Cronbach's alpha coefficient (0.81), respectively. Statistical population consisted of customers of all marketing and sales managers of food industry of Jey industrial town in Isfahan, which was a limited population (80 people), therefore sampling was not required and questionnaires were distributed among all population through census method. Structural equation modeling results indicated the significant effect of customer targeting, the ability to identify customers' need, construction and management of customer information system and customer service capability on customers' loyalty. The results of Friedman test indicated that the most and the least mean ranks related to identify customer need, and construction and management of customer information systems well as customer relationship management, respectively.

Key words: *Customer capital; Customer targeting; Construction and management of a customer information; Customer service capability; Customer's loyalty*

1. Introduction

Knowledge assets are considered as the primary sources of competitive advantages in knowledge-based organization (Low, 2000; Boulton, 2000). The knowledge-based business environment requires an approach including organizational intangible assets such as knowledge and human resource competencies, innovation, customer relationship, organizational culture, systems, and organizational structure.

It is necessary for companies to identify, measure, and report intellectual capital to be able to control and manage it (Meer-Kooistra et al., 2001). Customer capital is one of the intellectual capital factors which strengthen the effect of the relationship between a business and its customers on company's value. However, in practice, companies encounter lack of a suitable measurement technique. Therefore, considering the limited tangible assets, time, and recourses, companies need to carry out more researches to improve customer relationship management performance and increase customer's loyalty.

In theory, it is often stated that customers are as the heart of an organization and loyal customers are the source of companies profitability, although in practice they do not attain that it is identification and responsiveness to customers' need which can make customers loyal and more profitable. Since customers' diverse demands and an increase in competition in today's competitive environment endangered customers' loyalty, this study aimed to find that how we could improve customer relationship management and customer's loyalty while food industry provided more diverse and qualified products for customers every day.

The previous studies generally focused on customers' satisfaction, repurchase intention, and service quality (Chen and Ting, 2002; Fornell et al., 1996; Zeithaml, 2005), while a few studies supported the idea of customer capital and provided empirical evident about the causal relationship between customer capital different aspects (Zaichkowsky, 2010). Therefore, in recent decades a better customer relationship management is an important issue which leads to an improvement in commercial activities so that the new term "customer capital" emphasized on customer relationship management. Chang and Nisteng (2005) suggested that customer capital was a result of an

* Corresponding Author.

interaction between an organization and its customers, thus organizations can improve customer capital through discovery or profit processes.

This study aimed to investigate the causal relationship between different aspects of customer capital to improve customer relationship management and increase customer's loyalty. Therefore, this study investigated the relationships between these aspects.

2. Theoretical framework and hypotheses development

2.1. Theoretical framework

Customer information system is a collection organized of comprehensive data about customers or potential customers, which can be accessed and used for marketing purposes such as accessibility to the customers who make their first purchase, determining of eligible customers, selling a service or product and retaining a good customer relationship (Kotler, 1996). These are designed to increase customer's loyalty that is a deep commitment to repurchase a preferred product or service which is done continuously in future and leads to repurchase a certain brand or a set of brands (Oliver, 1999). As providing a new method of looking at an effective competition in market is one of the most important aspects of customer relationship management, the best effort of companies should be limited to customers who have maximum value and profitability for them. Customer capital includes out-organizational dependencies such as customers' loyalty, reputation, and good relationship with resource suppliers, which is

defined through the customer's perceived value of interactions with the organization (Malcom, 2013). Customer targeting is a base for goal oriented marketing. A market is analyzed to identify potential customers with similar demands and price sensitivity, then, each group is evaluated based on some factors such as market size, market growth rate, competition environment, price sensitivity, and the level to which the company can cope with demands of these groups from which one group is selected as target customers (Hutt and Spoh, 2006). It is suggested that customers' satisfaction, i.e. customer capital, can be achieved through determining appropriate criteria and implementing and reforming customer relationship management. Customer relationship management refers to all activities that a business does to identify, describe, find, develop and retain loyal and profitable customer through providing a good service/ product for an appropriate customer in an appropriate time and price, which facilitates organization relationship with customers, commercial partners, suppliers, staff and other organizations (Galbreath and Rogers, 1997). Eventually, customer service capability refers to staff's perception of their ability to serve customers (Hallowell, 1996).

According to the context, the following conceptual model (Fig.1) could be used, which investigated the causal relationship between aspects of customer capital to improve customer relationship management performance and increase loyalty. Furthermore, research variables and the way in which these variables were connected were illustrated.

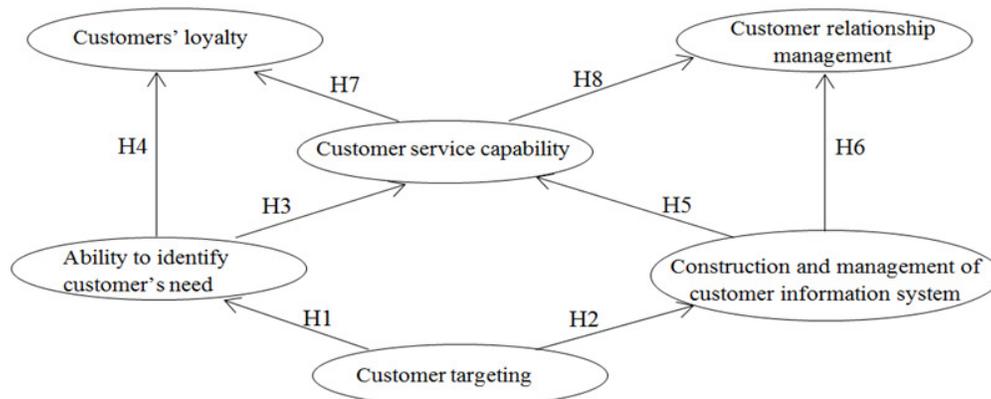


Fig. 1: The conceptual framework (reference: Chan and Wang, 2012)

2.2. Hypotheses development

Companies marketing managers combine corporate marketing elements through a goal oriented marketing to meet their customers' demands and requests. Most of the companies have concluded that it is really important to identify the type of their customers as they are really diverse in terms of some characteristics such as preference, price sensitivity, service cost, absorption rate,

response to marketing tactics, sales and use of required communicational path. By determining customers' demands and expectance and responding to them, marketing gives customer a higher value as a key factor of management (Kaynak and Kara, 2004). Chan and Wang (2012) investigated the causal relationship between aspects of customer capital to indicate that the main aspect, i.e. customer targeting, affected the ability to identify customers' needs and construction and customer information

system management. Therefore, we may hypothesize that:

H1. Customer targeting has a significant effect on the ability to identify customers' needs.

H2. Customer targeting has a significant effect on the construction and management of a customer information system.

Companies should always care about their interaction with their customers, and identify and perceive their needs and values correctly to provide a valuable product/ service for them to make them satisfy and loyal. Companies have found that the cost of attracting a new customer is five times the cost of retaining a current customer. Therefore, losing a customer is not only losing a sales item but also, beyond that, losing all purchases that they can make during their lifetime (Kotler and Armestrang, 2001). Therefore, we may hypothesize that:

H3. The ability to identify customers' needs has a significant effect on customer Service capability.

H4. The ability to identify customers' needs has a significant effect on customers' loyalty.

Marketing is on a path that quickly converts to a game in which information (not just marketing activities) will lead to companies' success in achieving to competitive advantages. Customer relationship management process depends on information which its start point is creating a data base. Management information system is a system which collects environmental data, record organizational operations and exchanges data, then, filters, organizes and selects them to provide a measure for managers to produce their required information (Murdic and Munson, 1988). The future successful organization use customer information intellectually to make a relationship with customer in their desired level to develop a long-term relationship through retaining customers and achieve competitive advantages through designing and implementing customer relationship management system. Accordingly, we may hypothesize that:

H5. The construction and management of a customer information system has a significant effect on customer service capability.

H6. The construction and management of a customer information system has a significant effect on customer relationship management.

As making customer loyal leads to profitability, customer's loyalty is an important commercial strategy. If a customer receive a high quality product/service, repeat their purchase and feel satisfy so that passes their experience to the others. Chan and Wang (2012) indicated that an increase in customer service capability leads to an increase in customer's loyalty and customer relationship management. Therefore, we may hypothesize that:

H7. Customer service capability has a significant effect on customers' loyalty.

H8. Customer service capability has a significant effect on customer relationship management.

3. Research methodology

3.1. Instrument development and data collection

An empirical investigation of the causal relationship between aspects of customer capital for improving customer relationship management and increasing customer loyalty (case study: food manufacturing industry) was conducted in Isfahan city. The questionnaire consisting of two parts was used. The first part solicited demographic information such as age, gender, level of education and work experience. The second presented questions pertaining to the proposed model including 40 questions which were measured on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). To address content validity, supervisor professor's opinion was used. The pre-test examination was conducted by distributing 30 questionnaires, which provided us reasonable assurance of the validity of the scale items and helped us to refine the questionnaire. The target population was all marketing and sales managers of Jey industrial town in Isfahan, which was a limited population, therefore sampling was not required and questionnaires were distributed among all population through census method. Cronbach's alpha coefficient was calculated using SPSS software, so that questionnaire reliability was 0.81 which indicated questionnaire good reliability.

3.2. Demographic data

Among all respondents, the majority of them (84.2%) were male and 15.8% were female. The age range of 26.3% of respondents was 20-30 years old, 28.9% were 31-40, 40.8% were 41-50, and 3.9% were above 50 years old. The level of education of the majority of respondents (43.4%) was bachelor's, 17% had diploma, 31.6% had associate degree, while merely 7.9% of them had master's. The work experience of most of the respondents (51.3%) was 6-10 years, work experience of 27.6% was 1-5 years, 15.8% was 11-20 years, and 5.3% was more than 20 years old. Table 1 provided research variables descriptive indexes such as mean value and standard deviation, and variance.

4. Structural equation modeling and hypotheses test

4.1. Structural model

Statistical data analysis was done through structural equation modeling and using software Amos. Analysis of covariance structures, causal modeling or structural equation modeling are main methods for complex data structures analysis. Since so many variables in this research were independent, which their effects on the dependent variable must be examined, it would be necessary to

use structural equation modeling. Path coefficient of our conceptual model was presented in Fig. 2.

Table 1: Descriptive statistics of research variables

variable	Mean value	Standard deviation	variance
Customer targeting	3.240	0.772	0.597
Ability to identify customer need	3.307	0.845	0.714
Customer service capability	3.183	0.747	0.559
Construction and management of customer information system	3.197	0.737	0.544
Customer relationship management	3.097	0.700	0.490
Customer loyalty	3.242	0.822	0.676

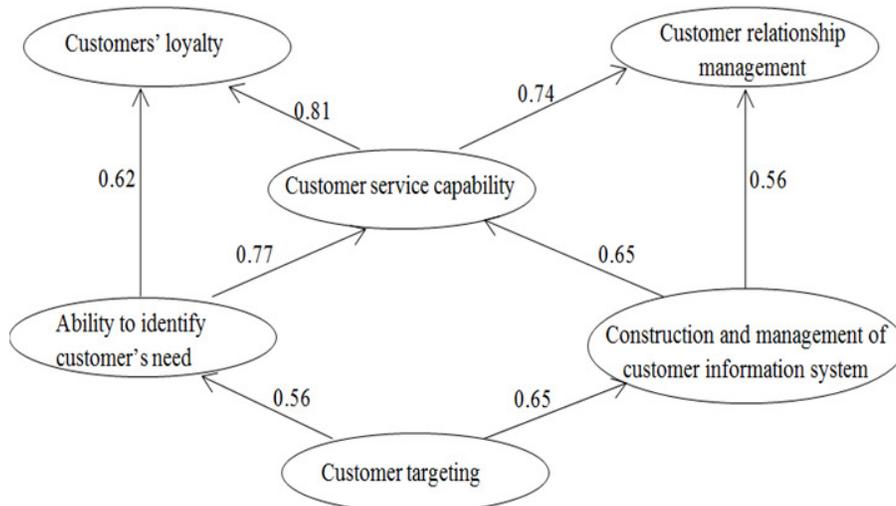


Fig. 2: Structural model analysis results (path coefficients).

4.2. Measurement model

Given the model, several indexes were used to estimate its goodness of fit. Table 2 presented the indexes of model goodness of fit.

Table 2: Indexes for estimating model goodness of fit

Model	χ^2/df	P	AGFI	GFI	CFI	NFI	RMSEA
Default model	2.00	0.12	0.91	0.89	0.92	0.88	0.09

P-value tests whether model fit is good or not. In this study P-value= 0.12 indicated an appropriate model fit. The more AGFI and GFI indexes are near to 1, the model goodness of fit to observe data is better. Here, AGFI=0.91 and GFI=0.89 which indicated a good model fit, i.e. the model was confirmed. RMSEA index is less than 0.05 for a good model fit; the higher values up to 0.08 indicate a reasonable error for approximation in the community. Thus, given the RMSA= 0.09, the model is fitted almost well. According to the suggested indexes, it can be said that model was fitted rather well.

4.3. Hypotheses test

Fig.2 and Table 3 presented the results of our study with overall explanatory power, estimated path coefficients and associated t-values of the paths. As shown in Fig.2, and Table 3, structural model results provided strong support for all of the hypotheses. The significance level was calculated less than 0.05, and t-value was calculated more than 1.96 for all hypotheses. Therefore, as the effect of

customer targeting on the ability to identify customers' need, and construction and management of customer information system was calculated 0.74 and 0.81, respectively, customer targeting had a significant effect on the ability to identify customers' needs (supporting H1) and construction and management of customer information system (supporting H2). On the other hand, since the effect of the ability to identify customers' need on customer service capability and customers' loyalty was calculated 0.65 and 0.56, respectively, the ability to identify customers' needs had a significant effect on customer service capability (supporting H3) and customers' loyalty (supporting H4). The results of table 3 also indicated that construction and management of customer information system had a significant effect on customer service capability (supporting H5) and customer relationship management (supporting H6). Eventually, the effect of customer service capability on customers' loyalty and customer relationship management was calculated 0.65 and 0.56, respectively, which indicated the significant effect of customer service

capability on customers' loyalty (supporting H7) and customer relationship management (supporting H8).

Table 3: Hypotheses testing results

Hypotheses	Path	Path coefficient	T-value	Result
H1	CT → ICN	0.74	3.4	Supported
H2	CT → CMIS	0.81	2.7	Supported
H3	ICN → CSC	0.65	5.4	Supported
H4	ICN → CL	0.56	8.2	Supported
H5	CMIS → CSC	0.77	3.2	Supported
H6	CMIS → CRM	0.62	1.7	Supported
H7	CSC → CL	0.65	2.3	Supported
H8	CSC → CRM	0.56	6.4	Supported

Note: CT= customer target, ICN= identify customer need, CMIS=construction and management of customer information system, CSC= customer service capability, CL= customer loyalty, CRM= customer relationship management.

4.4. Friedman test

In this section, the mean ranks of variables were compared using Friedman test. According to table 4, research variables did not have the same importance, with regard to respondents' opinions. According to Friedman test, the most and the least mean ranks related to identify customer need (3.68), and construction and management of customer information system (3.39) as well as customer relationship management (3.39), respectively.

Table 5: Variables mean rank

Variables	Mean rank
Customer targeting	3.56
Ability to identify customer need	3.68
Customer service capability	3.44
Construction and management of customer information system	3.39
Customer relationship management	3.39
Customer loyalty	3.53

5. Conclusion and discussion

Nowadays successful organizations are trying to design and customized new products for every customer or a similar group of customers by considering their opinions and taste. Since the cost of retaining a current customer is several times less than the cost of attracting new customers, retaining customers has an especial importance, especially about a group of customers who have the most profitability for the organization. Hence, dividing a market is the most important prerequisite of identifying customers and discovering their profitability. The more this division is accurate and has more similar members, the more exact identification is achieved and more services are provided. Undoubtedly, gaining customers' satisfaction is allocated a vital role in companies' objectives so that senior managers know that their success in achieving companies' objectives depends on gaining customers' satisfaction. On the other hand, as all customers do not have the same contribution in companies succeed, it is vital to make key customers satisfy. In this regard, designing and implementing a system is necessary to attract new customers and retain current customers. The profit

of new customers referred by current customers is a result of customer's loyalty, while the profit of an increase in purchase which is partly due to an increase in customers and partly due to customers' repurchasing is an achievement of customer relationship management. Satisfied customers are a profit source for companies, while companies which cannot make their customers satisfy, will not survive in long time (Rusta et al., 2010).

In this study the causal relationship between customer capital was investigated whose results was along with results of Chan and Wang (2013) that indicated the significant effect of customer targeting, the ability to identify customers' need, construction and management of customer information system and customer service capability on market intense and customers' loyalty. The results indicated that customer targeting had a significant effect on construction and management of customer information system which was along with kim et al (2003). The results also indicated the significant effect of the ability to identify customers' need on customer service capability which was also confirmed by Chang and Ting (2010).

References

Boulton, R., Libert, B., and Samek, S. (2000). A business model for the new economy. *Journal of Business Strategy*, 21: 29-35.

Chan A., and Wang ,W. (2012). The causal relationships between aspects of customer capital. *Industrial Management and Data systems*, 112: 846-865.

Chang, A., and Seng, C. (2005). Building Customer Capital through relationship marketing activities. *Journal of Intellectual Capital*, 6: 18-34.

Chen, C., and Ting, S. (2002). A study using the grey system theory to evaluate the importance of various service quality factors. *The International Journal of Quality*.

Fornell, c., Johnson, M., and Anderson , E.W. (1996). The American customer satisfaction index. *journal of marketing*, 60: 7-18.

- Galbreath, J. and Rogers, T. (1999). Customer relationship leadership: a leadership motivation model for the twenty-first century business. *The TQM magazine*, 11(3): 161-171.
- Hallowell R., Schlesinger, L.A., and Zornit, J. (1996). Internal service quality, customer and job satisfaction: linkages and Implication for management. *Human Resource planning*, Tempe, 19.
- Hutt, M.D., and Speh, T.W. (2006). *Business Marketing Management south - western*, 4th ed.
- Kaynak, E., and Kara, A. (2004). Market orientation and organizational performance: A comparison of industrial versus consumer companies in mainland china using market orientation scale (MARKOR). *Industrial Marketing management*, 33(8): 743-753.
- Kim, J., Suh, E., and Hwang, H. (2003). A model for evaluating the effectiveness of CRM using the balanced scorecard. *Journal of interactive marketing*, 17 (2): 5-19.
- Kotler, P. (1997), *Marketing management: analysis, Planning, implementation and control*. (9th ed). New jersey: asimon and Schuster co.
- Low, J. (2000). The value creation index. *Journal of Intellectual Capital*, 1: 252-262.
- Malcolm, W. (2002). *International Encyclopedia of Business and Management*. New York: Thomson Business Press.
- Meer-Kooistra, J., and Zijlstra, S. (2001). Reporting on intellectual capital accounting. *Auditing and Accountability Journal*, 4: 456-476.
- Oliver, R.L. (1999), Whence Customer Loyalty. *Journal of Marketing*, 63: 33-44.
- Rusta, A., Venus, D., and Ebrahimi, A. (2010). *Marketing management*. Tehran: SMT.
- Zaichkowsky, J.L., Parlee, M., and Hill, J. (2010). Managing industrial brand equity: developing tangible benefits for intangible assets. *Industrial Marketing Management*, 39 (5): 776-83.
- Zeithaml, V.A., Bitner, M.J., and Gremler, D.D. (2005). *Services Marketing*. 4th ed McGraw-Hill/Irwin, New York, NY.