

Reviews on Customer Knowledge Management Researches

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Abstract: *As one of the key strategic resources, the customer knowledge not only improves the performance of customer relationship management, but fosters the sustained competitive advantages as it creates values for customers with customer knowledge management. On the basis of the general introduction of research on customer knowledge management, this paper develops the research on customer knowledge management from the perspective of strategic management, and discusses further relevant studies concerning concepts of customer knowledge and customer knowledge management, studying perspectives, key questions as well as development directions for research, and so on.*

Keywords : *Customer Knowledge Management, Strategy, Research, Reviews*

1. Introduction

Under the background of the rapid development of knowledge economy and the business environment undergoing fierce changes, the knowledge is becoming a key resource for strategy and competition. And the development and sharing of knowledge turned out to be key steps for getting sustainable competitive advantages, and enterprises with strong knowledge basis are able to integrate traditional resources and assets and create bigger value for customer in innovative ways.^[1] M Garcia-Murillo and H Annabi (2002) has pointed that having good processes and systems to manage customer knowledge is important for the following reasons: better and more timely design of new products and services; early warning and competitive intelligence ;customer commitment and loyalty; the synergy of collaboration.^[2] C.K. Prahalad and Venkat Ramaswamy(2004) thought that the tension manifests itself at points of interaction between the consumer and the company – where the co-creation experience occurs, where individuals experience choice, and where value is co-created.^[3]Gathering ,managing, and sharing customer knowledge can be a valuable competitive tool.

The key factor for some business's' success lies in the absorption of customers as a knowledge resource in formulating strategy, marketing management, developing new products. They communicate fully and establish close relationship with customers, create bigger customer values in providing better products and services based on the respective advantages and resources existing. In this process, enterprises get knowledge resources, foster sustainable competitive advantages. Therefore, the Customer Knowledge Management, CKM, is defined as the process of cooperation with customers, creation of customer values, and fostering of competitive advantages. This paper develops the research on customer knowledge management from the perspective of strategic management, and discusses further relevant studies concerning concepts of customer knowledge and customer knowledge management, studying perspectives, key questions as well as development directions for research, and so on.

2. Concept and classification of the customer knowledge

2.1 Concept of customer knowledge

The research on customer knowledge begins from 90's in 20 centuries. At the beginning, Bruns, Don (1992) think that, by using messages on hold, a company can tell its existing customers about all the aspects of its business. With this technology, when clients are put on hold, they hear new information about the company. Perhaps the best use of messages on hold is cross-selling and promoting. This is word-of-mouth advertising at its best. Using a message-on-hold system to better inform customers can have significant paybacks.^[4]

Tiger Li and Roger J Calantone (1998) differentiated the market knowledge and market knowledge competence, and defined market knowledge as organized and structured information about the market, and defined market knowledge competence as processes that generate and integrate market knowledge.^[5]

In this period, the definition of customer knowledge is almost equivalent to customer information. Based on the assumption of understanding and discovering customer demands, purchasing behaviors to the largest extent, and therefore promoting sales, scholars made their researches mainly from the perspective of promotion management and new products development in a marketing sense.

2.2 classification of the customer knowledge

Customer's knowledge is an important asset to all business enterprises. Generally, in the management practice of knowledge, some multinational companies divided the knowledge in the business enterprise into four types, namely customer knowledge, business competition intelligence report, management operation management knowledge and product knowledge. And thinks customer knowledge is an important part of it.

Jennifer E. Rowley (2002) thought that there are two types of customer knowledge:

(1) Knowledge about customers, which may include knowledge about potential customers and customer segments as well as knowledge about individual customers.

(2) Knowledge possessed by customers, about product ranges, such as compatibility between computer hardware components, or the efficacy of specific drugs in treating complaints, and about the wider context and marketplace into which products and services are delivered.^[6]

Henning Gebert, Malte Geib and Lutz Kolbe(2002) described customer knowledge as three types: knowledge for, from and about the customer.^[7]

(1) Knowledge *for* customers is mainly generated in processes within the enterprise, such as research and development and production. Campaign management is responsible for collecting this knowledge and refining it according to the customer requirements.

(2) Knowledge *about* customers is captured mainly by offer management, service management, complaint management and, if available, contract management. Main user processes of knowledge about the customer are campaign management and service management, because both processes personalize their services based on user criteria.

(3) Knowledge *from* customers can be captured in similar ways as knowledge about customers. Gaining knowledge from customers is based on the fact, that customers gain their own expertise while using a product or service and can be seen as equal partners, when discussing changes or improvements. This aim is not commonly understood in the business world and its impacts poorly researched in academia.

The following is the sum-up of classification models of customer knowledge:

(1) classification based on the nature of customer knowledge:

In reference to Nonaka's classification, the customer knowledge can be classified into the explicit and the tacit knowledge. The explicit knowledge is compiled and organized by

people, can be expressed in the forms of words, formula or programs, and can be spread in the formal and systematic means, such as books and computer networks, which makes it feasible for other persons to study. On the other hand, the tacit knowledge exists inherently in the form of experiences and it is very difficult to express them in the form of words and formula. Basically, because this kind of knowledge is inherent in people, collecting and spreading such knowledge are difficult.

(2) classification based on the manners and models of collecting customer knowledge:

- Communication-based customer knowledge: you can understand the customers' demands through formal or informal communications with customers, suppliers and other cooperators of the supply chain.
- Observation-based customer knowledge: you can get customer knowledge by observing customers on how to purchase and use products and services.
- Predictive customer knowledge: you can get customer knowledge from results defined and predicted by using analysis models.

(3) classification based on the sources of customer knowledge

- Knowledge about customers
- Knowledge from customers
- Knowledge for customers
- Knowledge from cooperation

The meaning of the first three knowledge is the same as that from Geberth, Geibm and Kolbel (2002). The fourth kind of knowledge in this paper is formed by smooth communication and cooperation with customers. Microsoft is a good example in this aspect. It communicates and cooperates with its core customers to develop new products and new marketing methods, thus reaching win-win strategy in the terms of creating values and cultivating competitive advantages.

3. The meaning of the customer knowledge management

Based on the opinion of Wayland, R.E. Cole, P.M. (1997), the customer knowledge management includes the resources and applications of customer knowledge and how to establish the valuable customer relationships applying IT, and the leverage effect of relevant information and experiences in acquiring, developing and maintaining customers groups.^[8]

Eric Lesser, David Mundel and Charles Wiecha (2000) pointed out that, managing customer knowledge requires that organizations undertake a range of knowledge creation activities including acquiring capturing, and storing data, developing information by combining data, context, and theory, and creating knowledge and understanding based on this information.^[9]

Jennifer E. Rowley (2002) believes that the customer knowledge is concerning about the management and utilization of such knowledge.^[6]

M. Gibbert (2002) believes that the customer knowledge management is a strategic process. And the business can release their customers from receiving products and services passively, and makes them the stronger provider of knowledge. The customer knowledge management is a process in which customers and businesses acquire, share, extend the existing knowledge existed in customers to their common interests^[10].

Other scholars view the customer knowledge management as analytical customer relationship management and it acquires stores, retrieves, explains and applies customer data to provide personalized services^[11].

According to the different explanations of scholars, although currently, there is no unified definition for customer knowledge management, we can conclude the common ideas associated with customer knowledge management:

(1) The customer knowledge by itself is the process of getting, sharing, applying, creating knowledge, and applying information technologies reasonably in this process.

(2) The customer knowledge management views the customer knowledge as the important asset of businesses. The aim is to establish valuable customer relationship and therefore improve enterprises' overall performance.

(3) The customer knowledge management is used as a key tool for customer relationship management.

Generally, at present, we mainly make the definition of the customer knowledge management in two perspectives:

- Applying the view of "objective-orientation", that is, you should view the knowledge as resources or production factors such as data, information. And you can take advantage of advanced technologies to manage the process of acquiring, classifying and storing, sharing, utilizing and creating customer knowledge, and thus amplifying the knowledge values.
- We can apply the view of "customer relationship management". You must study customers deeply in order to utilize and implement the customer relationship efficiently and effectively, and such study is the customer relationship management. It emphasizes the application of the customer knowledge management on CRM as a new technology, to improve the implement effects.

This paper recommends that, the strategic perspective and cooperation basis with customer should be emphasized theoretically in the process of customer knowledge management.

(1) strategic perspectives

The competence based on knowledge brings competitive advantages for businesses. Its significance has been emphasized in the relevant documents concerning marketing and strategic management. The corporation competence is viewed as the combination of complex technologies and collective knowledge involving many departments of organizations.

To develop customer knowledge, managers must integrate the information of the whole business, and this process needs knowledge basis of businesses, and more importantly, the focus of high-level management of businesses, smooth marketing, effective employee evaluation, rewards and incentive systems, and the friendly culture of businesses for knowledge.

Thus, to manage customer knowledge effectively, you must study the activities of customer knowledge management not only micro-economically, but also understand the customer knowledge management for the perspective of strategy.

(2) Cooperation basis with customers

The customer owns lots of tacit knowledge such as experience and understanding, consuming habits, expectation of demands, and such knowledge is one of the key resources for fostering core competences and flexibilities. And such knowledge can not be transferred and shared using current information technologies. They can only be obtained by getting involved in it and this process is not just the flow of existing knowledge inventory, but a process of creation of new knowledge.

Therefore, the customer is the receiver of products and services, and also, they can be the cooperators with businesses to create values. The customer knowledge management should make customers share and utilize their knowledge actively with enterprises.

Conclusively, this paper defines basically the customer knowledge management as the operation process in which businesses take full advantage of current information technologies

and knowledge management tools to develop and utilize the information and knowledge resources concerning customers both domestically and outside the businesses, and cooperate with customers to create new knowledge, realize customer value and sustainable competitive advantages.

4. Major research perspectives on the customer knowledge management

Currently, except the above researches about the basic theories, researches abroad on the customer knowledge are mainly concentrating on the following aspects:

(1) The integration between the customer knowledge and e-commerce

Amrit Tiwana (2001) defined once the concept of knowledge-based customer relationship management as the integration of knowledge management, customer relationship management and e-commerce. He believes that the knowledge management applied on e-commerce relationship management is almost the same as knowledge-based customer relationship management, and the integration between them can be applied on the customer knowledge and channels relationship to deliver high quality service, keep the customer loyalty, maximize the revenue, and acquire, support and ally with customers^[12]. According to the research of telecommunication, financing and banking services, IT, professionals, Plessis(2004) explored the role of knowledge management in the customer relationship management and e-commerce, and proposed that the knowledge management is the prerequisite for e-commerce and the relevant customer-based ideas^[13]. Jennifer (2002) made researches of customer knowledge in a e-commerce environment. And she believes that customer knowledge is important asset for e-commerce. The customer knowledge involves the management and utilization of customer knowledge, and recommends two kinds of customer knowledge^[6].

(2) Management methods for customer knowledge

Gibbert(2002) discovered that there is a similarity for customer knowledge management among different enterprises based on the analysis of more than 20 businesses from different industries, including medicine, banking services, measurement, chemistry, telecommunication and beverages. So they concluded the customer knowledge management methods as knowledge cooperation, team-based study, interactive creation, expert communities and sharing intellectual property^[14].

(3) The operation process of customer knowledge management

Robert. Wayland emphasized that in introducing the concept of customer knowledge management enterprises should set up a program which includes planning, focusing, extending, applying, sharing and editing in the implementation of customer knowledge^[8].

(4) Measuring the competence of customer knowledge management

In evaluating the competence of customer knowledge management, Gold, Malhotra and Segars (2001) thought it includes two parts: (1) Infrastructures: science, frames and cultures; (2) operation management competence: knowledge-acquiring process; knowledge-transferring process; knowledge-applying process; knowledge-protecting process^[15].

A.J. Campbell (2003) believes that the customer knowledge competence consists of four processes: ① customer information process; ② marketing IT interface; ③ senior management involvement; ④ employee reward and evaluation system. The customer information process produces customer knowledge, and the rest processes integrate customer knowledge^[16].

(5) The process models for customer knowledge management

Adrian Bueren (2004) set up the integrated customer knowledge management models based on the explanation of how modern IT support the process of customer relationship

management, and defined the sub processes for customer relationship management and four aspects for knowledge management including content, organization, competencies and cooperation^[17].

Jyhjong Lin (2007) proposed a objective-based method which can be used to develop CKMIS, and studied this methods using a example of a publishing company^[18].

Another points is the application of information technologies such data mining on the customer knowledge management.

Based on the above study perspectives, currently, while there are many researchers who still focus on the concept of the customer knowledge, many scholars are beginning to explore the areas of application and relevant knowledge. The author believes that the following points will be the key studying areas for the customer knowledge management.

- (1) studies of basic theories, study framework and the main study content about the customer knowledge management
- (2) application studies of the customer knowledge management in some concrete areas
- (3) The customer knowledge management theories and application under the background of e-commerce
- (4) the customer knowledge competence study
- (5) studies on some key points and relevant information technologies about knowledge management theories such as the knowledge expression, acquisition and sharing.

5. Conclusion

On the basis of the general introduction of research on the basic concept of customer knowledge, customer classification, study perspectives of customer knowledge, this paper recommends that we should define the customer knowledge management from the perspective of operation strategy, and classifies the study perspectives of customer knowledge, and discusses further the study trend in the future.

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