

## **A THEORETICAL MODEL FOR ENHANCING COMPETITIVE ADVANTAGE THROUGH MANAGING CUSTOMER KNOWLEDGE**

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**Abstract:** *This study is part of a larger research project that aims to investigate how competitive advantage in firms within various industries can be enhanced by appropriate management of customers' knowledge. As a first step, the current study proposes an integrated theoretical framework for enhancing competitive advantage through managing customer knowledge. Literature in the fields of Knowledge Management, Marketing, and Strategic Management, and Research Methodology are reviewed for the development of the proposed theoretical model as well as a brief description of the associated research methodology suitable for the proposed model.*

### **BACKGROUND**

The main focus of the current study is the role that Customer Knowledge Management (CKM) can play in enhancing competitive advantage of firms within specific industries. On the other hand, despite considerable effort made by both academics and practitioners for managing *information* from customers, there is a lack of focus on *knowledge* of customers (Daneshgar and Parirokh, 2012; Rowley, 2002; Derliyski & Frohlich, 2004). Many of the existing CKM models are generic, and no specialised, industry-based CKM process model exists. And finally, no explicit link currently exists between *managing customer knowledge* and *achievement of competitive advantage* (Silvi & Cuganesan, 2006; Daneshgar & Parirokh, 2012). The current study proposes an integrated theoretical framework for enhancing competitive advantage of firms through managing customer knowledge. More specifically, the current study attempts to provide answer to the following research question:

**RQ:** *How can management of customer knowledge in the firms lead to increased competitiveness of those firms?*

### **LITERATURE REVIEW**

The goals of the literature review in the current study are: (i) to identify the theoretical scope and boundary of the study as a precursor to identifying knowledge

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gap in the current literature, and (ii) to synthesise an initial theoretical framework for the study.

### **CUSTOMER KNOWLEDGE MANAGEMENT (CKM)**

It is now a common practice among many firms to use relationship marketing linked to knowledge management systems in order to achieve competitive advantage (Chatson et al., 2003). Historically, DiBella et al. (1996) provide a qualitative understanding of knowledge management systems within the context of marketing systems with the following orientations:

1. Knowledge Source: the extent to which an organization prefers to exploit new knowledge from external sources.
2. Product-process Focus: describes the accumulation of new knowledge, related to improving products or services and internal/organizational process activities.
3. Documentation Mode: encompasses the systems whereby an organization formally stores knowledge.
4. Dissemination Mode: has to do with how an organization formally manages the transfer of knowledge between employees.
5. Value-chain Focus: an indicator of the focus within the value-chain (e.g. marketing, manufacturing design, logistics, etc.) where a firm concentrates the majority of learning activities.
6. Skills Development: is concerned with what approaches a firm adopts in developing employees' individual and group-based competencies

However, the foundation of CKM as it exists today has been established by a milestone research by Gibbert *et al.* (2002) when they proposed five styles of CKM, along with a comprehensive analysis of differences and commonalities among CKM, CRM and KM. Table 1 shows a summary of the differences between the three concepts.

Among the existing CKM process models and taxonomies one model that has been frequently used by many researchers in the past, that also explicitly addresses the new products and services, is the model proposed by Dalkir (2005) and an associated CKM taxonomy developed by Gebert et al. (2002) and Gebert et al. (2003). Dalkir (2005) introduced a generic CKM cyclic process model that consists of the following four activities or sub-processes:

- (i) *Customer knowledge capture and/or creation*: that makes tacit knowledge explicit (Twentyman, 2012).
- (ii) *Customer knowledge sharing and dissemination*: through which customer knowledge (i.e. Information, skills, or expertise) is exchanged among various people (Jashapara, 2011:206).

**Table 1**  
**CKM vs. KM and CRM (partly adopted from Gibbert *et al.*, 2002 and Braganza *et al.*, 2013)**

|                               | <i>KM</i>   | <i>CRM</i>  | <i>CKM</i>   |
|-------------------------------|---|---|--|
| <b>Knowledge sought in</b>    | Employee, team, company, network of companies.                                      | Customer Database.  | Customer experience, creativity, and (dis) satisfaction with product/ service.                 |
| <b>Axioms</b>                 | 'If only we knew what we Know.'   | "Retention is cheaper than acquisition                      | 'If only we knew what our customers know.'   |
| <b>Rational</b>               | Unlock and integrate employee' Knowledge about customers, sales processes, and R&D. | Mining Knowledge about the customer in company's databases. | Gaining knowledge directly from the customer, as well as sharing and expanding this knowledge. |
| <b>Objective</b>              | Efficiency gains, cost saving, and avoidance of re-inventing the wheel.             | Customer base nurturing company's customer base.            | Collaborating with customer for join value creating  |
| <b>Metrics</b>                | Performance against budget.   | Performance in terms of customer satisfaction and loyalty.  | Performance against competitors in innovation and growth, contribution to customer success.    |
| <b>Benefits</b>               | Customer satisfaction.  | Customer retention.   | Customer success, innovation, organizational learning.   |
| <b>Recipient of Incentive</b> | Employee.   | Customer.   | Customer.  |
| <b>Role of customer</b>       | Passive, recipient of product.  | Captive tied to product/ service by loyalty schemes.        | Active, partner in value in value-creation process.  |
| <b>Corporate role</b>         | Encourage employees to share their knowledge with their colleagues.                 | Build lasting relationships with customer.                  | Emancipate customer from passive recipients of products to active co-creators of values.       |

(iii) *Customer knowledge acquisition and application*: to acquire customer knowledge from various sources, and organizing it for future applications (Jashapara, 2011: 136).

(iv) *New products and services*: An activity that transforms the acquired knowledge into innovative products and services (Dalkir, 2005).

In terms of customer knowledge (CK) taxonomy, the CK has been classified from multiple perspectives. One relevant perspective for the current study is a holistic model provided by Gibbert et al. (2002) with the ultimate aim of exploring innovative customer services and products, the latter being the focus of the current study. According to this taxonomy, CK can be classified into the following types:

**Knowledge About Customers (KAC)** - This includes factual information about the customers such as gender, educational background as well as customers' information needs and their interests as explained by the customers themselves (Su, Chen & Sah; 2006). Puccinelli et al. (2013) define KAC as knowledge about customers' background, motivation, expectations, and preference on products and services. This type of CK is mostly *explicit* by nature and therefore is codifiable and can be stored in formal organisational databases (Jashapara, 2011:112-143).

**Knowledge From Customers (KRC)** - This category deals with the customers' perceptions, insights, reactions, as well as their knowledge of other products, suppliers, markets, and overall knowledge of competitive environment. According to Chen and Su (2006) KRC is knowledge about customers' usage pattern or consumption experience of products or services.

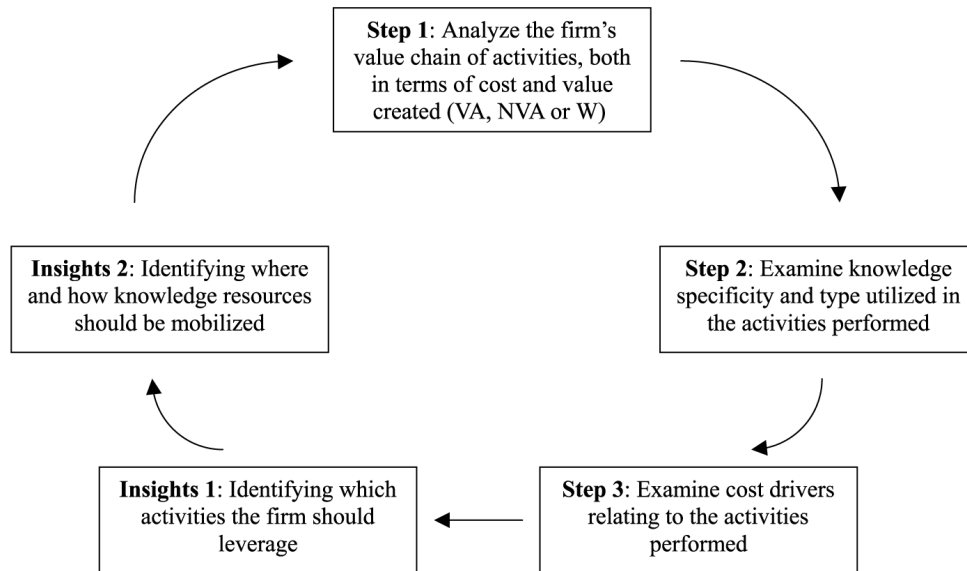
**Knowledge for Customers (KFC)** - This category of customer knowledge is generated by integrating the previous two types that is, KAC and the KRC. One major knowledge gap in the current literature is a lack of theoretical framework for integrating the above two kinds of knowledge in order to create KFC (Daneshgar and Parirokh, 2012).

## CKM, MARKETING AND COMPETITIVE ADVANTAGE

Collaborative marketing is defined as a strategic planning process in which manufacturers and retailers collaborate in developing consumer-driven marketing programs that are retail-centred and consumption-focused (Fusaro, 2000). This construct is relevant to the current study because the food industry in Saudi Arabia consists of various firms that are involved in various life cycle e.g., raw material acquisition, manufacturing, packaging, and distribution of food products.

A recent fundamental shift in the value system of corporations has been a shift away from physical and financial assets to intangible knowledge assets, quasi-assets, and competencies (Eustace, 2003). A study by Silvi and Cugansen (2006) identified key elements that facilitate enhancement of competitive advantage in firms through appropriate management of knowledge. They developed a framework for managing knowledge in an organisation by providing a series of steps towards enhancing competitive position of the firm, as shown in Figure 2.

**Figure 2: The Strategic-Knowledge Management Framework  
(adopted from Silvi & Cugansen (2006))**



The current study provides a specialised version of the above framework that specifically deals with ‘customer knowledge’ instead of ‘generic organisational knowledge’, the latter being the focus of the original model by Silvi & Cugansen (2006). Such specialisation, while maintaining fundamental underlying assumptions of the original model in terms of the strategic effects of ‘knowledge’ on prevailing competitive advantage, it will pave the road for an analysis of the firms’ competitive advantage in relation to the customer knowledge; the latter being the major focus of the current study. Column 2 of Table 2 shows a transformation from the original model by Silvi & Cugansen (2006) to a specific type of knowledge called ‘customer knowledge’ (CK).

As stated before, the current study proposes an integrated multi-perspective model combining Strategic Management, Knowledge Management, and Marketing theoretical perspectives in order to identify areas for enhancement of competitive advantage in Saudi Food Industry through the management of customer knowledge, that in turn, is expected to lead to the new/innovative products and services. This is summarised in the 3<sup>rd</sup> column of Table 2, and is explained below:

Steps 1 and 2 of the columns 1 and 2 of the Table are about analysing the firm’s value chain of activities, and then examining specific knowledge for each activity. The transformation of these two steps in column 3 is called ‘identifying certain points along the firm’s value chain of activities that customer knowledge can provide additional value’. This is shown as the first two steps in column 3.

The third step in columns 1 and 2 involves an assessment of all costs associated with each activity. Incorporating customer knowledge into the firm's value chain of activities would involve certain costs and will create additional value. This is shown as the 3<sup>rd</sup> step in column 3 where a realistic and updated costs and benefits are evaluated for each activity on the value chain.

The 4<sup>th</sup> step in columns 1 and 2 involves prioritisation of the activities based on their costs and benefits. And finally, step 5 of column 3 identifies how the KFC (which is the result of KAC and KRC) can be used by the firms in Saudi Food Industry for the development of new and innovative products in order to achieve competitive advantage.

**Table 2**  
**Proposed Strategic Customer Knowledge Management Framework (SCKMF)**

| <i>Steps of Strategic Knowledge Management Framework</i>                                 | <i>Steps of Strategic Customer Knowledge Management Framework</i>   | <i>Steps of the Proposed Sckmf</i>  |
|--|---|---|
| 1. Analyse the firm's value chain of activities, both in terms of cost and value created | 1. Analyse the between-organisational value chain of activities, both in terms of cost and value created                | 1 & 2. Identify certain points along the firm's value chain of activities that CK (either KAC or KRC or both) can provide additional value.                   |
| 2. Examine knowledge specificity and type utilised in the activities performed.          | 2. Examine CK specificity and type utilised in the activities performed (KAC, KRC and associated knowledge activities)  |   |
| 3. Examine cost drivers relating to the activities performed.                            | 3. Examine cost drivers relating to the activities performed and share (agree on) the cost among collaborating parties. | 3. Examine modified cost drivers relating to the above activities within the firm.  |
| 4. Identify which activities the firm should leverage.                                   | 4. Identify which activities the firm should leverage   | 4. Identify which activities the firms in Saudi Food Industry would benefit most, in terms of developing new products and services within Saudi Food Industry |
| 5. Identifying where and how knowledge resources should be mobilised.                    | 5. Identify where and how the CK resources should be mobilised  | 5. Identify how KFC can mobilise new products and services within SFI as a push towards competitive advantage.  |

## PROPOSED RESEARCH METHODOLOGY

A summary of the steps involved in the overall research project is provided below as a context for identifying the scope of the current study within the larger scope of the project, including the future works. These steps are:

*Step 1 – Framework Development* (this is the subject of the current study): The current literature in the fields of Knowledge Management, Marketing and Strategic Management has been reviewed in order to determine the knowledge gap that exists in relation to the research questions of the study. Another related objective of this literature review is to derive an appropriate theoretical model that can initially guide the study in designing survey questions and other aspects of data collection (in the next steps).

*Step 2 – Pilot Interviews* (the authors' future study): Using findings in the previous step as well as the available industry and government documents, a set of semi-structured interview questions will be prepared to assist development of a survey questionnaire as the main data collection instrument of the study. Results of this step may suggest some changes to the proposed theoretical model before using the latter for the development of the survey questionnaire in the next step.

*Step 3 – Research Validation*: The proposed theoretical model will then be used for designing the main survey questionnaire of the study for testing and validating the proposed model.

## RESEARCH METHOD

The *survey method* (both semi-structured interviews and survey questionnaire) will be the main method for collecting the data for the study although the *secondary data method* (Neuman, 2011:480) will also be used to a limited degree for developing insights required for preparing appropriate semi-structured questions for the main interviews.

### Unit of Analysis

The selected industry will be the main unit of analysis. It normally consists of several sub-units. In such a layered environment, it is recommended that 'companies within various subunits of the SFI' constitute sources of data collection that collectively represent their industry. In terms of selecting individuals from each company a purposeful method is suggested by which an executive from each selected company will represent the company. Furthermore, by adopting a convenience sampling method results of data collection from the above process can be the aggregated to represent the entire industry.

To increase the quality of the data collected, the researcher would be interested in the data about the context of the interview as much as the interviews themselves.

For this reason data collected from the respondents may need further interpretation and adjustments based on the context and culture surrounding the interviewees. Furthermore, some answers may require more follow up questioning depending on the context.

### **Sampling Method**

The target population for the study is the population of the industry. However, depending on the industry structure, the researcher may select a random sample from the industry population for the questionnaire, and at least one company will be selected from each sub-unit group (purposeful sampling method). Since the sub-unit groups of companies may be spread geographically throughout the country, selection of one representative company from each sub-unit group may have to be done conveniently (convenience sampling).

### **Validation of the Research**

This study adopts the conception of validity of qualitative research as defined by Pervin (1984:48). According to this view, validity pertains to whether a method investigates what it is intended to investigate, to “the extent to which our observations indeed reflect the phenomena or variables of interest to us” (Ibid). Similarly, Kvale (1989) provides a comprehensive discussion on the social construction of validity, which defines *validity* as “whether a study investigates the phenomena intended to be investigated”. Validity is not only an issue of the methods used; the researcher’s person (Salner, 1989), including his or her ethical integrity (Smith, 1990), becomes critical for the quality of the scientific knowledge produced. Pyett (2003) further emphasises on the role of researcher as an “instrument” during the qualitative research process, which involves continuous reflexivity and self-scrutiny, and provides appropriate guidelines for this.

Kvale & Brinkman (2008) proposed seven-stages of research process including *thematizing, designing, interviewing, transcribing, analyzing, verifying, and reporting*. Each of these steps would address specific issues of validity. These validity considerations are grouped into three major categories including ‘validity as a craftsmanship’, ‘communicative validity’, and ‘pragmatic validity’ and will be considered throughout the data collection, analysis and interpretation phases of the proposed research. The current study follows the 7-steps provided by Kvale & Brinkman (2008) in order to validate various aspects of the research.

### **CONCLUSION**

This study is the first step of a larger research project that aims to investigate ways by which Saudi firms in food industry can enhance their competitive advantage over the imported products. This study provided a synthesized



theoretical model in the form of an integrated multi-perspective theoretical framework that identifies areas for enhancement of competitive advantage through customer knowledge management. By adopting a specific industry as the case study, the current investigation proposed a synthesized theoretical model by integrating an existing Knowledge Management Strategic Model with a CKM model in order to develop a theoretical grounding for the achievement of competitive advantage by the firms in a specific industry. Since a case study approach has been adopted by the study, an appropriate research methodology has also been proposed.

In addition to the firms within the industry, it is expected that other stakeholders would also benefit from the results of this study; e.g., government who is responsible for various regulations, shareholders of the firms, and general public whose safety and satisfaction have always been of primary concern. The benefit to the latter would be through the development of new products and services, possible subsequent enhancements in the government regulations in relation to the customers' well-being and satisfaction, and the enhanced value created for general public through more effective participation in the industry's product life cycle.

Future steps of the research project include: (i) empirical validation of the proposed theoretical model, (ii) to increase generalizability of the proposed model by extending the current research to incorporate food industries in other parts of the Middle Eastern countries, the latter sharing a common business and social culture.

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