

Identifying Key Competencies Affecting Competitive Advantage (Case Study: Iranian Dairy Industry)

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Abstract: This study aims to examine the effect of key competencies on competitive advantage. The research method is a survey-analysis method. The statistical population consists of senior, middle and operational managers of dairy industry of Iran. Sampling method is simple random sampling method which includes 118 members of the target population. The research measurement tool is standard researcher-made questionnaire and the data collected from the Partial Least Squares Method (PLS-SEM) was analyzed using SMART-PLS2, SPSS21 Software. The results show that key competencies include entrepreneurial competence, innovative competence, intercultural competence, functional competence and marketing competence that have a significant positive impact on competitive advantage.

Key words: Competitive advantage, key competencies, dairy industry, partial least squares method, Iran

INTRODUCTION

In knowledge-based economy, especially in fast-growing new industries, science has an important and direct impact to achieve competitive advantage (OECD, 2002). Competitive advantage (Porter, 1985) since a long time ago has been affected by two overall strategies that include the theory of industrial organization and resource-based theory; competitive advantage based on “resource-based theory” is the best source of competitive advantage (Huang *et al.*, 2015). To pass a temporary competitive advantage and move towards a sustainable competitive advantage, organizations choose different strategies (Huang *et al.*, 2015; O’Shannassy, 2008). The most important element in achieving sustainable competitive advantage is key competencies that is a unique and inimitable combination of skill, knowledge, resources and competencies; key competencies has three basic features that include responding to market needs, contributing to produce the final product and being inimitable for competitors (Srivastava *et al.*, 2013; Srivastava, 2013). Therefore, in order to have a sustainable competitive advantage, organizations should improve key competences to an appropriate level. In the performed studies organizational key competencies that include entrepreneurial competence (Khalid and Bhatti 2015; Klein *et al.*, 2010; Muzychenko, 2008), innovative competence (Wang, 2014), intercultural competence (Garcia, 2013), functional competence (Nguyen, 2008) and

marketing competence (Kanibir *et al.*, 2014). The set of these key competences lead to competitive advantage in organizations; on the other hand now one of the key areas in the food industry is the dairy industry. Therefore this study was conducted in the dairy industry and the basic research question is that what are these key competences of the organization that lead to competitive advantage?

Literature review

Competitive advantage: Porter (1985) asserted that competitive advantage comes from the value that firms create for their customers that exceeds the cost of producing that value. The key concern for a business is to capture that value which is greater than its cost. He also identified two types of competitive advantage which were cost leadership and differentiation (Porter, 1985). Competitive advantage means that a firm has gained an above-average return as compared to its competitors in its industry (Hill and Jones, 2008). In order to achieve competitive advantage, a company must implement a “value creating” strategy (Barney, 1991). Value creation is measured by the difference between value to consumer and cost of production (Hill and Jones, 2008; Porter, 1985).

Entrepreneurial competence: Ability to sustain temporal tension, strategic focus and intentional posture combined with entrepreneurial bonding, ability to create and restructure relationships. New pathways for

achieving innovation-related business targets and ability to identify and pursue opportunities (Lans *et al.*, 2010).

Innovation competence: Wang (2014) innovation competence: defined innovations including the introduction of new products new methods of production, the opening of new markets and the identification of new suppliers. According to the OECD broad definition of innovation, there are numerous types of innovation, including product development and the deployment of new processes, technologies and management practices (Sohrabi *et al.*, 2015).

Marketing competence: Catoiu and Veghes (2009) marketing competencies defined to exert its various functions (commercial, financial, production), the organization must have the necessary competencies. Similarly, to exert its specific marketing functions, the organization must have a set of dedicated competencies. The definition of the marketing competencies may start from different definitions given to the competencies of an organization. One of the reference definitions in this respect considers generally the basic competencies of an organization as being a set of skills, knowledge and technologies enabling it to provide specific benefits to the customers and generate competitive advantages for this. Remaining at the level of the organization, Hamel and Prahalad identify its basic major competencies: the creation of value for the customer, differentiation against competitors and the expandable and adaptable products, services, brands and activities.

Intercultural competence: Iles makes a distinction of intercultural competence by inserting the manager's intercultural abilities (competence) in three main levels: affective, communicative and cognitive. Cui and Van den Berg perceive intercultural efficacy as a "three-dimensional concept which includes communication competence, cultural empathy and communicative behaviour." They emphasize cultural empathy as a factor including tolerance, empathy for the other's culture, empathy towards dissimilar ways of working and the awareness of cultural differences (Garcia, 2013).

Functional competencies: Nguyen (2008) asserted that competencies at functional-level can be sources of CA through assessing the four factors of CA efficiency, quality, innovation and customer responsiveness. Functional-level strategies are strategies directed at improving the effectiveness of basic operations within a company. They include primary functions (e.g.,

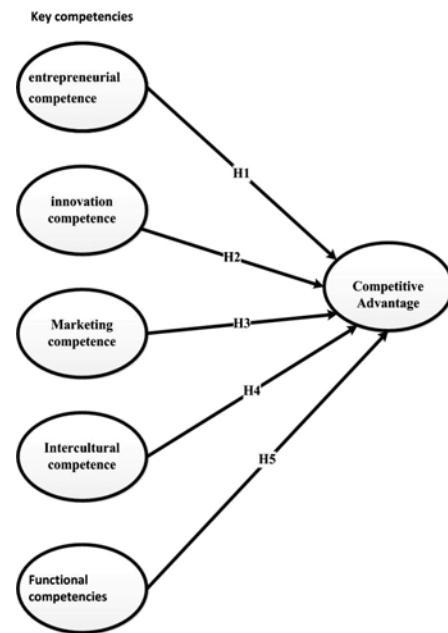


Fig. 1: Hypothesized research model (developed by the reserchers)

production, marketing, research and development) and support functions (e.g., information system, human resources and infrastructure) (Fig. 1).

The conceptual model: In order to do scientific and systematic research we need a scientific and theoretical framework. Conceptual model of the study indicates the relationships between independent and dependent variables. In this study, according to the theoretical foundations of literature review the following model and hypotheses are provided.

Study hypotheses:

- H₁: entrepreneurial competence has an impact on competitive advantage
- H₂: innovative competence has an impact on competitive advantage
- H₃: marketing competence has an impact on competitive advantage
- H₄: intercultural competence has an impact on competitive advantage
- H₅: functional competence has an impact on competitive advantage

MATERIALS AND METHODS

This study is an applied study in terms of purpose and in terms of data collection is a descriptive-correlation study. The type of collected data is quantitative

(questionnaire). For questionnaire data analysis, structural equation modeling with the approach of Partial Least Squares (PLS-SEM) and SMART-PLS2 Software were used. Variables in the structural equation modeling method are divided in two categories of latent and observable variable variables that latent variables of the structures are also used at different levels. In this context, structures of the key competence variables were measured by the researcher-made questionnaire and competitive advantage was measured by Hosseini questionnaire. The statistical population included all senior, middle and operational managers of the dairy companies in Fars province that the managers were 170 persons and 118 persons were selected by Cochran formula and the questionnaires were distributed randomly.

Reliability assessment: The partial least square method was used to assess the reliability of the questionnaire including Cronbach's alpha and the Composite Reliability (CR) was used if the CR>0.6 and Cronbach's alpha is >0.7 it has acceptable reliability (Assioras *et al.*, 2015) (Table 1).

The questionnaire validity was assessed by two validity criteria of divergent and convergent using partial least squares method. In the case of validity, structure validity was tested at first. The structure validity is divided into convergent validity and divergent validity. The criteria AVE (Average Variance Extracted 0.67) was used for convergent validity: The criterion value for acceptable level of AVE is 0.5 (Hulland, 1999). As it is specified by Table 2, all AVE values of structures are >0.5 and this indicates that convergent validity of the questionnaire is at an acceptable level.

Table 1: Reliability assessment

Variables	No. of questions	Alpha	CR
Competitive Advantage	6	0.76	0.84
Entrepreneurial competence	4	0.81	0.83
Innovative competence	5	0.85	0.92
Marketing competencies	4	0.74	0.81
Intercultural competence	5	0.75	0.79
Functional competence	3	0.89	0.84

Table 2: The average variance extracted for the study structures

Variable	Competitive advantage	Entrepreneurial competence	Innovative competence	Marketing competencies	Intercultural competence	Functional competence
AVE	0.74	0.92	0.85	0.76	0.81	0.64

Table 3: Comparison matrix of the square root of the average variance extracted and correlation coefficients of indicators (divergent validity)

Variables	Competitive advantage	Entrepreneurial competence	Innovative competence	Marketing competencies	Intercultural competence	Functional competence
Competitive advantage	0.85					
Entrepreneurial competence	0.73	0.95				
Innovative competence	0.83	0.12	0.86			
Marketing competencies	0.43	0.46	0.47	0.92		
Intercultural competence	0.65	0.34	0.23	0.78	0.91	
Functional competence	0.68	0.57	0.64	0.54	0.65	0.86

Method of Fornell and Larcker was used for divergent validity (Assiouras *et al.*, 2015). According to Table 3, it was determined that the values of the main diagonal of matrix (the square root of the average variance extracted) are more than the low values (correlation coefficients of each structure with other structures) that this represents acceptability of divergent validity.

RESULTS AND DISCUSSION

Status of the statistical population in terms of gender, education level and work experience is shown in Table 4. To test the conceptual model of the study, Software SMART-PLS2 was used; there are two models in PLS outer model, measurement model, the internal model is similar to structural model at structural equation models. In this model, mental health was drawn as endogenous variable and emotional-social competence was drawn as exogenous variables. In this model, significant coefficients Z and t-value can be used to calculate the significance of paths, that to prove the significance of the paths the value of them should be > +0.196 that is shown in parentheses in Fig. 2 and t-value shows the authenticity of relationships (Hair *et al.*, 2012). And the determination coefficient value of R² the effect of exogenous variable on an endogenous variable is measured; if this ratio is close to 0.67 is desirable, close to 0.33 is normal and close to 0.19 is normal. In Fig. 2, t-values and the determination coefficient value of R² is shown in parentheses.

Entrepreneurial competence has a positive and significant impact on competitive advantage for organizational change; that its amount of factor loading is equal to 0.64 which this amount of factor loading represents 0.64% change in the readiness of managers to change is explained by the entrepreneurial competencies and given the value t is equal to 7.34 it is at the 95% confidence level and the other variables of innovative competence with factor loading (0.72) and statistics (11.34), marketing competence (0.57)

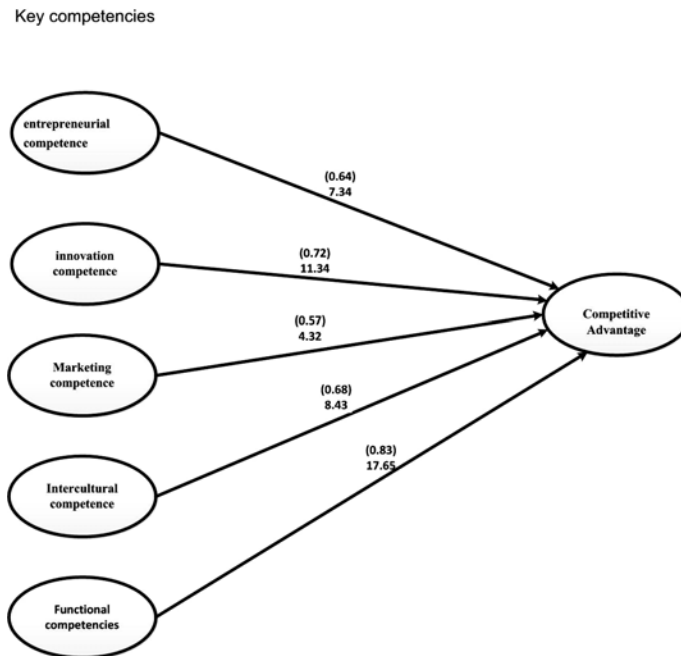


Fig. 2: Output of Software SMART-PLS

Table 4: demographic situation of the statistical population

Type	Status	Percentage
Gender	Male	95
	Female	5
Educational level	PhD	8
	Master	55
	Bachelor	43
Work experience	<1 year	5
	1-3 years	8
	3-5 years	16
	5-10 years	20
	>10 years	51
Management level	Top-level	16
	Middle-level	52
	First-level	32

Table 5: Study hypotheses

Hypothesis	Path coefficient	t-values
Entrepreneurial competence has an impact on competitive advantage	0.64	7.34
Innovative competence has an impact on competitive advantage	0.72	11.34
Marketing competence has an impact on competitive advantage	0.57	4.32
Intercultural competence has an impact on competitive advantage	0.68	8.43
Functional competence has an impact on competitive advantage	0.83	17.65

and statistics (4.32), intercultural competence with factor loading (0.68) and statistics (8.43), functional competence (0.534) and statistics (17.65) which reflects the positive

impact of all variables on competitive advantage and also at the 95% confidence level since all values (t) are greater than +1.96, there is a significant positive relationship (Table 5).

CONCLUSION

With regard to the subject of the research that is to examine the impact of key competencies on competitive advantage (Case study: Iranian dairy industry), according to the results of factor loadings and explained results of analytical parts of this study, key competencies have a significant positive impact on competitive advantage. This means that the key competencies that include entrepreneurial competence, innovative competence, marketing competence, intercultural competence and functional competence affecting gaining competitive advantage in companies. The first hypothesis of this study was to confirm the effect of entrepreneurial competencies on competitive advantage, that it is compatible with the study of Beaver and Jennings (2005) that consider competitive advantage as having entrepreneurial competence. And also in another article in 2012, entrepreneurial competence is considered as one way to achieve competitive advantage and entrepreneurial competence has an impact on competitive advantage

(Ismail, 2012). The second hypothesis of this study is to confirm the impact of innovative competence on the competitive advantage that by a research in 2008 that stresses that innovation as a key competence has a main role of movement of the companies toward competitive advantage. In a study in 2002 innovation is referred as a competence that leads to company revival and innovative competence is considered essential to achieve competitive advantage (Danneels, 2002). The third hypothesis of this study is to confirm the impact

of marketing competence on competitive advantage that is compatible with the research conducted in 2014 (Kanibir *et al.*, 2014). The fourth hypothesis of this study is to confirmed the impact of intercultural competence on competitive advantage that is compatible with the studies conducted in 2012 and 2015 (Kanibir *et al.*, 2014) and express intercultural competence as key competence that leads companies to competitive advantage and intercultural competence is required fo managers of companies to achieve competitive advantage in international business (Garcia, 2013). The fifth hypothesis of this study is to confirm the impact of functional competence on the competitive advantage that is compatible with the studies of Nguyen (2008) and functional competencies have a key role in achieving competitive advantage. In this study, it was found that key competencies has a fundamental role in gaining competitive advantage and companies should act in a way that to improve their key competences so that they have competitive advantage over competitors.

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