



The impact of knowledge management on competitive advantage considering the mediating role of organizational agility

Case study: the hospitality industry in Isfahan

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ABSTRACT

Competitive advantage, as a set of unique abilities in an organization, allows it to enter new markets and overcome competition. This paper aims to determine the impact of agility and knowledge management on competitive advantage. According to the available literature and research background, three hypotheses are formed and tested. The data for the study are collected using a standard questionnaire and analyzed by SPSS V.18.0 and AMOS V.20.0 software packages. The results indicate that knowledge management affects the ability to gain competitive advantage both directly and indirectly through organizational agility.

Indexing terms/Keywords

knowledge management, organizational agility, competitive advantage

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1. INTRODUCTION

Not long ago, having access to more financial resources constituted power and competitive advantage for an organization (Ansari et al., 2012). However, in the modern world, the ability to manage knowledge efficiently creates the advantage (Rahmani, 2011). Therefore, organizations are attempting to identify key enablers of and prepare for knowledge management so that they can utilize internal sources of knowledge as well as those in the environment (Ansari et al., 2012). The modern world is characterized by complexity, diversity, and rapid change, where negligence may impose heavy losses on or even terminate an organization. In such a setting, knowledge is fast becoming the core competitive advantage of an organization (Moughli, 2006). Competitive advantage in the future will present itself as knowledge and information management capabilities, and physical capital will be replaced by intellectual capital.

The business environment in the modern world is dynamic, unpredictable, and adversarial, which concerns many organizations (Almahamid, 2008). Therefore, traditional models and business priorities are no longer useful in facing current challenges. Agility is among the measures organizations take to respond to the environment. Organizational agility is in fact a new paradigm for engineering competitive organizations and businesses (Shahaei, 2008). There are many concepts in the agility literature including flexibility, responsiveness, adaptability, etc. While some authors consider these concepts to be distinct, others believe they are synonymous. Essentially, they all focus on the organization's ability to adapt its processes, strategies, products, resources, etc. in order to respond to environmental changes. We can see that there is no consensus on the definition of agility (Giachetti et al., 2003; Arteta and Giachetti, 2004; Lin et al., 2006; Jain et al., 2007)

This study aims to investigate the impact of organizational agility and knowledge sharing on competitive advantage. The rest of the paper is organized as follows. In the next section we provide a review of literature followed by the hypotheses and the conceptual model of the study. Next we present our methodology. Data analysis comes in the section after that. Finally, we conclude the paper with a discussion of the results.

2. Theoretical Background

Knowledge management

Knowledge management includes all the effort of an organization for managing its knowledge assets i.e. capturing, storing, transferring, utilizing, updating, and creating. Knowledge management creates value by converting human assets to organized intellectual capital. Understanding the importance of knowledge in decision making, managers are trying to use knowledge management techniques and solutions in all levels of the organization. Knowledge management is receiving an increasing amount of attention. Most organizations are looking for knowledge management solutions so that they can use existing knowledge in improving policies and gaining competitive advantage (Fatehi, 2011).

Knowledge management is a broad and complex concept which various experts have investigated from different angles. The commonality between different definitions is that knowledge management is the process identifying, capturing, organizing, and processing information in order to create knowledge, which can later be disseminated, to create further knowledge and assist in decision making. Studies have shown that knowledge management is a social endeavor and humans play the most important role in its success. Figure 1 presents the knowledge lifecycle in organizations, which has four main stages (Afzare, 2007).

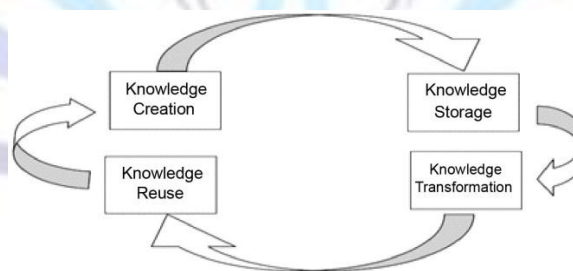


Figure 1. Knowledge lifecycle in organizations

Knowledge creation: involves activities associated with new knowledge entering the system including knowledge development, discovery, and capture.

Knowledge storage: the set of activities which preserve knowledge in the system. To this end, the most important factor identified by authors is organizational memory, defined as the organization's ability to retain its accumulated body of knowledge. Dingo and Carbi (1999) notes that organizational memory can only retain explicit knowledge. Organizations cannot rely solely on memory in order to attain effective knowledge management. They identify individual memory as the most important source of implicit knowledge. Knowledge management can succeed only if both types of knowledge are available and reinforce each other.

Knowledge transformation and transfer: includes activities that cause knowledge to be transferred from one person or department to another including translation, transformation, interpretation, and cleansing.

Knowledge reuse: the set of activities associated with using knowledge in the organization.



In the competitive global market, business processes need to be reconstructed to become more agile and consumer-centric. Maximizing profitability and efficiency is vital to every organization. Among the many assets of an organization, knowledge is critical to the processes of goal setting and decision making. Knowledge management implements a systematic view that exploits the full potential of the available knowledge in the organization (Zanjiri et al., 2009). Various authors have focused on agile development, agile workforce and other concepts of agility. Below we present some of the most significant research on agility to date.

Agility

Change is an undeniable fact in the modern world of business. New competitors, new customers, and global competition have caused unexpected changes many industries. In order to achieve success, organizations need to take advantage of their dynamic environment and view change as an opportunity as opposed to a threat. Organizations need to adapt to change rapidly. A dynamic environment is generally a driver for agility. There are many models and methodologies for agility in the literature.

Sharifi and Zhang (1999; 2000) introduced a methodology for achieving organizational agility. Goldman and Nagel (1995) proposed four dimensions for strategic agility: valuing the customer; cooperative competitiveness; change control; and utilizing individual abilities and information. Valuing the customer goes beyond selling products and includes providing the customer with valuable solutions. Cooperative competitiveness can be improved through intra- and inter-organizational cooperation to allocate resources optimally and create products at the lowest possible price. Change control refers to the organization's flexibility to allocate its resources.

Yusuf et al. (1999) identified competitive foundations of agility as follows: speed, flexibility, innovation, proactivity, quality, and profitability. In their framework, they defined three aspects of agility related to different levels of organization. Elemental agility refers to individual resources (people, machinery and management); micro-agility refers to the enterprise, and macro-agility to the inter-organizational level.

Zhang and Sharifi (2000) believed that the most comprehensive agility framework should consider the four attributes of an agile organization: agility drivers; strategic capabilities; agility consequences; and agility abilities.

Jackson and Johansson (2003) did not consider agility to be a specific goal. They believed organizations should try to achieve competitiveness in the dynamic environment through agility. They divide agility capabilities into four main dimensions: (1) product-related change capabilities, (2) change competency within operations, (3) internal and external co-operation, and (4) people, knowledge, and creativity.

Following the framework by Sharifi and Zhang (1999), Lin et al. (2006) introduced capabilities of similar names and provided the following definitions:

Responsiveness: the ability to recognize and react swiftly to change.

Competency: the ability to identify organizational goals both effectively and efficiently. In other words, competency consists of a number of capabilities, which cause efficiency and effectiveness and play an important role in the organization's path to its ultimate goal, including strategic view, technological competencies, and cost-benefit.

Flexibility/ adaptability: the ability to use different means to achieve the same goal including flexibility in production volume, individual flexibility, etc.

Speed: the ability to complete an activity as fast as possible including short time-to-market for new products, speed in providing service and new products, etc.

Recently Sherehiy et al. (2007), building on previous studies on agile development and agile workforce, identified main attributes, applicable to any organization: flexibility, responsiveness, speed, culture of change, integration, low complexity, high quality and customized products, and mobilization of core competencies. They suggest that organizations capable of agility can operate effectively and efficiently in conditions of uncertainty, which can lead to competitive advantage. They, also, believe that agility without knowledge management will not create competitive advantage.

Competitive advantage

Gaining competitive advantage has become an international issue. Many definitions have been presented for competitive advantage. In the following we discuss some of them.

Competitive advantage is how attractive a company's offers appear compared to those of the competition. The competitive index of an organization is the difference in attributes and dimensions and it's what enables better performance compared to competition. In general, competitive advantage involves quality, effectiveness, responsiveness and innovation (Shahgholi, 2009).

In another definition Sanayeie and Alavi (2006) define competitive advantage as the set of factors or enablers that allow an organization to always perform better than the competition. In other words competitive advantage includes of factor(s) that allow an organization to succeed in a competitive environment and which competitor cannot imitate (Sanayeie and Alavi, 2006; Tajedini et al., 2012). Therefore, in order to competitive advantage an organization must be cautious about both the external and internal surroundings. On the road to gaining competitive two important points must be considered:

Firstly, the organization must, through its competencies, create sustainable competitive advantage and perform better than competitors. Secondly, increased complexity and competition make competitive advantage obsolete, because competitors imitate innovations and customers pay less attention to older products. Thus, competitive advantage must remain up to date. This means organizations always need to look for new competitive advantages. The organization's resources including assets, capabilities, processes, information, knowledge, etc. need to be managed in a way that create value (Ansari et al., 2013).

3. Hypotheses and Conceptual Model

Agility is widely considered the main factor in improving performance and competitive position. It is recognized as the main reason for success and survival in a dynamic, changing, and competitive environment. However, the prerequisite to timely responses and the ability to turn threats to opportunities is appropriate flow of information among units and teams in the organization both vertically and horizontally as well as external flow of information (suppliers, customers, and even competitors). According to a review of literature, knowledge management is vital to improving competitiveness in dynamic and changing conditions (Alhamid, 2008).

In this study, using the presented review of literature, we believe that in order to survive and succeed in a dynamic and competitive environment, an organization requires integrated knowledge management and agility capabilities. Figure 1 presents the conceptual model of the study and the following are hypothesized.

H1: organizational agility influences competitive advantage.

H2: Knowledge management influences competitive advantage.

H3: Knowledge management influences organizational agility.

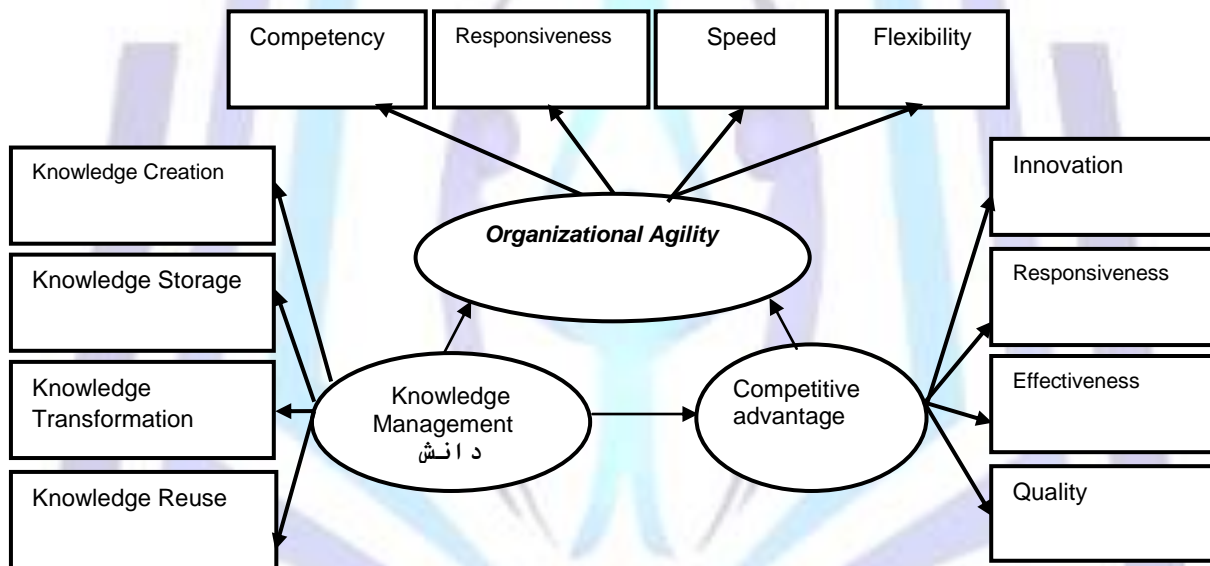


Figure 1. Conceptual model of the study

4. Methods

Population and sample

This is an applicative descriptive survey. The statistical population includes the managers and staff of hotels in Isfahan City. Using random sampling, 250 copies of the questionnaire were distributed among the participants, of which 212 were acceptable upon return. The questionnaire consists of two sections. Answers are given on Lickert scale of 1 (completely disagree) to 5 (completely agree).

Study variables

Content validity of the questionnaire was verified by experts in the field of knowledge management. To determine the reliability of the test, Cronbach's alpha was calculated giving a result of 0.80, which is acceptable. Cronbach's alpha for individual variables can be seen in Table 1.

Table1. Cronbach's alpha

Variable	Source	Dimensions	Cronbach's alpha
Knowledge management	Afzare (2007)	Knowledge Creation Knowledge Storage Knowledge Transformation Knowledge Reuse	0.85
Organizational Agility	Becker and Knudson (2005) Zhang and Sharifi (1999; 2000)	Responsiveness Competency Flexibility Speed	0.76
Competitive advantage	Lin et al. (2007)	Innovation, responsiveness, effectiveness, quality	0.79

5. Data Analysis

Confirmatory factor analysis

The first step is to determine the fit for the measurement model. Table 2 presents the fit indices of the models.

Table 2- fit indices of the measurement model

Variable Index	Knowledge Management	Organizational agility	Competitive advantage
CMIN/DF	1/45	1/02	2/98
RMR	0/018	0/001	0/05
GFI	0/93	0/98	0/90
AGFI	0/91	0/92	0/89
IFI	0/98	0/97	0/95
NFI	0/975	0/97	0/97
CFI	0/98	0/98	0/95
RMSEA	0/04	0/02	0/06

The measurement models are good-fitting i.e. fit indices confirm the fact that the models provide adequate fit for the data. All factor loadings are greater than 0.5, with significance level equal to 0.000.

Structural Equation Modeling

After confirming the goodness of fit for the measurement models in the first step, the second step is to test the hypotheses using structural equation modeling. Model fit indices are shown in Table 3.

Table 3. Model fit indices

RMR	IFI	CFI	NFI	AGFI	GFI	RMSEA	CMIN/df	
0/04	0/94	0/95	0/94	0/89	0/91	0/06	3/01	
Near zero	0/90>	0/90>	0/90>	0/90>	0/90>	0/08<	1> 3<	Acceptable region

The results of Table 3 can be interpreted as follows.

The standard estimation model from Amos indicate that the path analysis model is adequate. The chi-square is equal to 3.01, falling between 1 and 3. The RMSEA equals 0.06, which is adequate. Furthermore, GFI, AGFI, NFI, CFI, and IFI are all greater than 0.90. Finally, the RMR is near zero. The values for the fit indices are all in the acceptable region, which proves the models provide adequate fit for the data. The hypotheses along with their partial indicators and regression coefficients can be seen in Table 4.

Table 4. Hypotheses test results

Hypothesis	Sample size	Significance value	Critical value	Correlation coefficient	Result
Knowledge Management → Organizational Agility	212	0/000	11/34	0/73	Confirm
Organizational Agility → Competitive advantage	212	0/008	2/66	0/16	Confirm
Knowledge Sharing → Competitive advantage	212	0/000	13/52	0/94	Confirm

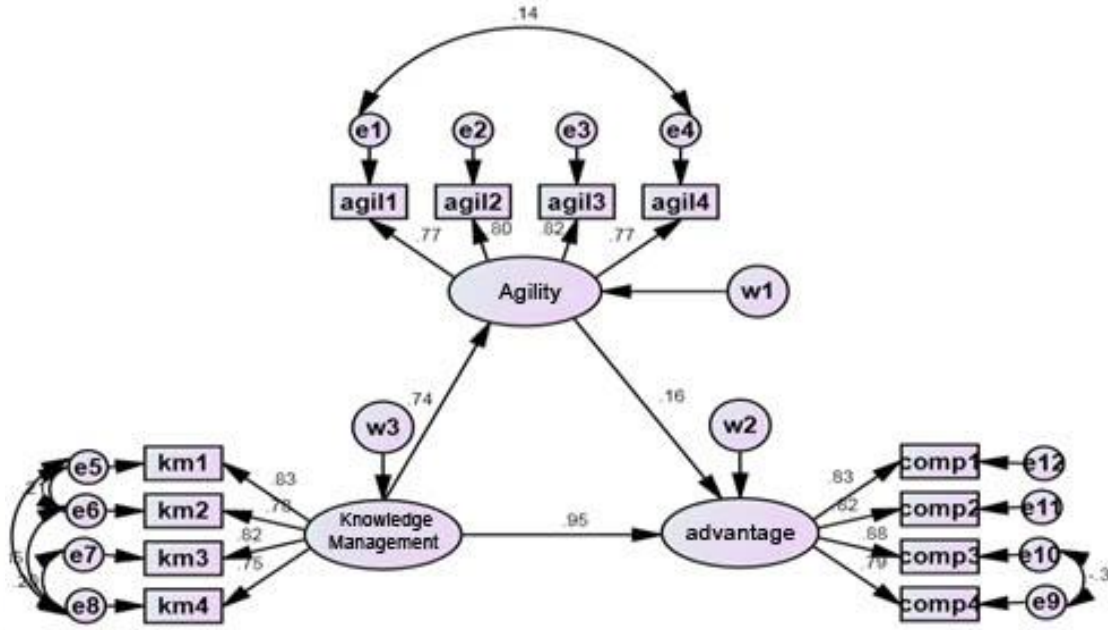


Figure 2. Structural Equation Modeling

6. Discussion and Conclusion

The results of testing the hypotheses are as follows.

H1: organizational agility influences competitive advantage. Path analysis proved that, with a 0.16 coefficient, this is true.

H2: Knowledge management influences competitive advantage. Path analysis proved that, with a 0.94 coefficient, this is true.

H3: Knowledge management influences organizational agility. Path analysis proved that, with a 0.74 coefficient, this is true.

Knowledge is the primary competitive tool for organizations. Business experts as well as scientists believe that organizations can sustain their competitive edge if they possess knowledge. Managers need to seek knowledge management in order to align organizational knowledge with organizational goals. They need to become skilled at knowledge management, learn the strategies, and create an environment where employees can interact and share their knowledge. In this manner, knowledge can become a competitive advantage. After studying the relationship between knowledge management and organizational agility and how they impact competitive advantage in this paper, the following suggestions can be made.

Paying more attention to how sources of knowledge are managed.

Creating knowledge banks (organizational memory and knowledge repositories) and recording experiences so that they can be accessed from anywhere and at any time by authorized individuals.

Encouraging employees to update their skills and knowledge by interacting with people who possess that knowledge.

Forming special knowledge management teams

Determining the role of knowledge management in improving performance in the organization.

Establishing an agile organization capable of dealing with unexpected changes.



Organizing physical and human resources such that they can adapt to the changing environment and seize available opportunities in the market.

As with any scientific work, this study faced some challenges and limitations. The data were collected using questionnaires at a specific point in time, which may expose the data to economic and political influences from the society at the time of the study. Future research can use interviews among other data collection tools and increase the reliability of the study by collecting data over longer periods of time. Furthermore, more independent variables can be introduced in order to create a more holistic model. The impacts of demographic variables such as age, gender, and education need to be determined as well.

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