

Strategic knowledge management assessment of SMEs based on value creation and opportunities abduction

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CHRONICLE

Article history:

Received January 4, 2014

Accepted 1 June 2014

Available online

June 5 2014

Keywords:

Strategic knowledge management

Value creation

Opportunities abduction

Small and medium businesses

ABSTRACT

Knowledge management plays essential role for the success of organizations. Strategy formulation is one of the modern environmental requirements in the field of knowledge management and it helps and supports different parts of the organization to identify opportunities. The primary objective of this research is to evaluate the relationship between strategic knowledge management and value creation as well as opportunities abduction. Statistical population of our study is small and medium businesses in Shams Abad, Tehran. The survey is accomplished in three industries including textiles, drinking and edible. The study investigates different hypotheses on knowledge management and the results indicate that the strategies of business and saving knowledge did not have any direct effect on opportunity abduction.

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1. Introduction

Nowadays, the resources and competences play essential role in survival of an organization in dynamic and competitive environment (Alam Tabriz & Rahimi, 2008; Nahapiet & Ghoshal, 1998). Once the knowledge was replaced with funds, materials and labor, it was known as an important agent in production (Garavelli et al., 2004; Nasution et al., 2011). According to Drucker (1993), competitive advantage in the future can be measured by labor force or knowledge resources called knowledge workers. Therefore, knowledge is as an asset and needs to be managed, properly. There is an increasing trend on learning more about the firms' ability to identify, to capture, to create and to share knowledge within the organizations. Specially in newly emerging organizations, efficiency has great relevance with knowledge sharing among individuals, teams or units. In fact, any firm must be able to keep all kinds of its knowledge and maximizes its strategic values by strategic knowledge management. Any organization needs to recognize its strengths and weaknesses and the opportunities

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and threats of knowledge management to achieve its objectives through the process of creating knowledge management strategy. By learning more about strengths and weaknesses and the opportunities and environmental threats, it is possible to reach the ability to monitor all internal and external environmental factors, completely and it can create value and discover opportunities for organization. It is also possible to reach a high competitive advantage in market to upgrade and to maintain its position in the market (Haas & Hansen, 2007).

2. Research Foundations

2.1 Knowledge management strategies

Knowledge is as an essential source of competitive advantage and value creation, an important element for sustainable development and generally recognize as a determinant factor for firms with global aspirations. Besides, the identified knowledge is a dynamic resource, which requires careful management. Most researchers have introduced details of knowledge in terms of four levels including data, information, knowledge, and wisdom. As long as firms do not perform a survey in evaluating their knowledge assets, it is not possible to confirm knowledge management, organizational development and performance improvement. (Hansen et al., 1999)

Although knowledge management has been recognized as a tool applied by managers to increase efficiency, efficiency and innovation is accepted as principles of developing knowledge management. This is because typically organizations apply knowledge management methods, which are well established. Knowledge management can lead to improve the organizational performance. Today, all large and small organizations require implementing the knowledge management to stay on competition. Knowledge management is a way that organizations create, acquire, classify, modify, share and publish the knowledge. Many researchers believe that knowledge management is changing data to information and then information to knowledge. Gottschalk (2007) defines knowledge management as “formal access to experience, knowledge and expertise that creates a new ability , encourage innovation and increases customer value”. Others believe that knowledge management is supporter of innovation, creator of new ideas and exploitation of organization’s thinking ability. It is also considered for facing the knowledge economy and to participate in knowledge-based competition. All organizations must be able to keep all sorts of knowledge and maximize strategic values. To realize this, many organizations are beginning to re-design and re-organize business strategies, business processes, information technology and organizational structure to form a knowledge-based view (Chio & Lee, 2002; Shane, 2003).

One of the most important issues for the creation of knowledge management strategy is associated with strategy and its related objectives should reflect the strategy and organizational objectives. They ought to be able to improve effectiveness and efficiency of business processes and eventually to improve organizational performance. An organization may be aware of strong and weakness points and the opportunities and threats of knowledge management to achieve its goals through the process of creating knowledge management strategy. Therefore, we may say that strategic planning of knowledge management is a part of knowledge management and strategy creation is part of strategic planning of knowledge management (Khadivar, 2009; Gottschalk, 2007). Schools of knowledge management strategy can generally be evaluated based on its characteristics in two groups. The first school is associated with division of the knowledge management strategies into personalization strategy and explication. One strategy is to describe collecting knowledge, to store them in the database, and to provide available knowledge in form of explicit and codified. The second strategy is to personalize strategy, which is not concentrated on saving knowledge but its focuses on using information technology to help people build a connection among people’s knowledge. The purpose of this strategy is to transmit, to communicate and to exchange knowledge among knowledge networks (Hansen, et al., 1999).

2.2 Value Creation

In the field of knowledge, the existence of value chain means having set of clear activities required and organizations must consider and focus on them. These activities are described from the moment of the formation innovation in organization till its value can be achieved for that. In the past, when a manufacturing firm used innovation it was possible to introduce new product. This innovation initially was coded and then was recorded by using others. Recorded innovation was evaluated by organization associated with this issue and then copyright and royalties were presented to protect the intellectual property and prevent any abuse. After receiving the right, the organization attempted to manufacture, to distribution and to sale of the new product (See Fig. 1).

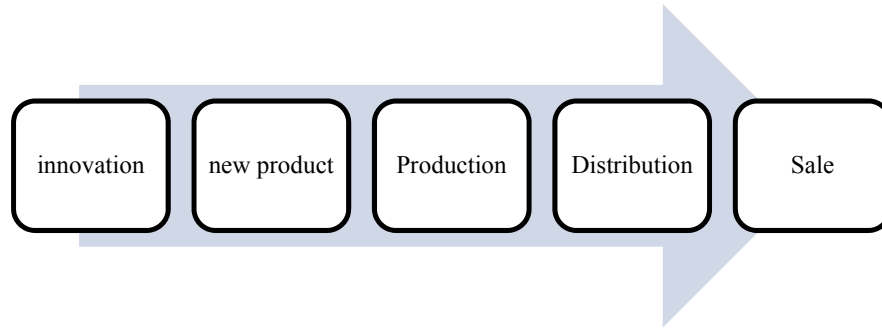


Fig. 1. The process of value creation

Process of value creation is a phenomenon that has several dimensions, because it can achieve value creation through various activities (Gloet & Terziovski, 2004). According to value-based marketing view, customer value is associated with the differences between customer perceptions from the benefits of buying and using goods. Some people considered the ultimate purpose of creating value in a business as shareholder value and stated that organizational value is a basis for the marketing value. Marketing value is the basis for creating financial value and financial value is the shareholder's value prerequisites including dividends or capital growth (Rai, 2011; Grant, 1996).

2.2.1 Customer Value

Value is one of the most widely used concepts in social sciences in general and in management literature, particularly. Value from the customer's perspective is a set of advantages derived from any sort of products excluding all paid expenses from this view. In marketing concept, achieving to the organization's goals depends on defining requirements of target market and providing optimum and more effective customer satisfaction than competitors. A success for a firm is achieved by providing more customer satisfaction. Creating superior value for customers is the basis of competitive advantage of any firm. The company may create superior value for its customers by providing benefits for them and these benefits are bigger than the cost that consumers have to be paid to the product or services of lifecycle. In addition, if a firm wishes to have long term relationship with its customers, superior value must be provided as a competitive advantage for the customer. On the other hand, creating value for customer is one of the most important factors of profitability in economic enterprises. Competition increases and firms try to achieve a sustainable competitive advantage and superior. In fact, satisfaction means customer's judgments about the level of achieved value. Companies may believe in culture based on delivering value to the customer reinforce customer orientation in all their processes and actions and consequently have superior business performance to others (Alvesson & Kärreman, 2001; Jafari & Akhavan, 2006).

2.2.2 Creating value

Value creation is the act of taking advantage of financial, social or personal in addition to the total cost of ownership (Mirfakhrdini et al., 2010). Evaluating value in smaller financial unit includes

economic profits, which means more revenue. Value is formed by changing inputs to products, media products are for transmission of value transmission between company and customer value. Opportunities for value creation is derived from market reaction in assumption of market equilibrium conditions to a set of resources (Huang et al., 2011). In terms of market equilibrium, there are three conditions to specify the ability of value creation. The first condition of general equilibrium is the issue that market's product both are more or less uniform. In such circumstances, there is not a large difference between the qualities of products sold on the market. As a result, buyers choose just based on price difference between the products supplied. The second condition is relative stability of the market based on the assumption that, each variable in characteristics of supply or demand rapidly and effectively are answered by reactions of consumers and producers or both of them. These fast movements are based on the third conditions, which is completeness of competitive market. Consumers should be aware of the products supplied in the market and suppliers in qualities of market, production technologies and supply sources. The result of these three conditions is the issue that price moves rapidly towards the final cost and after a short period, the possibility of achieving value increases (Bierly & Daly, 2002). Therefore, the market quickly will be mutually beneficial. Creation of value in such circumstances is only in marketing time management. By taking distance from these assumptions, the probability of definitive predictions is less.

2.3 Opportunistic abduction

Entrepreneurs do not have any meaning without opportunities. Detection and exploitation of opportunities are the normative definition of entrepreneurship. Opportunity is the most important element of the entrepreneur process and this process is nothing more than identifying, evaluating and exploitation of opportunities that entrepreneurs have gained because of their special features. This definition accurately reflects the importance of opportunity in the entrepreneurial process and indicates that the organizations should pay special attention to this concept.

2.3.1 Identify opportunities

Opportunity detection has been defined as the ability to understand a good idea and to transfer it into business to produce value added and income. Opportunity happens when people take their initial ideas into some business plans. However, the opportunity development process is different from opportunity detection or understanding conceptually. What is called "Detection of opportunity" in literature of entrepreneurship consists of three different stages. The sense or perception of market needs or unused resources for detection or discovery of a "proportionality" between the needs of certain markets. These processes respectively include perception, discovery and creation and indicate detection of opportunities (Alsos & Kaikkonen, 2004). Detection of opportunities is a process to have a potential ability to create new things. Detection of opportunity points out the process of the perception of the possibility of a new profitable business, a product or service. It means, the opportunity cannot be exploited before being detected. In addition, detection of opportunity is a process in which the entrepreneurs look for the new ideas leading to business. In views of entrepreneurship experts, detection of opportunities has a vital and inevitable role in entrepreneurial activities. Timmons believes that entrepreneurship is a way of thinking and practice based on opportunities (Bahadori Fard, 2010; Wong, 2012).

2.3.2 Strategies to identify opportunities

Entrepreneurship has been led to creation, promotion and recreation of value for owners and stakeholders, and the opportunity is the heart of such process (Choi, & Lee, 2002). All successful businesses have a mutual experience: They began their business based on a good idea. Maybe at the beginning, the idea is only a spark and a set of unorganized thoughts or inspirations that are re-defined and it can be determined whether they are transferable to a new business opportunity or not. Of course, when a certain idea or an opportunity is detected, the newcomers to an industry maybe are

those who question and challenge the conventional process and the way of performing different tasks. In a research about innovation of firms, it is asked from 500 CEOs which one of the firms best use from the change in their industry during last decade: newcomers, old competitors or their own firms? The answer of the most was newcomers (Huang et al., 2011; Seba & Rowley, 2010).

2.3.3 Opportunities abduction

Opportunity abduction is the speed of opportunity detection and the speed of utilization of the opportunity. This is associated with an entrepreneur who is quicker and provides sufficient reaction rather than other entrepreneurs in detection and utilization of opportunities. According to Shepard (2013), the definition of opportunistic Abduction is defined as follows,

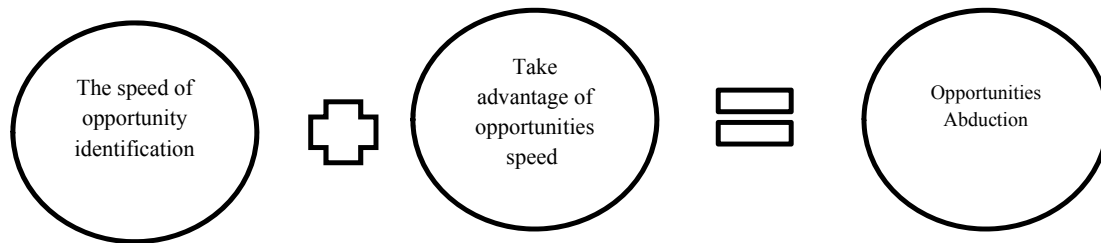


Fig. 2. Definition of opportunistic Abduction

3. The proposed model

3.1 Type of investigation

The present study method regarding to data collection, is descriptive-survey. Descriptive because the data are described actually the same collected without any change. The relationships among all variables have been studied and the relationships of independent variable and dependent variables have been evaluated. The study uses questionnaire and performs an empirical investigation.

3.2 Statistical population and study sample.

The population of this study is Shams Abad Industrial Town. Sampling in this study was simple and comfort. The size of sample used by the researcher in order to collect data regarding to this subject that it is done in a limited population is determined via Cochran formula in 161 numbers.

3.3. Data collection tools

The information was collected through questionnaires and through references such as books, journals, internet and magazines. The structure of the questionnaire will be explained in continue. The questionnaire consists of two groups: The first part includes general questions such as sex, age, education, work experience and field of study. The second part includes technical questions questioned through in three subcategories. The first subcategory was about the dimensions of knowledge management strategies, which consisted of 11 questions. The second subcategory included questions about value creation and it had 11 questions in 5-item Likert. The third subcategory was about opportunity abduction, which concluded 11 questions in Likert 5-point scale.

3.4 Validity and reliability of instrument

In order to gain validity of used instrument, professors and specialists' ideas have been used. In addition, several times questions have been reviewed and are designed so simple .pre testing has been used make sure that sample's participants have same understanding of questions. Cronbach's alpha applied In connection with reliability that its reliability coefficient for Business strategy, production and storage, Personalization strategy, Value creation and Opportunities abduction are 0.89, 0.91, 0.79 and 0.90, respectively.

3.5. Development of a conceptual model and hypotheses

The present study examined 5 hypotheses that these assumptions are the following:

Main hypothesis: Strategic knowledge management influences on organization’s value creation and opportunities abduction

3.5.1 Sub-hypotheses

1. Business strategy, production and storage of knowledge will enhance value creation.
2. Knowledge personalization strategy will increase the value creation.
3. Business strategy, production and storage of knowledge influence on opportunities abduction.
4. Knowledge personalization strategy has positive effect on opportunities abduction.
5. Business strategy, production and storage of knowledge through indirect value creation have an effect on opportunities abduction.

4. Analysis and conclusions

4.1 Descriptive Statistics:

Fig. 2 shows personal characteristics of the participants. As we can observe from the results of Fig.1, most surveyed people were middle-aged male with good university educations.

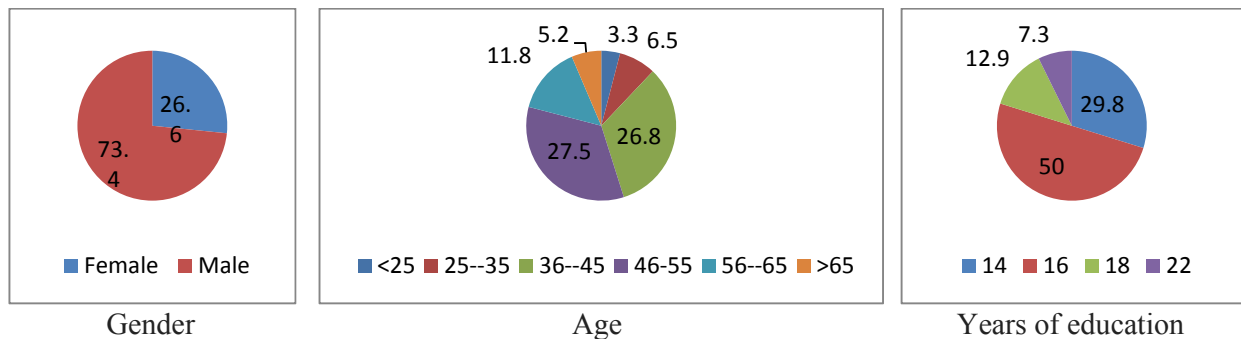


Fig. 2. Personal characteristics of the participants

4.2 inferential analysis

Before starting the analysis associated with approve or reject the assumptions, it is necessary to evaluate the overall condition of variables in terms of factor loading and AVE and CR (Table 1). To analyze the research’s conceptual model partial least squares approach has been used and to analyze the significance of model’s relationship t-value significant coefficients is applied. Fig. 3 shows details of our findings.

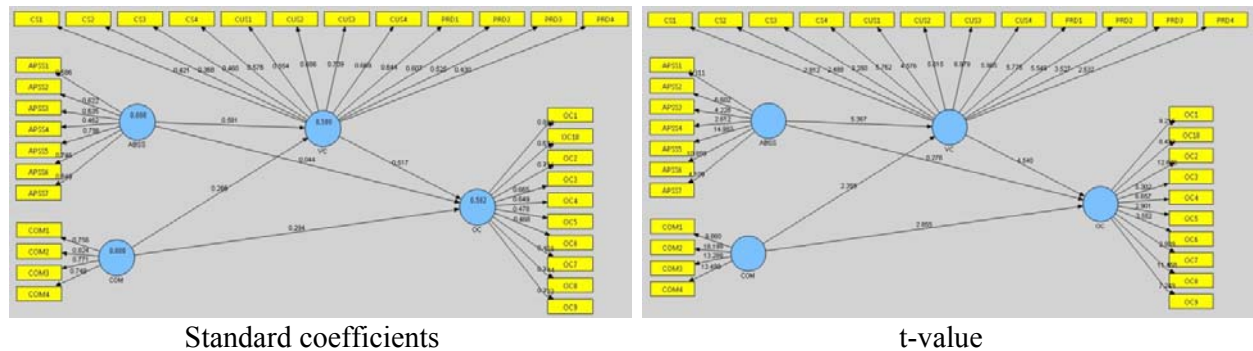


Fig. 3. The results of structural equation modeling

Table 1
Structure validity (factor loadings, mean of developed variance and combined reliability)

Variables	Abbreviations	Indicators (questions)	Factor	AVE	CR
Strategy of business, production and storage	APSS1	Knowledge acquisition of every individual experts and colleagues	0.5858	0.5964	0.8178
	APSS2	Knowledge acquisition through person to person coaching	0.6220		
	APSS3	Knowledge sharing by conversations and informal meetings	0.6345		
	APSS4	Ease of face to face use of expert advice	0.4624		
	APSS5	The impact of organizational values, attitudes and staff's idea on knowledge acquisition	0.7555		
	APSS6	Role of developing financial reporting system on knowledge acquisition	0.7459		
	APSS7	Organization sensitivity to the information changes of environment	0.5490		
Personalization strategy	CS1	Human capital of science and technology in knowledge acquisition	0.4212	0.6013	0.8459
	CS2	Gaining organization's information through market research	0.6681		
	CS3	Maintaining information systems capacity to store knowledge in the organization	0.4596		
	CS4	Power of exchange information systems to keep and storage the information	0.5760		
Value creation	PRD1	Quality of product / service to the customer	0.6438	0.6226	0.8749
	PRD2	Identifying hidden needs	0.6072		
	PRD3	The rapid development of new products	0.5248		
	PRD4	Quick service to customers	0.4303		
	CUS1	Improving capabilities for customers	0.5542		
	CUS2	Personalized Products and Services	0.6864		
	CUS3	Purchasing decision quality by using information	0.7392		
	CUS4	The size of the fair pricing from customers view	0.6686		
	COM1	More investment than competitors in research and development	0.7556		
	COM2	Improving New Product Development Process	0.8239		
	COM3	Facilitate the purchase process compared to competitors	0.7710		
	COM4	Top marketing effectiveness to competitors	0.7490		
Opportunities Abduction	OC1	Former knowledge of entrepreneurs in discovering opportunities	0.7995	0.5208	0.8576
	OC2	Self-effectiveness	0.7559		
	OC3	Regular information searching	0.6646		
	OC4	Social bonds	0.6489		
	OC5	Coaches (guides and experts)	0.4778		
	OC6	Information flow	0.4678		
	OC7	Technological leadership	0.4276		
	OC8	Pioneering at the acquisition of assets	0.7442		
	OC9	Attention to the rate of buyer's change	0.7025		
	OC10	Attention to the customer preferences	0.6761		

As we can observe from the results of t-values, most figures are well above the critical value of 1.96, which validates the overall questionnaire. However, the t-value associated with the third hypothesis is equal to 0.278, which is less than 1.96 and it means the third hypothesis is rejected.

5. Conclusions

Knowledge assets and management strategies of such assets are value creator of a determining agent for long-terms advantage. The performance of firms that are active in economics depends on knowledge and most companies have recognized their large part of competition merits in their own intangible assets. Future firms' competition is based on management and knowledge integration. Opportunity abduction is important completion advantage of companies and capability of their survival especially in high technology industries. This study attempted to investigate different hypotheses on knowledge management and the results have indicated that the strategies of business and saving knowledge did not have a direct effect on opportunity abduction, of course, it does not imply the lack of relationship but also it means the lack of direct relationship in accordance with the views of respondents.

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