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An empirical study of the relationship between knowledge management practices and strategy formulation capabilities

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Abstract

The aim of this paper is to identify the relationship between the knowledge management practices and the strategy formulation capabilities using an empirical research. To this end, a questionnaire form was sent to Top 1000 Big Companies of Turkey. Statistical analyses are employed based on the data gathered from 94 companies and findings of the research confirm the relationship between the knowledge management practices and the strategy formulation capabilities. According to the findings, it can be proposed that companies should pay more attention to the knowledge management practices to support the strategy formulation capabilities.

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Keywords: Knowledge management practices, Strategy formulation capability

1. Introduction

Knowledge management has become a popular subject in the literature since 1990, and many researches have been conducted so far. A number of studies ranging from knowledge management processes to critical success factors can be found in the literature in a wide perspective. Besides that, many empirical researches have been also carried out in different contexts to explain the relationship between knowledge management and some performance related issues. However, the effect of knowledge management on strategic formulation processes has generally been neglected so far. Therefore, an interesting question “Do the knowledge management practices have any effect on the strategy formulation capabilities?” has not a definite answer yet. This study is promising to fulfill this gap by empirical techniques. This empirical study first lays out a literature review about the concepts then provides detailed framework on research design, findings and conclusion.

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2. Literature Review and Hypotheses

There are many models for knowledge and knowledge management practices proposed by a number of institutes such as European Knowledge Management Form 2001 (Mesci, 2011:11). Even in the literature review, it has been accessed many classifications on knowledge management practices, defined conceptually by Gold, Malhotra and Segars, (2001), Soo, Devinney, Midgley and Deering, (2002:130), Barutçugil (2002:72), Desouza and Evaristo, (2003), Liebowitz, (2003), Akgün and Keskin (2003), Uzun and Durna (2008), Kianto (2008) (revised by Shi (2010)), Wang et al.(2012). For instance, even though Gold, Malhotra and Segars, (2001) define these processes as acquisition, conversation, application, and protection, Akgün and Keskin (2003) specify these practices as acquisition, storage, delivery, commitment, and application. In this study, the knowledge model improved by Kianto (2008) and revised by Shi (2010) is accepted as a base, because it is the closest one to our study among the other models, which has been formed by comparing and combining of all models, due to their similarity by the help of a matrix.

On the other hand, Zack (1999) proposed that how knowledge is linked to strategies, is more important than mere knowledge itself. In fact, the question, “how” in this proposition, forms the frame of the knowledge management practices. Soo, et. al. (2002:130) investigates knowledge management as a base of competitive advantage in a similar manner. Proving that, they confirm that there is a positive correlation between the business performance and the knowledge management practices, combination of knowledge creation, storage, organization and application (Soo, et. al., 2002; 130).

Authors such as Mitzberg (1973), Rapp (1973), Hart,(1994), Hard and Banbury, (1994), Slater, Olso and Hult, (2006), Veetil, (2008), Alpkın and Doğan, (2008) indicate that some processes tied to business strategies, effect business performance and completion (Sarbah, Otu-Nyarko, 2014). However, only decision procedures to formulate a strategy cannot explain the complex and changing nature of this view (Hart, 1994). The strategy formation capability is a comprehensive concept which comprised of: mission/goal clarity, situation analysis, comprehensiveness of alternative evaluation and strategy formation process. Mission encompasses organizational purpose, scope of market activities, and competitive distinctiveness. Situation analysis is concerned with the scope of the firm’s environmental scanning and organizational analysis. Comprehensiveness is concerned with the thoroughness with which alternatives are generated and evaluated. Finally, strategy formation process ranges from informal and emergent to formal and deliberate (Slater et. al. 2006).

2.1. Development of Hypotheses

It has been expressed by many authors such as Scarso and Bolisani (2010), Snyman and Kruger (2004) that original strategies for companies can only be formulated by the help of capabilities such as the accumulation of knowledge and resources. In this manner, Zack (1999) says that knowledge about environmental varieties and inner capabilities yield to solve decision problems and determine business opportunities (Sohrabi and Mirali, 2014). Nevertheless, this is the kind of knowledge that competitors have as well. In this concern, Sohrabi and Mirali, (2014) indicate that advantageous strategy formulation can actually be obtained by the help of innovative knowledge as a reaction to turbulences in a market. On the other hand, Zack (1999) says that strategies formulated by this kind of knowledge cannot sustain marketing advantages if knowledge is not produced internally, stored, shared, namely managed, therefore it can be imitated by competitors easily. That is why, the most important point to formulate a strategy providing competitive advantage is intensions and capabilities of which companies are used to manage knowledge organizationally better than their competitors as agreed by Erkut (2009:43) and Zack (1999). Correspondingly, Macmillan and Ihrig (2015) express that these capabilities improve strategy formulation capabilities simultaneously due to knowledge management activities. For example, Koza, (2008:17) expresses that business models and strategies can be formulated much easier by the help of knowledge management practices. In this way, Donoghue, Harris and Weitzman (1991) have concluded in their study that a strategy can yield profit maximization depending on a consistent and clear competitive advantage such as cost effectiveness and product positioning. On the other hand, knowledge management practices that companies place emphasis on, can change due to their internal structures, environmental factors and strategic goals. This change basically has an effect on strategy formulation capabilities. For example, Javernik-Will (2013) has discovered that teams working in civilization or real estate companies in whose markets have low turbulence rates, pay more attention to the socialization and organizational knowledge integration than the others. Yannopoulos (2011) proposes that Internet as a knowledge acquisition, production, sharing and product marketing channel, affects strategy formulation capabilities. Moreover some authors declare that some strategy formulation capabilities are more correlated than the others. For instance Snyman and Kruger (2004) say that there is a relationship

among goals, vision of companies and knowledge practices controlling business performance. In brief, the effects of knowledge management practices on strategy formulation capabilities have not been defined yet.

Theoretical framework and simplified relationship model of this study is composed of two variables. The first one of is the knowledge management practices whose scale is developed by Kianto (2008), revised by Shi (2010), and containing several practices or sub-variables named as a) Knowledge acquisition, b) Knowledge creation c) Knowledge sharing d) Knowledge storage and documentation e) Knowledge application. Second variable is the strategy formulation capabilities whose scale is developed by Slater, Olso and Hult (2006). This variable consists of several capabilities or sub-variables as follows; a) Clarity of mission, vision and goals, b) Systematicity of situation analysis, c) comprehensiveness of alternative evaluation d) Formality of strategy formation process. In this concern, according to the literature review summarized above, a new hypothesis below is defined to profound the correlation between the variables.

H1: There is a positive relationship between the knowledge management practices and the strategy formulation capabilities .

3. Methodology

In this survey, we aim to identify the relationship between the knowledge management practices and the strategy formulation capabilities. In order to test the proposition, a field survey was conducted. A quantitative data collection technique was used in the field survey. In this technique, a questionnaire is chosen as a basic data collection instrument. This approach is appropriate for the basic philosophy of this study declared as a descriptive research (Kuş, 2009;23). As mentioned, the questionnaire form was built based on two scales already used in the another studies. Knowledge management scale derived from Slater, Olso and Hult (2006)'s study while strategy formulation capability scale adopted from Shi (2010)'s study. Additionally, five point Likert-type scales were preferred. The codifications of these points were determined as (1) totally disagree- (5) totally agree. Reliability analyses of the scales are shown in Table 1. Since the scales have already been used in another studies, no more statistical analyses were applied.

Table 1 Cronbach Alpha Values of Scales

Scales	Cronbach's Alpha	Number of Items
Knowledge Management Practices	,918	32
Strategy Formulation Capabilities	,915	18

3.1. Sample and data collection

The methodology of this research is a survey on big manufacturing companies of Turkey. Although SMEs or small companies are not perfectly aware of the concept of knowledge management, İpçioğlu and Erdoğan (2005) claim that big companies in Turkey are well aware of knowledge and knowledge concepts. Concordantly companies in the sample set of this study are chosen from the list of Biggest 1000 Companies in Turkey indexed by İstanbul Chamber of Industry. The questionnaire was sent to the board members, top managers and mid-level managers and got 94 responses so far. The characteristics of the respondents are shown in Table 2.

Table 2 Characteristics of the Respondents

	Values	N.	Percentage
Positions of respondents	Board member	2	2,1
	Top Manager	6	6,4
	Mid-level Manager	86	91,5
Total		94	100
Working years of respondents in companies	Less than 5 years	40	42,6
	4 < <11	22	23,4
	11 < <21	27	28,7
	More than 20 years	5	5,3
Total		94	100

The demographics of companies in the sample set are shown in Table 3.

Table 3 Demographics of the Companies

Demographics	Values	N.	Percentage
Status of being a holding member	Yes	51	54,3
	No	43	45,7
Status of exporting goods	Yes	84	89,4
	No	10	10,6
Number of employee in companies	Less than 250	4	4,3
	250< <1000	48	51,1
	1000< <10000	41	43,6
	More than 10.000	1	1,1
	Less than 10	5	5,3
Age of companies	9< <20	18	19,1
	19< <30	17	18,1
	29< <50	34	36,2
	49< <100	19	20,2
	More than 10.000	1	1,1
Total		94	100

4. Findings

Since the number of the participants applying the questionnaire was adequate, parametric Pearson moments multiplying correlation test was used for analyzing the data. The values obtained in the analysis are shown in Table 4.

Table 4 Pearson Correlations between the Main Variables

		Knowledge Management Practices	Strategy Formulation Capabilities
Knowledge Management Practices	Correlation	1	,595**
	Sig. (2-tailed)		,000
	N	93	93
Strategy Formulation Capabilities	Correlation	,595**	1
	Sig. (2-tailed)	,000	
	N	93	94

** . Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 4, it is obvious that there is a significant positive correlation between the Knowledge Management Practices and the Strategy Formulation Capabilities (r=.595, p<.01). Therefore, findings of the research support Hypothesis H1. We can say that knowledge management practices improve the capabilities of companies to formulate their strategies as suggested by the researchers such as Koza (2008), Macmillan & Ihrig (2015) and Adamides & Karacapilidis (2005).

The correlations between the sub-variables or the factors of the Knowledge Management Practices and the Strategy Formulation Capabilities are shown in Table 5. Some of the correlations would be stated here. For example, the practice of knowledge acquisition has a significant correlation with the clarity of mission, vision, goals (r=.430 p<.01), systematicity of situation analysis (r=.336 p<.01), comprehensiveness of evaluating alternatives (r=.337 p<.01) and the formality of strategy formulation (r=.277 p<.01). This finding supports the theory that information about technology, market and other things should be obtained from the environment of companies to develop the mission, vision and goals, while formally formulating the strategy (Zack, 1999). In another correlation, the knowledge storage not only has a significant correlation with all knowledge management practices, but also has a correlation with all strategy formulation capabilities. These findings support the proposition that the stored data in a company yields an accurate strategy (Scarso and Bolisani, 2010, Snyman and Kruger, 2004 etc.).

Table 5 Pearson Correlations among Sub-variables (factors)

		Knowledge Acquisition	Knowledge Creation	Knowledge Sharing	Knowledge Storage	Knowledge Application	Clarity of Mission, Vision, Goals	Systematicity of Situation Analysis	Comprehensiveness of evaluating alternatives	Formality of Strategy Formulation
Knowledge Acquisition	Correlation	1	,578**	,266**	,542**	,421**	,430**	,336**	,337**	,277**
	Sig. (2-tailed)		,000	,009	,000	,000	,000	,001	,001	,007
	N	94	93	94	94	94	94	94	94	94
Knowledge Creation	Correlation	,578**	1	,433**	,499**	,417**	,396**	,217*	,351**	,281**
	Sig. (2-tailed)	,000		,000	,000	,000	,000	,036	,001	,006
	N	93	93	93	93	93	93	93	93	93
Knowledge Sharing	Correlation	,266**	,433**	1	,441**	,460**	,267**	,226*	,329**	,367**
	Sig. (2-tailed)	,009	,000		,000	,000	,009	,029	,001	,000
	N	94	93	94	94	94	94	94	94	94
Knowledge Storage	Correlation	,542**	,499**	,441**	1	,615**	,490**	,394**	,437**	,446**
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,000	,000	,000
	N	94	93	94	94	94	94	94	94	94
Knowledge Application	Correlation	,421**	,417**	,460**	,615**	1	,492**	,299**	,477**	,370**
	Sig. (2-tailed)	,000	,000	,000	,000		,000	,003	,000	,000
	N	94	93	94	94	94	94	94	94	94
Clarity of Mission, Vision, Goals	Correlation	,430**	,396**	,267**	,490**	,492**	1	,408**	,499**	,457**
	Sig. (2-tailed)	,000	,000	,009	,000	,000		,000	,000	,000
	N	94	93	94	94	94	94	94	94	94
Systematicity of Situation Analysis	Correlation	,336**	,217*	,226*	,394**	,299**	,408**	1	,427**	,464**
	Sig. (2-tailed)	,001	,036	,029	,000	,003	,000		,000	,000
	N	94	93	94	94	94	94	94	94	94
Comprehensiveness of evaluating alternatives	Correlation	,337**	,351**	,329**	,437**	,477**	,499**	,427**	1	,657**
	Sig. (2-tailed)	,001	,001	,001	,000	,000	,000	,000		,000
	N	94	93	94	94	94	94	94	94	94
Formality of Strategy Formulation	Correlation	,277**	,281**	,367**	,446**	,370**	,457**	,464**	,657**	1
	Sig. (2-tailed)	,007	,006	,000	,000	,000	,000	,000	,000	
	N	94	93	94	94	94	94	94	94	94

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

5. Conclusion

This study introduces the concept of strategy formulation capabilities based on the knowledge management practices into the literature through empirical study. Although the study aims to determine the relationship between the knowledge management practices and the strategy formulation capabilities through a limited data set, a significant correlation between two variables is revealed. This correlation indicates that the strategy formulation capabilities could be carried out more effectively utilizing the knowledge management practices. To achieve superior performance, managers must take the nature of the strategy formulation capabilities into account when developing knowledge management practices as well. Consequently, it could be proposed that companies investing in knowledge management practices can develop a better strategy which supported by this empirical study.

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