The Relationship Between Intellectual Capital, Innovative Work Behavior and Business Performance Reflection

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Abstract

Main purpose of this study is to identify the relationship between the intellectual capital owned by the businesses and innovative work behaviors, and to find out how to reflect that relationship on the business performance. Studies carried out so far points out the presence of a positive relation between intellectual capital and business performance (Bontis, 1998; Bontis, Keow & Richardson, 2000; Bontis et al., 2010; Goh, 2005; Erkuş, 2006; Akdağ, 2012). Building up such relation depends on transferring the intellectual capital into innovation. And if the intellectual capital transferred into innovation is managed successfully within the businesses, it triggers performance development (Narvekar & Jain, 2006: 178-179).

Keywords: Intellectual Capital; Innovative Work Behavior; Business Performance.

1. Introduction

Twentieth century was the century of knowledge, innovation and changes. Services sector expanded, and industrial sector stayed in the background as a result of the progress in these fields. In this process, while the financial capital became influential within the businesses, “intellectual capital” concept began to come into prominence. Market value of a business consists of the combination of the owned book value and the intellectual capital (Pike, Rylander & Roos, 2002: 658). Intellectual capital is the total sum of everything known by everybody within a business, and it provides the business with competitive advantage in the market (Stewart, 1991; Bontis &
Serenko, 2004:185). If the businesses with such an important strength direct intellectual capital towards the innovative business behavior, they can survive for longer years and obtain competitive advantage. Innovative work behavior is described as an individual behavior that allows employees to add and introduce new and beneficial ideas, processes and products to their working environment (Mura et al., 2012).

2. Intellectual Capital

The concept of Intellectual Capital was revealed firstly by Kenneth Galbraith in 1969. In the letter that he wrote to economist Michael Kalecki, he stated the significance of intellectual capital by saying “what I have over the last decade, I owe to intellectual capital” (Sveiby, 1998; Bontis, 2002: 8). According to Galbraith, intellectual capital implies the difference between market value and book value of an institution (Hsu & Fang, 2009: 665). Thomas A. Stewart who made term of intellectual capital significantly popular, defined the intellectual capital in his article, named as “Brain power" published in Fortune Journal in 1991 as; "the sum of things known by everyone in businesses which ensures competitive advantage in the market" (Stewart, 1991; Bontis & Serenko, 2004: 185). According to him, every business has knowledge increasing rapidly (knowledge regarding patents, processes, management skills, technologies, customers and suppliers, old fashioned experiences, etc.) and these are intellectual capital of business (Stewart, 1991). Intellectual capital is the brain power of the organization and currency of future (Stewart, 1997: 20; www.nickbontis.com/main.swf).

Intellectual capital consists of three main factors. These are human capital, structural capital and customer capital. The number and name of factors may vary according to researchers. Determination of the factors of intellectual capital is required for measurement and management issues. Besides, when these factors are compatible with each other, this increases the creativity, stimulates the innovation and facilitates the feedback (Erkal, 2006: 51).

2.1. Human Capital

Human capital implies a skill which employees have in order to apply their accumulation of knowledge to business problems (Pirtini, 2004: 29). According to another definition, human capital is knowledge in employees mind. It cannot be expressed clearly and organization members' abstract intellectual knowledge constitutes its essence (Şamiloğlu, 2002: 87; Arıkboga, 2003: 76). Even though human capital is intellectual and imagination power, this will not be wrong to say that it is the heart of intellectual capital (Obeso, Luengo & Intxausti, 2013: 315).

Human capital generally combined of factors such as; technical knowledge, technological knowledge, education devoted time, educational background, professional competence, professional qualifications, occupational appreciated values, attrition rate of staff, psychological assessments, innovation (Arıkboga, 2004: 30; Karacan, 2007: 28-29; Aydemir, 2008: 100-101; Wee & Chua, 2013: 582). Norbert Bensel, human resources manager of Daimler-Chrysler reveals that company employees are the part of company. He mentioned that the employee's motivation, knowledge and skills, innovative skills, their language of customer desire constitutes the raw materials of innovative services. The employees are actually an entrepreneur and their performances are measured by the quality of the achieved goals and results, not by the hours that they spent in the company (Gorz, 2011: 13).

2.2. Structural Capital

Human capital turns to structural capital at the end of a certain period. After Thomas Edison invented the light bulb, established company turned to General Electric later or the creation of Microsoft by Bill Gates are the best examples of transformation of human capital to a structural capital. Business where there is no structural capital will only consist of human capital (Şamiloğlu, 2002: 79-80; Arıkboga, 2003: 93). Structural capital has two main factors. One of these is the intellectual ownership and the other is infrastructure assets. The subcomponents of these factors are indicated at Fig. 1 (Erkal, 2006: 56; Aydemir, 2008: 101).
Structural capital is like the skeleton of the enterprise. It ensures business to be afloat and to develop its aims. Therefore it is in constant interaction with other factors (Eren & Akpinar, 2004: 10). According to Edvinsson, structural capital is everything else left in the business after everyone goes to their home. Even, it is the only permanent intellectual property factor (Edvinsson & Sullivan, 1996: 360; Edvinsson 2002: 108). It can be said as an unmanned source of information (Ahmadi, Ahmadi & Shakeri, 2011: 371). It is easier to have structural capital (Edvinsson, 2002: 108).

2.3. Customer Capital

Every business with customers has the customer capital as well. It serves as a bridge between human capital and structural capital (Karacan, 2007: 34). In simple terms, customer capital is the probability of customers doing business with the company (Stewart, 1997: 99). The ground of customer capital bases on the knowledge which is hidden in external relations (relations with customers, suppliers, government or concerned industrial establishments) of the business. Marketing channels knowledge and customer relations are the main theme of the customer capital (Bontis, 1998: 67).

Customer capital is the most prominent one in intellectual capital factors. Customer capital can be followed easily because of the financial indicators. However, this factor is the one which is directed as the worst, in intellectual capital factors (Stewart, 1997: 202-203). The management of customer capital effectively is closely associated with accurate and sensitive measurement of knowledge, customer relations and the values that they reveal. Direct proportion is the subject between these variables. The factors of customer capital are summarized at Table 1. Bringing the factors of intellectual capital together in a compatible way is expected to trigger the innovative work behavior.

<table>
<thead>
<tr>
<th>Customer Capital Elements</th>
<th>Theme</th>
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<tbody>
<tr>
<td>Supplier capital</td>
<td>The mutual trust, commitment, and creativity of key suppliers</td>
</tr>
<tr>
<td>Alliance capital</td>
<td>Reliable and beneficial partners</td>
</tr>
<tr>
<td>Community capital</td>
<td>An organization’s capabilities and reputation in its surrounding community</td>
</tr>
<tr>
<td>Regulatory capital</td>
<td>Knowledge of laws and regulations as well as lobbying skills and contacts</td>
</tr>
<tr>
<td>Competitor capital</td>
<td>Critical understanding and intelligence about competitors</td>
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</table>

3. Innovative Work Behavior

Change is inevitable in today's business world. To comply with a change or to give a direction passes through innovation. The aims of businesses are not only to give services to their customers, also to increase their quality of life and stimulate the changes (Drucker, 1998: 13). While processing this, skill of innovation is the one which effects their futures significantly. Businesses in their struggle for existence, they mostly focus on their product and they pay attention to innovation.

According to Kırm (2008), innovation is a tool to be different; they are innovative work ideas which gain money to business and comes out by creativity. Through implementation of innovative business ideas, innovative work behavior comes out. Innovative work behavior defined as an individual behavior which provides employees to add new and beneficial ideas, processes and products to be presented (Mura et al. 2012: 2). Innovative work behavior generally includes processes of revealing ideas and their implementation. Innovative outputs are expected to be achieved as the result of innovative behavior. When it is especially met with a problem in the business, in situations when the performance is insufficient or innovation need is perceived, it is thought that the innovative behavior process should be started (De Jong & Den Hartog, 2010: 24).

Researchers working on innovative behavior, deal with stages of innovation process in various aspects. For example, Scott and Bruce (1994: 582) claim that innovative work behavior consists of multistep processes. In each stage of this multistep process, various activities and various individual behaviors are available. Shane assesses the various personal aspects and environmental aspects as main factors in the formation of innovative behavior (De Jong & Den Hartog, 2010: 24). Janssen put forward four stages of innovative work behavior. These are exploration of problem, idea generation, idea championing and implementation of innovative idea (Knol & van Linge, 2009: 361). Kanter examines innovative behavior in three aspects. According to Kanter, the innovative behavior combines of; producing the idea, establishment of coalition and implementation of the idea (Scott & Bruce, 1994: 582; De Jong & Den Hartog, 2010: 24).

3.1. Idea Exploration

Innovation process starts with stage of idea exploration, that is to say, searching of opportunities. In this stage, new ways are searched in order to develop current products and services. Development of business processes and finding new product and services alternatives, are some of the activities performed in this stage. Intensive market researches, feedbacks of customers are evaluated in this stage. Thus, it appears that what kind of innovation in which area needs to be done. After the area and the path to be followed are determined the second step as idea exploration is achieved (De Jong & Den Hartog, 2010: 24).

3.2. Idea Generation

Idea generation; is concerned with development of new product, services or current business processes, process of entering to a new market or solution of problems occurred in business. The purpose of this stage is, to collect and edit the information required for problem solving or increasing the performance. Re-editing of new pieces formed through constant change in a whole, is significantly important in idea generation process (De Jong & Den Hartog, 2010: 24).

There are so many factors to ease the forming of innovative ideas. External factors can be counted as follows; unexpected developments, incompatibility between expectations and the results achieved, needs concerning the process, changes experienced in the sector or market, demographic changes, perception changes, construction of new information regarding business. Although these factors mentioned above are different from each other in respect of danger risk and complexity, they can conflict with each other and create innovation potency (Drucker, 2003: 119-130).
3.3. Idea Championing

This stage includes finding support of the idea, relying on innovative behavior, formation of enthusiastic structure, inclusion of the employees right to the process, ensuring the permanency (De Jong & Den Hartog, 2010: 24). Innovative ideas seem to be charming hoping to fill the gap in the performance. So many business ideas' benefits, meeting the costs of their development and/or their application are unclear in respect of the business. Therefore, innovative ideas should be championed, enriched and brought ready to be implemented by colleagues, leaders and customers (De Jong & Den Hartog, 2008: 7).

3.4. Idea Implementation

An innovative idea can be explored, generated and championed. However, if this idea is not used in any field of the business, than it is useless. The evidence of values of innovative ideas is that they are brought to implementation. Each new idea that hasn't brought to implementation means that they are waiting in Arafat (Levitt, 2003: 174). With the implementation of the innovative idea/prototype which is championed, the innovation process is being completed. The efficiency and productivity of innovative idea can be understood from the feedbacks achieved from customers (Scott & Bruce, 1994: 582). If the employees that work in the implementation stage of idea works as coordinated and integrated, only in that way, they would bring innovation one step forward and routinize in the business (Radaelli et al. 2014 401).

4. Business Performance

Performance is one of the subjects being discussed mostly in management literature. Because, performance measures are very important to draw a road map. It is not possible to make the control of or to manage a thing that can not be measured. Researches regarding business performance measures may be encountered in both academic works and practices (Venkatraman & Ramanujam, 1986; 801). Business performance is an significant component of experimental researches regarding business policies. It is an complicated and multidimensional concept (Dess & Robinson, 1984; 265). Performance measurement and evaluation, provides an opportunity to analyze and to see the success level of an activity of a person, group or institution according to certain criterias (Öncü et al. 2013: 121). Although business performance focuses on economic aspects, it is difficult to receive accurate measure in the researches conducted. The first difficulty is encountered in work units of businesses which operates in many sectors. Second, it is encountered in businesses which operate in private fields. Because, such both types of businesses, it is difficult to reach to data or business owners are sensitive to share the data concerning their businesses (Dess & Robinson, 1984: 265-266).

Business performance can be measured objectively or subjectively according to financial and non-financial datas. While objective measure can be achieved by quantative data, subjective measures can be made through perceptual questions according to competitive or businesses expectations (Yildiz, 2011; 12). In the researches conducted, researchers evaluated objective and subjective data which include so many performance measures such as increase in sales, market share, profitability (Dawes, 1999: 68).

In objective performance measurements financial indicators such as an increase in sales of the businesses, profitability, investment, rates achieved from sales and equity capital. In non-financial business performance measurements known as subjective performance indicators such as market share, number of new product launched to the market, quality of product, marketing activity and technological activity are used. Business performance can be measured by only one of the indicators of objective (financial) or subjective (non-financial) as well as by both of them (Venkatraman & Ramanujam, 1986: 801-804). Measurement methods such as balanced scorecard are used to measure financial and non-financial indicators of business (Kaplan & Norton, 2007: 11). Data regarding these measures are achieved from initially resources (data directly achieved from the business) or secondary resources (data achieved from current net resources). According to Venkatraman and Ramanujam (1986: 801-804), in
measurement of business performance, market and value based measures gives more appropriate results than accounting based measures. However, approaches regarding objective performance measures are seen much dominant and legitimate to reflect the financial aims of business.

5. The Relationship Between Intellectual Capital, Innovative Work Behavior and Business Performance Reflection

In businesses, the end purpose of performance measurement is to make the profitability sustainable. Businesses manage their operational and strategic activities for this purpose. The most significant work within this scope is to develop innovations which create difference between the competitive in the market and attract the customers to the business. It is to benefit from intellectual and physical power of human capital that it has. Innovative efforts are shaped in accordance with customer needs and feedbacks received from them. The innovative ideas coming out are passed through implementation and expected to increase the performance to the extent that it coincides with structural capital of business.

Researches conducted reveal that firstly intellectual capital should be transferred to the innovation in order to establish a positive relationship between intellectual capital and business performance. Intellectual capital that has been transferred to the innovation triggers the performance development if it is directed successfully in the businesses. Innovation which plays an active role especially in customer capital, creates an increase in business performance by being returned to the products and services creating values (Narvekar & Jain, 2006: 178-179; Aydemir, 2008: 95). This situation is indicated at Fig. 2.

![Fig.2. Intellectual Capital, Innovative Work Behavior and Business Performance Reflection](Image)


Researches indicate that intellectual capital factors both affect each other in their own and championing innovative behavior development. Thus, performance which is the end purpose is developed in a positive way. Being successful of the business in its operating field, depends on using its intellectual capital in a right way and skill of developing innovative behavior (Sharabati, Jawad & Bontis, 2010: 114-116; Mention, 2012: 16; Akdağ, 2012: 53).

In the business where performance development is stimulated constantly, innovative work behavior is being discussed. And, in developing the innovative work behavior, to provide togetherness is very important. Since, while
innovative thought or invention is an individual activity alone, making innovation and implementing this innovation is a collective success (Mura et al. 2012: 2).

There is a significant relationship between innovative behavior and intellectual capital. Intellectual capital factors support the innovative activities in order to create innovation and provide sustainable competitive advantage (Obeso, Luengo & Intxausti, 2013: 315). It can fulfill this because of human capital that it has. The human capital in the business takes new ideas appropriate with the structural capital of the business, adopts them, and applies them to its business role, business unit or organization (Akkoc, Caliskan & Turunc, 2011: 389). Giving autonomy and control freedom to employees while they fulfill their works, gives them opportunity to make brain blooming, easing the change of information, accelerating the process of solving problems (De Jong & Kemp, 2003: 194). Employees who have this right can take the risk of being unsuccessful easier than the others and reveals so many innovative ideas. Thus, efficiency of employees’ increases and this efficiency reflects to the business performance (Ramamoorthy et al. 2005: 144-145).

Innovation is one of the fundamental functions of structural capital. Therefore, if innovative behavior is stimulated, facilitated and developed in current structure, the desired purpose will be reached (Knol & van Linge, 2009: 361). The intellectual properties, patents and intellectual property rights are accepted as input for the innovation process and to be the determinant of innovation behavior outputs (Mention, 2012: 20). Dominant culture and supportive climate imply whole of informal rules. The employees ideas are to the extent that they have support by everyone, it is easier for them to develop innovative behavior and increase the performance (De Jong & Kemp, 2003: 194).

Customer capital can effect individuals and organizations in so many various ways. Customer capital which includes the internal and external contacts of the business implies the reasons of employees’ skills in order to learn and make innovation (Fan & Lee, 2011: 173). In here, mutual effectiveness is very strong. Due to information share, the businesses provides the customers to evaluate their benefit levels that they achieved and also can affect them (Mura et al. 2012: 4). Businesses that can manage customer relations effectively, produces innovative ideas responses to customer demands (Kheng, June & Mahmood, 2013: 50).

Even the smallest change in customers’ demands can influence the firms sales significantly. Changes in demand stimulates the innovative behavior and with the demand of different products and services by customers, employees making connection with customer demands and innovative ideas in order to meet the demand (De Jong & Kemp, 2003: 195). To make not what the customers demanded, to make better than they demanded and to develop a customer focused behavior model in accordance with this thought, is very beneficial for the performance of firm.

6. Conclusion

A transformation is being experienced in the whole world. With this transformation, access to new technologies is getting easier, improvement depending on process is being observed in product and service production and a high increase is occurring in the efficiency. Besides, information which has great importance today, may turn to a worthless stack tomorrow. Therefore, the effectiveness of intellectual capital that is the resource of knowledge can be felt in every area. Although the effectiveness of intellectual capital is high, it is not enough by alone. In the literature conducted, it is seen that intellectual capital is being transferred to the innovation and thus leads performance increases. Briefly, employees’ intellectual capital based on innovative work behavior has vital importance for many businesses.

The survivals of businesses and to be able to compete are getting more difficult day to day. Business can reach to high performance that they need by; directing intellectual capital and innovative work behavior in harmony. Intellectual capital which can turn into innovation within the business carries property of increasing business performance. The effective management of intellectual capital plays a key role in order to ensure competitive
advantage. It also secures sustainability of competitive advantage. In business where intellectual capital is being directed effectively, innovation and innovative activities can occur easier also by the effect of knowledge share. Thus, increase is seen in patents and processes, new products and services are submitted to a market to meet customer needs. Briefly, innovative work behavior which comes out by human capital with contribution of structural capital, effects the customer capital and also being effected from it. Mutual effectiveness affects the performance development as a result.

References


