The effects of organizational culture and innovativeness on business performance in healthcare industry

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Abstract

One of the most important research questions in the field of strategic management is the performance differences between companies that compete with each other in product/service market and the way to sustain competitive advantage. Competitive advantage is reflected in superior economic performance compared to rivals. Innovation is one of the most important capabilities to differentiate products, services, procedures, and overall our business in order to gain superior performance outcomes. Recent studies reveal the importance of organizational culture in order to be innovative and positive effects on business performance. Today, healthcare industry also became more competitive through new liberal policies. Thus innovativeness is a necessity to reach competitive advantage. In this context, the aim of this study is to identify the effects of organizational culture and innovativeness on business performance. To reach this aim a questionnaire survey is performed among the 332 employees of the 65 private hospitals. The database analyzed by SPSS v.15 statistical program using multivariate data analyses techniques through developed hypothesis. According to the findings of this research supported the positive effects of innovation and organizational culture on the business performance in context of healthcare industry.

Keywords: Organizational culture; innovativeness; healthcare industry; business performance.

1. Introduction

Developments in information and communication technologies, increase in the variety of products/services according to the customer expectations and intense global competition are the most important dynamics in today’s economy. Every firm uses some strategies whether explicit or not while competing to gain competitive advantage in this harsh environment, and in the competitive struggle of each product/service market, some firms are successful with achieving competitive advantage while others fail (Walker, 2009: 1). Competitive advantage is reflected in superior economic performance compared to rivals. Thus, one of the most fundamental questions in the field of strategic management field is why some firms in the same industry have systematically performed better than others (Crook et. al., 2006; Teece et. al., 1997).

In business world, it is considered that usually a well planned strategy brings the company success. This idea led many organizations to imitate the strategies of successful businesses. However, time is changing, technology is changing, market is changing and competition rules are changing. So, a firm’s strategy must shift to meet them.

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(Walker, 2009: 15), and this changing must be continuously (Fleisher & Bensoussan, 2003: 2). Therefore, it has already emerged that, to imitate competitors’ strategies is not the only way to compete and to gain competitive advantage. According to Porter’s (1996) perspective, the strategy is based on unique activities. To be successful against rivals, a business has to select different set of activities and should provide a unique value. The sustainability of this competitive advantage depends on obtaining the economic value which was created by competitors’ capabilities (Fleisher & Bensoussan, 2003: 2).

According to Porter, one of the generic strategic alternatives of firms to access long-term objectives is differentiation. The essence of this strategy is to maintain uniqueness for customers and despite low-cost competitors, motivate their customers to pay higher costs. With the properties, the unique product tries to catch customer interest with image, technology, and service or production system. Porter offered that, the ideal is differentiation in various sizes and if it happens, this would be an applicable strategy to obtain above-average returns in the market (Porter, 1980: 37). Differentiation strategy requires collaborative efforts of strategy, logistics, manufacturing and marketing functions. Companies applying this strategy investigated the ways and methods to make them different from competitors in the eyes of customers. Differentiation is specific in every industry. Thus, in general, differentiation is creating something which is considered as unique in all sectors and differentiating the product or service offered by the business (Porter, 1985: 14-15). In this context, while Porter (1985) arguing that companies can catch competitive advantage with innovation, on the other hand Schumpeter suggested that entrepreneurs would tend to use technological innovation (new product/service or a new process to accomplish this) to achieve strategic superiority (Tidd et. al., 2005: 7).

According to Resource-based theory, in order to gain competitive advantage, businesses need to create unique and valuable capabilities in the eyes of customers. To sustain created competitive advantage preventing imitation and substitution of these capabilities is required (Barney, 1991) in order to protect the firm’s returns from the effects of competition (Walker, 2009: 50). When we considered together Porter’s view on competitive differentiation and innovation strategies and the views of Resource-based theorists’ on substitution and imitation, innovation is found to be the most important business capability which creates valuable, rare, inimitable (or costly imitable) and non-substitutable product/services. Today it is widely accepted that innovation capabilities is vital for the firms to challenge with today’s harsh competitiveness in the market by gaining competitive advantage and by sustaining those advantage.

It is widely acknowledged that technological changes and innovation are major drivers of economic growth and lie at the very heart of the competition process. Until recently empirical studies on the subject of innovation have almost focused exclusively on product innovation and manufacturing industries. However, today, service industries capture increasing importance in GDP’s of many developed countries. Innovation in services has in fact become a topic of increasing interest among economists and scholars of technological change. The health sector itself, be regarded as a service process so considering this, it is offered that innovation is the ability to take place in the market with newly developed services and products with high level of product differentiation (Baker & Sinkula, 1999). According to the literature on the EU and OECD, as a process of innovation is refers to‘ transforming an idea to a marketable product or service, new or improved manufacturing/distribution method or new social service method,’ and at the end set out of ‘marketable, a new or improved products, methods or services’ (OECD, 2005).

To the success of business organizations, employees’ contributions are very important. In innovation-based strategies, it has a great importance for employees to work with endeavor by combining their own personal goals and organizational goals. Today, continuous innovation is becoming a necessity if firms want to stay competitive. Due to rapid and continuous environmental changes and intense competition, planner perspective to strategic management left the place to strategic orientations (Berthon et. al., 2004). Strategic orientations differ from strategic planning by emphasizing on strategic intent in every phase of the management of the firms, and by implementing it into the firms’ culture. On the other some researcher offer that different factors influence the rate of innovation in a firm, among which corporate culture has often been recognized among the most important factors (Nacinovic, 2009). So, we can say that an innovatively focused organizational culture can contribute to the firms to gain competitive advantage by superior performance results that coming from innovation.

Healthcare industry is getting more competitive due to liberal policies of governments in Turkey. Turkey’s annual healthcare spending in 2009 was USD 38 billion, representing 6.2 percent of total GDP. Both public and private
sector hospital numbers have been growing strongly in recent years. As of 2008, the number of hospitals and total number of beds are 1,350 and 188,065, respectively (Deloitte, 2010). Despite the importance in national economy, healthcare industry is typical in service industries. We expected that an innovation focused organizational culture can facilitate to reduce costs and to increase incomes. Thus, this study aims to examine the organizational culture types (adhocracy, clan, hierarchy and market culture) of healthcare industry in Turkey and the effect of organizational culture and organizational innovation capabilities (process innovation, product innovation, marketing innovation, behavioral and strategic innovation) on organizational performance. In order to reach this aim a questionnaire survey was performed among the private hospitals in Istanbul, İzmir, Bursa, Antalya, Samsun and Kocaeli provinces. A total of 332 questionnaires were collected from employees of 65 hospitals which have given permission to our research. The database analyzed by SPSS v.15 statistical program using multivariate data analyses techniques through developed hypothesis.

In this context this study consists of four parts. In the following part organizational culture and organizational innovation concepts will be explained according to the literature. Then the hypotheses developed about the effects of current levels of healthcare institutions within the framework of these concepts on business performance will be given. Sampling, data collection, scale validity and reliability, and analysis of the research question can be seen in the third part. Finally, the paper will be ended with discussing and synthesizing the empirical findings, and implications to researcher and professionals will be in this last part. We expected that the results of this study will bring different perspective on performance dynamics of organizations in competitive and increasingly liberalized healthcare industry.

2. Literature Review and Theoretical Frame Work

2.1. Organizational Innovativeness

Innovativeness, is a key capability which provides competitive advantage in healthcare sector as well as in many other industry. Innovation, in its simplest form, is defined as commercialization process which is converting the idea to product/service, newly improved production/distribution method or a new social service. As such, innovation is the realization of a new or improved product (goods or services) or process, a new marketing method or organizational method in internal applications, workplace organization or external relations (Tirupati, 2008: 105). For innovation, product, process, marketing method and organizational method must be new or significantly improved for the company. In this context, innovation activities cover newly developed or adapted products, processes or methods (OECD and Eurostat, 2006: 50).

In general, innovation activities in a business are carried out with technical and administrative areas and products and processes (Cunliffe, 2008: 106). According to some authors, the concept of innovation which can be evaluated in two categories as product and process innovation goes beyond this basic classification and examined under four classes (product, process, marketing and organizational innovation) in Oslo Handbook (OECD, 2005). The innovation which is regarded as the main source (Xu et. al., 2008: 340) of competitive advantage and developing the competitiveness of enterprises is examined under the dimensions of product, process, marketing, strategic and behavioral innovation put forward by Wang and Ahmed (2004).

Product innovation describes technical details, components and materials, legal software, ease of use or other functional features which have been developed according to the characteristics and planned use or describes entirely new product or services (OECD, 2005). Besides, Wang and Ahmed (2004) described product innovation as the significance and novelty of the new products which are offered in the market at the right time. Product innovation can take advantage of new knowledge or technology; hold the use and combination of existing knowledge and technology. Small changes in design cannot be regarded as product innovation. Hernard and Szymanski (2001), when addressing the concept of product innovation, suggested evaluating products and services together.

According to Wang and Ahmed (2004), product innovation highlighting the novelty of the products on the other hand, marketing innovation emphasizes the novelty of the market-oriented approaches. They mentioned that, market innovation can take place in an entirely new market or a section in an available market. Marketing innovation is an application of a new marketing method covering the major changes in the design or the product packaging, product pricing or positioning (OECD, 2005). Market innovation aims to improve target customer needs, create new markets
or repositioning the company product in the market. Marketing innovation is much related with pricing strategies, product packaging design features, product placement and promotion activities.

The same researchers describe process innovation as the introduction of new production methods, management approaches and new technology which are used for improving production and management processes. Based on Oslo Handbook (OECD, 2005), it is the application of new or modified production or delivery method or new and suitable intermediate steps. Therefore, process innovation means to be innovative in any required steps related with the creation and development of the product. Implementation of this method contains important developments in technique, equipment or software. The concept of process innovation explains how scope may be wider while handling the innovation concept and due to the possibility of conflict, how difficult and may be misleading.

As Damanpour and Evan (1984) also reported that, innovation, requires contribution and support of all stakeholders and, therefore requires a conception of participatory management. This expression highlights the important point while exemplify the relationship between organizational culture and innovation. Actually, the concept of culture often used in literature as innovation culture. In this context, behavioral innovation may be at individual, team or management levels, helps to shape the innovation culture and emphasizes group dynamics based on synergy (Wang & Ahmed, 2004).

Strategic innovation defined by Markides (1998) as re-conceptualization of the relevant subject of a job and changing the game dramatically in another direction. Therefore, we can say that, it struggles with status quo and creates environment that enables such efforts. Wang and Ahmed (2004), on the other hand, expressed that a particular gap in a position of the market facilitates the awareness of strategic innovation and to take advantage of it. The same authors mentioned that the focus of strategic innovation is the evaluation and development of competencies of an organization in order to overcome organizational objectives (Wang & Ahmed, 2004).

In the literature, there are many studies demonstrating the positive relationship between innovation and organizational performance (eg. Bobillo et.al., 2006; Cainelli et. al., 2004; 2006; Cefis & Ciccarelli, 2005; Dannels, 2002; Siqueira & Cosh, 2008). In our country, innovation by considering various aspects, has been subject to a lot of empirical studies and parallel results were obtained in the international literature (eg. Imamoğlu et. al., 2011; Özen & Bingöl, 2007; Ulusoy et. al., 2008; Yavuz, 2010). Based on these foresight and findings from the literature, the following hypotheses were developed;

\[ H1: \text{Innovation types are positively associated with quantitative business performance} \]
\[ H2: \text{Innovation types are positively associated with qualitative business performance} \]

2.2. Organizational Culture

The concept of culture has principally stemmed from the study of ethnic and national differences in the varied disciplines of social sciences. The concept of organizational culture has used by management and organizational scholars over the last decades. Schein (1997) defined organizational culture as a pattern of basic assumptions-invented, discovered, or developed by a given group as it learns to cope with the problems of external adaptation and internal integration. Based on the literature the concept of organizational culture has four key elements. First, organizational culture is a shared phenomenon (Schein, 1997: 8; Wilson, 2001; Baumgartner, 2009). Second, organizational culture has visible and less visible levels (Schein, 1997: 17; Wilson, 2001; Baumgartner, 2009). Third, each new member of the organization learns the culture (Wilson, 2001; Baumgartner, 2009). Finally, culture tends to change slowly over time (Wilson, 2001; Baumgartner, 2009).

According to Cameron and Quinn (1999), culture defines the core values, assumptions, interpretations and approaches that characterize an organization. In general, it has been claimed by many researchers that, success-oriented organizational culture increase organizational effectiveness (Deal & Kennedy, 1982; Furnham, 1997; Kotter & Heskett, 1992; Peters & Waterman, 1982; Schein 1997; Denison, 1990). The effects of organizational culture on organizational performance Under the framework and different constructs of several studies, (Gordon & DiTomaso, 1992; Ogbonna & Harris, 2000; Poll, 2000) is tested even it is determined that, organizational culture created competitive advantage (Scholz, 1987; Kretting & Frost; 1985). In some studies in our country, (Eren et. al., 2003) it
has been identified that culture has an effect on organizational performance through internal integration and external focus.

Cameron and Quinn (1999), in their study, investigated the contribution of developed organizational culture on organizational effectiveness of organizational success. In that study, it is claimed that each of the organizational culture types may contribute to organizational success depending on the needs of the external environment and strategic orientation of organization. Organizational performance is taken as dependent variable for this study therefore organizational culture types in Cameron and Quinn (1999) typology were considered as independent variables.

According to Cameron and Quinn (1999) typology, culture in an organization can be seen in four different types where one axis with internal focus at one end and external focus at the other end cut other axis with flexibility and dynamism at one end and stability and control at the other hand. In ‘Competitive Value Model’, the four dominant culture types – hierarchy, market, clan and adhocracy emerge from the framework.

Clan (cooperative) culture is shaped between the dimensions of organization focus and flexibility/dynamism. Organizational commitment is a culture type which has seen in organizations, acting as family and has social features as trust, solidarity and unity. Successful Japanese firms with effective team structure are examples of this culture. Hierarchy (control) culture is located between internal organization focus and stability/control dimensions. This is an organizational culture type which the leadership is effective cause it is in mechanical and bureaucratic organizations that give importance to order and rules. This culture can be seen in global companies like McDonald’s and Ford Motor Co. leads to worker alienation, purposelessness and decrease in the sense of autonomous. Although there is an external focus/orientation, Market (competitive) culture occurs at the time of stability and control. Employees in these culture types are success-oriented. They give importance to personal interests rather than organizational goals and emphasis on the concepts of planning, performance and efficiency. Global businesses which have effective relationship between suppliers, customers and external stakeholders are examples of this organizational culture. Adhocracy (creative) culture with its external-oriented and dynamic structure refers to the culture of an organization in entrepreneurial, flexible, innovative and creative areas. Employees can take the initiative, supported with new discoveries and freedoms so they feel satisfied, happy and successful in this environment (Berrio, 2003, Cameron & Quinn, 1999; Erdem, 2007). Organizations, doing business over the internet which is defined as ‘new economy’, using advanced technology are examples of this culture. Based on these foresight and findings from the literature, the following hypotheses were developed;

\[ H3: \text{Organizational culture is positively associated with quantitative business performance} \]
\[ H4: \text{Organizational culture is positively associated with qualitative business performance} \]

3. Methodology

3.1. Measurement Instrument

To test the above hypotheses, multi-item scales adopted from prior studies for the measurement of constructs were used. Those scales used in this study are formed by literature review from recent and generally accepted sources which are accepted in the international arena. They used in previous studies related with the area and formed from the survey questions which their validity and reliability is approved.

Innovativeness is the measure of the degree of newness of an innovation. According to the literature most seen classification of innovativeness is product and process innovation. In current research, in order to measure organizational innovation, 18-item Likert scales of Wang and Ahmed (2004) and Jansen et. al. (2006) is given to the participants. 7, 14, 15 and 18th questions of the scale is reverse coded and it is indicated in the questionnaire. This scale is composed of product, process, market, behavioral and strategic innovation sub-components (Wang & Ahmed, 2004).

Classifications of organizational culture vary according to the researches’ choices of theoretical models based on their studies. The equilibrium between pressures of organization’s external environment and the dynamics of internal environment are the basis of classification in our study. Thus we decided to use the revised model of the Organizational Culture Assessment Instrument (OCAI) based upon the Competing Values Framework (CVF)
(Cameron & Quinn, 1999; Cameron et al., 2007; Helfrich et al., 2007; Goodman et al., 2001; Öztrop, 2008; Quinn & Kimberly, 1984) to determine the cultural dimensions. The CVF clarifies the complex nature of organizational culture and provides a taxonomy of cultural values that reflect preferred structural characteristics and desired modes of operation. The structure of CVF was designed to differentiated organizational culture according to two dimensions: internal/external focus, and stability/flexibility. Using these two dimensions, four quadrants occur as representing Clan (team), Adhocracy (entrepreneurial), Hierarchical, and Market (rational) cultures.

We took into consideration the output of business performance within two factors that evaluate the quantitative and qualitative performance of the businesses. Those performance scales used in this questionnaire are taken from most commonly used scales in the literature (Venkatraman & Ramanujan, 1986; Baker & Sinkula, 1999; Antoncic & Hisrich, 2001; Zahra et. al., 2002; Chang et. al., 2003; Rozenzweig et. al., 2003) and also taken form models previously applied on Turkish companies (Acar, 2010; Acar & Zehir, 2009; Altındağ et. al., 2011; Zehir et. al., 2010).

These scales that were used for the first time in Turkish was translated by the authors, then two bilingual academics back-translated the instrument. Through interviews with various academics and managers, it is questioned whether there is disorder or ambiguity of the expression. Any discrepancies were rewritten to be cleared and then back-translated once again (Brislin 1970). In the final stage, with using 5-point Likert-type scales ranging from “strongly disagree” (1) to “strongly agree” (5), the final shape was given to scale and applied to corporate executives.

3.2. Sampling

The aim of this study is to reveal the relationships among innovativeness, organizational culture and business performance. In order to test the developed hypothesis current study was carried out in healthcare industry in Turkey. In this research, questionnaire survey technique has been used as a method of data collection. First, private hospitals are chosen as universe of our research. With the purpose of getting appropriate data to test the research model the research universe is narrowed in respect of geographical regions. In this stage we selected private hospitals in İstanbul, İzmir, Bursa, Antalya, Samsun and Kocaeli provinces due to availability of the data easily. This regions occupies nearly 1/3 portion of Turkey’s population. We applied to the hospitals by random selection and a total of 65 hospitals accepted to be subject of this research. We sent the questionnaire forms with a cover letter. We eliminated some questionnaire because of faulty inputs. Then a database was formed from the returned questionnaires of 332 employees of those 65 hospitals.

After gathering the data, the basic features of the data were described with statistics to provide simple summaries about respondents. According to the descriptive analysis, our sample is a group of young (mean 31,86; %85,9<40) and educated people. Thus, it is considered that this sampling will positively affect the accuracy of our research, due to their basic knowledge about the concepts of the research. Some descriptive results are given in the Table 1 below.

<table>
<thead>
<tr>
<th>Table 1: Descriptive statistics of the sample</th>
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<tbody>
<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
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<tr>
<td>Total</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Status</td>
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<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Doctor</td>
</tr>
<tr>
<td>Manager</td>
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<tr>
<td>Administrative staff</td>
</tr>
<tr>
<td>Nurse</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Primary school</td>
</tr>
<tr>
<td>High school</td>
</tr>
<tr>
<td>Under graduate</td>
</tr>
<tr>
<td>Graduate and higher</td>
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<tr>
<td>Total</td>
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</tbody>
</table>
3.3. Scale Validity and Reliability

In this empirical study, all items and components are tested by comprehensive reliability analyses. At first, it’s analyzed the alpha reliability test; overall scale reliability coefficient has been determined a satisfactory level such that $\alpha = 0.984$; this value is quite over the recommended 0.70 threshold (Nunnally, 1978; Nunnally & Bernstein, 1994). Reliability coefficients of the main scales in our research model are identified as: Organizational Culture scale 0.952, Innovativeness scale 0.970 and Business Performance scale 0.963 respectively.

In the variable analysis, there is no variable founded which has low value of corrected inter-item correlation, squared multiple correlation and/or impair the scale reliability. In the exploratory factor analysis procedure, Kaiser-Meyer-Olkin (KMO) and Bartlett’s test results were examined. The results showed that, data are suitable for the principle component analysis (PCA), reliable and validity of the construct is provided. Then, the principle factor analysis was applied to identify the components of the factors having eigenvalues greater than one. During the factor analysis, varimax rotation was applied with taking into account the generalization of the results. In the data reduction procedure, those variables having a factor load of 0.500 and above were taken into the account. This application maximizes the sum of the variances necessary for the factors matrix (Hair et al., 1998: 110).

According to the results of PCA one item (I08) from innovativeness scale and three items (P02, P03, P08, P19) from the business performance scale are excluded because any of them not loaded under a component. According to the results of the PCA, all other variables are separated to their estimated factorial components without any cross-loading. Factor loading values are found out between 0.538 and 0.918 (KMO: 0.953; $p<.000$; Total variance explained: 74.788) for Organizational Culture, 0.579 and 0.812 (KMO: 0.961; $p<.000$; Total variance explained: 77.327) for Innovativeness and 0.648 and 0.840 (KMO: 0.950; $p<.000$; Total variance explained: 67.306) for Business Performance scales. After putting forward the factor structure of the research model, it is observed that reliability coefficient of all sub-dimensions and related variables of the model are above Nunnally’s (1978) threshold value of 0.70.

Before examining the relationships among the factors in our research model, as one of the most important criteria in which we would evaluate the validity of the results, the data was examined to determine if it had normal distribution. For this purpose, the scale structure that was obtained with factor analysis was evaluated with the Kolmogorov-Smirnov test, and it was seen that $t$ values of all of the variables were at the sufficient level for our sample ($t_{min} = 3.702; p<0.001$). These findings prove that the distribution of the data is statistically normal. Furthermore, considering the fact that the validity and the reliability of the items we used in the research scale have been tested in previous studies the confirmatory factor analysis procedure was not applied.

3.4. Test of the Research Questions

This study sought to examine which organizational culture and which type of innovation is mostly seen in Turkish healthcare industry, and is there a direct relationship between innovativeness and business performance and between organizational culture and business performance. According to the descriptive statistics it is found out that the dominant organizational culture in the Turkish healthcare industry is Hierarchy (mean= 3.5205), and it is followed by Clan (mean= 3.0658) and Adhocracy (mean= 3.0243) cultures. On the other hand the most seen innovation type is Product innovation (mean= 3.2036), and it’s followed by Behavioral innovation (mean= 3.1336) and Marketing innovation (mean= 3.1199). These results found out through aggregating the data to the firm level.

Based on the psychometric properties of the constructs it was determined that the measures were sufficient and could be employed in hypotheses. The test of the relationships among the concepts of the current research is started by correlation analysis. As a result of the analysis, it is founded that, all of the variables in the research model have statistically significant ($p<0.01$ 2-tailed) mutual relations with each other. According to the results of correlation analysis strong correlations are between these dimensions: Process Innovation and Quantitative Performance, Marketing Innovation and Qualitative Performance, Strategic Innovation and Qualitative Performance.

To reveal the direct relationships between main factors that suggested in the hypotheses linear regression analysis was used. First, the linkages between innovativeness and business performance are tested. It is found that product, process and behavioral innovativeness sub-dimensions have positive effect on Quantitative Business Performance.
Thus, H1a, H1b and H1d hypotheses are supported, except the others. On the other hand it is found out that process, marketing and behavioral innovativeness sub-dimensions have positive effect on Qualitative Business Performance. These findings supported H2b, H2c and H2d hypotheses. The results of hypotheses 1 and 2 can be seen in Table 2.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Quantitative Business Performance (H1)</th>
<th>Qualitative Business Performance (H2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>T</td>
</tr>
<tr>
<td>(a) Product</td>
<td>.399***</td>
<td>31,658</td>
</tr>
<tr>
<td>(b) Process</td>
<td>.663***</td>
<td>50,943</td>
</tr>
<tr>
<td>(c) Marketing</td>
<td>.005</td>
<td>341</td>
</tr>
<tr>
<td>(d) Behavioural</td>
<td>.032*</td>
<td>2,182</td>
</tr>
<tr>
<td>(e) Strategic</td>
<td>-0.29</td>
<td>-1,913</td>
</tr>
</tbody>
</table>

R²: 97.9; F: 3033.953; p<0.001

Then the linkages between organizational culture types and business performance are tested. After performing a regression analysis it is found out that adhocracy, clan and market types of organizational culture have positive effects on both quantitative and qualitative performance of the business. There is no direct relationship between hierarchy culture and business performance could find. Thus, H3a, H3b, H3d, H4a, H4b and H4d hypotheses are supported. The results of hypotheses 3 and 4 can be seen in Table 3.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Quantitative Business Performance (H3)</th>
<th>Qualitative Business Performance (H4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>T</td>
</tr>
<tr>
<td>(a) Adhocracy</td>
<td>.412***</td>
<td>7,544</td>
</tr>
<tr>
<td>(b) Clan</td>
<td>.225***</td>
<td>4,087</td>
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<td>(c) Hierarchy</td>
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<td>-.486</td>
</tr>
<tr>
<td>(d) Market</td>
<td>.281***</td>
<td>5,537</td>
</tr>
</tbody>
</table>

R²: 64.7; F: 148,040; p<0.001

4. Discussion and Conclusion

The present paper tries to empirically explain the relationships among innovation, organizational culture and business performance in healthcare service firms. According to the descriptive statistics it is found out that the dominant organizational culture in the Turkish healthcare industry is *Hierarchy* and it is followed by *Clan* and *Adhocracy* cultures. On the other hand the most seen innovation type is *Product* innovation, and it’s followed by *Behavioral* and *Marketing* innovations.

From a theoretical point of view, a positive impact of innovation on the business performance is expected. According to the findings we can say that to gain better quantitative results hospitals should emphasize on *Product* and *Process* innovation. On the other hand, according to the employees of healthcare services hospitals can be reach qualitative results through innovative activities in *Marketing*, *Behavioral* and *Process* phases. To interpret the results of regression analysis it’s needed to consider with general findings about which type of innovation seen in our sample most. So, if most seen type is *Product* innovation, it’s not surprising to find positive effects on quantitative performance. However, the interaction of the customers to the offered services are not much than the other service industry firms, it should be considered that customers will be affected by offering different procedural and behavioral solutions. Also, the silent voice of the respondents yield the same opinion and offered that when hospitals be innovative in processes and behaviors to the customers, maybe to the employees, the positive performance results will be taken both in qualitative and quantitative performance.

In an evaluation of studies of organizational culture and organizational performance, it emerged that organizational culture is directly linked to the performance of an organization (eg. Denison, 1990). Our study provides additional empirical evidence from healthcare services in Turkey to the research stream on innovation and organizational culture. Ogbonna and Harris (2000) offer that an internally oriented organizational culture may prove comparatively disadvantageous when compared to the advantages possible with externally oriented cultures. Indeed, according to the findings of the analysis of the data came from our respondent emphasized that it’s hard to reach superior performance only in hierarchical organization. However, these results also supported the results of Ogbonna
and Harris’ (2000) study. But current study demonstrates that Turkish healthcare organizations are mostly in a hierarchical culture. In this sense, in the case of internally oriented cultures, little evidence is found to support claims of a link between cultural strength and performance. This paradox should be the main problem to solve by professional in healthcare industry in Turkish context. However, in today’s competitive environment it’s not incorrect to say that external oriented firms tend to gain superior business performance in respect of both quantitative and qualitative results than others. With other words, competitive and innovative cultures which are sensitive to external conditions have a strong and positive impact on organizational performance (Ogbonna & Harris, 2000). So the opinions of Barney (1991) who argues that for organizational culture to provide a source of sustainable competitive advantage, the culture must be adaptable to external contingencies, is supported again by our results. On the other hand hospitals should be flexible to respond the customer expectations. So, it’s advised to professionals of this industry to chance the organizational culture of their hospitals to the best appropriate type of organizational culture for healthcare industry, adhocracy.

Based on assessments of literature review, employees have accepted innovation approaches as basic values and norms and it is also suggested that if innovation approaches have spread as a culture within the organization, this will affect the business performance. Therefore, the common effects of organizational culture and innovation on business performance are expected to be greater. However, that study is remained outside the scope of this paper and left for further studies. Additionally to solve the confusing results on the relationship between innovation types and organizational performance is transferred to the future studies.

References


