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Editorial

THE RELATIONSHIP BETWEEN INNOVATIVENESS AND ORGANIZATIONAL PERFORMANCE PERCEIVED BY HEALTHCARE MANAGERS: A STUDY IN A HEALTHCARE GROUP

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Abstract: Increased patient expectations from healthcare services, intense competition in the healthcare sector, and the necessity of providing high-quality healthcare service have made innovativeness and performance more important for healthcare organizations. Therefore, healthcare managers' perception of relationship between innovativeness and performance is required to be examined. The aim of this study is to investigate the relationship between innovativeness and organizational performance through the lenses of healthcare managers. The study was done with healthcare managers working in 12 hospital which belong to a healthcare group operating in Turkey. 173 questionnaires were collected, and correlation and regression analyses were performed in order to determine the relationship between innovativeness and organizational performance. According to the analyses results, there is a statistically significant and moderately positive relationship between innovativeness and organizational performance. It is also found that innovativeness affects organizational performance significantly and positively as well.

Key Words: Innovativeness, Performance, Healthcare Group

Introduction

Globalization has brought major changes in the business world. Especially, technological, economic, and social changes have caused businesses to face with a highly competitive environment. Today, business organizations deal with crucial topics such as competing with rivals, operating with lower levels of profit, satisficing customer expectations, and sustaining survival. Therefore, increasing organizational performance becomes important more than ever. Organizations increasing their performance are more likely to gain competitive advantage against their rivals. In addition, one of the most important ways of gaining competitive advantage is based on innovation and innovativeness. Similarly, healthcare organizations also operate within a highly competitive environment, which causes healthcare organizations to rely on innovation in order to increase organizational performance.

Innovations increase organizational performance through providing sustainable competitive advantage (Huang et al., 2016). Today, when the global leader firms are examined, it is clearly seen that each major firm involves significant innovations. More importantly, being on the top is highly relied on being innovative as well. In this study, it is aimed to examine the relationship between innovativeness and organizational performance.

Theoretical Background

Innovation

The very first definition of innovation was provided by Schumpeter in 1934. He defined innovation as developing new products, new processes, new supplies, new markets, and new ways in organizational structure (Giniuniene and Jurksiene, 2015). According to Oslo Manual, innovation is defined as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. According to Oslo Manual, there are four types of innovation: (1) product innovation, (2) process innovation, (3) marketing innovation, and (4) organizational innovation. Product innovation is based on introducing new or significantly improved products or services to the market. Process innovation is based on introducing new or significantly improved production or delivery method. Marketing innovation is based on introducing new or significantly improved product design, packaging, product positioning, promotion, or pricing. Lastly, organizational innovation is based on the implementation of a new organizational practice in the firm's business operations, workplace organization or external relations. (OECD and Eurostat, 2005).

Innovation is an important competitive strategy, which emphasizes developing world-class products and services that are permanent in global markets. In addition, innovation provides significant contributions to business growth and sustainable competitive advantage (Kalmuk and Acar, 2015). Innovative firms constantly perform market research in order to take the new opportunities in the market, and they collect customer data to understand highly changing customer preferences and trends (Tsai, 2013). Moreover, innovative firms disseminate the information obtained from market research within the organization as well. However, innovation activities of the firms may show variation across industries depending on the

financial resources, demands, and opportunities (Walker, Chen and Aravind, 2015). Innovation always involves risks, and it does not always guarantee success (Leal-Rodríguez et al., 2015).

In healthcare organizations, significant innovations have been implemented through the advanced technology and scientific studies. Innovation in healthcare sector involves new implementations, ideas, and products and services based on improvements related to diagnoses, treatment, medical support, prevention, research and development, quality, safety, and cost minimization (Omachonu and Einspruch, 2010). Applying innovation, especially technology-based ones, in healthcare services might be perceived as costly in the short-term, whereas it provides significant benefits in the long-run according to the previous studies (Gottlieb and Makower, 2013). Therefore, today many healthcare organizations have started to focus on developing innovations, and allocated resources to improve their innovation performance (Weng et al., 2011).

For healthcare innovations, there are various stakeholders with different needs, wants, and expectations from these innovations. For instance, physicians and healthcare personnel have expectations related to improvements in medical outcomes, diagnoses, and treatments. On the other hand, patients have expectations related to reduced waiting time and delays, and better treatment experience and psychological state. Lastly, organizations expect increased efficiency and effectiveness, and reduced costs (Omachonu and Einspruch, 2010).

Organizational Performance

Organizational performance refers to what extent the organization reaches to its goals and aims. Today, businesses put excessive emphasis on organizational performance, and they use numerous indicators to measure organizational performance (Zehir, Can and Karaboga, 2015). In general, organizations focus on financial indicators, however, in many cases focusing on solely financial indicators is not sufficient (Reiner, 2005). Therefore, in addition to financial indicators, organizations also use operational indicators. Financial indicators are used to determine whether the organization achieves its economic goals or not. These indicators include growth in sales, profitability ratios, and return on investment ratio etc. Operational indicators (also called as non-financial indicators) involve market share, number of new products launched, product quality, customer satisfaction, and employee satisfaction etc. (Venkatraman and Ramanujam, 1986; Erdem, Gökdeniz and Met, 2011).

Innovation and Organizational Performance Relationship

Organizations aim to increase their performance through innovations (Damanpour, Walker and Avellaneda, 2009). According to the literature, innovation has a positive influence on business performance in different ways. For instance, García-Morales, Lloréns-Montes and Verdú-Jover (2007) found that innovation has a direct and positive effect on business performance. Erdem, Gül and Gül (2013) found that there is a positive and significant relationship between innovation-orientation and business performance. Moreover, they also argued that innovation-orientation has a positive and significant effect on business performance Furthermore, according to the studies done by Çetintürk, Adıgüzel and Demir (2015) and Taherparvar, Esmaeilpour and Dostar (2014), there is a significant and positive

relationship between innovation capability and business performance. Moreover, innovation capability of an organization has a positive and significant influence on business performance Hassan et al. (2013) also found that innovation performance effects market performance and product performance in a positive direction.

Innovation studies done in healthcare organizations also supports the aforementioned relationship above. Specifically, Weng et al. (2011) suggest that technological innovation has a significantly positive effect on service performance given to emergency patients, inpatients, and ambulatory. In addition, Salge and Vera (2009) found that innovativeness in hospitals increases clinical performance, and partially increases administrative performance According to Kirby, Keeffe and Nicols (2007), innovation implementations have a positive relationship with advanced care activities. Specifically, the more innovative nursing houses are more likely to provide better patient care. Drawing upon the studies above and literature review, the following hypothesis is generated:

H1. *Innovativeness affects organizational performance in a health care group*

Methods

This study was accomplished between August 2016 and October 2016 in 12 hospitals belong to a healthcare group operating in Turkey. All administrators of the 12 hospitals within the health group were included in the sampling and a questionnaire was sent to all of them. The total number of managers is 210. The number of questionnaires used in the survey is 173. The survey return rate is 78%.The questionnaire form used in the study has three parts. First part involves demographic information related to the participants. Statements in the second part are based on determining the managers' perceptions related to innovativeness. In the development of the statements in the second part, studies done by Calantone, Cavusgil and Zhao (2002) were used. Totally 6 questions were used in this part. Lastly, third part is based on determining the managers' perceptions related to organizational performance. In the development of the statements in the third part, studies done by Zerenler (2005) and Wang and Wang (2012) were used. Also 6 questions were used in this part. Statements in the questionnaire were measured through 5-point Likert Scale (1= Totally Disagree, 2= Disagree, 3= Neither Agree nor Disagree, 4= Agree, and 5= Totally Agree).

In data analysis, SPSS 23 and AMOS 22.0 statistical package program was used. In data analysis procedure, descriptive statistics was used. In addition, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were used in determining construct validity of the scale, and Cronbach Alpha coefficient was used to measure the reliability of the scale. In order to determine the relationship between innovation-orientation and organizational performance, correlation and regression analyses were performed.

Findings

Among 173 participants in total, 118 of them (68.2%) are junior level managers, 35 of them (20.2%) are middle level managers, and 20 of them (11.6%) are top managers. 20 managers (11.6%) have 1-3 years of experience, 39 (22.5%) have 4-6 years of experience, 18 of them (10.4%) have 7-9 years of experience, 56 participants (32.4%) have 10-12 years experience,

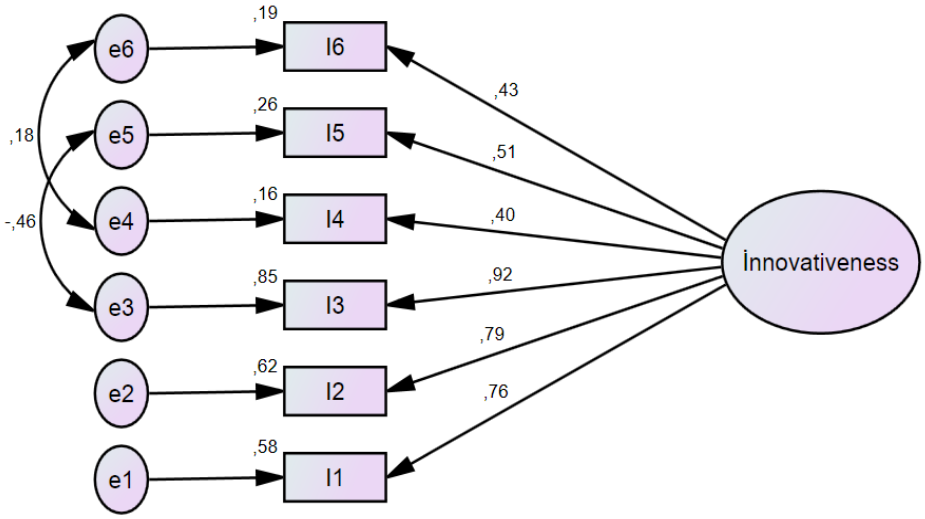
and 40 managers (23.1%) have 13 years or more experience in the specific organization that we conducted our research on.

Table 1: Exploratory Factor Analysis on Innovativeness

Items	Factor Loadings
I3. Our firm is innovative in terms of developing new methods. .	.86
I2. Our firm pursues better ways to do things	.84
I1. Our firm often tries new ideas.	.81
I6. Our firm has increased its introduction of new products and services to market in the last 5 years.	.61
I5. In our firm, innovation is perceived as risky, and avoided	.57
I4. Our firm generally is the first to introduce new products and services to market	.53

KMO and Bartlett tests were performed in order to determine whether the scale is appropriate for factor analysis or not. KMO value was found to be 0.78, and Bartlett test was found to be significant ($p<0.01$). As a result, it was concluded that there is a high relationship between the variable, which indicates that the data set is appropriate for factor analysis. Results obtained from exploratory factor analysis were shown in Table 1, and it was found that six-items were grouped under one single factor explaining 51.22 percent of the total variance.

Figure 1: Confirmatory Factor Analysis on Innovativeness



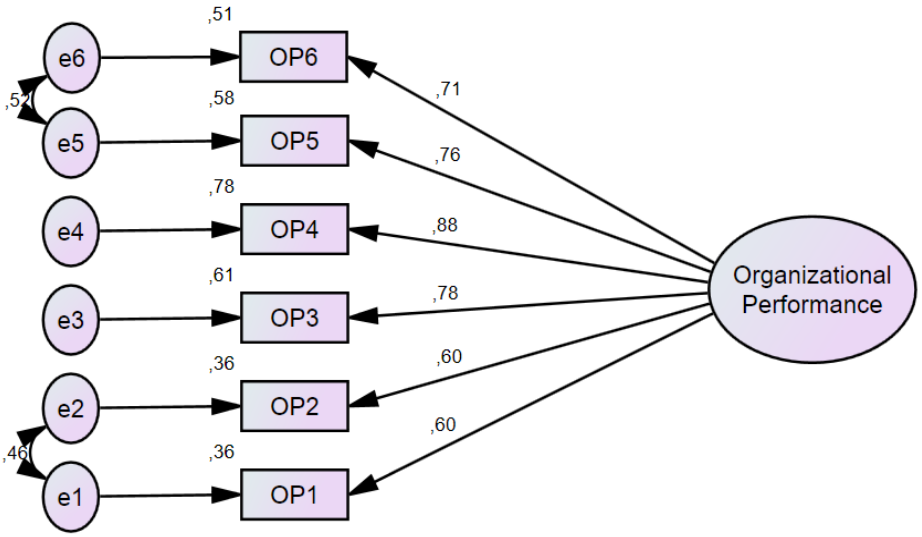
To confirm single factor with six-items structure of innovation-orientation scale, confirmatory factor analysis was performed, and fit indexes and model fit were examined. After the first evaluation, it was decided to apply certain modification according to the advices. The model obtained is given in Figure 1, and the six-items structure of the model could be seen. The fit indexes were found to be as follows: CMIN/df=1.99, NFI=0.96, IFI=0.98, TLI=0.96, CFI=0.98, RMSEA=0.08. According to the results, it was concluded that fit indexes are satisfactory, and the single structure of the factor shows consistency with the data collected. Cronbach Alpha coefficient, which measures scale reliability, was found to be 0.79, indicating the internal reliability of the scale was high.

Table2: Exploratory Factor Analysis on Organizational Performance

Items	*Factor Loadings*
OP4. Our organization has a higher rate of return on investment compared to our competitors.	.86
OP5. Our organization has higher profitability than its competitors.	.83
OP6. Our organization has higher sales volume than its competitors	.82
OP3. Our organization has higher market share than its competitors	.80
OP2. Our organization is more efficient than its competitors	.74
OP1. Our organization is more successful than its competitors in terms of cost management	.72

KMO and Bartlett tests were applied to determine the appropriateness of data set. KMO score was found to be as 0.83, and Bartlett test was found to be significant ($p<0.01$). Findings of the exploratory factor analysis are given in Table 2. Depending on the results of factor analysis, statements were grouped under a single factor with six-items, which explains 63.23 percent of the total variance.

Figure 2: Confirmatory Factor Analysis on Organizational Performance



Confirmatory factor analysis is done in order to evaluate whether the six-items structure of the organizational performance is confirmed or not. According to the analyses results, fit indexes and model appropriateness were examined. After examining the results, it was decided to perform modifications, and modification suggestions were examined. The obtained model is given in Figure 2. Fit indexes are found to be as CMIN/df=1.17, NFI=0.99, IFI=1, TLI=1, CFI=1, RMSEA=0.03. According to these results, it is concluded that the fit indexes are sufficient. Cronbach's Alpha coefficient, which is calculated to determine reliability of the scale, is found to be as 0.88, which indicates that internal reliability of the scale was high.

Table 3: Descriptive Statistics

Variables	**N**	**Mean**	**Std. Deviation**
Innovativeness	173	4,07	0,56
Organizational Performance	173	4,29	0,58

According to Table 3, managers participated in this study think that their organizations are innovative. Moreover, managers also noted that performance of their organizations is also high.

Table 4: Correlation Analysis

		Innovativeness
Organizational Performance	Correlation Coefficient	.585**
	Sig. (2-tailed)	.000
	N	173

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

According to the correlation analysis given in Table 4, there is a statistically significant correlation between innovativeness and organizational performance. According to the correlation coefficient (r=0.585), the relationship between these two variables is positive and moderate.

Table 5: Effect of Innovativeness on Organizational Performance

Independent Variable	**Unstandardized Coefficients**	**t**	**Sig.**
	B		
(Constant)	1.82	6.82	.000
Innovativeness	0.61	9.39	.000
	R^2= 0.34 F= 88.16 Sig.=0.000		

According to the regression analysis given in Table 5, innovativeness influences organizational performance significantly and positively (ß=0.61, t=9.39, F= 88.16, p<0.05). 34 percent of the variation in organizational performance is predicted by innovativeness (R^2=0.34). These results suggest that innovativeness in healthcare organizations is an important antecedent of organizational performance.

Discussion and Conclusion

According to the results, hospital managers perceive their organizations as innovativeness. Moreover, they also think that their organizations' performance is high, which is also a desirable situation for healthcare organizations. This study aimed to examine the effect of innovativeness on organizational performance for a healthcare group. Thus, the hypothesis of "*Innovativeness affects organizational performance in a health care group* " was formulated. According to the regression analysis performed, it was found that innovativeness affects organizational performance significantly and positively. Thus, hypothesis 1 was accepted. Similar studies in the literature, which focus on the relationship between innovativeness and organizational performance, also support this result (Erdem, Gökdeniz and Met, 2011; Altuntaş, Semercioöz and Eregez, 2013; Calantone, Cavusgil and Zhao, 2002). Similarly, other studies focused on the effect of innovation on organizational performance also support the findings of this study (García-Morales, Jiménez-Barrionuevo and Gutiérrez-Gutiérrez, 2012; Huang et al., 2016).

Innovativeness provides numerous benefits to healthcare organizations, such as patient satisfaction, competitive advantage, and increased income. In order to obtain these results,

healthcare organizations, and especially managers, should put effort in order to internalize innovativeness. One of the limitations of this study is based on its small sample size, however it has still importance in terms of revealing the relationship between innovativeness and organizational performance. It is concluded that future studies with bigger samples might be beneficial and contributive.

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