Examining the relationship among innovation competencies, management innovation, and organizational performance

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ARTICLE INFO

Article history:
Received 27 July 2023
Received in rev. form 25 Sept. 2023
Accepted 19 October 2023

Keywords:
Innovation Competence, Management Innovation, Organizational Performance

JEL Classification:
O30, M10, L25

ABSTRACT

This study was conducted to determine the relationship among individuals' innovative competencies, management innovation, and organizational performance. This quantitative study was conducted with 531 business employees operating in various sectors at national and international levels, and the survey method was preferred as the data collection tool. The developed hypotheses within the scope of the study were tested by using Statistical Package for the Social Sciences (SPSS). As a result, significant findings were obtained in the relationship and impact analysis dimensions among innovation competencies, management innovation, and organizational performance. The results depict that innovation competencies and management innovation have a positive and significant effect on organizational performance (β=0.470, p<0.01; β=0.503, p<0.01, respectively). Additionally, it was concluded that management innovation has a positive and significant mediating effect on the relationship between innovation competence and organizational performance (β=0.173; p<0.01).

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Introduction

Organizations now aim to recruit employees with different qualifications in order to cope with the complex situations and challenges they face in today's business world. Especially with the rapid course of technology in many fields, individuals who can keep up with this dynamic can follow innovations, and obtain outputs from these developments, in short, individuals who possess more innovative skills have become preferred and even more sought-after by almost all organizations. Each individual may have an understanding of this change for his or her organization and an ability to develop intuitions about opportunities and foresight about the future. These qualities can be associated not only with the expertise of a particular group in the organization but also with employees at all levels of the organization, who can help define the future of the organization (Hamel & Prahalad, 1994).

The constant change in the business world continuously affects the place of the organizations on the leadership board. While the existence of an organization can last for a while under certain conditions, the permanence of this existence can only be ensured if organizations learn to innovate. In this sense, the management function, which can be defined as an organization's brain, and the innovations and even radical or semi-radical changes to be realized with the related functions will make that organization unique in its environment. Therefore, given that the traditional improvement programs that organizations have undertaken have yielded diminishing returns, organizations need more rigorous strategies and must develop them more rapidly than ever before.

This study aims to determine the relationship among the innovative competencies of individuals, management innovation, and organizational performance. The concept of innovation, one of the most popular topics of today's organizations, is examined at the micro level in terms of the qualifications of individuals and at the macro level by considering the management function of an organization. How and how severely developments at these two levels can affect the organization's performance in different areas...
management innovation can be implemented at any level of the organization (Hamel, 2006). Management innovation refers to ideas that have not been implemented or interpreted as differentiation of "how" managers do business. In this context, understanding how management innovation develops can be seen as an important strategy that an organization should implement in a competitive market (Çelikyay & Adıgüzel, 2019).

Although the meaning of innovation is literally "renewal/newness" (TDK, 2021), it is defined as the act of doing something new or approaching the existing reality in a new way, as well as a new technology (Porter, 1990). Drucker (1984) defines innovation as a change or activity that can be considered an opportunity and states that innovation can be in the form of technological progress and as a business practice enabling organizations to carry out their activities with better processes and methods.

Innovation Competence

While the concept of innovation is defined as a specific "one competence," a set of competencies is seen as a "plural competence" (Suominen et al., 2008). This competence (or competencies) is at the core of the concept of innovation competence. Innovation competence refers to certain specific characteristics of an individual that are causally related to innovation and superior performance and also include characteristics that define individual creativity (Jussila et al., 2008). In other words, innovation competence can be defined as the ability to generate new ideas, methods, solutions, and products (Zwell, 2000, as cited in Jussila et al., 2008). It can also be defined as the ability to create, introduce, adapt, and/or implement beneficial innovations at any level of the organization (Marín-Garcia et al., 2016) and as a set of separate or overlapping competencies, skills, and capacities (Keinänen & Butter, 2018).

Innovation competence enables the study of behaviors and actions needed at different stages of innovation processes and provides a broad perspective on the specific capabilities of individuals (Keinänen & Kairisto-Mertanen, 2019).

In the research initiated by Kairisto-Mertanen et al. (2011) and continued by Räsänen et al. (2015b) (as mentioned in the study conducted by Räsänen et al., 2015a), it is seen that there are basically 3 dimensions of innovation competence and these include innovation competencies on individual, interpersonal and social networks. Within the scope of this research, innovation competence will be measured based on the mentioned study, and the concept of innovation competence will be discussed through five subdimensions: creativity, critical thinking, initiative, teamwork, and networking.

Management Innovation

Management innovation is a concept that refers to new solutions implemented in the methods, processes, or structure of management. It can be expressed as the manifestation of the innovation of top management in an organization, i.e., their ability to generate, adapt, and implement new solutions in organizational management (Krašnicka et al., 2016). The innovation process, innovations developed on products or services, and organizational capacity are mutually reinforcing. From a holistic perspective, management innovation is based on considering innovations in organizing and carrying out the work of an organization as an outcome, process, strategy, or organizational capacity. Organizations move forward in this process by discovering a new position or finding better ways to compete in old ways (Porter, 1990).

Hamel (2006), one of the greatest exponents of the concept of management innovation, defines management innovation as the differentiation of "how" managers do business. In this context, understanding how management innovation develops can be interpreted as understanding a highly complex social process that proceeds in relation to how individuals interpret the world, how they act, and the meaning they attribute to the world (McCabe, 2002). Management innovations refer to ideas that have not been implemented in an organization and can be adapted to meet the organization's needs and include new solutions that emerge...
meaningfully for the organization. These methods may include management techniques that have been already used in other organizations or new tools that can be developed specifically for the organization (Kraśnicka et al., 2016).

Organizational Performance

There is no clear definition of the concept of performance, and it can be used to describe many things, from effectiveness and efficiency to development, and there is no distinction in terms of dimensions or criteria (Heffernan & Flood, 2000). In general terms, performance is the degree to which an individual or a group is able to reach the set goals while performing a task and how far they are able to achieve them. It includes questions that reveal where they are currently, how well the tasks are performed, and where they want to be in the future (Kutlar et al., 2004). In terms of strategic management, performance is defined as achieving the strategic goals set by the organization (Odita & Bello, 2015), and gaining superiority in performance and sustainability of this performance is accepted as a success criterion that provides a competitive advantage to organizations (Porter, 1990; Porter, 1996).

Nwanzu (2013) defines organizational performance in terms of the achievements of the organization at certain points. Accordingly, organizational performance is:

i. the degree to which an organization achieves its goals,
ii. the degree to which an organization can obtain the resources needed,
iii. the degree to which an organization maintains internal cohesion,

determined by the degree to which an organization meets and satisfies the needs and expectations of its stakeholders (Nwanzu, 2013, as cited in Odita & Bello, 2015).

As mentioned above, the diversity of performance indicators and definitions of performance has been influential in determining the variable criteria to be selected in this research, and organizational performance is intended to be evaluated from three perspectives. Since innovation is at the core of innovation competence and management innovation, measuring innovation performance constitutes the first and perhaps the most important criterion for determining organizational performance. The other two performance indicators are financial and employee performance. Thus, along with measurement at the individual and organizational level, it is also aimed to determine the performance in economic terms. Finally, it is possible to measure how and at what levels the organization's performance level can be affected by the three different perspectives mentioned.

Empirical Review and Hypothesis Development

When the literature is examined, it is seen that there are studies that directly or indirectly point out the relationship between the concepts of innovation competence and management innovation. Firstly, it is pointed out that innovation competence develops with the support of the environment (Ovbiagbonhia et al., 2019), and it is underlined that creativity, entrepreneurial integration, anticipation of change, and management of change are required for innovation competence (Cuenca et al., 2014). Innovation competencies can also be developed through collaborations, social negotiations, and interactions with experiences (Dyer et al., 2009). Learning environments designed around activities that encourage self-analysis, self-awareness, and self-knowledge encourage managers, leaders, and other individuals within an organization to explore, learn, and conduct research collectively (Ernest, 1995, as cited in Ovbiagbonhia, 2021; Burgess and Addison, 2007).

This interaction will be effective in facilitating the movement of innovative capabilities from individuals to the management level and in enabling the realization of innovation at the management level. From this point of view, it is predicted that innovation competence has a significant effect on management innovation, and this assumption is examined through the following hypothesis.

H1: Innovation competencies have a significant and positive effect on management innovation.

H1a: Creativity has a significant and positive effect on management innovation.

H1b: Critical thinking has a significant and positive effect on management innovation.

H1c: Initiative has a significant and positive effect on management innovation.

H1d: Teamwork has a significant and positive effect on management innovation.

H1e: Networking has a significant and positive effect on management innovation.

Management innovation is defined as anything that drastically changes the way that the managerial work is done and does so in a way that increases organizational performance (Hamel, 2007) and is shown as a mechanism that enables organizations to benefit from technological discoveries in order to achieve superior financial performance (Černe et al., 2015). In addition, while discussing the characteristics that management innovation should have, it is learned that one of these characteristics is to increase the performance of the organization (Mol & Birkinshaw, 2009).

The studies on the concepts of management innovation and organizational performance show a positive relationship between the two concepts. In the study conducted by Mol & Birkinshaw (2009), it was found that management innovation has a positive effect on organizational performance resulting from productivity gains and is also positively related to organizational job performance, job
satisfaction, and service quality (Bezdrob & Sunje, 2014; Hsu et al., 2014; Shun-Wang et al., 2014). In addition, a meta-analysis of the relationship between management innovation and performance demonstrated that management innovation has an impact on organizational performance through performance management (Walker et al., 2011). Therefore, it is predicted that management innovation has a significant and positive effect on organizational performance.

H₂: Management innovation has a significant and positive effect on organizational performance.

H₂a: Management innovation has a significant and positive effect on innovation performance.

H₂b: Management innovation has a significant and positive effect on financial performance.

H₂c: Management innovation has a significant and positive effect on employee performance.

Studies examining innovation competence from an organizational perspective show that innovation competence and organizational performance are associated, and there is a positive relationship between the two concepts. It is also found that innovation competence in an organization increases organizational performance. While it is stated that innovation competence is an important factor of organizational performance (Wang, 2014), another study that considers competitiveness as a criterion of organizational performance found that there is a significant relationship between innovation competence and organizational competitiveness (Srivastava et al., 2017). Organizational innovation competence increases product innovation and, thus, organizational performance (Özkaya et al., 2015); also, in another study, it was determined that innovation competence has an increasing effect on the overall market performance of an organization (Huang and Yu, 2012).

Based on this information, it is thought that innovation competence has a positive effect on organizational performance.

H₃: Innovation competencies have a significant and positive effect on organizational performance.

H₃a: Creativity has a significant and positive effect on organizational performance.

H₃b: Critical thinking has a significant and positive effect on organizational performance.

H₃c: Initiative has a significant and positive effect on organizational performance.

H₃d: Teamwork has a significant and positive effect on organizational performance.

H₃e: Networking has a significant and positive effect on organizational performance.

As discussed above, it is investigated whether management innovation has an impact on innovation performance, financial performance, and employee performance, and it is also wondered to what extent individual innovative competence can affect the performance of the organization in the same way. Since the results will enable the comparison of the impact levels of the two variables on organizational performance, the hypotheses regarding the impact of innovation competence on innovation performance, financial performance, and employee performance are included in the related research as follows.

H₃f: Innovation competencies have a significant and positive effect on innovation performance.

H₃g: Innovation competencies have a significant and positive effect on financial performance.

H₃h: Innovation competencies have a significant and positive effect on employee performance.

The key factor that enhances innovation is the design and encouragement of learning activities to improve organizational innovation capability (Ernest, 1995, as cited in Ovbiagbonhia, 2021). While performing the tasks in such environments, managers, leaders, and other individuals in the organization learn, explore, and research together; therefore, their innovative competencies are developed. Furthermore, this management approach allows managers and leaders to support the learning needs of other individuals, thus creating an atmosphere of trust and cooperation in the organization that shows that individuals’ different approaches are valued (Burgess and Addison, 2007; Rutland and Barlex, 2008). Therefore, it is predicted that management innovation has an effect on increasing organizational performance by supporting individuals’ innovative abilities and that innovative competence plays a mediating role in its impact on organizational performance.

H₄: Management innovation has a mediating effect on the relationship between innovation competence and organizational performance.

Research and Methodology

Research Model and Sample

Based on the hypotheses stated in the previous section, the research model was created and shown in Figure 1.
To determine the relationship among individuals' innovative competence levels, management innovation, and organizational performance this study was conducted with 531 randomly selected employees of enterprises operating at national or international levels in various sectors in Turkey.

**Data Collection Tools**

The survey method was used to collect data, and the questionnaire was delivered electronically to the participants. The research questionnaire includes demographic questions, items related to the measurement of individuals' innovative competencies, management innovation, and organizational performance scales.

**Innovation Competence Scale**

The FINCODA scale, which was adapted into Turkish, was used to measure the innovation competence of individuals. The adaptation, validity, and reliability study of the scale in Turkey was conducted by Ovacı and Saatçi (2020) and this scale consists of 24 items in total. It has five dimensions; creativity (1-7), teamwork (8-12), initiative (13-16), critical thinking (17-21), and networking (22-24)

In the questionnaire design, a 5-point Likert scale was used, and the options in the scale were ranked from "1. Strongly disagree" to "5. Strongly agree".

**Management Innovation Scale**

In order to measure management innovation, the scale developed by Vaccaro et al. (2012), which consists of one dimension and 6 items, was used. Similar to the innovation competence scale, a 5-point Likert scale was used in the questionnaire design, and the options in the scale were ranked from "1. Strongly disagree" to "5. Strongly agree".

**Organizational Performance Scale**

Measurement of organizational performance was carried out through three dimensions. In the measurement of innovation performance and financial performance, participants rated their organizations on the relevant item from "1. Very low" to "5. Very high", while the options in the employee performance scale were ranked from "1. Strongly disagree" to "5. Strongly agree".

**Innovation Performance**

The questions in the scale were created from the study adapted to Turkish by Karaboğa (2015), based on the research of Prajogo and Sohal (2006). One of the scale items is “The level of use of the latest technological innovations in our new products and processes.”

**Financial Performance (Financial and Growth Performance of the Business)**

To measure financial performance, the survey questions that Altındağ (2011) developed and used in his study to measure financial and growth performance that created by researchers such as Antoncic and Hisrich (2001), Zahra et al. (2002), Chang et al. (2003), King and Zeithaml (2001), Lynch et al. (2000), Rozenzweig et al. (2003), Venkatraman and Ramanujan (1986), Baker and Sinkula (1999), Vorhies et al. (1999), Vorhies and Morgan (2005) were used. The scale, which consists of two sub-dimensions, financial and growth performance, includes 12 statements in total.

**Employee Performance**

In order to measure employee performance, the Performance Scale developed by Erdoğan (2011), by utilizing the scales created by Kirkman & Rosen (1999), Fuentes et al. (2004), and Rahman & Bullock (2005) was used.
Findings and Discussions

This research was conducted on 531 respondents, of whom 225 (42.4%) were female, 295 (55.5%) were male, and 11 (2.1%) did not want to answer. When the marital status of the respondents was analyzed, 216 (40.7%) were married, and 315 (59.3%) were single. Regarding the educational status of the individuals, 310 (58.4%) were university graduates, 166 (31.3%) had a master's degree, and the remaining 55 (10.4%) graduated from college, high school, or secondary education. When the fields of activity of the companies where the individuals work were analyzed, it was seen that 507 (95.5%) of them worked in the private sector and 24 (4.5%) in the public sector. It was observed that 61.8% of the individuals worked in international companies, 29.2% in national companies, and 9% in both national and international companies. The majority of employees worked in value manufacturing, telecommunications, automotive, and food, beverage, and tobacco sectors.

Table 1: Factor and Reliability Analysis Results of the Scales

<table>
<thead>
<tr>
<th>Scales</th>
<th>Number of questions</th>
<th>KMO Bartlett's</th>
<th>Explained Variance</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Competencies</td>
<td>19</td>
<td>0.949</td>
<td>71.086</td>
<td>0.941</td>
</tr>
<tr>
<td>Management Innovation</td>
<td>6</td>
<td>0.878</td>
<td>61.713</td>
<td>0.874</td>
</tr>
<tr>
<td>Organizational Performance</td>
<td>26</td>
<td>0.946</td>
<td>63.296</td>
<td>0.947</td>
</tr>
</tbody>
</table>

Source: Data Processed

In the first stage of the study, missing data analysis was performed to determine the presence of possible missing data in the data set, and it was observed that there were no missing answers to the survey questions. After this step, factor and reliability analyses were performed using the SPSS program. After the factor analysis, KMO Barlett's test results were examined, the adequacy of the sample for the analysis was checked, and the percentage of the variance the factors accounted for was found. KMO Barlett's results were found to be greater than 0.50 for all three scales. This indicates a very good result showing that the sample is adequate for interpreting the factor analysis (Kalayci, 2010).

In the factor analysis, the "direct oblimin" method was applied, the results were checked from the "Pattern Matrix" table, and the factor loadings were examined. During these processes, 5 questions were removed from the innovation competence scale and 1 question from the organizational performance scale due to the presence of overlapping loadings among the factor loadings. Reliability analyses were conducted on the remaining questions based on each main scale, and Cronbach's Alpha values were examined, and it was observed that they had high-reliability results (See Table 1). Thus, the hypotheses were tested in the most efficient way with the existing number of questions and sample size.

The hypotheses defined in the research model were analyzed by establishing simple and multiple regression models in the SPSS program. The relationship between the main scales and hypotheses in the study is shown in Table 2.

Table 2: Testing the Hypotheses Related to the Main Scales

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>β</th>
<th>t value</th>
<th>Is it accepted?</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Management Innovation ← Innovation Competencies</td>
<td>0.348**</td>
<td>8.50</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Organizational Performance ← Management Innovation</td>
<td>0.503**</td>
<td>13.31</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Organizational Performance ← Innovation Competencies</td>
<td>0.470**</td>
<td>12.18</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>Organizational Performance ← Innovation Competencies</td>
<td>0.175**</td>
<td>7.16</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

**p<0.01; *p<0.05

Source: Data Processed
As shown in Table 2, in the hypothesis H1 of the study, the effect of innovation competence on management innovation was examined. In this context, it has been observed that the management innovation variable has a statistically positive and significant effect on innovation competence (β=0.348; p<0.01). It has been observed that a one-unit change in innovation competence creates a 0.348-unit increase in management innovation, and hypothesis H1 has been accepted. Within the scope of hypothesis H2, the effect of management innovation on organizational performance was examined. This relationship is statistically significant (β=0.503; p<0.01). In other words, it is observed that a one-unit change in management innovation creates a positive change of 0.503 units in organizational performance. In hypothesis H3, the effect of innovation competence on organizational performance was examined, and this relationship was observed to be statistically significant (β=0.470; p<0.01). It has been observed that a one-unit change in innovation competence creates an increase of 0.470 units in organizational performance. Thus, hypothesis H3 is also accepted. Similarly, in hypothesis H4, the mediating effect of management innovation on the relationship between innovation competence and organizational performance was also examined by Sobel test (Baron and Kenny, 1986; Sobel, 1982), and it was observed that management innovation has a positive and significant mediating effect result on the relationship between innovation competence and organizational performance (β=0.175; p<0.01). It is observed that all of the hypotheses established in Table 2 are statistically significant and accepted.

**Table 3: Testing the Impact Hypotheses**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>β</th>
<th>t value</th>
<th>Is it accepted?</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Management Innovation ← Creativity</td>
<td>0.08</td>
<td>1.37</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H1b</td>
<td>Management Innovation ← Critical Thinking</td>
<td>0.056</td>
<td>1.07</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H1c</td>
<td>Management Innovation ← Initiative</td>
<td>0.198*</td>
<td>2.46</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H1d</td>
<td>Management Innovation ← Teamwork</td>
<td>-0.026</td>
<td>-0.47</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H1e</td>
<td>Management Innovation ← Networking</td>
<td>0.237**</td>
<td>4.8</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H2a</td>
<td>Innovation Performance ← Management Innovation</td>
<td>0.460**</td>
<td>11.86</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H2b</td>
<td>Financial Performance ← Management Innovation</td>
<td>0.406**</td>
<td>10.16</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H2c</td>
<td>Employee Performance ← Management Innovation</td>
<td>0.400**</td>
<td>9.99</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H3a</td>
<td>Organizational Performance ← Creativity</td>
<td>0.191**</td>
<td>3.51</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H3b</td>
<td>Organizational Performance ← Critical Thinking</td>
<td>0.06</td>
<td>1.08</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H3c</td>
<td>Organizational Performance ← Initiative</td>
<td>0.063</td>
<td>1.28</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H3d</td>
<td>Organizational Performance ← Teamwork</td>
<td>0.06</td>
<td>1.17</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H3e</td>
<td>Organizational Performance ← Networking</td>
<td>0.200**</td>
<td>6.01</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H3f</td>
<td>Innovation Performance ← Innovation Competencies</td>
<td>0.374**</td>
<td>9.23</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H3g</td>
<td>Financial Performance ← Innovation Competencies</td>
<td>0.361**</td>
<td>8.86</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H3h</td>
<td>Employee Performance ← Innovation Competencies</td>
<td>0.498**</td>
<td>13.13</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

**p<0.01; *p<0.05**

**Source:** Data Processed

Table 3 shows the relationship between the main hypotheses and sub-dimensions.

In the main hypothesis H1, the effect of innovative competence on management innovation was examined, and a statistically significant difference was found (Table 2). Multiple regression analysis was conducted to find out which sub-dimensions caused this
difference, and it was observed that the independent variables of initiative ($β=0.198; p<0.05$) and networking ($β=0.237; p<0.01$) had a predictive effect on management innovation. It has been observed that for every unit increase in the initiative variable, a 0.198 unit increase in the management innovation is predicted, holding all other variables constant. It was also found that for every unit increase in the networking variable, a 0.237 unit increase in the management innovation is predicted, holding all other variables constant. On the other hand, it was observed that the independent variables of creativity, critical thinking, and teamwork did not create a statistically significant difference in management innovation ($p>0.05$). Thus, while the hypotheses of $H_1c$ and $H_1d$ are accepted, the hypotheses of $H_1a$, $H_1b$ and $H_1e$ are rejected.

The effect of management innovation on organizational performance was examined within the scope of hypothesis $H_2$, and it was seen that it had a statistically predictive role. In order to see which sub-dimensions this effect is particularly concentrated on, a simple regression analysis was performed, and the results were analyzed. In this context, it was observed that management innovation had a predictive and positive change effect on innovation performance ($β=0.460; p<0.01$), financial performance ($β=0.406; p<0.01$), and employee performance ($β=0.400; p<0.01$), respectively. A one-unit increase in the management innovation variable was observed to affect innovation performance by an increase of 0.460 units, financial performance by an increase of 0.406 units, and employee performance by an increase of 0.400 units. It is also noteworthy that management innovation has a higher positive effect on innovation performance on the basis of sub-dimensions. After these analyses, it is seen that hypotheses $H_2a$, $H_2b$, and $H_2c$ are accepted.

In hypothesis $H_3$, it was observed that innovation competence had a statistically significant effect on organizational performance (Table 2). The breakdown of this effect on the basis of sub-dimensions was examined within the scope of multiple regression analysis. The model included creativity, critical thinking, initiative, teamwork, and networking as independent variables. After the analysis, it was observed that creativity ($β=0.191; p<0.01$) and networking ($β=0.200; p<0.01$) variables created a statistically significant difference in organizational performance. It was observed that for every unit increase in the networking variable, a 0.200 unit increase in the organizational performance is predicted, holding all other variables constant. It was also found that for every unit increase in the creativity variable, a 0.191 unit increase in the organizational performance is predicted, holding all other variables constant.

Networking and creativity variables provide a statistically significant predictive role on organizational performance, but the independent variables critical thinking, initiative, and teamwork do not ($p>0.05$). Therefore, based on these results, the hypotheses of $H_3a$, $H_3b$, and $H_3f$ are accepted, and the hypotheses of $H_3c$, $H_3d$, and $H_3e$ are rejected.

The effects of the sub-dimensions of innovative competence on organizational performance and management innovation were examined separately. It is a remarkable result that the networking variable is highly effective in both processes. However, concerning organizational performance, it is observed that the creativity variable creates a distinctive effect in the model, while in the case of management innovation, the initiative variables create a differentiating effect.

The effect of innovation competence on organizational performance was examined in Table 2, and it was seen that it had a statistically predictive role. In order to see which sub-dimensions this effect is particularly concentrated on, a simple regression analysis was performed, and the results were analyzed. In this context, it is observed that innovative competence has a predictive and positive change effect on employee performance ($β=0.498; p<0.01$), innovation performance ($β=0.374; p<0.01$), and financial performance ($β=0.361; p<0.01$) respectively. A one-unit increase in innovative competence affects employee performance by an increase of 0.498 units, innovation performance by an increase of 0.374 units, and financial performance by an increase of 0.361 units. It is noteworthy that innovative competence has a higher positive impact on employee performance on the basis of sub-dimensions. After these analyses, it is seen that the hypotheses of $H_3a$, $H_3b$, and $H_3e$ are accepted.

**Conclusions**

This study examines the impact of management innovation, which is considered a radical change in organizations along with the innovative skills of individuals on organizational performance. Examining innovation within the scope of both individuals and the organization and measuring its impact on performance provides information on how it yields micro and macro results within the same study, as well as providing inferences on how innovation capability at the level of individuals and management reflects on each other.

Today, the most difficult challenge for organizations is adaptation to and beyond environmental changes. The uniqueness of change creates an opportunity for organizations and is the only phenomenon that provides a competitive advantage. The creative skills of individuals in an organization can cause organizational change similar to the ring effect of a drop in water (Damanpour & Aravind, 2012). Therefore, the innovative competencies of individuals should be increased by supporting their innovation capabilities. Kivunja (2014) emphasizes that there should be a learning environment in organizations that aims to develop individuals’ innovation competence. This environment should provide conditions that enable individuals to be authentic, support their openness and collaborative problem-solving skills, and allow them to practice. Therefore, managers and/or leaders should have mechanisms that support individuals’ innovation competencies. Simultaneously, stimulating learning environments is known to increase individuals’ innovation competencies (Keinänen & Oksanen, 2017). Therefore, increasing the innovation competence levels of individuals will also enable managers and leaders, who are considered individuals, to take innovative steps at the managerial level. This effect is supported by the findings of this study.
Another important result of this study is that the contribution of innovation capability to individual and organizational performance is realized in different dimensions. While a high level of innovation competence at the individual level contributes more to employee performance, managerial innovation has a higher impact on innovation performance. This means that supporting the innovative abilities of individuals can increase employee performance; innovative developments in the management dimension will support innovative performance and thus contribute to organizational performance in different areas. In addition, when the innovative characteristics of individuals are examined, it is thought that the effects of innovative features on organizational performance and management innovation vary based on sub-dimensions, and based on this, decision-makers in the organization can develop supportive strategies and practices to increase the innovation capabilities of individuals in line with the organizational goals to be determined.

Innovation competencies consist of structural and capability components, different components in terms of both organization and individuals (Hartmann & Grolée, 2012). The basis of having innovation management competence and innovation performance rests on creating an innovation culture in the organization (Xu et al., 2008). Likewise, leadership and culture are highly effective factors for innovation performance (Leung & Sun, 2008). In this context, it is observed that supportive dynamics and factors within the organizational setting are essential for the enhancement of individuals' innovation competencies. Additionally, a culture and environment that actively support innovation, particularly at the managerial level, hold significant importance in terms of enhancing performance.

Acknowledgments

This article is derived from Tariq Aziz Tariq’s Ph.D. dissertation entitled “A Field Study on the Relationship between Innovation Competencies, Management Innovation and Organizational Performance”, prepared under the supervision of Prof. Dr. Cemal ZEHİR at Yıldız Technical University, Institute of Social Sciences, Department of Business Administration. All authors have read and agreed to the published version of the manuscript.

Author Contributions: Conceptualization, TAT and CZ; methodology, TAT and CZ; validation, TAT and CZ; formal analysis, TAT and CZ; investigation, TAT and CZ; resources, TAT and CZ; writing—original draft preparation, TAT and CZ; writing—review and editing, TAT and CZ.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

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