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The Mediating Role of Innovation Capability in the Effect of Entrepreneurial Leadership on Organizational Innovation: A Study on Managers and Employees[1]

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Abstract

The concepts of entrepreneurship, innovation, and innovation, emphasized in contemporary studies, are very effective phenomena for organizations to continue their activities in constantly changing competitive environments and be more successful against their competitors. In this context, the purpose of this study is to determine the mediating role of employees' innovation capability in the effect of entrepreneurial leadership on organizational innovation. For this purpose, a model showing the relationships between variables was developed by reviewing the literature. In order to test the model, data were collected through a questionnaire technique on managers and 250 employees at all levels working in an iron and steel industrial enterprise, which is the largest company in its sector in Samsun. These data were subjected to structural equation modeling (path analysis), and the relationships between variables were analyzed using SPSS and AMOS statistical analysis programs. As a result of the data obtained, all hypotheses were accepted, and according to the results of the research, entrepreneurial leadership positively affects organizational innovation, and employees' innovation capability positively affects organizational innovation. In addition, it has been determined that employees' innovation capability has a partial mediating role in the effect of entrepreneurial leadership on organizational innovation.

Keywords: *Entrepreneurial leadership, innovation capability of employees, organizational innovation.*

JEL Code: *M10, O3*

1 The Mediating Role of Innovation Capability in the Effect of Entrepreneurial Leadership on Organizational Innovation by Muhammet YÜKSEL, conducted under the supervision of Prof. Dr. Gülşah KARAVARDAR: A Research on Employees is derived from Muhammet YÜKSEL's PhD Thesis.

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Girişimci Liderliğin Örgütsel Yenilik Üzerindeki Etkisinde İnovasyon Yeteneğinin Aracı Rolü: Yöneticiler ve Çalışanlar Üzerine Bir Araştırma

Öz

Güncel çalışmalarda vurgulanan girişimcilik, yenilikçilik ve inovasyon kavramları, örgütlerin sürekli değişen rekabet ortamlarında faaliyetlerini sürdürebilmeleri ve rakiplerine karşı daha başarılı olabilmeleri için oldukça etkili olgulardır. Bu bağlamda bu çalışmanın amacı, girişimci liderliğin örgütsel yenilik üzerindeki etkisinde çalışanların inovasyon yeteneğinin aracılık rolünü belirlemektir. Bu amaçla literatür taraması yapılarak değişkenler arasındaki ilişkileri gösteren bir model geliştirilmiştir. Modeli test etmek için Samsun'da sektörünün en büyük firması olan bir demir çelik sanayi kuruluşunda çalışan her kademeden yönetici ve 250 çalışan üzerinde anket tekniği ile veri toplanmıştır. Bu veriler yapısal eşitlik modellemesine tabi tutulmuş, değişkenler arasındaki ilişkiler SPSS ve AMOS istatistiksel analiz programları kullanılarak analiz edilmiştir. Elde edilen veriler sonucunda tüm hipotezler kabul edilmiş ve araştırma sonuçlarına göre girişimci liderlik örgütsel yenilik pozitif yönde, çalışanların inovasyon yeteneği ise örgütsel yenilik pozitif yönde etkilemektedir. Ayrıca girişimci liderliğin örgütsel yenilik üzerindeki etkisinde çalışanların inovasyon yeteneğinin kısmi aracılık rolü olduğu tespit edilmiştir.

Anahtar Kelimeler: *Girişimci liderlik, çalışanların inovasyon yeteneği, örgütsel yenilik*

JEL Kodu: *M10, O3*

Introduction

Today, in order for all organizations to carry out their activities and survive, they need to adapt to changing internal and external environmental factors, new management approaches, and information technologies, as well as constantly reshape their strategic planning by learning lessons from past experiences (Elenkov, Judge and Wright, 2005, p. 665). The dynamics brought about by the information revolution, technological developments, and globalization have caused changes in all factors and elements that support each other in the processes in which organizations operate. Modern management approaches inevitably need help with concepts such as competition, speed, risk, uncertainty, dynamism, and turbulence. At the same time, organizations, which serve as the cornerstone in the functioning of the modern world, can only be expected to carry out their activities if they are affected by these two changes (Naktiyok, 2007, p. 212; Hamidi & Benabdeljlil, 2015, p. 289). Organizations must constantly renew and change their products, markets, management, organizational structure, systems, processes, and strategies to respond to internal and external environmental changes. To manage this process correctly is to be innovative (Onağ & Tepeci, 2016, pp. 52-55; Adams, Bessant and Phelps, 2006, p. 22; Normann, 1971, p. 203). Although the employee is the most basic and most important asset of all organizations in realizing the activities of organizations, leadership is needed for the employee, that is, human resources, to be efficient. Likewise, since continuous focus and development are aimed at organizations with organizational innovation capabilities, it draws attention as a concept that has become the focus of attention in the search for solutions to the unpredictable environmental conditions in which managers and leaders operate (Normann, 1971, p. 203; Onağ & Tepeci, 2016, p. 52). Another critical factor in the success of organizations is the innovation capability of employees and enabling employees to innovate in all activity processes and to express and realize themselves (Altan & Özpehlivan, 2019, p. 162; Esmer & Dayı, 2017, p. 118; Laursen & Salter, 2020, p. 256; Stock & Grob, 2016, pp. 2172-2173).

For this purpose, this study will research concepts and employees that directly exist in employees' lives and show their effects at every moment (Blandul, 2015, p. 484). Employees' perceptions of entrepreneurial leadership, organizational innovation perception, employee innovation behaviors, and the relationships between these variables are investigated. In this context, data are collected from leaders, managers, and 358 employees at all levels working in the iron and steel industrial enterprise, the largest company in its sector in Samsun, using the survey technique. These collected data are subjected to structural equation modeling (path analysis), and the relationships between variables are tried to be determined.

Literature Review

Entrepreneurial leadership

According to the Turkish Language Institution, a leader is defined as the chief or person in charge of the highest-level management of a party, organization, or team, or as a competitor in a competition, who undertakes the task of leadership (TDK, 2005, 47). The concept of leadership often needs to be clarified with the concept of management, and, unlike management, leadership is not a virtue that is acquired later. However, it can be defined as the names of people who are generally innate to people and can create a common desire for themselves and others and make them struggle to achieve this desire. Entrepreneurial leadership includes individual efforts to establish an organizational structure, behaviors that follow innovations in all matters, and behaviors related to taking advantage of opportunities by revealing the difference in market conditions (Zorlu & Tetik, 2018, p. 299). The desired characteristics of entrepreneurial leaders are risk-taking, willingness to succeed, working with others, trusting and managing them, accepting their shortcomings and being a researcher, working under difficult and heavy conditions, and being patient (Sönmez & Toksoy, 2014, p. 44). Entrepreneurial leadership is a person who can predict the performance of employees and the opportunities that will arise, who can use those opportunities in organizational activities by recognizing those opportunities, who can direct the achievement of success in the realization of organizational goals, and who can influence employees for this (Renko, Tarabishy, Carsrud and Brannback, 2015, p. 55). Fernald et al. (2005) state that entrepreneurial

leadership has become a much more important issue with the emergence of new production and technological and financial resources after the 1980s. The world is constantly changing its economic, social, and political perspectives. It also shows that employees, managers, employers, leaders, and entrepreneurs have important roles in this change process. Despite all these, some factors prevent entrepreneurial leaders for several reasons, and these reasons emerge in many different ways. Some of these reasons are social environment, learned helplessness, deficiencies in market research, financing problems, and lack of information (Akpınar & Küçükgöksel, 2015, p. 14).

Innovation and inovation capability

Innovation is a concept derived from "innovate," which means "to do new things" in Latin (Tiddy, 2005, p. 172), "Innovation" means "the use of new methods in social, cultural, and administrative fields" in English and Turkish this concept is tried to be met with the word "innovation" (Arslan, 2012, p. 7). Austrian economist Joseph Alois Schumpeter was the first to emphasize the importance of the concept of innovation. According to Schumpeter (1939), innovation is a new product, service, market, or production process, but innovation is more than a good idea, a new service, technology, or product. Because innovation is what can change and positively affect market markets or social expectations (Arpacı, 2011, p. 111).

While defining the concept of innovation requires time and process, Peter F. Drucker (2002) sees innovation as a means of change and lists the occurrence of innovation under seven main headings, four of which are internal, that is, related to changes within the organization or industry, while the other three are external, that is, related to changes outside the organization or industry. While internal sources are listed as unexpected developments, incompatibilities, process requirements, and changes in market and sector structure, external sources are listed as changes in demographic structure, changes in perception, and new information (Drucker, 2002, p. 97). Innovation is an essential tool that enables organizations to find and enter new markets, reduces costs, increases efficiency and effectiveness, improves product and service quality, and increases productivity in employees and organizations. The types of innovation have also diversified or changed over time, and while innovation in products and innovation in the industry was firstly innovation in products, later organizational innovation types have also emerged (Damanpour, Walker and Avellaneda, 2009, p. 653). After the literature reviews, six types of innovation are assumed to have significant effects on social and economic life: product, process, marketing, organizational, social, and management innovation (Reıchstein & Salter, 2006, p. 657).

Employees' innovation capability refers to the ability of employees to develop new ideas, improve existing processes, and produce innovative solutions (Hero, Lindfors and Taatila, 2017, p. 105). Employees with innovation capability are users who play an important role in the innovative activities of organizations and, at the same time, provide feedback to organizations on what kind and where organizations should innovate (Scott & Bruce, 1994, pp. 582-590). Organizations have developed many production activities as a result of the needs of consumers, and employees are one of the most important actors in achieving this process for organizations engaged in such renewal efforts. An organization's success is employees' innovation capability, enabling them to innovate in all activity processes, express themselves, and realize themselves (Sushil, 2002, p. 24). Employees are users who play an important role in the innovative activities of organizations, but they also provide feedback to organizations on what types and where organizations should innovate (Bogers, Afuah and Bastian, 2010, pp. 857-858). The innovation capability of employees can be defined as an individual's capability to come up with their ideas. At the center of this concept is the capability of employees to create new ideas by filtering the information they receive from their environment or to change existing ideas for the better. While the essential elements of innovation include imagination (thinking of new ideas), implementation (putting these ideas into practice), and willingness to take risks, individuals with this capability think abstractly and strive to transform their ideas into concrete products or services (Laursen & Salter, 2020, pp. 19-21).

Organizational innovation

Every field of activity in which humanity has made progress has impacted the scientific approach to organizations. With the Industrial Revolution, the understanding of production based on body power was replaced by machine power. The mechanization in production caused the rapid growth of organizations and brought about scientific ideas to provide the most efficiency in the activities of organizations (Genç, 2012, p. 91). Considering the historical process, it is possible to examine organizational theories in three main groups (Ertekin, 2017, pp. 67-68), and these theories are accepted as Classical Organisation Theory, Human Relations Theory, and Modern Organisation Theory.

Technological, political, and financial changes have affected the tendencies of societies and caused differentiation of their emotions, values, ethics, and short or long-term expectations (Northouse, 2006, p. 15; İşcan & Karabey, 2007, pp. 184-186). These changes and innovations affect social trends and manifest themselves in every field and sense. They are determined as a rule of survival, especially in organizations with an essential share in the economic system. The main reason why organizations invest in innovations in order to continue their activities is the search for competitive advantage. In this way, organizations struggle to make their competitive advantages permanent by providing superiority in their fields of activity and creating new differences (Adams, Bessant and Phelps, 2006, p. 22). Since organizational innovation capabilities support continuous focus and development within the organization, it draws attention as a concept that has become the focus of attention in the search for solutions to the unpredictable environmental conditions in which managers and leaders operate (Onağ & Tepeci, 2016, p. 52). It is seen that there is a lack of consensus on many issues, such as the nature of the innovation process and disciplinary approaches to clarifying the concept of organizational innovation (Tang, 1999, p. 42). Theoretically, research on organizational innovation can open new perspectives in organizational management and organizational activities (Lam, 2004, p. 10). On several interesting topics that have emerged recently, the social approach and institutional change issues can contribute to several important areas of new research beyond sociology by analyzing the dynamics of knowledge communities at the macro and micro levels. The most obvious in this sense is research on social systems and institutional structures.

Literature review on entrepreneurial leadership, organizational innovation, and employee innovation

There are not enough studies on the mediating role of the concepts related to the innovation ability of employees in the effect of entrepreneurial leadership on organizational innovation together with all variables, especially in the domestic literature; very few studies exist. In this section of the study, the current studies on the concepts and the effects of variables on each other are emphasized, and the aims and results of some of these studies are explained.

Sawaean & Ali (2020). In the Effect of Entrepreneurial Leadership and Learning Orientation on Organizational Performance of SMEs: The Mediating Role of Innovation Capacity, 392 questionnaires were answered by 500 business owners or CEOs in Kuwait by face-to-face survey method, 384 people's questionnaires were validated, and the questionnaires were analyzed with the SPSS program, and according to the analysis data, it was stated that entrepreneurial leadership has a direct impact on the performance and innovation capacity of organizations. Chandra et al. (2019). The Relationship Between Organizational Performance and Entrepreneurial Leadership: The Mediating Role of Employee Innovations states that entrepreneurial leadership is directly related to organizational performance, and employees' innovation capabilities impact organizational innovation. Poplete (2018), in his study on how innovative entrepreneurship can affect growth expectations, surveyed and analyzed 2000 people between the ages of 18 and 64. As a result of the analysis, it was concluded that innovation is based on entrepreneurship, and innovative entrepreneurial leaders attach more importance to innovation. Zorlu and Tetik (2018) researched 381 employees using face-to-face interview techniques with academic and administrative staff working on the central campus of Ahi Evran University in their study titled The Effect of Entrepreneurial Leadership Behavior on Employee Creativity. The research results were solved with AMOS 24 and SPSS 22.0 package programs, and it was found that the perceived entrepreneurial leadership

style in organizations has a positive and significant effect on the creativity levels of employees. Bagheri and Akbari (2018) aimed to examine entrepreneurial leadership's effect on nurses' innovation behaviors. For this purpose, 273 nurses were randomly selected from three public and two private hospitals serving Iran. A questionnaire form was distributed, and as a result of the survey data, it was determined that entrepreneurial leadership plays an important role in the innovation behaviors of nurses. Yıldız et al. (2017), in their research titled The Mediating Role of Individual Innovativeness in the Effect of Organizational Innovativeness on Employee Performance, 348 people from the employees of companies operating in the manufacturing and service sectors were interviewed with face-to-face interview technique, and the results of the analysis conducted with SPSS and AMOS package programs were mentioned. According to the analysis results, it was concluded that organizational innovativeness positively affects individual and employee performance, and individual innovativeness affects employee performance. Leitch and Volery (2016) examined entrepreneurial leadership conceptually and stated that entrepreneurial leaders also affect their employees and influence them to engage in entrepreneurial activities and innovative behaviors. Mokhber et al. (2016), in the research on the role of employees' innovation self-efficacy in the impact of entrepreneurial leadership on the innovation demand of organizations, it was concluded that entrepreneurial leadership in the innovation demand of organizations and employees' innovation self-efficacy plays an important mediating role in the impact of entrepreneurial leadership on the innovation demand of organizations. Fu et al. (2015), in their research on how high-performance business systems affect organizational innovation in professional service firms, it was concluded that organizational innovation affects employees' innovation ability in the analysis conducted with the participation of 522 managers from 261 firms using the survey method and answering the questionnaires.

Methodology

Purpose, model, and hypotheses of the study

Today, for organizations to be successful, employees at all levels of management should be asked to be entrepreneurial leaders, and opportunities should be offered to them to be entrepreneurial leaders (Zorlu & Tetik, 2018, p. 299). For organizations to be successful, not only the managers of the organization but also the employees at all levels who work to perform the activities of the organization should behave toward organizational goals. In addition to fulfilling their formal roles, they should exhibit innovation activities in their duties, and organizational managers should adopt the understanding of organizational innovation at all these stages (Leitch & Volery, 2016, p. 149). As organizations examine the diversity of organizational activity methods with different technological and task environments through innovation, market markets become complex and uncertain, and organizations' task activities become more adaptable and flexible structures as they become homogeneous and open to innovation (Lam, 2004, p. 8). One of the first factors is entrepreneurial leadership, which is explained as directing and influencing employees to achieve success in the realization of organizational goals, which includes anticipating opportunities to increase the performance of employees and recognizing and using those opportunities. Another factor is organizational innovation, which refers to the change in organizational activities, and the innovation capability of employees, which is the mediating role of these two variables, is another factor (Altan & Özpehlivan, 2019, p. 162; Laursen & Salter, 2020, p. 256; Stock & Grob, 2016). The main purpose of this study is to determine the relationship between entrepreneurial leadership and organizational innovation and the mediating role of employees' innovation capability in this relationship. Thus, it is aimed both to contribute to the relevant literature and to provide information to organizational managers and institutions engaged in all organizational activities about the most effective and efficient evaluation of human resource management. This research aims to determine whether there is a mediating effect of employees' innovation ability on the effect of entrepreneurial leadership on organizational innovation Therefore, the model of the research fits the mediation test model.

This research aims to determine whether there is a mediating effect of employees' innovation ability on the effect of entrepreneurial leadership on organizational innovation. Therefore, the model of the research fits the mediation test model. Baron and Kenny (1986) state that three conditions must be met to prove the mediation relationship in classical regression analysis. These are listed below, as follows (Baron & Kenny, 1986, pp. 1174-1176).

- In the regression model between the independent variable and the dependent variable, the independent variable is an important determinant,
- The independent variable is an important determinant of the mediating variable, and if the mediating variable is not related to the independent variable, the mediation test cannot be mentioned,
- The dependent variable is related to both the independent variable and the mediator variable, and the mediator variable controlled by the independent variable is an important determinant of the dependent variable.

In the research model, when "Entrepreneurial Leadership" is considered as an independent variable, "Organizational Innovation" as a dependent variable, and "Employees' Innovation Capability" as a mediating variable (Chandra, Setyohadi and Hidayat, 2019, pp. 35-36; Leitch & Volery, 2016, pp. 148-150; Zorlu & Tetik, 2018, pp. 300-302), the hypotheses and model based on research theory and empirical research are given below.

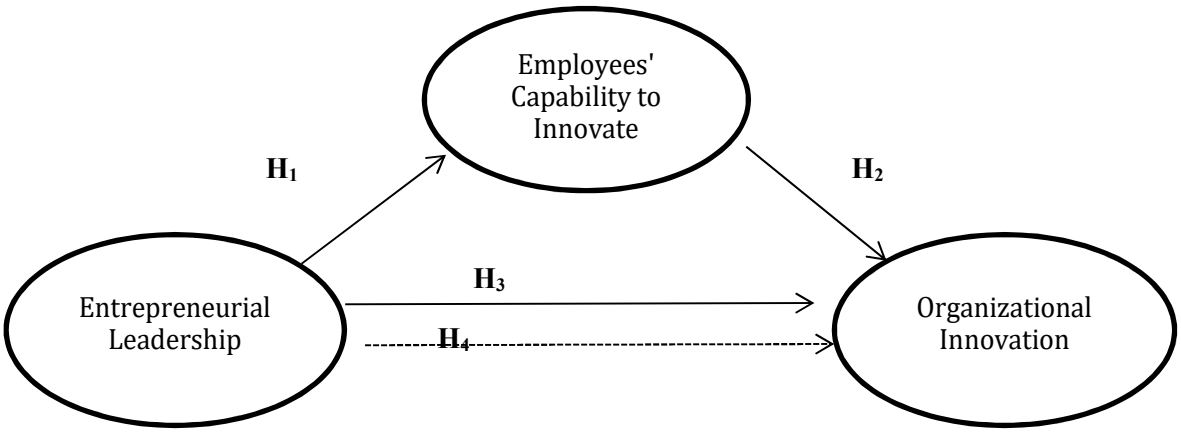

Figure 1. The research model

The main research questions were formulated in the light of the relevant literature and within the scope of the research as follows.

H1: Entrepreneurial leadership has a positive and significant effect on employees' innovation capability.

H2: Employees' innovation capability has a positive and significant effect on organizational innovation.

H3: Entrepreneurial leadership has a positive and significant effect on organizational innovation.

H4: Employees innovation capability has a mediating role in the relationship between entrepreneurial leadership and organizational innovation.

Population and sample of the study

Although the population of the research was targeted to be all of the industrial enterprises registered in the database of Samsun Chamber of Commerce and Industry, which were included in the list of the 500 largest companies determined by the Istanbul Chamber of Industry (ITO) every year in 2020, it was understood that it would not be possible to obtain data that could be statistically analyzed due to time, cost and especially pandemic conditions. Therefore, all employees working in various units and positions in the iron and steel industrial enterprise, the largest company in the sector in Samsun, were included in the universe.

As a result of the calculation made in the Sample Size Calculator Programme (Find Out The Sample Size) at 95% confidence level and 5% confidence interval, the minimum sample size was determined as 249 people. The questionnaire form was delivered face-to-face to approximately 702 participants using a convenience sampling method in the workplace. Although the number of employees in the enterprise is 702 people, the number of questionnaire returns is 358 participants, and the number of questionnaires that can be used is determined to be 250. Accordingly, it has been determined that more than the calculated sample size has been returned from the participants in the specified enterprise. In addition, Ethics Committee approval was obtained for this research by Ondokuz Mayıs University Social and Human Sciences Scientific Research and Publication Ethics Committee numbered 2021-927 and dated 26.11.2021.

This study uses Cronbach's alpha (α) coefficient, which is widely used in many studies. It is stated that Cronbach's alpha coefficient of $0.00 \leq \alpha < 0.40$ indicates that the scale is not reliable; $40 \leq \alpha < 0.60$ indicates low reliability; $0.60 \leq \alpha < 0.80$ indicates high reliability; $0.80 \leq \alpha < 1.00$ indicates that the scale is highly reliable (Akgül & Çelik, 2005, pp. 435-436).

The reliability values of the scales are between 0.85 and 1.00 (ELS: 0.92, OIS: 0.94, EAIS: 0.85). Therefore, the scales are highly reliable. When the employees' innovation capability scale is examined in detail, it is seen that it consists of 3 dimensions: idea generation, idea dissemination, and idea realization, and the reliability values of the dimensions are 0.82, 0.67, and 0.82, respectively. Of these values, only the idea dissemination scale is slightly low, but since it is between 0.60 and 0.80, it is considered reliable.

Data collection method and creation of questionnaire form

In the data collection phase of this research, when the possibility of generalization is evaluated, the questionnaire technique is preferred because it provides objective information in a short time and the possibility of comparison with the research to be conducted by other researchers. In this direction, the data to be obtained regarding the research variables (entrepreneurial leadership, organizational innovation, innovation capability of employees) are collected through a questionnaire form prepared by using scales whose validity and reliability have been tested before. However, there are few scales in the literature on the subject. Scale items were adapted to be applied to employees. During the adaptation studies, the opinions of expert academicians working in different universities, including an Associate Professor from Bayburt University, an Associate Professor from Giresun University, and an Associate Professor from Ondokuz Mayıs University, were consulted.

The questionnaire form used within the scope of the research consists of four sections, and the first section includes 7 questions about demographic variables such as gender, age, education level, marital status, income, working time in the institution, and title. In the second part, the "Entrepreneurial Leadership Scale (ELS)" consisting of (8) items developed by Renko et al. (2015) and validated by Bagheri and Akberi (2017) and Zorlu and Tetik (2018) is used. This scale, which consists of a single dimension, aims to measure the entrepreneurial leadership perception of employees in management positions. The third part, the "Organisational Innovation Scale (OIS)" developed by Çavuş (2006), consists of (18) items, and a single dimension is used. This scale aims to determine the level of innovativeness of organizations. In the fourth part, the "Employees' Innovation Capability Scale (EIC)" consisting of (9) items developed by Janssen (2000) and validated by (Önhon, 2016; Holman, Totterdell, Axtell, Stride, Port, Svensson and Zibarras, 2012) is used. This scale aims to determine the innovation capabilities of employees. The scale has three dimensions: idea generation, spread the idea, and idea realization. The idea generation dimension consists

of 3 (1-3) items, the idea dissemination dimension consists of 3 (3-6) items, and the idea realization dimension consists of 3 (6-9) items.

In order to measure the questions in the second, third, and fourth sections of the questionnaire form other than the first section, a 5-point Likert scale is used, and scoring is made in this direction.

Findings

In this section, the findings obtained from analyzing the data collected from the sample are presented and interpreted in tables. In this context, descriptive statistics, and the results of the hypothesis tests developed in line with the research model are presented respectively.

Descriptive statistical findings

This section presents descriptive statistical findings regarding the participants' entrepreneurial leadership, organizational innovation, and innovation behavior tendencies.

Table 1

Descriptive Statistics of Scale Scores

Scale	N	Min.	Max.	X	SS	Skewness	kurtosis
ENTREPRENEURIAL LEADERSHIP	250	1,00	5,00	3,27	0,83	-0,28	-0,35
ORGANIZATIONAL INNOVATION	250	1,00	5,00	3,06	0,78	-0,38	-0,33
Generating the Idea	250	1,00	5,00	3,82	0,77	0,13*	0,62
Spread the Idea	250	1,00	5,00	3,07	0,91	-0,20	-0,26
Realization of the Idea	250	1,00	5,00	3,74	0,83	0,16*	0,35
EMPLOYEES' CAPABILITY TO INNOVATE	250	1,00	5,00	3,55	0,69	0,38*	0,31

*After logarithmic transformation

The most important descriptive statistics in Table 1 are skewness and kurtosis values, which are shown in response to the assumption that the survey data are typically distributed. Skewness and kurtosis coefficients take values between - ∞ and + ∞, and skewness and kurtosis coefficients of -3 and + 3 indicate normal distribution according to some researchers (Akgül & Çevik, 2005, pp. 61-68). In order to obtain accurate results in the analyses, the data should be normally distributed or close to normal, and for this reason, the skewness and kurtosis values were examined in Table 1 to determine whether the data were normally distributed, and it was determined that the skewness and kurtosis values were mostly near the values of -3 and +3.

According to Table 1, entrepreneurial leadership perception scale score is 3.27±0.83; organizational innovation scale score is 3.06±0.78; employees' innovation capability scale score is 3.55±0.69. Accordingly, the entrepreneurial leadership perception and organizational innovation scores of the employees participating in the research regarding their managers are in the "Undecided / Agree" range; the innovation capability perception scores of the employees are in the "Agree" range.

Validity and reliability analysis findings of entrepreneurial leadership perception scale

The findings of the confirmatory factor analysis conducted on the unidimensional and 8-item structure of the entrepreneurial leadership perception scale are presented in Table 2. According to the results of the confirmatory factor analysis, it was determined that the item factor loadings were at an appropriate level, but the model fit indices were not at excellent levels, so the fit index was tried to be improved with covariance connections suitable for modification suggestions.

Table 2

Model Fit Indices Obtained in Confirmatory Factor Analysis of the Perception of Entrepreneurial Leadership Scale

	First CFA	**Last CFA***
Model Fit Indices	**8 items one dimension**	**8 items one dimension**
X2/SD	12,037	2,770
SRMR	0,078	0,034
GFI	0,831	0,947
NNFI	0,779	0,965
CFI	0,842	0,976
RMSEA	0,211	0,084
Correlation between factors	-	-
Factor load	0,63 / 0,89	0,58 / 0,90

After establishing the covariance connection between the two items (m1-m2), the model fit indices reached good and excellent levels. In order to confirm the single-factor structure of the entrepreneurial leadership scale, a Level I Confirmatory Factor Analysis was performed in the AMOS 21 statistical program, and according to this analysis, the factor loadings of all statements were found to be significant. It was decided that no statements would be removed from the analysis. In (Table 2), where the factor loadings of the scale were found to be within the appropriate ranges, the results of the Level I Confirmatory Factor Analysis of the entrepreneurial leadership scale are given in Figure 2.

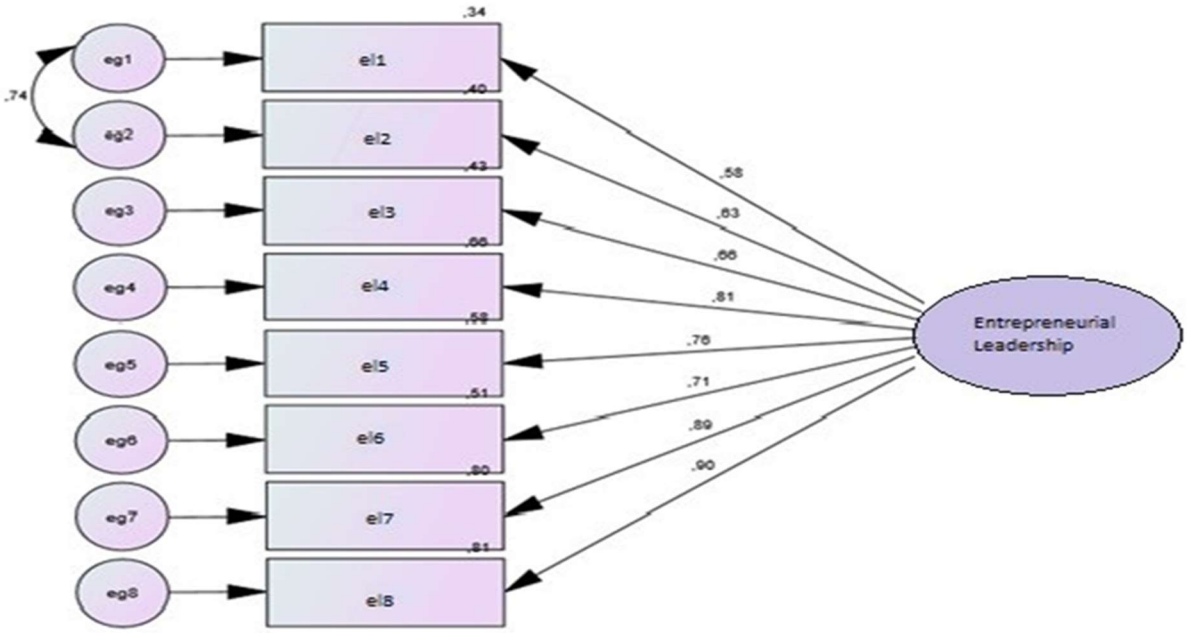

Figure 2. CFA diagram of entrepreneurial leadership scale

Table 3

CFA and Reliability Analysis Results of Entrepreneurial Leadership Perception Scale

Item and Dimension	**Std. β**	**t**	**r**	**α**
My managers often develop innovative ideas for products.	0,58		0,63	
My managers often develop new product and service ideas that can be sold	0,63	15,90**	0,67	
My managers know how to take risks when necessary.	0,66	8,44**	0,66	
My managers develop creative solutions to problems.	0,81	9,72**	0,77	0,92
My managers are committed to their work and enjoy their work.	0,76	9,33**	0,74	
My managers have long-term goals for my work.	0,71	8,94**	0,67	
My managers work in an innovative way and encourage employees to be innovative at work.	0,89	10,26**	0,82	
My managers question existing ways of doing things from an innovative perspective.	0,90	10,30**	0,82	

r: Item Total Correlation **p<0.01

The Cronbach Alpha coefficient of the whole scale is 0.92, and the item-total correlation for all items is higher than 0.30 (between 0.63 and 0.82). According to the results obtained, it was determined that the entrepreneurial leadership perception scale is a reliable and valid scale with 8 items and a unidimensional structure.

Organizational innovation scale validity and reliability analysis findings

According to the results of the confirmatory factor analysis, it was determined that the model fit indices were not in appropriate ranges and there were items with factor loadings lower than 0.40, so the fit indices were tried to be improved by covariance linkages and the items with low factor loadings were gradually removed from the scale (Table 4).

Table 4

Model Fit Indices Obtained in Confirmatory Factor Analysis of Organizational Innovation Scale

Model Adaptation Indices	First CFA 18 items one dimension	Final CFA 15 items one dimension	
X2/sd	3,184		2,279
SRMR	0,056	0,042	
GFI	0,826	0,903	
NNFI	0,877	0,944	
CFI	0,891	0,953	
RMSEA	0,094	0,072	
Correlation between factors	-	-	
Factor load	0,35 / 0,85	0,52 / 0,86	

*With covariance links

According to the results of the Level I Confirmatory Factor Analysis in Figure 3, it was determined that the model fit indices reached appropriate levels, and the factor loadings were in appropriate ranges in the 15-item structure remaining in the scale with three covariance links (m2-m3, m9-m10, m15-m16) by deleting 3 items with excessively high correlation (m12, m17, m18).

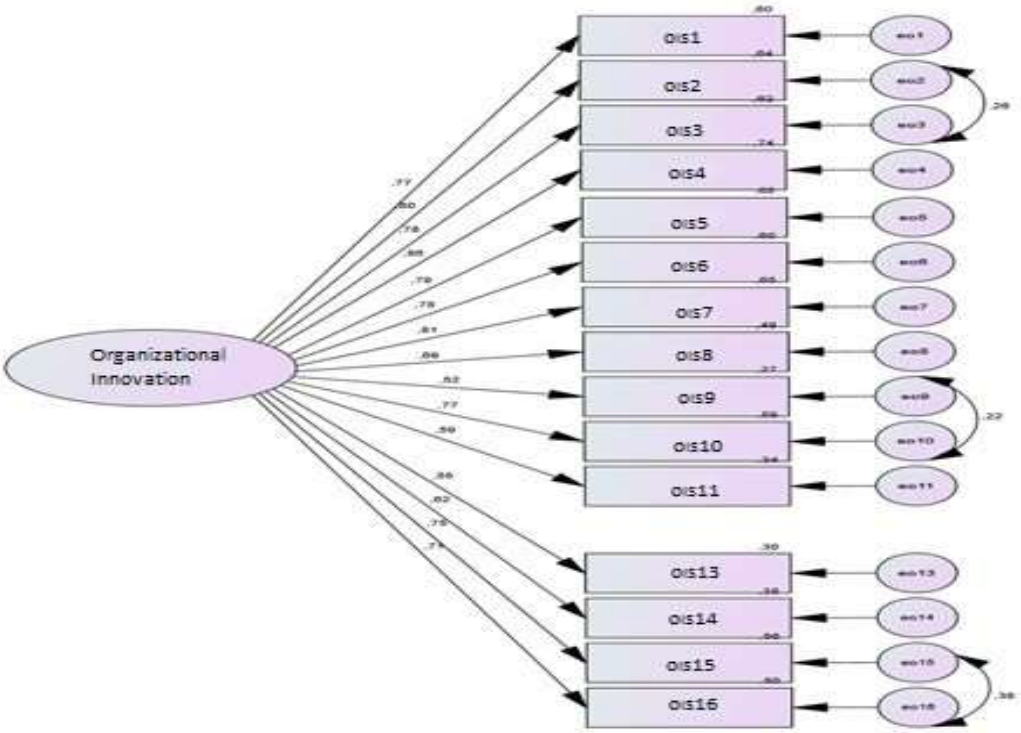

Figure 3. CFA diagram of organizational innovation scale

Table 5

CFA and Reliability Analysis Results of Organizational Innovation Scale

Item and Dimension	Std. β	t	r	α
Our business has an innovative vision that is shared by everyone.	0,77		0,74	
Innovative ideas are always appreciated.	0,80	11,84**	0,77	
A suitable environment is prepared for innovation in our organization.	0,78	12,24**	0,76	
We are always encouraged to be innovative.	0,86	12,00**	0,81	
To be innovative, the necessary material and non-material resources are provided.	0,79	13,16**	0,75	
We can always put our thoughts into practice.	0,78	12,09**	0,75	
Innovative practices are taken into account in performance evaluation.	0,81	11,91**	0,79	
Organizational and managerial factors that prevent innovation in our business are minimized.	0,69	12,37**	0,67	0,94
Failures are ignored and successes rewarded.	0,52	10,58**	0,53	
An independent working environment is offered to foster innovation.	0,77	8,00**	0,76	
When hiring new employees, they are considered to be innovative.	0,59	11,81**	0,57	
Top management delegates authority and responsibility for implementing creative ideas to subordinates.	0,55	8,99**	0,56	
Innovative practices are handled in mutual trust.	0,62	8,44**	0,61	
Innovative practices are handled in mutual trust..	0,75	9,49**	0,76	
Our business is open to innovation and change.	0,71	14,54**	0,71	

r: Item Total Correlation **p<0.01

The Cronbach Alpha coefficient of the scale was found to be 0.94. The item-total correlation for all items in the scale is higher than 0.30 (between 0.53 and 0.81). According to the results obtained, it was determined that the organizational innovation scale is a reliable and valid scale with the remaining 15 items and a unidimensional structure.

Validity and reliability analysis findings of employees' innovation capability scale

The findings obtained from the confirmatory factor analysis conducted with the 9-item and 3-dimensional structure of the employees' innovation capability scale are presented in Table 6. According to the results of confirmatory factor analysis, it was determined that the model fit indices were not within the appropriate ranges. When the factor loadings were examined, it was determined that although there were no factor loadings lower than 0.40, 2 items (m4, m7) in the scale had high correlations with the items in other dimensions. Covariance links were observed in the modification suggestions. Due to the high

correlation arising from these items, it was found that there was a correlation at the level of 0.90 between the dissemination of the idea and the realization of the idea dimensions, and since it negatively affected the model fit indices, the items in question (m4, m7) were removed from the scale, and the results in Table 6 were obtained.

Table 6

Model Fit Indices Obtained in Confirmatory Factor Analysis of Employees' Innovation Capability Scale

Model Adaptation Indices	**First CFA 9 items 3 dimensions**	**Final CFA* 7 items 3 dimensions**
X^2/sd	4,353	2,364
SRMR	0,054	0,030
GFI	0,907	0,971
NNFI	0,903	0,961
CFI	0,935	0,979
RMSEA	0,116	0,074
Correlation between factors	0,74 / 0,72 / 0,90	0,53 / 0,78 / 0,69
Factor load	0,58 / 0,90	0,66 / 0,84

*With covariance links

In order to verify the model fit indices in Table 6 and the three-dimensional structure of the employees' innovation capability scale, Level I Confirmatory Factor Analysis was applied in Figure 4. According to the results of the Level I Confirmatory Factor Analysis in Figure 4, it was determined that the model fit indices reached appropriate levels without the need for covariance linkage after removing the problematic items (m4, m7) in the scale according to the results whose factor loadings were not appropriate and that the correlations between factors and item factor loadings were in appropriate ranges.

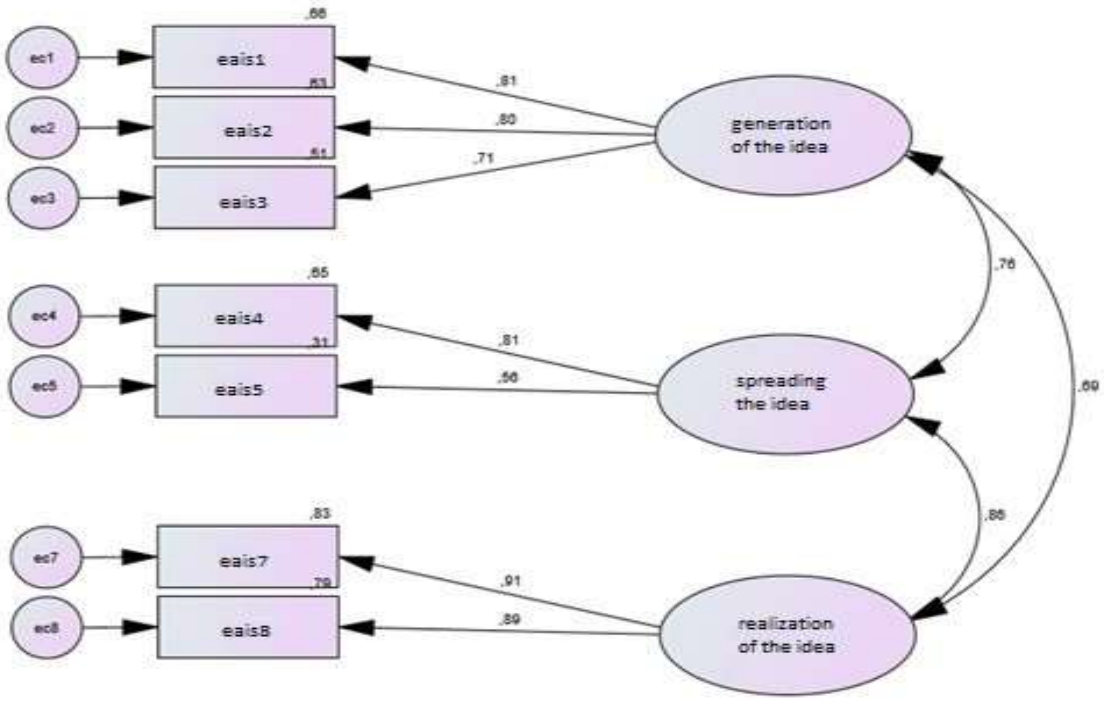

Figure 4. CFA diagram of employees' ınnovation capability scale

Table 7

CFA and Reliability Analysis Results of Employees' Innovation Capability Scale

Item and Dimension	Std. β	t	r	α (0,85)
Generating of the Idea				**0,82**
I generate new ideas for business development.	0,81		0,66	
I research new working methods, techniques or tools.	0,79	12,35**	0,65	
I come up with ideas for solving problems that have not been tried before.	0,72	11,21**	0,56	
Spread the Idea				**0,67**
I am appreciated for my innovative ideas.	0,66		0,45	
I encourage people in key roles in our company to come up with innovative ideas.	0,77	7,06**	0,54	
Realization of the Idea				**0,82**
I systematically apply innovative ideas to the work environment.	0,84		0,71	
I review the benefits of innovative ideas.	0,84	13,36**	0,69	

r: Item Total Correlation **p<0.01

As a result of the confirmatory factor analysis, it is seen that the factor loadings of the remaining 7 items in the scale are higher than 0.40, and the t values of all items are significant. The Cronbach's Alpha coefficient for the whole scale was 0.85; the Cronbach's Alpha coefficients of the sub-dimensions were 0.82 / 0.67 / 0.82. The item-total correlation for all items in the scale is higher than 0.30 (between 0.45 and

0.69). According to the results obtained, it was determined that the employees' innovation capability scale is a reliable and valid scale with the remaining 7 items and 3-dimensional structure.

Testing the research model and hypothesis findings

In the study, structural equation modeling was preferred in the AMOS program instead of regression analysis, which is generally used to determine the accuracy of research models. Because structural equation modeling offers a more robust infrastructure than the classical regression model (İlhan & Çetin, 2014, pp. 29-32). Since the structural equation is a statistical method, especially in the form of models that examine the relationship between many variables, this study tested the research model with latent variables using the AMOS program. Because in this test method, reliable results emerge for the path analysis since the relationships between variables can be calculated free of errors (Meydan & Şeşen, 2015, p. 30).

In order to test the research model, path analysis was performed with latent variables in the AMOS 22 statistical program, and the results of path analysis with latent variables are shown in Figure 5.

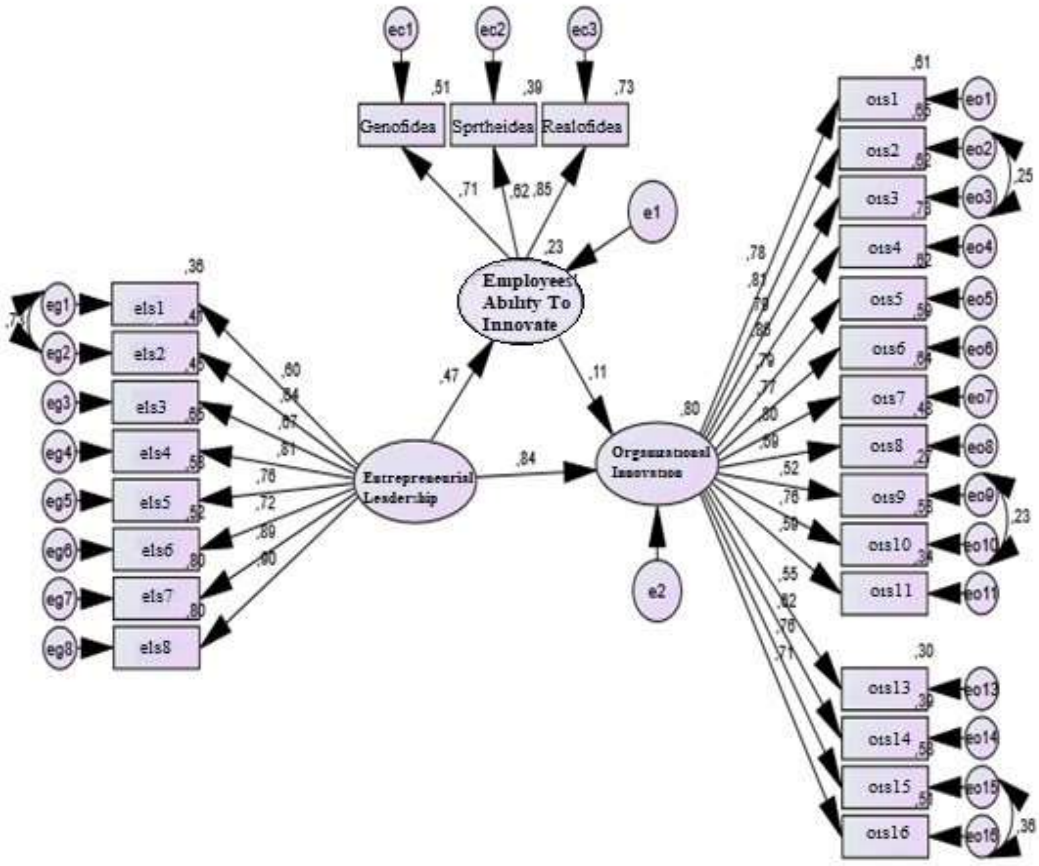

Figure 5. Path analysis diagram with latent variables

Table 8 shows the Pearson correlation test results of the relationship between latent variables and variables related to path analysis. Since the correlation test results given in the table are at the desired level, it is seen that the research model created works.

Table 8

The Relationship between Variable Scores

Scale and Subscale	1	2	3	4	5	6
1- ENTREPRENEURIAL LEADERSHİP	1	0,83**	0,27**	0,42**	0,32**	0,42**
2- ORGANIZATIONAL INNOVATION		1	0,25**	0,53**	0,34**	0,47**
3- Generating of the Idea			1	0,36**	0,62**	0,76**
4- Spread the Idea				1	0,50**	0,81**
5- Realization of the Idea					1	0,84**
6- EMPLOYEES' CAPABILITY TO INNOVATE						1

*p<0,05 **p<0,01

A positive and significant relationship was found between the independent variable entrepreneurial leadership scores and the dependent variable organizational innovation scores (r=0.83; p<0.05). A positive and significant relationship was found between the independent variable of the study, entrepreneurial leadership scores, and the mediating variable, employees' innovation capability scores (r=0.42; p<0.05). A positive and significant relationship was found between the mediating variable of the study, employees' innovation capability scores, and the dependent variable, organizational innovation scores (r=0.47; p<0.05).

Table 9

Results of the Research Model with Mediating Variables

Model	Independent Variable	Path	Dependent Variable	H	β	t	p	R^2
Independent Models	Entrepreneurial Leadership	→	Innovation Capbility of Employees	H1 (a)	0,46	5,42	0,000	0,215
	X^2/sd=2,02	SRMR=0,06	GFI=0,94	NNFI=0,97		CFI=0,97	RMSEA=0,06	
	Innovation Capability of Employees	→	Organizational Innovation	H2 (a)	0,51	6,33	0,000	0,257
	X^2/sd=2,44	SRMR=0,07	GFI=0,88	NNFI=0,92		CFI=0,93	RMSEA=0,07	
	Entrepreneurial Leadership	→	Organizational Innovation	H3 (c)	0,84	8,71	0,000	0,788
	X^2/sd=2,44	SRMR=0,07	GFI=0,88	NNFI=0,92		CFI=0,93	RMSEA=0,07	

Model with Mediating Variables	Independent Variable	Path	Dependent Variable	H	Mediating Variable	IES	STS	R^2_{IES}
	Entrepreneurial Leadership	→	Organizational Innovation	H4 (c')	Innovation Capability of Employees	0,051	1,61	0,032
	X^2/sd=1,92	SRMR=0,06	GFI=0,85	NNFI=0,93	CFI=0,94	RMSEA=0,06		

*: p<0,05 **: p<0,01 IES: Indirect effect size STS: Sobel test statistic R2IES : Variance due to indirect effect

According to Table 9, entrepreneurial leadership has a positive and significant effect on employees' innovation capability (β=0.46; t=5.42; p<0.05). The variance explained by entrepreneurial leadership on employees' innovation capability variable is 22% (R2=0.215).

H1 Supported Entrepreneurial leadership has a significant effect on employees' innovation capability.

According to Table 9, employees' innovation capability has a positive and significant effect on organizational innovation (β=0.51; t=6.33; p<0.05). It was determined that the variance explained by the innovation capability of employees on the organizational innovation variable was 26% (R2=0,257).

H2 Accepted: Employees' innovation capability has a significant effect on organizational innovation.

According to Table 9, entrepreneurial leadership has a positive and significant effect on organizational innovation (β=0,89; t=8,71; p<0,05). The variance explained by entrepreneurial leadership on organizational innovation variable is 79% (R2=0,788).

H3 Accepted: Entrepreneurial leadership has a significant effect on organizational innovation.

According to Table 9, it was determined that the variance change in organizational innovation with the inclusion of the mediating variable of employees' innovation capability in the model in the relationship between entrepreneurial leadership and organizational innovation is at the level of 3% (R2IES =0.032), the indirect effect of employees' innovation capability in this relationship is at the level of 0.05 (IES=0.05), and this change with the mediating effect of employees' innovation capability is statistically partial (STS=1.61; p>0.05).

H4 Accepted: There is a partial mediation effect of employees' innovation capability in the relationship between entrepreneurial leadership and organizational innovation. Although the effect of entrepreneurial leadership on organizational innovation changes at the level of 3% with the mediating effect of employees' innovation capability, this effect is determined as a partial effect.

Conclusion and Recommendations

Organizations are dynamic structures and systems that can be affected by internal, external, micro, and macro environments. Especially with the development of globalization and technology, this interaction has increased even more, and this situation has caused organizations to gradually lose their own control of their functioning (Gemici, 2019, p. 225). For organizations to be successful and to continue their activities, that is, to ensure their sustainability, some reasons are required, and this situation can be realized by focusing on some concepts and directing them correctly. In this context, the study examined the relationship between entrepreneurial leadership, organizational innovation, and innovation capabilities of employees.

The literature on entrepreneurial leadership, organizational innovation, and innovation ability of employees was reviewed, and a model expressing the relationship between variables was created. This model was tested with structural equation modeling (path analysis) in the AMOS statistical program, and it was concluded that the model worked. Hypothesis H1, developed in line with the model, was supported, while hypotheses H2, H3, and H4 were accepted. First, entrepreneurial leadership positively and significantly affects employees' innovation ability (β=0.46; t=5.42; p<0.05). The variance explained by entrepreneurial leadership on employees' innovation capability variable is 22% (R2=0.215). Although there are similar studies in the literature, Chandra (2019), in his study on the relationship between organizational performance and entrepreneurial leadership: the mediating role of employee innovations, argues that organizational development is linked to entrepreneurial leadership and that organizations that want to develop should give importance to entrepreneurial leadership. Miao et al. (2018), How Leadership and Public Service Motivation Enhance Innovative Behavior. In their study, they argue that to facilitate innovative behavior among employees, public organizations need training that encourages leaders to serve as entrepreneurial role models for leaders (Chandra, Setyohadi and Hidayat, 2019, pp. 35-36; Maio, Newman, Schwarz and Cooper, 2018, pp. 77-78). Secondly, employees' innovation ability positively and significantly affects organizational innovation (β=0.51; t=6.33; p<0.05). It was determined that the

variance explained by the innovation ability of employees on the organizational innovation variable was 26% (R2=0.257). This situation is in line with some studies in the literature. Laursen and Salter (2020) concluded in their research on who is affected by innovation in firms and employees that individual innovation activities affect organizations and organizations' innovative activities affect individuals. Fu et al. (2015), in their research on how high-performance business systems affect organizational innovation in professional service firms, it was concluded that organizational innovation affects the innovation ability of employees in the analysis conducted with the participation of 522 managers from 261 firms using the survey method and answering the questionnaires (Laursen and Salter, 2020, p. 24; Fu, Flood, Bosak, Morris and Regan, 2015, p. 212). Third, entrepreneurial leadership positively and significantly affects organizational innovation (β=0.89; t=8.71; p<0.05). Sawaean and Ali (2020), in The Effect of Entrepreneurial Leadership and Learning Orientation on Organizational Performance of SMEs: The Mediating Role of Innovation Capacity, 392 people answered the application made by face-to-face survey method by 500 business owners or CEOs in Kuwait, 384 people's questionnaires were validated, and the questionnaires were analyzed with the SPSS program, and according to the analysis data, it was stated that entrepreneurial leadership has a direct effect on the performance and innovation capacity of organizations. The variance explained by entrepreneurial leadership in the organizational innovation variable was determined to be 79% (R2=0.788). Esmer and Dayı (2017), Entrepreneurial Leadership: A Theoretical Framework, argue that entrepreneurial leadership is effective in today's organizations to innovate (Sawaen and Ali, 2019, p. 372; Esmer ve Dayı, 2017, pp. 119-120). Finally, in the relationship between entrepreneurial leadership and organizational innovation, the variance change in organizational innovation with the inclusion of the mediating variable of employees' innovation ability in the model was found to be at the level of 3% (R2EB =0.032), the indirect effect of employees' innovation ability in this relationship was found to be at the level of 0.05 (DE=0.05), and this change with the mediating effect of employees' innovation ability had a partial mediating role (SBT=1.61; p>0.05). This situation overlaps with some domestic and foreign studies in the literature. Poplete (2018) surveyed 2000 people between 18 and 64 in his study on how innovative entrepreneurship can affect growth expectations. Newman et al. (2018), in their study on the effect of self-creativity on employees' innovation behaviors and the role of entrepreneurial leadership, surveyed 346 people in a state-owned enterprise providing transportation services in China. According to the data analysis of the questionnaires, it was argued that entrepreneurial leadership has a positive and significant relationship with employees' innovation behaviors (capabilities). Zorlu and Tetik (2018) researched 381 employees using face-to-face interview techniques with academic and administrative staff working on the central campus of Ahi Evran University in their study titled The Effect of Entrepreneurial Leadership Behavior on Employee Creativity. The research results were solved with AMOS 24 and SPSS 22.0 package programs, and it was found that the perceived entrepreneurial leadership style in organizations has a positive and significant effect on the creativity levels of employees (Poplete, 2018, p. 209; Newman, 2018, p. 8; Zorlu ve Tetik, 2018, p. 305).

In this context, the study aims to determine whether entrepreneurial leadership affects organizational innovation in employees and to reveal whether employees' innovation capabilities mediate in this relationship. In line with this purpose, a model expressing the relationship between variables was created by reviewing the literature on entrepreneurial leadership, organizational innovation, and innovation capabilities of employees.

Based on the findings obtained after the research results, suggestions are made for academicians, researchers, managers, and practitioners. These suggestions can be listed as follows:

- Creating an environment where there are innovative and supportive leaders in every field, where work is programmed appropriately in terms of time and effort, where all employees are managed impartially, and where employees act with a team spirit should be the main goal of all organizations that want to be innovative.
- Opportunities and responsibilities should be given to leaders and employees in all units and levels to realize themselves and contribute to organizational activities.
- In order to be aware of the constantly changing management and market structure, entrepreneurs, leaders, and employees at all levels should be able to receive training to complete their deficiencies and see innovations by using various methods when necessary.

- In organizational management, concepts related to entrepreneurship, innovation, and innovation capabilities of employees should be included in the definitions of mission and vision, and these concepts should be effectively applied to the realization of organizational activities.
- Organizations should closely follow the innovations required by the period and be transparent and innovative in decision-making processes in all monetary, managerial, and organizational issues.
- Organizations should be able to develop new knowledge and understanding that have the potential to affect the way they operate in their processes while performing their activities, and they should bring the developed knowledge to the organizations. In order to make this process effective and continuous, organizations should support their employees' innovativeness in every subject, reward new ideas, have an entrepreneurial leadership approach, share a common vision, and have system thinking.
- In understanding changing environmental conditions and world market competition, organizations should see gaining a competitive advantage and increasing product/service quality as the most important reasons for innovation.

One of the limitations of this study is that it was conducted only on employees and managers working in an enterprise operating in the industrial sector. Another limitation is that since the study was conducted in a single enterprise, it is impossible to generalize the results. Different results may emerge from comparative examination with other sectors and public organizations. This study focused on managers and employees at all levels in the relevant organization. In other studies, only the perception of entrepreneurial leadership, perception of organizational innovation, and innovation ability tendency of employees can be examined. This study was conducted only in a leading business in Samsun, but the study can be expanded and conducted regionally or nationwide. Comparisons can be made between organizations with different business lines on entrepreneurial leadership, organizational innovation, and employees' propensity for innovation ability. This study can also be supported by future studies using qualitative research methods. In conclusion, this study will give academicians, researchers, managers, and practitioners a different perspective.

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Genişletilmiş Özet

Araştırma problemi

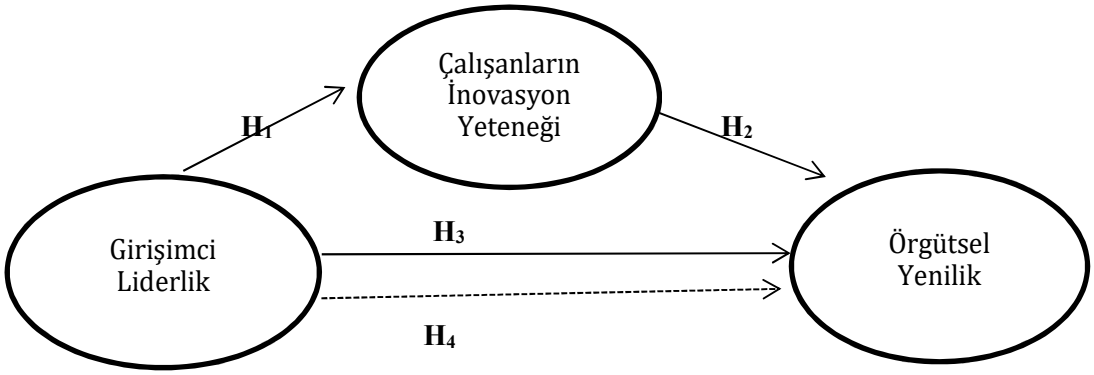
Bu araştırma, girişimci liderliğin örgütsel yenilik üzerindeki etkisinde çalışanların inovasyon yeteneğinini aracılık rolünü incelemek amacıyla gerçekleştirilmiştir.

Literatür taraması

Birçok araştırmacı, girişimci ve girişimci liderler aracılığıyla kuruluşların rakiplerine karşı üstünlük sağlamada etkili olduklarını tespit etmiştir. Araştırmalar sonucunda, girişimci liderlik hem özel sektörde hem de kamu sektöründe tanımlanmıştır. Çalışanların sahip olması gereken bir özellik olarak kabul edilmektedir. Girişimci liderler risk alabilme yeteneği, başarma arzusu, başkalarıyla birlikte çalışabilme becerisi, onlara güvenme ve onları yönetebilme, eksikliklerini kabul ederek zor ve ağır şartlar altında çalışabilme ve sabırlı olma gibi özelliklere sahiptir ve bu özellikleri sağlayan liderler kurumlarında fark yaratırlar. Girişimci liderler, bağlı bulundukları kuruluşlara rekabet avantajı sağlarlar (Sönmez ve Toksoy, 2014, 44). Kuruluşlar için inovasyon yapmak da bir zorunluluk olmakla birlikte, inovasyon kelimesinin yenilikçilik kavramını karşılayıp karşılamadığı konusunda bir kafa karışıklığı söz konusudur. İnovasyon çok boyutlu bir kavramdır ve bu özelliği nedeniyle inovasyon kavramı üzerinde tam olarak uzlaşılmış bir tanım bulunmamaktadır (Arslan, 2012, 8). İnovasyon kavramı açıklanmaya çalışılırken bu kavram genel olarak yenilik anlamında kullanılsada teoride inovasyon katma değer sağlayan her şeye denir. Teknolojik, politik ve finansal değişimler toplumların eğilimlerini, duygularını, değerlerini, etik anlayışlarını, kısa ya da uzun vadeli beklentilerini farklılaştırmaktadır (Northouse, 2006, 15). Bu değişim ve yenilikler sadece toplumsal eğilimleri etkilemekle kalmamakta, her alanda ve anlamda kendini göstermektedir. Özellikle ekonomik sistem içinde önemli bir paya sahip olan kuruluşlarda hayatta kalmanın önemini ortaya koymaktadır. Kuruluşların faaliyetlerini sürdürebilmeleri için inovasyona yatırım yapmalarının temel nedeni rekabet avantajı arayışıdır. Bu sayede kuruluşlar kendi görev alanlarında üstünlük elde edebilmekte ve yeni farklılıklar yaratabilmektedirlern (Adams vd., 2006, 22). İnovasyon, her türlü faaliyette kuruluşların performansını artırmayı amaçlayan bir süreç olmasının yanı sıra, hem özel sektörde hem de kamu sektöründe giderek daha fazla arzu edilmekte ve uygulanmaktadır (İşcan ve Karabey, 2007, 182. Bu alandaki temel araştırma konuları, sürekli olarak yenilikçi ürün ve süreçleri benimseyen örgütler ve örgütsel performanstır (Hamidi ve Benabdeljlıl, 2015, 288). Bu amaçla bu çalışmada, çalışanların hayatında doğrudan var olan ve çalışanlar üzerinde her an etkisi olan kavramlar üzerinde araştırma yapılmaktadır.

Araştırmanın modeli ve hipotezleri

Araştırma modelinde, "Girişimci Liderlik" bağımsız değişken, "Örgütsel Yenilik" bağımlı değişken, "Çalışanların İnovasyon Yeteneği" aracı değişken olarak ele alındığında (Chandra vd., 2019, 35-36; Leitch ve Volery, 2016, 148-150; Zorlu ve Tetik, 2018, 300-302) araştırma kuramından ve görgül araştırmalardan yola çıkılarak meydana gelen hipotezler ve model aşağıda yer verilmiştir.



Şekil 1. Araştırma modeli

Araştırmanın temel soruları ve teorik bilgilerin ışığında hipotezler aşağıdaki gibi oluşturulmuştur.

H1: Girişimci liderliğin, çalışanların inovasyon yeteneği üzerinde pozitif yönde ve anlamlı bir etkisi vardır.

H2: Çalışanların inovasyon yeteneğinin, örgütsel yenilik üzerinde pozitif yönde ve anlamlı bir etkisi vardır.

H3: Girişimci liderliğin, örgütsel yenilik üzerinde pozitif yönde ve anlamlı bir etkisi vardır.

H4: Çalışanların inovasyon yeteneği, girişimci liderlik ile örgütsel yenilik arasındaki ilişkide aracılık rolüne sahiptir.

Araştırmanın evreni ve örneklemi

Araştırmanın evrenini, İstanbul Sanayi Odası (İTO) tarafından her yıl belirlenen en büyük 500 firma listesinde 2020 yılında yer alan ve Samsun Ticaret ve Sanayi Odası veri tabanına kayıtlı sanayi işletmelerinin tümü hedeflenmesine rağmen uygulamaya geçildiğinde zaman, maliyet ve özellikle pandemi (Salgın Hastalık) koşulları nedeniyle istatistiki analiz yapılabilecek nitelikte veri elde edilemeyeceği anlaşılmış olup, bu nedenle Samsun'da sektörün en büyük firması olan demir-çelik sanayi işletmesinde çeşitli birimlerde ve konumlarda görev yapan tüm çalışanlar evrene dâhil edilmiştir.

Araştırma evreninden %95 güven düzeyinde ve %5 güven aralığı dikkate alınarak, *Sample Size Calculator Program*ı`nda yapılan hesaplama sonucunda örneklem büyüklüğü minimum 249 kişi olarak belirlenmiştir. İşletmede çalışan sayısı 702 kişi olmakla birlikte ankete geri dönüş sayısı 358 katılımcı görünmekte ve kullanılabilecek anket sayısı 250 olarak belirlenmiştir. Buna göre belirtilen işletmede hesaplanan örnek sayısının üzerinde katılımcıdan geri dönüş sağlanmış olduğu tespit edilmiştir.

Veri toplama yöntemi ve anket formunun oluşturulması

Araştırma kapsamında kullanılan anket formu dört bölümden oluşmakta olup birinci bölümde cinsiyet, yaş, eğitim düzeyi, medeni durum, gelir, kurumda çalışma süresi, unvan vb. demografik değişkenlerle ilgili 7 soru bulunmaktadır. İkinci bölümde ise Renko ve diğerleri (2015), Bagheri ve Akberi (2017) ve Zorlu tarafından geliştirilen ve Tetik (2018) tarafından geçerlemesi yapılan (8) maddeden oluşan "Girişimci Liderlik Scale (LLS)" ölçeği kullanılmıştır. Tek boyuttan oluşan bu ölçek, çalışanların girişimci liderlik algısını ölçmeyi amaçlamaktadır. Üçüncü bölümde Çavuş (2006) tarafından geliştirilen (18) maddeden ve tek boyuttan oluşan "Örgütsel Yenilikçilik (IIS) Ölçeği" kullanılmıştır. Bu ölçek kuruluşların yenilikçilik düzeyini ölçmek için kullanılmaktadır. Dördüncü bölümde Janssen (2000) (Önhon, 2016; Holman vd., 2012; Wallece vd., 2013). (9) maddeden oluşan "Çalışanların İnovasyon Yeteneği Ölçeği" (ÇİYKÖ)" kullanılmıştır. Bu ölçek çalışanların inovasyon yeteneklerini belirlemeyi amaçlamaktadır. Ölçekte, fikir üretme, fikir yayma ve fikir gerçekleştirme olmak üzere olmak üzere üç boyut bulunmaktadır. Fikrin üretilmesi boyutu 3 (1-3), fikrin yayılması boyutu 3 (3-6), fikrin gerçekleştirilmesi boyutu ise 3 (6-9) maddeden oluşmaktadır. Bu çalışmada verileri analiz etmek için SPSS 21.0 ve AMOS 22.0 istatistik

programları kullanılmıştır. Ölçeğin geçerlilik çalışmaları kapsamında doğrulayıcı faktör analizi; madde-toplam korelasyonu ve Cronbach Alpha analizlerinden yararlanılmıştır.

Anket formunun birinci bölüm haricinde bulunan ikinci, üçüncü ve dördüncü bölümünde yer alan soruları ölçmek için 5'li Likert ölçeğinden yararlanılarak, bu yönde puanlama yapılmaktadır. Sorulara verilecek puan değerleri ve cevap seçenekleri şu şekildedir: (1) Kesinlikle Katılmıyorum, (2) Katılmıyorum, (3) Kararsızım, (4) Katılıyorum, (5) Tamamen Katılıyorum şeklindedir.

Bulgular ve sonuçlar

Girişimci liderlik, örgütsel inovasyon ve çalışanların inovasyon kabiliyeti ile ilgili literatür incelenmiş ve değişkenler arasındaki ilişkiyi ifade eden bir model oluşturulmuştur. Bu model AMOS istatistik programında yapısal eşitlik modellemesi (yol analizi) ile test edilmiş ve modelin çalıştığı sonucuna varılmıştır. Model doğrultusunda geliştirilen tüm hipotezler kabul edilmiş olup, ilk olarak, girişimci liderliğin çalışanların inovasyon yeteneği üzerinde pozitif ve anlamlı bir etkisi vardır (β=0.46; t=5.42; p<0.05). Girişimci liderliğin çalışanların inovasyon yeteneği değişkeni üzerinde açıkladığı varyans %22'dir (R2=0.215). İkinci olarak, çalışanların yenilikçilik yeteneğinin örgütsel yenilikçilik üzerinde pozitif ve anlamlı bir etkisi vardır (β=0.51; t=6.33; p<0.05). Çalışanların yenilikçilik yeteneğinin örgütsel yenilikçilik değişkeni üzerinde açıkladığı varyansın %26 olduğu tespit edilmiştir (R2=0,257). Üçüncü olarak, girişimci liderliğin örgütsel yenilikçilik üzerinde pozitif ve anlamlı bir etkisi vardır (β=0,89; t=8,71; p<0,05). Girişimci liderliğin örgütsel yenilikçilik değişkeni üzerinde açıkladığı varyans %79'dur (R2=0,788). Son olarak, girişimci liderlik ile örgütsel yenilikçilik arasındaki ilişkide, çalışanların yenilikçilik yeteneğinin aracı değişken olarak modele dâhil edilmesiyle örgütsel yenilikçilikteki varyans değişiminin %3 düzeyinde olduğu (R2EB=0,032), bu ilişkide çalışanların yenilikçilik yeteneğinin dolaylı etkisinin 0,05 düzeyinde olduğu (DE=0,05) ve bu değişimin çalışanların yenilikçilik yeteneğinin kısmi aracılık rolü üstlenmesiyle gerçekleştiği tespit edilmiştir (SBT=1,61; p>0,05). Bu çalışma sadece Samsun'da bulunan ve faaliyet alanında lider olan bir işletmede gerçekleştirilmiştir. Bu çalışma genişletilerek bölgesel veya ülke çapında yapılabilir. Farklı iş kollarına sahip kuruluşlar arasında girişimci liderlik, örgütsel yenilikçilik ve çalışanların yenilikçilik becerisi eğilimi konularında karşılaştırmalar yapılabilir. Bu çalışma, nitel araştırma yöntemlerinin kullanıldığı gelecek çalışmalarla da desteklenebilir. Sonuç olarak, bu çalışmanın akademisyenlere, araştırmacılara, yöneticilere ve uygulayıcılara farklı bir bakış açısı sağlayacağı düşünülmektedir.