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THE EFFECTS OF ORGANIZATIONAL FACTORS ON INNOVATION AND CREATIVITY PERFORMANCE IN PROTOTYPE DESIGN COMPANIES*

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ABSTRACT

Research and development activities, which have become indispensable in the innovation and creativity process of the information and competition age, have brought model and prototype applications with them. By testing working conditions, performance and production requirements of products to be developed through model and prototype production, the final point of the innovation and creativity process is reached. This research was carried out in order to reveal whether organizational factors in a prototype business affect the innovation and creativity performance, and to what extent they do; and to reveal the effects of the personnel and therefore the business on the innovation and creativity performance. This study, which is important in terms of understanding organizations' innovation and creativity management and which organizational factors should be utilized in this context, was implemented in the KIWI CNC-Technik GmbH Prototype company operating in Lower Saxony, Germany. A total of 320 questionnaires were distributed to the employees of the company by subjective sampling method. Data obtained from the study were analyzed using the SPSS 22 package program; and the technology, organizational structure, product and service quality, intra-organizational communication, research/development, leadership and organizational climate factors; which are especially effective in the development of innovation and creativity activities of enterprises, were evaluated according to findings of the survey. Results have shown that in KIWI CNC-Technik GmbH innovation develops and creativity progresses accordingly. In addition, it was emphasized that all factors other than leadership, communication, and research/development affect innovation performance significantly, the least quality factor and the most organizational structure.

Keywords: Innovation, Creativity, Organizational Factors.

JEL Codes: M10

PROTOTİP TASARIM İŞLETMELERİNDE ÖRGÜT İÇİ FAKTÖRLERİN YENİLİK VE YARATICILIK PERFORMANSINA ETKİLERİ

ÖZ

Bilgi ve rekabet çağının yenilik ve yaratıcılık sürecinde olmazsa olmazı haline gelen araştırma ve geliştirme faaliyetleri, model ve prototip uygulamalarını da beraberinde getirmiştir. Model ve prototip üretimiyle geliştirilecek olan ürünlerin çalışma şartları, performansı ve üretilme koşulları denenerek yenilik ve yaratıcılık sürecinin son noktasına ulaşılmaktadır. Bu araştırma bir prototip işletmesindeki örgütsel faktörlerin yenilik ve yaratıcılık performansını etkileyip etkilemediğini, etkiliyorsa ne derecede etkilediğini ve personelin, dolayısıyla işletmenin yenilik ve yaratıcılık performansına olan etkilerinin ortaya konulması amacıyla yapılmıştır. Örgütlerde yenilik ve yaratıcılık yönetiminin anlaşılması ve bu konuda hangi örgütsel faktörlerden faydalanılması gerektiği hususunda önem arz eden çalışma, Almanya'nın Aşağı Saksonya

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Eyaletinde faaliyet gösteren KIWI CNC-Technik GmbH Prototip şirketinde uygulanmıştır. Firma çalışanlarına amaçlı örnekleme yöntemiyle toplam 320 anket dağıtılmıştır. Çalışmadan elde edilen veriler SPSS 22 paket programı kullanılarak analiz edilmiş; işletmelerin yenilik ve yaratıcılık faaliyetlerinin geliştirilmesinde özellikle etkili olan teknoloji, örgüt yapısı, ürün ve hizmet kalitesi, örgüt içi iletişim, araştırma/geliştirme, liderlik ve örgüt iklimi faktörleri anket sonuçlarına göre değerlendirilmiştir. Araştırmanın sonucuna göre KIWI CNC-Technik GmbH'da yeniliğin geliştiği, yaratıcılığın da ona bağlı olarak ilerlediği bulgusuna ulaşılmıştır. Bununla birlikte yenilik performansına liderlik, araştırma geliştirme ve iletişim harici tüm faktörlerin anlamlı bir şekilde etki ettiği, en az kalite unsurunun, en çok ise örgüt yapısının etkili olduğu vurgulanmıştır.

Anahtar Kelimeler: Yenilik, Yaratıcılık, Örgüt İçi Faktörler.

Jel Kodları: M10

INTRODUCTION

Change has become an indispensable feature of organizational life in markets which have become intense and dynamic with global competition. In this variation; new products, services, processes and organizational structures are the primary factors that businesses use to satisfy their customers and compete with each other. Businesses need to perceive the concept of innovation correctly and choose the most appropriate innovative organizational structure to adapt to their own organizational formation (Acaray, 2007). Since today, companies being known as market leaders in many sectors are businesses that have the ability to develop innovative products and services (Yüce, 2013); organizations are now constantly renewing and altering their systems, products, structures, processes, and strategies in order to respond to major formations and transformations in external environmental conditions. Organizations being aware of the fact that the only way to fulfill this obligation is to be creative and innovative (Naktiyok, 2007), have to deal with creativity and innovation in order to maintain their competitive advantage against their rapidly growing and especially new and influential competitors operating on global scale (Cengiz et al., 2007).

Many past and current studies have proven that producing and executing innovative projects are needed in order to achieve improvements in business performance, and that the concept of creativity should be constantly considered for this purpose (Meyer & Plucker, 2022; Mickiewicz & Kaasa, 2022; Aydın & Çilesiz, 2022; Vernandhie, 2022; Akhter et al., 2022; Karakuş, 2014). In this context, it has been revealed that organizational factors such as innovation orientation, project generation, information sharing, communication, goal orientation, complementary skills, and team spirit have a positive effect on both innovation and creativity performance (Kale, 2010). In addition, studies have shown that personal factors such as stress, anxiety, work commitment, and organizational support have a positive effect on innovative behaviors and innovation outcomes (Moreno Cunha et al. 2022).

Beside these, prototype works are also on the agenda as integrated with innovation and creativity activities (Jaskyte & Liedtka, 2022; Bulat, 2022; Johnson, 2022; Özkaya et al., 2022; Farzampour, 2022). The role of creativity techniques in the design of prototypes is of particular interest in terms of innovation potential (Silveira et al., 2020). Based on the idea that research and development activities, which have become indispensable in the innovation and creativity process bring along model and prototype applications, it was found appropriate to conduct this research in a prototype enterprise. In this study, the main research problem is to reveal whether organizational factors affect innovation and

creativity performance, and if so, to what extent; and the second problem is to reveal their effects on staff's innovation and creativity performance, and therefore the business. In this direction, hypotheses investigating these problems were formed, and results being important within the scope of internal organizational factors, innovation and creativity in increasing the competitiveness of enterprises were presented. Nevertheless, evaluating innovation and creativity on the basis of only a few factors and limiting the research to a single company constitute the limitations of the research.

Thus, in the first part of the study concepts of innovation and creativity are explained and subsequently, organizational factors being dealt within the enterprise are clarified. In the next part; the aim, importance, model, hypotheses, method, and constraints of the research are mentioned. Finally, in the analysis part of the study, regression analyzes of innovation and creativity variables with the factors technology, organizational structure, product/service quality, intra-organizational communication, research/development, leadership, and organizational climate were made; continously findings were discussed in the conclusion part.

1. THEORETICAL FRAMEWORK

1.1 Innovation

The word innovation is derived from the Latin root "innoware" which means "to do something new and different". The concept means the renewal of science and technology in a way that will benefit economy and society. For this reason, innovation is not a simple renewal, but it is a process that starts from the theoretical stage of innovation, includes the innovative product, and accepts its marketability (Yamaç, 2001). Innovation is not only limited to making some innovations and improvements in the product, production method, and the usage of the product; but it is also a phenomenon including developments in subjects such as management, information, organization, and finance. Therefore, it is closely related to the application of social sciences such as economics and business to industry and companies (Tüzmen, 2002).

Drucker, who has done much research on innovation, defined it as useful information that enables people with different knowledge and abilities working together in an organization for the first time to make them productive. As he stated, innovation is a special tool of entrepreneurship and an action that provides resources creating the elements necessary to make wealth (Drucker, 1985). Accordingly, Drucker defined innovation also as "the act of giving resources the capacity to create new wealth" and reported that "innovation is not change management, but researching what changes a company can benefit from" (Barker, 2002).

Damanpour (1987) defined the concept of innovation as "a means of change made in the output, structure or processes of an organization to facilitate the adaptation process to the environment". Also Sull (2007) defined innovation as "a new combination of resources that fills an unmet need gap in the market and creates added value to the procurement cost of using the required resource". To him, value is achieved not in keeping boundaries in check, but in the ability to manage the uncertainty in the nature

of trying something new. In this context, entrepreneurs create value if the plan is successful by catching the gap in the market and developing a plan that includes innovation in order to fill this gap (Sull, 2007).

Innovation covers all processes carried out to develop a new or improved product, service, or production method to make it profitable. The starting point of developing a new or improved product, service, or production method is new ideas. Since innovation is a continuous activity; ideas and their results which are put forward, developed, put into practice, and ultimately marketed in a way that will bring competitive power to the company, need to be re-evaluated and used by disseminating them for new returns. New ideas that will arise in this way will lead to innovation activities (http://www.inomer.org). Innovative organizations have grasped the real meaning of innovation. They know that innovation is a value, not science and technology. They also emphasize that innovation is not something inside the organization, but a change that exists outside (Drucker, 1974).

1.2 Creativity

Creativity is a concept often confused with innovation, but innovation is a process, while creativity is a set of skills or natural dispositions that make this process possible. Creativity is an innovative (mainly mental) activity, whereas innovation is the physical or external result of creativity. Creativity is a word that affects people and evokes the extraordinary. It refers to the first and new, in other words “creativity is the ability to create new ideas” (Barker, 2002). Currently, all products and services being created with creativity and offer convenience to our lives are product innovations. From this explanation, it can be understood that there’s a close relationship between product innovation and technology. A product differing greatly from previously produced products, goods, or services with its technological features or purposes of use is a technologically new product (Yüce, 2013).

Creativity is new intuitions, ideas, and products with aesthetic, scientific, social, and technical value which experts accept; in short, it is the invention, discovery, or contrivance (Bedük, 2012), and it can also be a reflection of many concepts such as “magic, innovation, shine, and being different” (Bentley, 2004). Although it’s the most effective way to gain added value from existing values (Bono, 1996), creativity is the ability to dream of something that does not exist yet, to do something in different ways than anyone else, and to develop new ideas. In other words, creativity is seeing the same what everyone sees but thinking different. Creativity is being able to look at daily events and objects from a different perspective than other people, and to develop different approaches (İmrek, 2014).

Employees should be able to design creativity in the work environment and be organized to lead change, and develop creativity in all units. It is possible for each employee to produce different, original, and useful ideas, and to be creative in their field of expertise (Amabile et al., 1996). In this sense, employee creativity, which is an individual phenomenon, is defined as the production of organizationally valuable new ideas (Jaiswal & Dhar, 2015), and as competition develops, creative thinking must also develop. Doing the same things better is no longer enough to solve problems effectively. Business life requires creative thinking at the strategic level and in the foregrounds where the real competition takes place (Bentley, 2004).

There is no need to look for creative people outside the organization. In every organizational structure, as long as the work environment and conditions are suitable; original and change-oriented, open-minded, investigative, determined, and problem-solving employees will be able to develop creativity. However, managers need to prepare working environments that will enable and develop creativity (Daft, 2000). For this, intra-organizational factors effective in innovation and creativity management such as appropriate technology and research/development opportunities, non-rigid flexible organizational structure and organizational climate, appropriate leadership style, quality products and services, and clear communication within the organization should be supported.

1.3 Effective Internal Factors in Innovation and Creativity Management

The structure and processes of the organization are very important in the development of innovative qualifications of institutions. In order to make progress in innovation, the organization needs to make some adjustments in structure and process. While making these arrangements in line with innovations, the organization should take internal factors into account (Durna, 2002). Among these; technology, organizational structure, product and service quality, intra-organizational communication, research/development, leadership, and organizational climate are important factors. They are explained below respectively.

1.3.1 Technology

It can be seen from the literature, that each branch of science makes a definition suitable for its own technology structure. In its most comprehensive form, technology can be defined as obtaining tangible assets by applying physical and mental efforts to nature in order to obtain some values (Bal, 2010). Today, in the competitive environment which new technologies and globalization create, the ability to catch up with international competitiveness actually depends on maturation in technological innovation. Therefore, it is accepted that technological innovation is one of the most basic elements of gaining international competitiveness as well as rapid production and income increase (Ansal, 2004). Technology, which is one of the first concepts that come to mind about innovation, is about discovering the unknown by innovating, and developing the known by using it in new designs and processes (Acaray, 2007). Yet, in retrospective research it has been proven that if organizations adapt to the environment-dominated state of technology, they will increase company performance (Woodward, 1965).

1.3.2 Organizational Structure

In various studies, a very strong relationship has been found between the firm size and breadth of structural features (Child, 1975). Accordingly, it has been observed that small organizations innovate relatively more than large organizations. This has led many organizations to form small and informal innovative groups, a special form of organization where creative people come together with formally formed teams. Radical innovations emerge especially in organizations where such formations are formed, leaving the bureaucracy aside, and instilling group identity and loyalty (Tushman & Anderson, 1997).

1.3.3 Product and Service Quality

The need to be involved in the world's rapid technological development and information network has created a quality revolution by increasing competition. The quality revolution, first in production and then in the service sector, made it necessary for companies to turn to total quality management (Altınok, 2012). In order to offer better products and services, and to achieve maximum quality with minimum cost, businesses need to combine technology and creativity. The aim in creativity is to ensure continuous development (Samen, 2008), which is possible with high product and service quality. A high-quality new product implementation process and support for research will influence the development of new products (Cooper & Kleinschmidt, 2007).

1.3.4 Intra-Organizational Communication

Communication as a term is the equivalent of "communicatio" in Latin. The words root has a meaning of vocables such as jointly, collectively, in common, and in cahoots. In this context, communication, in its broadest sense, refers to a process operating based on certain common elements among living things (Özaslan, 2009). According to Gürgen (1997)'s definition, communication is the interaction of at least two people with each other by sharing their feelings, thoughts, and information.

However, organizational communication is defined as the process of transmitting and receiving a message from one individual to another in the organization, either directly orally or in writing. Communication in organizations can be even done indirectly with modern communication technology tools such as fax, computer, telephone, etc. (Çalık, 2013). One of the most important factors determining the effectiveness and creativity of organizations is communication. Employees establish relationships with each other by using the internal communication process. In business environments, managers can get their employees to do what is expected by communicating correctly with them (Eren & Gündüz, 2002). Former researchs have proven that even if employees in organizations with non-transparent communication channels have creative qualities, they cannot be helpful in this regard (Garfield, 1989).

1.3.5 Research and Development

Research and development is the whole of systematic and creative studies aimed at introducing new products and production processes in enterprises (Demirci et al. 2006). Research and development functions should be compatible with goals a firm wants to achieve. If the innovation process cannot be created within the corporation, the technology transfer process should be continued in accordance with goals of the company. Plans for research and development activities that reveal the innovation process within the institution should also be compatible with the objectives of enterprises (Şimşek & Çelik, 2013). Although research and development is a prerequisite for innovation; if resulting innovative approaches are handled from an entrepreneurial point of view, innovation emerges as a result of commercializing these innovations, and improving the knowledge and experience of the enterprise. As it provides the necessary knowledge and experience for innovation, the research and development process is an important approach for companies (MÜSİAD, 2012).

1.3.6 Leadership

A leader is someone who leads, guides, teaches, and enlightens people around him; at the same time, he is a creative person who senses the wishes and needs of persons he is with in a timely manner and organizes them (Tosun, 1982). Great leaders arouse passion in followers, activate them, and become a source of inspiration that enables subordinates to do their best (Goleman et al., 2002). According to Cummings and Schwab's (1973) study, the most important variable affecting employee performance in the organization is leadership.

With an appropriate behavior towards subordinates, leaders indirectly affect their employees' creativity by creating an organizational climate supporting creativity rather than suppressing it. Creativity thrives in dynamic and tolerant atmospheres. So, in order to develop creativity, managers must first understand the creativity process, encourage creative behavior and promote organizational climates where creativity can develop (Çekmecelioğlu, 2005).

1.3.7 Organizational Climate

Organizational climate is a factor that is directly or indirectly perceived by organization members and affects their motivation, expectations, skills, and behaviors within the business (Arslan, 2004). Creative organizational climate includes perceptions about the relationship of innovation and creativity within the social environment of the institution (Lundmark & Björkman, 2011). If employees have the ability to innovate, their willingness and innovation depend on the organizations' climate (Mumford & Gustafson, 1988). This is because creativity can thrive best in a tolerant organizational climate that encourages the generation of new ideas and the development of new production methods (Şimşek et al., 2014).

2. RESEARCH METHODOLOGY

2.1 Aims, Model and Hypotheses of the Research

The aim of the research is to reveal whether organizational factors affect innovation and creativity performance in enterprises; and if so, to what extent they do. Another aim of the study is to put forth the effects of important organizational factors on the creativity performance of working personnel and therefore the enterprise's innovation performance. In many previous studies, it has been proven that it is necessary for businesses to produce innovative projects in order to improve business performance, and for this, the concept of creativity should be constantly taken into account (Meyer & Plucker, 2022; Mickiewicz & Kaasa, 2022; Aydın & Çilesiz, 2022; Vernandhie, 2022; Akhter vd., 2022; Karakuş, 2014).

However, among these researches, a limited number of studies were found in which internal organizational factors affecting innovation and creativity performance were investigated. One of them is the research of Kale (2010) on tourism businesses. Kale's revealed in her research that organizational factors such as innovation orientation, project generation, information sharing, communication, goal orientation, complementary skills, and team spirit have a positive effect on both innovation and creativity performance. Besides, Moreno Cunha et al. (2022) have proved that personal factors such as stress, anxiety, work commitment, and organizational support also have a positive effect on innovative

behaviors and innovation outcomes. Based on this information obtained from the literature, it is thought that effects of different factors on innovation and creativity should be tested. The idea that different organizational factors can cause different effects on innovation and creativity constitutes the starting point of this study. For this purpose, the following model and hypotheses were created.

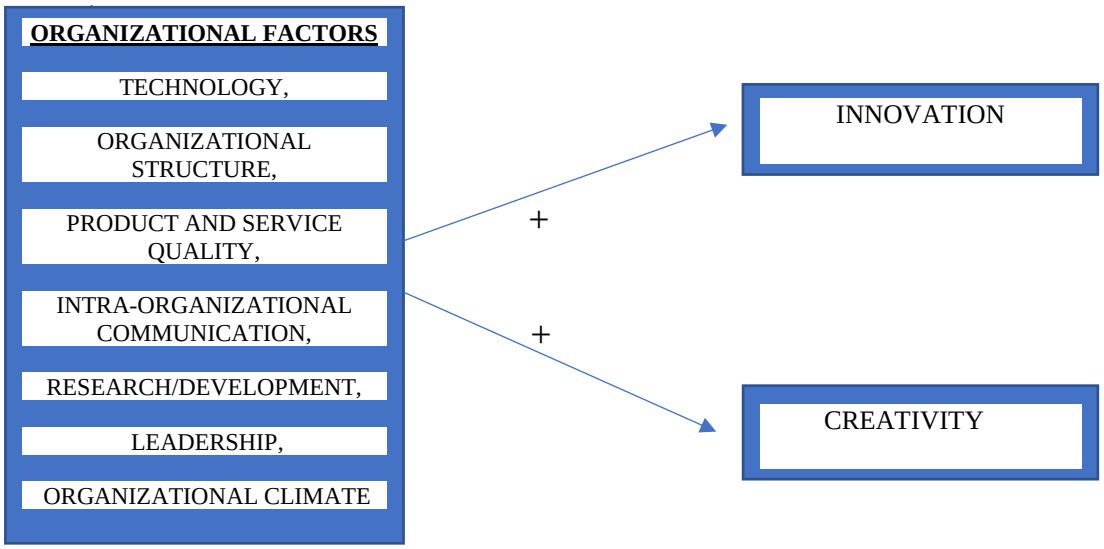

Figure 1: The Research Model

H1a: The technology factor has a significant relationship with organizational innovation performance.

H1b: The technology factor has a significant relationship with organizational creativity performance.

H2a: The organizational structure factor has a significant relationship with organizational innovation performance.

H2b: The organizational structure factor has a significant relationship with organizational creativity performance.

H3a: The product and service quality factor has a significant relationship with organizational innovation performance.

H3b: The product and service quality factor has a significant relationship with organizational creativity performance.

H4a: The intra-organizational communication factor has a significant relationship with organizational innovation performance.

H4b: The intra-organizational communication factor has a significant relationship with organizational creativity performance.

H5a: The research and development factor has a significant relationship with organizational innovation performance.

H5b: The research and development factor has a significant relationship with organizational creativity performance.

H6a: The leadership factor has a significant relationship with organizational innovation performance.

H6b: The leadership factor has a significant relationship with organizational creativity performance.

H7a: The organizational climate factor has a significant relationship with organizational innovation performance.

H7b: The organizational climate factor has a significant relationship with organizational creativity performance.

H8a: The perception of innovation performance within the organization differs according to the age.

H8b: The perception of creativity performance within the organization differs according to the age.

H9a: The perception of innovation performance within the organization differs according to the education status.

H9b: The perception of creativity performance within the organization differs according to the education status.

H10a: The perception of innovation performance within the organization varies according to the working time.

H10b: The perception of creativity performance within the organization varies according to the working time.

H11a: The perception of innovation performance within the organization varies according to the working department.

H11b: The perception of creativity performance within the organization varies according to the working department.

2.2 Importance, Scope and Limitations of the Research

The importance of this study is about understanding the innovation and creativity management in organizations, and about which inner organizational factors should be used in this regard. The scope of this study focuses on investigating the effects of organizational factors on employees' innovation and creativity performance. In this context; the effects of factors called technology, organizational structure, product/service quality, intra-organizational communication, research/development, leadership, and organizational climate on the innovation and creativity performance of employees were investigated.

Therefore, considering that it would be necessary to reach employees of a company where innovation and creativity come into play, an application was made in an enterprise that produces models and prototypes which have an important place in creating innovations and could be suitable for the subject of this research. Prototypes are developed to test innovative ideas in the production of functional

parts and models during the product development process, and to transform creative thoughts into successful products.

That only a few major organizational factors which are thought to affect innovation and creativity are included in this study, and that the research was limited to a single company constitute the limitations of the research. Therefore, it may be recommended to differentiate the factors and diversify the sample group for future studies.

2.3 Universe and Sample of the Research

The population of the research consists of prototype production companies in Germany, and the sample of the research consists of the KIWI CNC-Technik GmbH employees, who operate in the production of models and prototypes in Gifhorn city in Lower Saxony, Germany. The purpose of choosing this sample is the idea that innovation and creativity are values that are kept alive especially in prototype production enterprises. Working with suppliers, the firm reacts quickly to market changes, providing precise figures on online visibility, which is important in terms of innovation and creativity. KIWI CNC-Technik GmbH is a business operating since 2011 in the prototype sector with an average of 330 employees.

2.4 Data Collection Tool and Analysis Method

In the research, quantitative data collection and analysis method was used. In order to test the model and the hypotheses, a questionnaire consisting of demographic variables, 2 separate scales and 51 questions was used. A 5-point Likert scale was used in the questionnaire form. In forming all the questions about innovation and creativity, the scale used in Kale's (2010) thesis titled "The Effects of Intra-Organizational Factors on Innovation and Creativity Performance in Accommodation Businesses" was used. The Reliability Coefficient of the scale in Kale's thesis was found to be 0.895. Additional questions about organizational factors were prepared in the light of literature and opinions of expert academicians. The validity and reliability of the organizational innovation and creativity scales used in this research were tested with Cronbach's Alpha analysis; a high level of reliability was found for the concept of innovation with a value of 0.710 and a value of 0.825 for the concept of creativity. This means that the survey can be applied.

Table-1: Validity and Reliability of Organizational Innovation and Creativity Scales

	Number of Items	Cronbach's Alpha
Innovation	10	0,710
Creativity	8	0,825

The ethical approval of the scale with report number 04-2022/71 was obtained by the ethics committee of Karamanoğlu Mehmetbey University gathered on 17th of May 2022. The scale questions were translated into German and sent via e-mail to the manager of KIWI CNC-Technik GmbH. For the data analysis, first, the validity and reliability of the scales were tested with the Cronbach Alpha analysis, then the One-Sample Kolmogorov-Smirnov Test and parametric analyzes were performed. For to measure the innovation and creativity performance related to the variables of age, working time,

position, and educational status; One-way analysis of variance was used, and the Pearson Correlation Test was used to measure the effects of organizational factors on innovation and creativity performance.

3. FINDINGS

A total of 320 employees, 14 of whom were in the management, participated in the study carried out at KIWI CNC-Technik GmbH. 20 of the respondents were female and 300 were male; 200 people are under the age of 30 and 120 are over; 100 of whom are high school graduates from "Hauptschule", 160 are graduates of "Realschule" at college level and 60 are graduates of "Gymnasium" at university level. 100 of the employees have been working for the company for less than a year, 60 for up to three years and 160 for more than three years.

Table-2: One-Sample Kolmogorov-Smirnov Test

		Innovation	Creativity	Technology	Organizational Structure	Quality	Communication	Research and Development	Leadership	Organizational Climate
N		320	320	320	320	320	320	320	320	320
Normal Parameters (a,b)	Mean	33,6250	31,5000	15,0625	14,7500	16,2500	14,1875	14,8125	16,6875	17,1250
	Std. Deviation	4,01456	3,84708	1,94829	1,43759	2,35230	2,48244	1,79699	1,85180	1,82117
Most Extreme Differences	Absolute	,157	,198	,230	,199	,202	,157	,156	,198	,185
	Positive	,157	,133	,230	,199	,202	,155	,156	,114	,152
	Negative	-,093	-,198	-,185	-,183	-,191	-,157	-,121	-,198	-,185
Kolmogorov-Smirnov Z		,629	,793	,920	,796	,810	,630	,624	,793	,738
Asymp. Sig. (2-tailed)		,824	,555	,365	,550	,528	,823	,831	,555	,647

a Test distribution is Normal.
b Calculated from data.

According to the results of the One-Sample Kolmogorov-Smirnov Test seen in Table 2, the measurements have a normal distribution and parametric analyzes were used.

Table-3: Pearson Correlation Test on the Effects of Organizational Factors on Innovation and Creativity Performance

		Innovation	Creativity	Technology	Organizational Structure	Quality	Communication	Research and Development	Leadership	Organizational Climate
Innovation	Pearson Corr.	1	,846(**)	,685(**)	,803(**)	,505(*)	,656(**)	,516(*)	,476	,773(**)
	Sig. (2-tailed)		,000	,003	,000	,046	,006	,041	,062	,000
	N	320	320	320	320	320	320	320	320	320
Creativity	Pearson Corr.	,846(**)	1	,698(**)	,759(**)	,634(**)	,499(*)	,574(*)	,557(*)	,695(**)
	Sig. (2-tailed)	,000		,003	,001	,008	,049	,020	,025	,003
	N	320	320	320	320	320	320	320	320	320
Technology	Pearson Corr.	,685(**)	,698(**)	1	,910(**)	,505(*)	,756(**)	,422	,264	,467
	Sig. (2-tailed)	,003	,003		,000	,046	,001	,103	,322	,068
	N	320	320	320	320	320	320	320	320	320
Organizational Structure	Pearson Corr.	,803(**)	,759(**)	,910(**)	1	,631(**)	,799(**)	,497	,445	,700(**)
	Sig. (2-tailed)	,000	,001	,000		,009	,000	,050	,085	,003
	N	320	320	320	320	320	320	320	320	320

Quality	Pearson Corr.	,505(*)	,634(**)	,505(*)	,631(**)	1	,642(**)	,485	,432	,521(*)
	Sig. (2-tailed)	,046	,008	,046	,009		,007	,057	,094	,038
	N	320	320	320	320	320	320	320	320	320
Communication	Pearson Corr.	,656(**)	,499(*)	,756(**)	,799(**)	,642(**)	1	,472	,304	,658(**)
	Sig. (2-tailed)	,006	,049	,001	,000	,007		,065	,253	,006
	N	320	320	320	320	320	320	320	320	320
Research and Development	Pearson Corr.	,516(*)	,574(*)	,422	,497	,485	,472	1	,622(*)	,456
	Sig. (2-tailed)	,041	,020	,103	,050	,057	,065		,010	,076
	N	320	320	320	320	320	320	320	320	320
Leadership	Pearson Corr.	,476	,557(*)	,264	,445	,432	,304	,622(*)	1	,487
	Sig. (2-tailed)	,062	,025	,322	,085	,094	,253	,010		,056
	N	320	320	320	320	320	320	320	320	320
Organizational Climate	Pearson Corr.	,773(**)	,695(**)	,467	,700(**)	,521(*)	,658(**)	,456	,487	1
	Sig. (2-tailed)	,000	,003	,068	,003	,038	,006	,076	,056	
	N	320	320	320	320	320	320	320	320	320

When the inter-organizational factors were examined, after organizational structure (91%) and communication (75%), a significant relationship was found between technology and quality (50%). The element of organizational structure is related 91% to technology, 79% to communication, 70% to organizational climate and 63% to quality. It can be seen also in the table that the quality factor is associated with communication and organizational structure by around 63%-64%, with technology by 50% and with organizational structure by 52%. Besides, the communication factor is an internal element related to organizational structure (79%), technology (75%), organizational climate (65%) and quality (64%). While the organizational climate factor is associated with 70% to organizational structure, 65% to communication and 52% to quality, only a significant relationship (62%) is being observed between the research/development and leadership factors.

Looking at the table above, it can be said about the tested hypotheses, that the technology, organizational structure, communication, and organizational climate factors have a high correlation with the innovation performance. So, hypotheses H1a, H2a, H4a, and H7a are confirmed. Also, the technology, organizational structure, communication, quality, and organizational climate factors have a high correlation with the creativity performance. So, hypotheses H1b, H2b, H3b, H4b, and H7b are confirmed with a high rate. Hypotheses confirmed, but with a moderate rate are the remaining hypotheses H3a, H4b, H5a, H5b, H6a, and H6b. Table 4 summarizes the results of the aforementioned hypotheses.

Table-4: Hypothesis Test Results about the Effects of Organizational Factors on Innovation and Creativity Performance

H1a	The technology factor has a significant relationship with organizational innovation performance.	Confirmed (High correlation)

H1b	The technology factor has a significant relationship with organizational creativity performance.	Confirmed (High correlation)
H2a	The organizational structure factor has a significant relationship with organizational innovation performance.	Confirmed (High correlation)
H2b	The organizational structure factor has a significant relationship with organizational creativity performance.	Confirmed (High correlation)
H3a	The product and service quality factor has a significant relationship with organizational innovation performance.	Confirmed (Moderate correlation)
H3b	The product and service quality factor has a significant relationship with organizational creativity performance.	Confirmed (High correlation)
H4a	The intra-organizational communication factor has a significant relationship with organizational innovation performance.	Confirmed (High correlation)
H4b	The intra-organizational communication factor has a significant relationship with organizational creativity performance.	Confirmed (Moderate correlation)
H5a	The research and development factor has a significant relationship with organizational innovation performance.	Confirmed (Moderate correlation)
H5b	The research and development factor has a significant relationship with organizational creativity performance.	Confirmed (Moderate correlation)
H6a	The leadership factor has a significant relationship with organizational innovation performance.	Confirmed (Moderate correlation)
H6b	The leadership factor has a significant relationship with organizational creativity performance.	Confirmed (Moderate correlation)
H7a	The organizational climate factor has a significant relationship with organizational innovation performance.	Confirmed (High correlation)
H7b	The organizational climate factor has a significant relationship with organizational creativity performance.	Confirmed (High correlation)

Table-5: One-Way Analysis of Variance Related to the Age Variable, the Education Status Variable, the Working Time Variable, and the Work Position Variable on Innovation and Creativity Performance

	Age Group	**N**	**Average**	**Std. Deviation**	**Test**	**P Value**
Innovation	<=30	200	31,70	2,983	F=9,679	0,008*
	30<	120	36,83	3,544		
Creativity	<=30	200	30,10	4,012	F=4,311	0,057
	30<	120	33,83	2,228		
	Education Status	**N**	**Average**	**Std. Deviation**	**Test**	**P Value**
Innovation	Hauptschule	100	33,60	4,929	F=0,213	0,811
	Realschule	160	33,12	2,997		
	Gymnasium	60	35,00	6,082		
Creativity	Hauptschule	100	30,60	4,098	F=0,220	0,806
	Realschule	160	32,12	3,522		
	Gymnasium	60	31,33	5,507		
	Working Time (year)	**N**	**Average**	**Std. Deviation**	**Test**	**P Value**
Innovation	**0-1**	100	32,20	1,788	F=0,931	0,419

	1-3	60	32,33	5,131		
	3<	160	35,00	4,566		
Creativity	**0-1**	100	30,60	2,966		
	1-3	60	29,66	5,131	F=0,886	0,436
	3<	160	32,75	3,918		
	Position	**N**	**Average**	**Std. Deviation**	**Test**	**P Value**
Innovation	**Executive**	80	38,50	2,886	F=15,430	0,002*
	Employee	240	32,00	2,860		
Creativity	**Executive**	80	34,75	1,500	F=4,761	0,047*
	Employee	240	30,41	3,800		

In Tables 5, analyzes related to the age variable, the education status, position at work and working time were made. When the results are examined, it can be seen that the innovation performance differs according to employees' age and position. While innovation performance is lower in employees under the age of 30, it is found higher in the age groups over 30. It can be understood from the data obtained that individuals working in managerial positions are more innovative. There is no significant difference between the elements of education status and working time with innovation and creativity performance. Creativity, on the other hand, differs significantly only by position. While the executive group has higher creativity than the employee group, no difference is being found regarding other variables. In these cases, H8b, H9a, H9b, H10a, H10b were confirmed; and H8a, H11a, and H11b were rejected. Table 6 summarizes the results of the aforementioned hypotheses.

Table-6: Hypothesis Test Results Related to the Age Variable, the Education Status Variable, the Working Time Variable, and the Work Position Variable on Innovation and Creativity Performance.

H8a	The perception of innovation performance within the organization differs according to the age.	Rejected
H8b	The perception of creativity performance within the organization differs according to the age.	Confirmed
H9a	The perception of innovation performance within the organization differs according to the education status.	Confirmed
H9b	The perception of creativity performance within the organization differs according to the education status.	Confirmed
H10a	The perception of innovation performance within the organization varies according to the working time.	Confirmed
H10b	The perception of creativity performance within the organization varies according to the working time.	Confirmed
H11a	The perception of innovation performance within the organization varies according to the working department.	Rejected
H11b	The perception of creativity performance within the organization varies according to the working department.	Rejected

CONCLUSION

Innovation and creativity practices are an important tool that should be integrated into organizational factors in every business. In this study, it was investigated whether factors within the

organization affect the innovation and creativity performance of employees, and if so, to what extent they do. According to results obtained, it has been found that innovation develops in KIWI CNC-Technik GmbH and creativity progresses accordingly. This finding is supported by the results of similar studies on innovation and creativity (Vernandhie, 2022; Meyer & Plucker, 2022; Akhter et al., 2022; Mickiewicz & Kaasa, 2022; Aydın & Çilesiz, 2022).

When factors that are likely to affect innovation and creativity performance are considered in the study, it has been observed that all factors except leadership, quality, and research/development affect innovation performance significantly. Also the leadership, communication, and research/development factor has not a remarkable effect on organizational creativity performance. In other words, while other factors have a high influence on partially innovation and creativity, leadership has a moderate influence on these both variables. Actually, leadership is considered to be a major contextual factor that influences employee creativity and innovation (e.g., Tierney, 2008; Shalley & Gilson, 2004; Anderson et al., 2014). Although this result obtained from the study may seem surprising at first glance, there are other studies supporting this in the literature: In a study conducted on leadership and innovation by Barsh et al. (2008), the effect of leadership on innovation was found to be low. Again, Rosing et al. (2011) also revealed in their study that not every type of leadership, but on the contrary, only multifaceted leadership contributes to innovation. Kesting et al. (2015), on the other hand, found that different leadership styles, especially transformational leadership, affect different types of innovation. From this point of view, it can be said that this result is due to the fact that the effect of leadership on innovation and creativity was investigated in general, but not on a specific type of leadership.

Among the factors examined, it has been found that innovation performance is affected the most by organizational structure and the least by quality. This result may be due to the fact that the research was conducted in an enterprise that produces models and prototypes. When the creativity performance is examined, it is noteworthy to say that all the factors mentioned in the study are affected by communication at the lowest level and by organizational structure at the highest level.

When attention is paid to the factors' considering level of influence on each other within the organization; the fact that technology, communication, and organizational climate is most related to organizational structure indicates that organizational structure is the most influential factor on innovation and creativity in the enterprise. Regarding the numerical data, it is clear that organizational climate, which is closely related to organizational structure, follows the item in the second place. Tushman and Anderson (1997) also obtained similar results in their study. They concluded that especially radical innovations emerge in organizations where bureaucracy is left aside and formations instill group identity and loyalty. This indicates that the results of both studies conform with each other and therefore, that the result of this study is supported.

In addition, it has been observed that among the factors affecting innovation and creativity performance, the technology factor comes after organizational structure and organizational climate, and

that other organizational factors do not have a significant effect to take notice. There are also other studies in the literature that show similarities both with the method and results of this study. In Kale's (2010) study, the majority of similar organizational factors, whose effects on innovation and creativity are examined, have been found positive. In addition, according to the results of Moreno Cunha et al.'s (2022) research, personal factors have a positive effect on innovation outputs. When the results of these studies are compared with this study's results, it can be said that they are compatible with the findings of this study.

Another important point is that while employees' both innovation performance and creativity performance vary according to the education status and working time, the age variable affects only the creativity performance. Here emerges the significant impact of education on innovation and creativity. Culen (2015) and Heunks (1998) have also revealed the positive relationship of education with innovation and creativity in their studies. One another result is that the working department does not affect the innovation and creativity performance. The reason for this is thought to be the focused innovation and creativity performance in prototype enterprises. As long as being focused on innovation and creativity, a significant difference may not occur.

It is thought that findings of the examined organizational factors specific to this study will form a basis for future research. In this context, it is expected that conducting similar studies with different universes and larger samples will make significant contributions to the research of innovation and creativity. It is recommended that similar studies be carried out not only in prototype production enterprises, but even in the service industry and also in different sectors like the automotive industry, the textile sector, etc. Also, it is recommended to investigate more and different organizational factors and variables in future studies.

REFERENCES

Acaray, A. (2007). *Küçük ve Orta Boy İşletmelerde Yenilik Yönetimi: Yenilik Yönetiminde Etkili Olan Örgütsel Yapı ve Faktörlere İlişkin Bir Uygulama*. Master thesis, Kocaeli Üniversitesi, Sosyal Bilimler Enstitüsü.

Akhter, A., Karım, M. M., & Islam, K. (2022). The impact of creativity and innovativeness on digital entrepreneurship: Empirical evidence from Bangladesh. *The Journal of Asian Finance, Economics and Business*, *9*(3), 77-82.

Altınok, V. (2012). *Endüstri ve örgüt psikolojisi* (3rd ed.). Konya: Eğitim Yayınevi.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J. & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39, 1154-1184.

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management, 40*(5), 1297-1333.

Ansal, H. (2004). Geçmiş ve gelecekte ekonomik gelişmede teknolojinin rolü. *TMMOB 50. Yıl Yayınları, Teknoloji*.

Arslan, N. T. (2004). Örgütsel performansı belirleyici bir etmen olarak örgüt kültürü ve iklimi hakkında bir değerlendirme. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, *9*(1), 203-228.

Aydın, E., & Çilesiz, E. (2022). Örgüt iklimi, yenilikçi davranış ve bireysel yaratıcılık ilişkisi: Türkiye'de otel işletmeleri çalışanları üzerine bir araştırma. *Türk Turizm Araştırmaları Dergisi*, *6*(1), 266-280.

Bal, O. (2010). Teknolojinin sosyo-ekonomik yapıya etkileri. *Akademik Bakış Dergisi*, 20(1).

Barker, A. (2002). *The alchemy of innovation: Perspectives from the leading edge.* Spiro Press.

Barsh, J., Capozzi, M. M., & Davidson, J. (2008). Leadership and innovation. *McKinsey, 4*(1).

Bedük, A. (2012). Karşılaştırmalı işletme yönetim terimleri sözlüğü (3rd ed.). Nobel Akademik Yayıncılık.

Bentley, T. (2004). Yaratıcılık (Creativity) (translator: Onur Yıldırım). İstanbul: Hayat Yayınevi.

Bono, E. De; (1996) "Rekabetüstü" (translator: Oya Özel). İstanbul: Remzi Kitabevi.

Bulat, F. (2022). Digital design applications with 3D printed textiles. *The Journal of Kesit Academy*, 8 (30), 92- 118.

Cengiz, E., Acuner, T. & Birdoğan, B. (2007). Örgütsel yaratıcılığı belirleyen faktörler arası yapısal ilişkiler. *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 9(1), 98-121.

Child, J. (1974). Managerial and organizational factors associated with company performance part I. *Journal of Management studies*, *11*(3), 175-189.

Woodward, J. (1965). *Industrial organization: Theory and practice*. London: Oxford University Press.

Cooper, R.G. & Kleinschmidt, E. J. (2007). Winning businesses in product development: The critical success factors. *Research Technology Management*, 50(3), 52-66.

Culén, A. L. (2015). HCI education: Innovation, creativity and design thinking. In *International Conferences on Advances in Computer-Human Interactions*, (125-130).

Cummings, L.L. & Schwab, D.P. (1973). Performance in organisations: Determinants and appraisa, *Glenview: Scott, Foresman and Company.*

Çalık, D. (2013). *Yeni iletişim teknolojilerinin örgüt içi iletişimde kullanımı: Türkiye'deki büyük ölçekli firmalar üzerine bir araştırma* (Master Thesis). Ankara Üniversitesi, Sosyal Bilimler Enstitüsü.

Çekmecelioğlu, H. (2005). Örgüt ikliminin iş tatmini ve işten ayrılma niyeti üzerindeki etkisi: bir araştırma", *C.B.Ü. İktisadi ve İdari Bilimler Fakültesi Yönetim ve Ekonomi Dergisi*. 6(2), 23-39.

Daft. R. (2000). *Management* (5th ed.). Dryden Press.

Damanpour, F. (1987). The adoption of technological, administrative, and ancillary innovations: Impact of organizational factors. *Journal of management*, *13*(4), 675-688.

Demirci, R., Baş, M. & Tolon, M. (2006). Türkiye'nin AB'ye uyum sürecinde türk işletmelerinin ar-ge faaliyetleri. 5. *Orta Anadolu İşletmecilik Kongresi Bildiriler Kitabı*, 73-81.

Drucker, P.F. (1974). *Management: Tasks, responsibilities, practices.* New Yorks Row, 121-122.

Drucker, P. F. (1985). *Innovation and entrepreneurship*. New York: Harper And Row Publishers.

Durna, U. (2002). Yenilik yönetimi. Nobel Yayınları, Ankara.

Eren, E. & Gündüz H. (2002). İş çevresinin yaratıcılık üzerindeki etkileri ve bir araştırma. *Doğuş Üniversitesi Dergisi*, (5), 65-84.

Farzampour, A. (2022). Innovative structural fuse systems for various prototype applications. *Materials*, *15*(3), 805.

Garfield, E. (1989). Creativity and science: (Part 2) The process of scientific discovery. *Current Comments*, 45(6), 314-320.

Goleman, D., Boyatsiz, R. & McKee, A. (2002). *Yeni liderler* (Translator: Filiz Nayır & Osman Deniztekin). İstanbul, Varlık Yayınları.

Gürgen, H. (1997). *Örgütlerde iletişim kalitesi.* İstanbul: Der Yayınları.

Heunks, F. J. (1998). Innovation, creativity and success. *Small Business Economics*, *10*(3), 263-272.

http://www.inomer.org/Inovasyon/Inovasyon-Nedir-Ne-Degildir, Access date: 28.01.2022.

İmrek, A. İ., http://www.inovasyonel.com/?Bid=958776, Access date: 28.01.2022.

Jaiswal, N. K., & Dhar, R. L. (2015). Transformational leadership, innovation climate, creative self-efficacy and employee creativity: A multilevel study. *International journal of hospitality management*, 51, 30-41.

Jaskyte, K., & Liedtka, J. (2022). Design thinking for innovation: Practices and intermediate outcomes. *Nonprofit Management and Leadership*, 32(4), 555-575.

Johnson, W. R. (2022). Bias in creative adoption decision points: why receivers hinder the creativity–innovation process. In *The Generation, Recognition and Legitimation of Novelty*. Emerald Publishing Limited.

Kale, E. (2010). *Konaklama işletmelerinde örgüt içi faktörlerin yenilik ve yaratıcılık performansına etkileri* (published master thesis). Erciyes Üniversitesi, Sosyal Bilimler Enstitüsü.

Karakuş, G. (2014). *İşletmelerde ürün ve süreç yeniliğinin örgütsel yaratıcılık bağlamında performansa etkileri ve bir uygulama* (published doctorate dissertation). Selçuk Üniversitesi, Sosyal Bilimler Enstitüsü.

Kesting, P., Ulhøi, J. P., Song, L. J., & Niu, H. (2015). The impact of leadership styles on innovation-a review. *Journal of Innovation Management*, *3*(4), 22-41.

Lundmark, E. & Björkman, H. (2011). New job – new ideas: The relationship between tenure and perceived creative climate. *Human Resource Development Journal*, 14 (5), 605-621.

Meyer, M. S., & Plucker, J. A. (2022). Creativity in groups: Catalyst or complication? In *Creativity and Innovation Theory, Research, and Practice* (pp. 209-216). Routledge.

Mickiewicz, T., & Kaasa, A. (2022). Creativity and security as a cultural recipe for entrepreneurship. *Journal of Institutional Economics*, *18*(1), 119-137.

Moreno Cunha, A., Marques, C. S., & Santos, G. (2022). Organizational and personal factors that boost innovation: The case of nurses during COVID-19 pandemic based on job demands-resources model. *Sustainability*, 14(1), 458.

Mumford, M.D. & Gustafson, S. B. (1988). Creativity syndrome: integration, application, and innovation. *Psychological Bulletin*, 103(1), 27-43.

MÜSİAD (2012). Küresel rekabet için Ar-Ge ve inovasyon: Stratejik dönüşüm önerisi. *MÜSİAD Araştırma Raporları*, 76, 55.

Naktiyok, A. (2007). Yenilik yönelimi ve örgütsel faktörler. Atatürk Üniversitesi, *İİBF Dergisi*, 21(2).

Özaslan, S. (2009). *Sözsüz iletişimin örgütsel iletişim tatminine etkileri: Çanakkale'deki konaklama işletmelerine yönelik bir araştırma* (master thesis). Çanakkale Üniversitesi, SBE Turizm İşletmeciliği ABD, Çanakkale.

Özkaya, A., Bulut, S., & Şahin, G. (2022). STEM etkinliklerinin öğretmenlerin yaratıcı tasarım becerilerine etkisinin incelenmesi. *Fen Matematik Girişimcilik ve Teknoloji Eğitimi Dergisi*, *5*(1), 1-17.

Rosing, K., Frese, M., & Bausch, A. (2011). Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership. *The leadership quarterly*, *22*(5), 956-974.

Samen, S. (2008). İşletmelerde yaratıcılığın önemi. Ç.Ü. *Sosyal Bilimler Enstitüsü Dergisi*, 17(2), 363-378.

Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The leadership quarterly*, *15*(1), 33-53.

Silveira, C., Reis, L., Santos, V., & Mamede, H. S. (2020). Creativity in prototypes design and sustainability: The case of social organizations. *Advances in Science, Technology and Engineering Systems*, 5(6), 1237-1243.

Sull, D. N. (2007). Closing the gap between strategy and execution. *MIT Sloan Management Review*, *48*(4), 30.

Şimşek, M. Ş. & Çelik, A. (2013). *İşletme bilimine giriş.* Konya: Eğitim Yayınevi.

Şimşek, Ş. M.; Çelik, A. & Akgemci, T. (2014). *Davranış bilimlerine giriş ve örgütlerde davranış* (8th ed.), Konya: Eğitim Yayınevi.

Tierney, P. (2008). *Leadership and employee creativity.* Handbook of organizational creativity. Academic Press.

Tosun, K. (1982). İşletmeYönetimi (2nd ed.) İstanbul.

Tushman, M.L. & Anderson, P.C. (1997). Managing strategic innovation and change: A collection of reading. New York: *Oxford University Press*.

Tüzmen, K. (2002). Küresel rekabet için yenilik ve Ar-Ge. *TÜBİTAK-TTGV-TÜSİAD IV. Teknoloji Kongresi*, İstanbul.

Vernandhie, D. D. (2022). Small and medium enterprise (SME) innovation and creativity in a pandemic. *International Journal of Education, Information Technology, and Others*, 5(1), 37-42.

Yamaç, K. (2001). Inovasyon nedir? *Bilim, Eğitim ve Düşünce Dergisi*, Cilt 1, sayı: 3.http://www.universite-toplum.org/text.php3?id=38, Access date: 04.12.2021.

Yüce, D. (2013). Örgütsel yenilik kavramı ve insan kaynakları alanındaki uygulamaları. *Kocaeli Üniversitesi Sosyal Bilimler Kongresi 2*, Kongre Kitabı: 223- 280.

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