Journal of Research in Business : 7 (2), 542-562 December • Dezember • Aralık: 2022 • ISSN: 2630-6255
DOI: 10.54452/jrb.1126077

RESEARCH ARTICLE • FORSCHUNGSARTIKEL • ARAŞTIRMA MAKALESİ

EXAMINATION THE EFFECTS OF GLOBAL CAPABILITIES AND LEARNING ORIENTATION ON INNOVATION AND PRODUCTION PERFORMANCE IN TECHNOLOGY-FOCUSED MANUFACTURING COMPANIES

TEKNOLOJİ ODAKLI ÜRETİM YAPAN ŞİRKETLERDE GLOBAL YETENEKLERİN VE ÖĞRENME ODAKLILIĞIN İNOVASYON VE ÜRETİM PERFORMANSINA ETKİLERİNİN İNCELENMESİ

Fatma SÖNMEZ ÇAKIR[*]
Songül YEŞİLOT ZEHİR[**]
Zafer ADIGÜZEL[***]

Abstract

For the research, data were collected from technology-oriented production companies operating in Istanbul in order to examine the effects of both global capabilities and learning orientation in the constantly changing technology world. A sample of 1044 participants was taken to set up and test the model and analyzes were performed using SmartPLS 3.3.5. The following hypothesis was tested: Both innovation and production performances are positively affected if technology-oriented production companies have global capabilities and can realize the learning orientation.
Keywords: Global capabilities, learning orientation, innovation performance, production performance
JEL Classification: M10, D20, D83, F60

Öz

Çalışma için İstanbul'da faaliyet gösteren teknoloji odaklı üretim yapan şirketlerden veriler toplanmıştır. Bu şirketlerin seçilmesinin nedeni, inovasyon ve üretim performansı açısından teknoloji dünyasında

* Assoc. Prof., Bartin University, Faculty of Economics and Administrative Sciences, Management Information Systems, fsonmez@bartin.edu.tr, ORCID: 0000-0001-5845-9162.

** Dr., Gebze Technical University, Faculty of Business Administration, Management, songulzehir@gmail.com, ORCID: 0000-0002-5525-2438.

*** **Corresponding Author:** Assoc. Prof., Istanbul Medipol University, Medipol Business School, Logistics Management, zadiguzel@medipol.edu.tr, ORCID: 0000-0001-8743-356X.

To cite this article: Çakır, F. S., Zehir, S. Y. & Adıgüzel, Z. (2022). Examination the effects of global capabilities and learning orientation on innovation and production performance in technology-focused manufacturing companies. *Journal of Research in Business,* 7(2), 542-562. DOI: 10.54452/jrb.1126077

Ethics Committee: Istanbul Medipol University Social Sciences Scientific Research Ethics Committee, 15.03.2022-28.

Submitted: 04.06.2022 **Revised:** 22.09.2022
Accepted: 25.09.2022 **Published Online:** 21.12.2022

global yeteneklerin daha da önemli hale gelmesidir. Bu kapsamda araştırma da sürekli değişim halinde olan teknoloji dünyasında hem global yeteneklerin hem de öğrenme yöneliminin etkilerinin incelenmesi amaçlanmıştır. Modelin kurulması ve test edilmesi için 1044 katılımcıdan oluşan bir örneklem alınmış ve SmartPLS 3.3.5 kullanılarak analizler gerçekleştirilmiştir. Araştırmada, teknoloji odaklı üretim yapan şirketlerin global yeteneklere sahip olmaları ve öğrenme yönelimini gerçekleştirebilmeleri durumunda hem inovasyon hem de üretim performanslarının olumlu yönde etkilendiği hipotezlerin desteklenmesiyle açıklanabilmektedir.
Anahtar Kelimeler: Küresel yetenekler, öğrenme yönelimi, yenilik performansı, üretim performansı
JEL Sınıflandırılması: M10, D20, D83, F60

1. Introduction

The longevity and continuation of businesses depend on whether they can adapt to business strategies and the ever-changing global environment. Global businesses should be able to produce higher quality products at a lower cost than their competitors in the markets in which they operate. The pace of change caused by globalization has proven that nothing is static, and change is not an option but a necessity. In this direction, businesses have had to adapt their strategic plans and the technology that assists in this endeavor while market growth, customer demand, changing technological speeds, and the varying types of competition continue to evolve and change. The forces pushing businesses to this environment are multiple: customer expectations, competition among competitors, and the necessity of acclimating brought about by technology. In fact, the survival of a business relies on rapidly changing environmental conditions, responding adequately to customer demands, closely following technology, improving upon past decisions, anticipating changes, and being able to completely transform when necessary. In particular, the easy availability of information has increased the curiosity about learning. Today, "learning" means a great deal, not only for individuals but also for organizations. Since "learning", which is no longer a cognitive concept, is now accepted as one of the important competitive tools, attracting the attention of Business Management, in particular. According to Lin et al. (2018), learning is related to the intuitive and cognitive processes experienced by people. In other words, individuals perceive the information and stimuli that have occurred or have just emerged in their environment and detect the differences or similarities between the events. As a result, the individual completes the learning process by reflecting on the opinions he or she has formed regarding differing behaviors. On the other hand, Lin et al. (2020) states that a learning activity is an increase in an individual's capacity to be more effective. Global businesses, even local businesses, should know how to improve themselves, closely follow their competitors, effectively analyze changes in the marketplace, and successfully challenge their competitors – all while considering that both local and global businesses must meet in the markets, offer the same product, and target the same customer. This reality can cause local and global businesses to lose customers in the area in which they operate and to have problems in maintaining their existence. Clearly, there are many factors that will affect and be impacted by the environment of the business: access to new and developing markets, diversity in economies of scale, decreasing trade barriers, fluctuations in exchange rates, the speed of technological change, the global nature of business raw material resources, changing consumer demands and strategies, and decreasing communication

costs. In the end, while changes take place in the environment in which the business operates, the business is both in the position of affecting and being affected. In this context, the effects of global capabilities and learning orientation on innovation and production performance in technology-oriented production are examined. Continuously reassessing the effects of a learning orientation as an independent and mediating variable in the study ensures that it is a different study from similar studies. As a result of the research, it is supported by hypotheses that global abilities and learning orientation dimensions have positive effects.

2. Literature Review

2.1. Global Capabilities (GC)

Businesses affected by the events happening around them are due to the fact that businesses continue their activities as an open system (Chesbrough, 2007). For this reason, while businesses are globalizing, they affect and are affected by environmental factors with many factors creating the need for an institutional approach and strict regulatory system (Prasongko & Adianto, 2019): The acceleration of the developments in technology and production, the development of the free markets understanding of trade, the increasing number of international enterprises, and the differences in the capital systems that have lead to a shift in global competitiveness. Nowadays, in order to make a difference in this globally competitive environment, businesses should analyze their competitors, carefully observing the environment and readily adapting (Brondoni, 2018). Indeed, it is also possible that this behavior has a positive effect on a learning ability. A global business needs to determine its competitive strategy and its requirements in the market and make decisions in accordance with its strategies (Tallman et al., 2018). Therefore, the global capabilities of the company are very important. Such experiences can also have an impact on learning ability, as global businesses have to make decisions regarding purchasing, competitive strategy, production, market requirements, and distribution channels (Masroor & Asim, 2019). Global capabilities also enable production enterprises to develop the technologies they use in their activities, and in this way, technologies are forever changing with the globalization of competition (Brondoni & Zaninotto, 2018). From this perspective, it can be assumed that global capabilities affect innovation performance, and it is in their favor for global businesses to use advanced technology in their activities, especially the use of advanced technology that can lead different segments of the business – especially production companies – to economies of scale: Companies with global capabilities affect their production performance at the same time as innovation, and in fact, it is not an option but a necessity for businesses to continue their existence by using advanced technology in a competitive environment. For this reason, while expressing competitiveness at the sector or country level, the global competitiveness of the business in a sector/industry or country and the contribution of the environments in which these businesses are located to their business activities are considered (Kim & Jeon, 2016). Therefore, competitiveness at the sector/industry level can be expressed as contending sectors that have businesses on a regional or global

scale (Lukas & Bell, 2000). In this context, the effect of global capabilities on learning orientation, innovation, and production performances is examined in the research.

2.2. Innovation Performance (IP)

In today's economic conditions, businesses face great challenges related to competitiveness. The effort for a timely response to both changing business environments and customers' demands repeatedly puts on the pressure for greater innovation. Thus, investments in innovation, the basis of sustainable growth for businesses, increase day by day (Srisathan et al., 2020). However, the high investment expenditures on innovation do not guarantee that the innovation is made wisely since businesses need continuous evaluations for the continuity of their innovation projects (Yang et al., 2019). Innovation is related to organizational learning and is expressed as the identification, acceptance and production of new ideas, processes, goods and services (Hameed et al., 2021). Businesses have to attach importance to innovations in order to adapt to changing environmental conditions or to improve themselves and increase their performance. Yet, it is very difficult to evaluate the innovation performance of enterprises due to the intricacies of differentiating a product, service or process from its rival in order to be seen as innovative (Leung & Sharma, 2021). Hameed et al. (2018) and Mardani et al. (2018) outlined a criteria for measuring innovation performance in their research: innovations related to business processes and methods, managerial innovations, increasing the quality of products and services, number of new products and projects, percentages of new products in total products, or number of patented or patentable products. Moreover, Calantone et al. (2002) stated that innovation performance indicators vary: being able to develop new ideas, researching new ways of conducting business, being creative in functional methods, being the first in the market with new products and processes, and determining whether innovation is considered risky for either the business or new product introduction. In today's globally competitive environment, non-stop development provides great benefits to businesses for their innovation performance. In particular, though, the advantages of having an innovative structure for businesses are not limited to issues that can be measured quantitatively, such as productivity. The hypothesis developed and tested in this context is noted as the following;

H_1: Global capabilities in technology-oriented production companies have a positive effect on innovation performance.

2.3. Production Performance (PP)

The concept of production defines it as the creation of a new good or service as a result of certain activities and transactions, production, and anti-consumption phenomenon (Shubbak, 2019). Production is a natural activity that arises as a result of increasing human needs and the inability to fully meet the increasing need (Arkolakis et al., 2018). Performance, on the other hand, is defined as the quantitative and qualitative expression of both what the decision-making unit can achieve and what it can achieve towards the targeted result (Bouwman et al., 2019). That is, performance

is an indicator of the extent to which the individual or the group can reach the goals and standards set (Clauss et al., 2019), and the concept of performance is defined through evaluating the success of the work done (Wang & Zhou, 2021). Performance measurement is expressed as the process of regularly and systematically collecting data, analyzing and reporting to monitor the resources used, the products and services produced, and the results achieved (Ferreras-Méndez et al., 2021). And, since performance measurement examines the importance of production outputs and their variation over time (Wang et al., 2020), production performance has become a necessity for production organizations in order to achieve their goals and objectives (Agus & Selvaraj, 2020). Therefore, firms need to set performance criteria to evaluate control, measure production performance, and improve the production process. Performance measures can be used to compare the performance of different businesses, facilities, departments, people or machines, as well as production performance (Lita et al., 2018). Factors, such as increasing global competition, decreasing product life cycles, accelerated technological developments, and increasing customer requirements have caused fundamental changes in the way companies compete. Firms can no longer contend only on the basis of price (cost), and as a result, they must formulate changes (Ratnawati, 2019) that, in turn, strengthens the ability to increase production performance along with a wide range of competitive targets (Nyachwaya & Rugami, 2020). The hypotheses developed and tested in this context;

H_2: Global capabilities in technology-oriented production companies have a positive effect on production performance.

2.4. Learning Orientation

For all organizations, information has strategic importance because, in today's world, companies that have knowledge can offer products/services with higher added value. Therefore, one of the methods of making the process of acquiring and disseminating knowledge effective is learning orientation. Learning orientation includes not only understanding the desires and expectations of customers but also what competitors do, how they do it, and accessing and sharing information utilizing technological advances (Atitumpong & Badir, 2018). According to Alerasoul et al. (2021), it is predicted that companies should be sufficient in terms of commitment to learning and a shared vision and open-mindedness in order to transform into a learning-oriented organization. Learning orientation has been examined in four dimensions: as a team, system, learning organization, and collective memory – within the scope of the research model.

2.4.1. Learning Orientation-Team (LOT)

No matter how learning begins at the individual level, participation is required in that learning in organizations takes place as a result of interaction. Individuals in the organization interact with each other by chance or involuntarily, and this interaction is supported by working groups or teams and helps organizations reach their goals (Wang & Lei, 2018). In order for team learning to be successful, each team member must be open to learning and be willing to act in accordance with the team's

common goals (Harvey et al., 2018). In addition, other factors that affect the success of learning as a team include the presence of a common vision within the team, the support of the managers for the team, and the clear communication between team members or between teams (Adiguzel, 2019). Hypotheses developed and tested to examine the effects that will occur within the organization with the successful implementation of team learning;

H_3: Global capabilities in technology-oriented production companies have positive effect on team learning, which is the dimension of learning orientation.

H_4: Team learning, which is the dimension of learning orientation in technology-oriented production companies, has a positive effect on innovation performance.

H_5: Team learning, which is the dimension of learning orientation in technology-oriented production companies, has a positive effect on production performance.

H_{15}: Team learning, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and innovation performance in technology-oriented production companies.

H_{16}: Team learning, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and production performance in technology-oriented production companies.

2.4.2. Learning Orientation-System (LOS)

When activities are performed within an enterprise, individuals reveal the units they are responsible for, and, as a result, the organizational activities that follow (Chughtai & Buckley, 2010). These activities take place in a plot where each has an impact on the other. Therefore, understanding businesses requires seeing them as a living system made up of interdependent parts, not individual parts (Widiartanto, 2013). As a result, it is not always easy for the members of the system to notice the elements that cause malfunctions and problems within the system. This requires a constant level of awareness and a perspective that focuses on the whole system, not its parts. Structures that only target profit maximization and ignore employees are losing their validity. Non-hierarchical and decentralized learning organizations, an effective alternative to these structures, also focus on the well-being and self-development of their employees (Senge, 1990). The hypotheses developed and tested in this context;

H_6: Global capabilities in technology-oriented production companies have positive effect on system learning, which is the dimension of learning orientation.

H_7: System learning, which is the dimension of learning orientation in technology-oriented production companies, has a positive effect on innovation performance.

H_8: System learning, which is the dimension of learning orientation in technology-oriented production companies, has a positive effect on production performance.

H_{17}: System learning, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and innovation performance in technology-oriented production companies.

H_{18}: System learning, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and production performance in technology-oriented production companies.

2.4.3. Learning Orientation-Learning (LOL)

Örtenblad (2018) defines successful businesses as those that are capable of creating, acquiring, and transferring knowledge and that can change their activities in the direction of a learning organization. One of the most comprehensive studies on learning organizations has been done by Senge (1990). Senge (1990) defines an organization that continually expands its capacity to create its future as a learning organization. The important thing for learning organizations is not just to survive to maintain the established order but to be able to survive and adapt with productive learning (Ju et al., 2021), especially as it is the sense of curiosity that motivates individuals to learn and explore. When individuals repetitively apply the new knowledge they have acquired through this sense of curiosity, they begin to gain experience regarding their new environment. In learning organizations, individuals question the values and assumptions underlying the system (Xie, 2020). According to Malik and Garg (2020), this is how open and reflective learning takes place. In this respect, dual-stage learning enables the members of the organization to expand on more free and creative solutions. The hypotheses developed and tested in this context;

H_{9}: Global capabilities in technology-oriented production companies have positive effect on learning, which is the dimension of learning orientation.

H_{10}: Learning, which is the dimension of learning orientation in technology-oriented production companies, has a positive effect on innovation performance.

H_{11}: Learning, which is the dimension of learning orientation in technology-oriented production companies, has a positive effect on production performance.

H_{19}: Learning, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and innovation performance in technology-oriented production companies.

H_{20}: Learning, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and production performance in technology-oriented production companies.

2.4.4. Learning orientation-Common Memory (LOCM)

It is possible to say that instead of realizing the ideas that can create the best solution for a subject in the business world or in our daily life, other options that are easier to reach and implement are mostly preferred. The reason for such a situation arises from the indecision of the administration and the lack of knowledge regarding easier alternatives to these methods. This situation shows the importance of shared memory (Kuutti & Virkkunen, 1995).

Memory is an organizational feature that is interrelated with the values, actions, and knowledge production behaviors of the organization, manifesting itself in every action of the organization (Antunes & Pinheiro, 2020). Learning orientation directly affects the memory of the organization and indirectly leads to the development of knowledge and increased performance (Hanvanich et al., 2006). Both the demonstrability and usability of learning in the process depend on the effectiveness of the collective memory of the organization (Lai et al., 2009). Organizations operating in a dynamic environment that is constantly changing and developing are realized by responding to the changes that occur in the environment, and focusing their activities on continuous learning (Ebrahimi et al., 2018). The hypotheses developed and tested in this context;

H_{12}: Global capabilities in technology-oriented production companies have positive effect on common memory, which is the dimension of learning orientation.

H_{13}: Common memory has a positive effect on innovation performance, which is the dimension of learning orientation in technology-oriented production companies.

H_{14}: Common memory has a positive effect on production performance, which is the dimension of learning orientation in technology-oriented production companies.

H_{21}: Common memory, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and innovation performance in technology-oriented production companies.

H_{22}: Common memory, which is the dimension of learning orientation, has a mediation variable effect between global capabilities and production performance in technology-oriented production companies.

3. Methodology

For data analysis, SmartPLS 3.3.5 version, one of the package programs used for PLS-SEM was used (common in Structural Equation Modeling analysis in recent years).

A Likert type scale designed as Strongly Disagree (1)-Strongly Agree (5) was used in the measurement of all variables. In order to avoid the Common Method Bias (CMB) problem during the implementation of the scale, anonymity was ensured in the questionnaire and an adequate response time was given to the participants. In the study, analyzes were made between 4 basic variables: Global capabilities, exogenous learning orientation, innovation performance, and production performance variables (designed as endogenous variables). The learning orientation variable has 4 sub-dimensions (team, system, learning, common memory). While the hypotheses H_1-H_{14} measure the direct effects, the hypotheses between H_{15}-H_{22} are established for the mediation effect.

The created scale was applied to 1044 authorized specialist employees in companies that make technology-oriented production in Istanbul. Since the questions about the variables representing the research model concern the top/middle level managers in the companies, a restriction was applied in the collection of the questionnaires in our sample.

Scales, Global Capabilities scales by Celuch et al. (2002) (Cronbach's alpha=.92) used the scales in their research. Learning Orientation scales Hult et al. (2003) (Cronbach's alpha=.85) used the scales in their research. Innovation Performance scales were prepared by Prajogo and Sohal (2006) (Cronbach's alpha=.86) and Robertson et al. (2021) used the scales in their research. Production Performance, Najafi-Tavani et al. (2018) (Cronbach's alpha=.85) and Langerak et al. (2004) used the scales in their research.

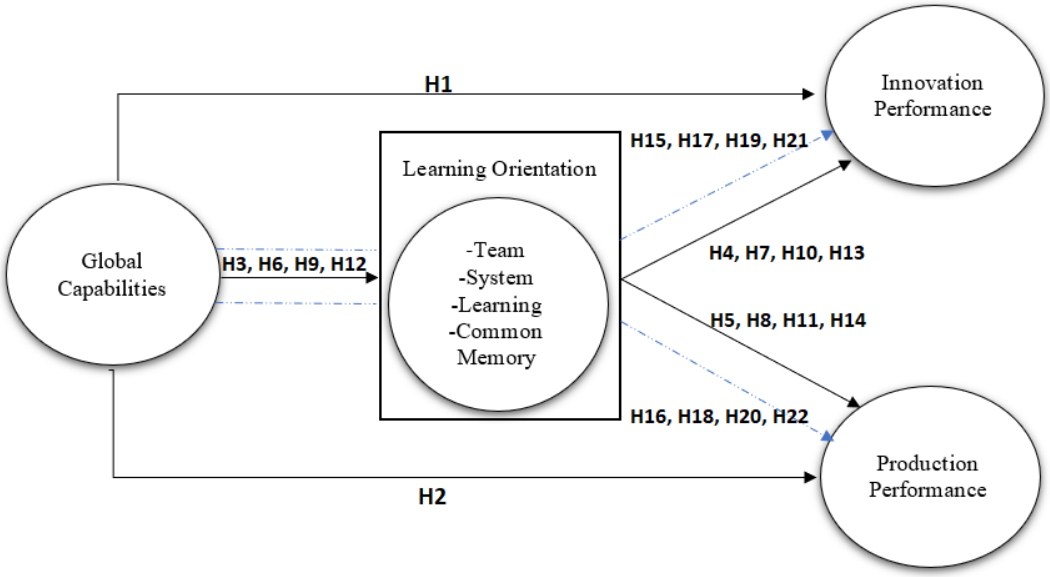

Figure 1: Conceptual Research Model

3.1. Analysis

The first part of the analysis is devoted to the results of factor analysis. First, whether the data is suitable for factor analysis is presented with Outer Loadings and Outer Weights values. The validity and reliability measurements of the model were made and tabulated. The second part of the analysis is reserved for Path analysis for Structural Equation Modeling. Path Coefficient values and results of hypothesis tests are given. In order to control the significance of the data obtained in the study, bootstrapping of 5000 units was performed. The dataset has a measurement size of 1044 units.

The results of the Confirmatory Factor Analysis performed in the SmartPLS program are given in Table 1. In the table, Outer Weight, Outer Loading, T statistics values showing the test results of the significance values of the expressions (items) and Outer VIF values of the expressions are given, although the model is not in a formative structure. Outer VIF values are the values presented in Formative models. It is preferable to present Inner VIF values in reflective models. These values are also given in the following tables.

Table 1: Factor Analysis Results

Items	Outer Weight	Outer Loading	T Stat.	Outer VIF
GC1. Our company is successful in global marketing strategies.	0,285	0,784	24,167*	2,102
GC2. Our company has the ability to produce in different countries.	0,267	0,736	18,491*	1,970
GC3. Our company's global service level is in good condition.	0,298	0,820	27,810*	2,396
GC4. Our company has the ability to develop strategy in the international arena.	0,316	0,871	30,748*	2,510
IP1. Our company's technological competitiveness is good.	0,137	0,644	18,969*	2,116
IP2. Our company's level of introducing new products to the market is good.	0,157	0,737	26,623*	2,202
IP3. The level of use of the latest technological innovations in our new products and processes is good.	0,150	0,709	25,444*	2,625
IP4. Our speed of applying the latest technological innovations in new product development and other processes is good.	0,168	0,790	32,956*	2,794
IP5. The level of change in our technology, technique and processes is good.	0,174	0,820	34,806*	2,768
IP6. Our unit managers attach importance to R&D, technological leadership and innovation.	0,171	0,807	32,026*	2,013
IP7. The number of new products and service lines offered by our company in the last 5 years is good.	0,151	0,709	25,412*	2,513
IP8. The number of radical changes our company has made in its product and service lines in the last 5 years is good.	0,163	0,770	25,583*	2,380
LOCM1. It is important to share the experiences gained in our company by everyone.	0,287	0,764	20,720*	1,712
LOCM2. In our company, lessons are learned from our unsuccessful attempts and these lessons are shared with employees.	0,301	0,801	27,388*	2,439
LOCM3. In our company, what we have learned from previous experiences is often discussed and brainstormed.	0,289	0,770	21,369*	2,170
LOCM4. The importance of knowledge and sharing is constantly emphasized in our company.	0,306	0,815	31,173*	2,281
LOL1. In our company, the ability to learn is seen as the key to progress.	0,228	0,760	27,014*	2,589
LOL2. Learning as a means of development is among the core values of our company.	0,240	0,799	31,039*	3,197
LOL3. Our future is in jeopardy if we give up the importance we place on learning in our company.	0,217	0,723	20,023*	2,060
LOL4. The resources allocated to employee training in our company are seen as an investment, not an expense.	0,262	0,871	31,178*	2,321
LOL5. The importance given to learning in our company is increasing day by day.	0,243	0,808	27,902*	2,407
LOS1. All units of our company are interconnected.	0,205	0,707	20,949*	2,118
LOS2. Each unit knows how much value they add to our company.	0,253	0,875	36,226*	2,747
LOS3. All activities carried out within the company are clearly and unequivocally defined.	0,242	0,835	32,525*	2,664
LOS4. It is clear who does what in the company and it is known by everyone.	0,228	0,786	27,580*	2,788
LOS5. The place and importance of all activities within the company is known by everyone.	0,244	0,844	31,244*	2,555
LOT1. It is possible to see a strong team spirit at every level of our company.	0,239	0,827	28,421*	2,950
LOT2. Teamwork between units is a widely used method in our company.	0,218	0,752	23,471*	3,079

LOT3. There are unity of purpose among the employees in our company.	0,225	0,776	27,714*	2,637
LOT4. The vision of our company is a vision accepted by everyone and developed jointly.	0,243	0,839	30,725*	2,443
LOT5. Throughout our company, we take care to explain and share our vision with each other.	0,248	0,857	26,866*	2,344
PP1. We can produce products in various sizes and colors in our company.	0,181	0,657	15,351*	1,802
PP2. We are able to produce in accordance with certain standards in our company.	0,178	0,646	17,149*	2,198
PP3. We are able to reduce production costs in our company.	0,230	0,834	24,289*	1,813
PP4. In our company, we can change the production speed according to the demand.	0,215	0,781	24,894*	2,226
PP5. In our company, when there is a defect in the product, we can intervene quickly.	0,223	0,810	23,485*	2,441
PP6. We can keep up with the change in product quantities in our company.	0,217	0,788	28,155*	2,604

*P value less than 0,05

When Table 1 is examined, the outer loads of the Global Capabilities exogenous variable are in the range (0.736-0.871), the outer loads of the Team sub-dimension of the Learning Orientation variable are in the range (0.752-0.857), the outer loads of the system sub-dimension are in the range (0.707-0.875), and the outer loads of the Learning sub-dimension (The outer loads of the Common Memory sub-dimension were in the range (0.774-0.815), the outer loads of the Innovation Performance endogenous variable were in the range (0.644-0.820), and the outer loads of the Production Performance endogenous variable were in the range (0.646-0.834). These values are 0.70 or higher is preferred (Wong, 2013). The absence of negative values in the Outer Weight values indicates that there is no multicollinearity problem between the variables. As a result of the 5000-unit Bootstrapping process, it was revealed whether there was a significant relationship between the variables of the expressions or not. T values greater than 1.96 at the 0.05 significance level reveal that the expressions are significant for the variables. At the same time, all p value values obtained were found to be less than 0.05. These values also show the significance of the data set. Variance Inflation Factor (VIF) values are one of the values that show whether there is a multicollinearity problem in the data set. It is desirable that this value be less than 5 (Hair et al., 2011). All VIF values given in Table 1 are less than 5. Although the model is reflective, Outer VIF values are given to ensure consistent results.

Table 2: Inner VIF values

	IP	**PP**
Global Capabilities	1,192	1,192
Common Memory	2,843	2,843
Learning	3,057	3,057
System	3,466	3,466
Team	3,316	3,316

Inner VIF values are given in Table 2. Since the model structure is Reflective, these values need to be interpreted and reported. It is a sufficient condition that the obtained values are less than 5. When

the values in Table 2 are examined, it can be seen that all of the endogenous variables have VIF values below 5. There is no multicollinearity problem between the variables. After interpreting the Outer loading/weight, t stat and Outer/Inner VIF values, the reliability and validity values of the scale were calculated. The obtained values are given in Table 3.

Table 3: Reliability Values

	Number of Items	Cronbach Alpha	rho_A	Composite Reliability (CR)	Average Variance Extracted (AVE)
Common Memory	4	0,867	0,868	0,867	0,620
Global Capabilities	4	0,879	0,883	0,880	0,647
Innovation Performance	8	0,911	0,914	0,911	0,563
Learning	5	0,895	0,898	0,895	0,630
Product Performance	6	0,889	0,894	0,888	0,572
System	5	0,906	0,909	0,906	0,659
Team	5	0,906	0,907	0,906	0,658

The Global Capabilities variable has four expressions; the Innovation Performance variable has eight expressions; the Learning Orientation variable has five expressions in the Learning sub-dimension; the System sub-dimension has five expressions; the Team sub-dimension has five expressions; the Common Memory sub-dimension has four expressions; and the Production Performance variable has six expressions. Cronbach's Alpha and Rho_a values are values that are widely used as reliability indicators. If these values are above 0.70, it is a sufficient indicator of reliability. Composite Reliability and Average Variance Extracted values are calculated on outer loading values. The mean of the squares of the outer loading values is equal to the AVE values. A value above 0.50 indicates that composite reliability is provided. Again, CR values are also a measure of reliability and it is preferred to be above 0.70 (Bagozzi & Yi, 1988). When Table 3 is examined, it can be seen that all the mentioned values are within the reference ranges. Construct reliability and validity are provided for the scale.

Table 4: Fornell-Larcker Criterion Values

	CM	GC	IP	L	PP	S	T
Common Memory	**0,788**						
Global Capabilities	0,361	**0,804**					
Innovation Performance	0,518	0,495	**0,750**				
Learning	0,758	0,373	0,569	**0,794**			
Product Performance	0,427	0,453	0,473	0,415	**0,756**		
System	0,721	0,349	0,559	0,743	0,427	**0,812**	
Team	0,714	0,352	0,530	0,728	0,425	0,804	**0,811**

Fornell and Larcker (1981) suggest that the "square root" of AVE of each latent variable should be greater than the correlations among the latent variables. Bold and underlined numbers in Table 4 show the values calculated according to the rule of Fornell and Larcker (1981). These values are

calculated with the squares of the AVE values. Other values in Table 4 are the correlation coefficients between the variables. There is a positive correlation between all variables. The Fornell and Larcker (1981) criterion is used to check discriminant validity. If the column and row with the values given in bold and underline in the table have the highest value, it means that the discriminant validity is provided. Fornell and Larcker (1981) criteria were met in discriminant validity control.

Table 5: Hererotrait-Monotrait Ratio Values

	CM	GC	IP	L	PP	S
Global Capabilities	0,362					
Innovation Performance	0,516	0,494				
Learning	0,760	0,372	0,566			
Product Performance	0,423	0,452	0,473	0,414		
System	0,721	0,348	0,557	0,744	0,424	
Team	0,714	0,352	0,529	0,730	0,421	0,804

Another measure used in discriminant validity is the Hererotrait-Monotrait Ratio value. It is preferred that these values be less than 0.85. Since all of the values in Table 5 are less than 0.85, it means that the discriminant validity is provided according to the HTMT criterion. Cross loading values are also used to determine discriminant validity. There must be a difference of at least 0.1 between the loading value for one factor and the loading value for another factor. No such problem was encountered in the cross-loading control. After this stage, hypothesis tests can be started.

Tests were carried out on the structural model given in Figure 1. Those between H1-H14 of these tests are designed for direct effects. Path analysis results made in the SmartPLS program are given in Table 6.

Table 6: Path Coefficient and Confidence Intervals Value

H	Path	O	M	STDEV	T Stat.	2.5%	97.5%	Decission
H1	GC→IP	0,353	0,355	0,032	11,189	0,293	0,415	**Accept**
H2	GC→PP	0,347	0,349	0,035	10,003	0,279	0,415	**Accept**
H3	GC→Team	0,352	0,356	0,032	10,970	0,289	0,418	**Accept**
H4	Team→IP	0,406	0,408	0,035	11,503	0,339	0,473	**Accept**
H5	Team→PP	0,302	0,302	0,036	8,350	0,230	0,376	**Accept**
H6	GC→System	0,349	0,347	0,031	11,099	0,287	0,408	**Accept**
H7	System→IP	0,560	0,560	0,030	18,665	0,499	0,611	**Accept**
H8	System→PP	0,428	0,429	0,030	14,439	0,372	0,485	**Accept**
H9	GC→Learning	0,374	0,377	0,032	11,678	0,316	0,436	**Accept**
H10	Learning→IP	0,569	0,569	0,029	19,866	0,515	0,628	**Accept**
H11	Learning→PP	0,417	0,419	0,032	13,167	0,355	0,476	**Accept**
H12	GC→CM	0,520	0,522	0,033	15,830	0,456	0,579	**Accept**
H13	CM→IP	0,429	0,431	0,030	14,161	0,373	0,491	**Accept**

H14	CM→PP	0,361	0,362	0,033	11,110	0,296	0,427	**Accept**

For the significance tests of the results obtained, 5000 units of Bootstrapping were performed. Column with "O" shows original sample. Column with "M" shows Sample mean values. These values are Path Coefficient values. Interpreted as regression coefficients. T statistic values show whether there is a difference between the original values and the values obtained as a result of bootstrapping. The fact that these values are greater than 1.96 indicates that the path coefficient values are significant. Shows 2.5% and 97.5% confidence intervals. There should be no "zero" value between these values. When Table 6 is examined, there is no zero value in the intervals. The paths established for the model are meaningful. All hypotheses were accepted.

Table 7: Mediation effect path results

H	Path	O	M	STDEV	T Stat.	2.5%	97.5%	VAF
H15	GC→Team→IP	0,143	0,145	0,018	7,879	0,112	0,180	**0,29**
H16	GC→Team→PP	0,106	0,107	0,016	6,755	0,077	0,137	**0,23**
H17	GC→System →IP	0,195	0,195	0,023	8,541	0,151	0,241	**0,36**
H18	GC→System→PP	0,149	0,149	0,019	7,986	0,116	0,187	**0,30**
H19	GC→Learning→IP	0,213	0,215	0,024	8,849	0,172	0,263	**0,38**
H20	GC→Learning→PP	0,156	0,158	0,020	7,656	0,122	0,199	**0,31**
H21	GC→CM→IP	0,155	0,156	0,019	8,016	0,125	0,202	**0,39**
H22	GC→CM→PP	0,188	0,189	0,023	8,010	0,145	0,236	**0,35**

The test results for the mediation effect are given in Table 7. To talk about the mediation effect, the path coefficients between dependent-mediation, dependent-independent and mediation-dependent variables must be significant. The effect between the dependent-independent variable is called the direct effect, and the effects between the independent-mediation and the mediation-dependent are called the indirect effect. The total effect is obtained by the sum of the indirect and direct effects. While measuring the mediation effect size, the ratio of the indirect effect to the total effect is examined (Nitzl & Hirsch, 2016). This gives the numerical extent of the mediation effect considered to be. If VAF values are below 20%, zero mediation effect is mentioned, while 20%-80% VAF value means partial, and more than 80% means full mediation effect (Hair et al., 2017). When the VAF values obtained according to the calculations are examined, it can be seen that all mediation effects are in partial mediation size.

4. Discussion

Business performance is a result of the individual performances of employees and the degree to which they operate in harmony with one another, as well as the organizational performance that is dependent on the external environment. Globally, there is a new trend that has shifted from mechanistic organizational structures with strict rules to organic organizational structures in which the importance of flexibility and communication is emphasized (Kanten et al., 2015). The analysis of the research supports the hypotheses that having global capabilities positively affects performance

outputs. Where centralism gradually loses its importance (Puranam & Maciejovsky, 2017), the need for individuals to be team players is key for organic structures that allow organizational learning. Effective and open communication is ensured as a result of productive brainstorming with individuals with these characteristics, and together with the effect of learning orientation, these characteristics positively affect performance outcomes. In recent years, many low and medium value-added product manufacturers are losing their competitive advantage in the markets due to multiple factors: globalization, access to cheap labor, and the rapid spread of information through the internet and technology. In contrast, economic growth and development in developed and developing countries allow businesses to produce products with high added value. Thus, innovations and innovativeness have become vital elements for businesses to maintain their competitive advantage. The level of innovation is not only determined by the workforce but also by the capital and technological ability of the enterprises. At the same time, how environmental factors affect R&D activities and innovation level is also decisive. For this reason, businesses operating in the same sector have different levels of innovation. In other words, in increasing the innovation performance of enterprises, external factors and internal factors are important for businesses to maintain their competitive advantage (Xue et al., 2022). This is also seen as a result of research analysis, with innovation performance being positively affected by global capabilities and learning orientation. Martins and Fernandes (2015) note that there are a clear set of common barriers to innovation in businesses: financial constraints, competitors rapidly copying innovation, lack of protection of intellectual property, lack of complementary assets (such as production facilities and access to distribution channels), poorly developed design and manufacturing skills, insufficient technological capabilities, and lack of managerial skills necessary to professionally commercialize the product. For this reason, it is very important for companies to have both global capabilities and a learning orientation.

5. Conclusion

Factors such as communication, global markets offering important opportunities, developments in information technology, rapid technological changes, the increasing importance of information, international competition, and a diminishing focus on the importance of services, people, goods, ideas, and borders within the economic field all play an important role in the emergence of global businesses. Global competition affects even national and local businesses, directing them towards product diversity, pushing them to follow newer technologies in order to compete. In fact, the phenomenon of globalization, which continues to change dynamically, destroys the concept of time and space in businesses and countries, thereby destroying the differences between local and global business. With the acceleration of globalization, enterprises considering entering transnational markets and gaining competitive advantage compared to their competitors will continue to grow. Enterprises seeking growth outside of the borders of their own country are heading towards transnational borders to find attractive opportunities where market growth is higher and competition is less. This idea is also attractive to businesses operating on a national scale and pushes them to globalize and compete in a globally competitive environment. Hence, global businesses need to gain a competitive advantage against their competitors in order to survive in global markets, and innovation is of great importance

for the medium and long-term success of businesses. On the other hand, innovations create many insecure and uncertain internal and external stakeholders. For this reason, it is difficult to predict the success of innovations. As the number of concurrent innovation projects increases or the scope of projects expands, planning and control becomes more difficult. Innovation performance measures help to cope with this situation (Putra et al., 2020). In addition, the fact that innovation outputs are associated with business performance can be particularly interesting as it will be an indicator of how successful the innovations are (Lai et al., 2021). By definition, innovation performance is considered to be the ability to transform innovation inputs into outputs, thereby transforming innovation capabilities and efforts into market practice, resulting in new market successes (Psomas et al., 2018). In other words, innovation performance refers to the tendency to introduce new products and services that will reduce sales of existing products or services, obsolete previous investments, and render existing organizational skills and routines obsolete. Firms with a high propensity to innovate are expected to develop and offer more innovative new products and services than firms with a low propensity to innovate (Nijssen et al., 2006). For this reason, enterprises that invest heavily in R&D have higher innovation performance (Leung & Sharma, 2021). The survival of the production systems and sub-systems depends on their performance of the expected success. The measurement of this success can be made for the entire system, as well as on the basis of the workshop, product, bench, or employee. To suggest that a production system is successful, based on one or more indicators, can lead to erroneous and dangerous judgments and decisions. Indeed, an organization that produces quality products may be unprofitable; a profit-making organization may not be efficient; an organization that is efficient under certain conditions may have low flexibility; or a highly productive organization may not be open to innovation. The main reason for these inconsistencies is that production systems are expected to carry many different qualities at the same time, due to the brutality of the business environment. Since the measurement of these different qualities cannot be reduced to a single and common basis, a single indicator that will reflect the success of the whole system cannot be defined. However, by examining the known indicators one by one, the failures of the system, at least in certain aspects, can be revealed.

Author Contribution

CONTRIBUTION RATE	EXPLANATION	CONTRIBUTORS
Idea or Notion	From the research idea or hypothesis	Fatma SÖNMEZ ÇAKIR
Literature Review	Review the literature required fort he study	Zafer ADIGÜZEL
Research Design	Designing method, scale, and pattern fort he study	Fatma SÖNMEZ ÇAKIR Songül YEŞİLOT ZEHİR
Data Collection and Processing	Coolection, organizing, and reporting data	Fatma SÖNMEZ ÇAKIR
Discussion and Interpretation	Taking responsibility in evaluating and finalizing the findings	Zafer ADIGÜZEL

Conflict of Interest

There is no conflict of interest between the authors in the article.

Financial Support

No support was received from any institution for this article.

References

Adiguzel, Z. (2019). Relationships among leader effectiveness, learning orientation, effective communication, team creativity and service innovation in the service sector, *Business and Economics Research Journal*, *10*(1), 131-148.

Agus, A., & Selvaraj, R. (2020). The effects of people-and technical-oriented TQM on productivity: the mediating role of production performance, *International Journal of Business and Society*, *21*(1), 234-252.

Alerasoul, S. A., Afeltra, G., Hakala, H., Minelli, E., & Strozzi, F. (2021). Organisational learning, learning organisation, and learning orientation: An integrative review and framework, *Human Resource Management Review*, 1-26.

Antunes, H. D. J. G., & Pinheiro, P. G. (2020). Linking knowledge management, organizational learning and memory, *Journal of Innovation & Knowledge*, *5*(2), 140-149.

Arkolakis, C., Ramondo, N., Rodríguez-Clare, A. & Yeaple, S. (2018). Innovation and production in the global economy, *American Economic Review*, *108*(8): 1-64.

Atitumpong, A., & Badir, Y.F. (2018). Leader-member exchange, learning orientation and innovative work behavior, *Journal of Workplace Learning*, *30*(1), 32-47. https://doi.org/10.1108/JWL-01-2017-0005

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models, *Journal of the Academy of Marketing Science*, *16*(1), 74–94.

Bouwman, H., Nikou, S., & De Reuver, M. (2019). Digitalization, business models, and SMEs: How do business model innovation practices improve performance of digitalizing SMEs?, *Telecommunications Policy*, *43*(9), 1-18.

Brondoni, S. M. (2018). Competitive Business Management and Global Competition. An Introduction, In *Competitive Business Management* (pp. 21-42). Routledge.

Brondoni, S. M., & Zaninotto, E. (2018). Ouverture de'The 4th Industrial Revolution. Business Model Innovation & Global Competition, *Symphonya*, (2), 1-7.

Calantone, R.J., Cavusgil, S.T., & Zhao, Y. (2002). Learning Orientation, Firm Innovation Capability and Firm Performance, *Industrial Marketing Management*, *31*, 515-524

Celuch, K. G., Kasouf, C. J., & Peruvemba, V. (2002). The effects of perceived market and learning orientation on assessed organizational capabilities, *Industrial marketing management*, *31*(6), 545-554.

Chesbrough, H. W. (2007). Why companies should have open business models, *MIT Sloan management review*, *48*(2): 22-28.

Chughtai, A.A., & Buckley, F. (2010). Assessing the effects of organizational identification on in-role job performance and learning behaviour: The mediating role of learning goal orientation, *Personnel Review*, *39*(2), 242-258. https://doi.org/10.1108/004.834.81011017444

Clauss, T., Abebe, M., Tangpong, C., & Hock, M. (2019). Strategic agility, business model innovation, and firm performance: an empirical investigation, *IEEE Transactions on Engineering Management*, *68*(3), 767-784.

Ebrahimi, P., Shafiee, B., Gholampour, A., & Yousefi, L. (2018). Impact of organizational innovation, learning orientation and entrepreneurship on SME performance: The moderating role of market turbulence and ICT, In *Competitiveness in emerging markets* (pp. 447-480). Springer, Cham.

Ferreras-Méndez, J. L., Olmos-Peñuela, J., Salas-Vallina, A., & Alegre, J. (2021). Entrepreneurial orientation and new product development performance in SMEs: The mediating role of business model innovation, *Technovation*, *108*, 1-13.

Fornell, C., & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error, *Journal of Marketing Research*, *18*(1), 39-50.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet, *Journal of Marketing Theory and Practice*, *19*(2), 139–151.

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research, *Industrial Management & Data Systems*, *117*(3), 442-458.

Hameed, W. U., Basheer, M. F., Iqbal, J., Anwar, A., & Ahmad, H. K. (2018). Determinants of Firm's open innovation performance and the role of R & D department: an empirical evidence from Malaysian SME's, *Journal of Global Entrepreneurship Research*, *8*(1), 1-20.

Hameed, W. U., Nisar, Q. A., & Wu, H. C. (2021). Relationships between external knowledge, internal innovation, firms' open innovation performance, service innovation and business performance in the Pakistani hotel industry, *International Journal of Hospitality Management*, *92*, 1-15.

Hanvanich, S., Sivakumar, K., & Hult, G. T. M. (2006). The relationship of learning and memory with organizational performance: the moderating role of turbulence, *Journal of the Academy of Marketing Science*, *34*(4), 600-612.

Harvey, J. F., Johnson, K. J., & Roloff, K. S. (2018). The Interplay between Learning Orientation, Openness and Psychological Safety in Team Learning, In *Academy of Management Proceedings* (Vol. 2018, No. 1, p. 11101). Briarcliff Manor, NY 10510: Academy of Management.

Hult, G. T. M., Snow, C. C., & Kandemir, D. (2003). The role of entrepreneurship in building cultural competitiveness in different organizational types, *Journal of management*, *29*(3), 401-426.

Ju, B., Lee, Y., Park, S., & Yoon, S. W. (2021). A meta-analytic review of the relationship between learning organization and organizational performance and employee attitudes: using the dimensions of learning organization questionnaire, *Human Resource Development Review*, *20*(2), 207-251.

Kanten, P., Kanten, S., & Gurlek, M. (2015). The effects of organizational structures and learning organization on job embeddedness and individual adaptive performance, *Procedia Economics and Finance*, *23*, 1358-1366.

Kim, S. D., & Jeon, I. O. (2016). Effects of Global Capabilities of Small and Medium Businesses on Their Competitive Advantage and Business Management Performances, *International Journal of Fuzzy Logic and Intelligent Systems*, *16*(1), 52-58.

Kuutti, K., & Virkkunen, J. (1995). Organisational memory and learning network organisation: the case of Finnish labour protection inspectors, In *Proceedings of the Twenty-Eighth Annual Hawaii International Conference on System Sciences* (Vol. 4, pp. 313-322). IEEE.

Lai, C. S., Pai, D. C., Yang, C. F., & Lin, H. J. (2009). The effects of market orientation on relationship learning and relationship performance in industrial marketing: The dyadic perspectives, *Industrial marketing management*, *38*(2), 166-172.

Lai, J. Y., Wang, J., Ulhas, K. R., & Chang, C. H. (2021). Aligning strategy with knowledge management system for improving innovation and business performance, *Technology Analysis & Strategic Management*, 1-14.

Langerak, F., Hultink, E. J., & Robben, H. S. (2004). The impact of market orientation, product advantage, and launch proficiency on new product performance and organizational performance, *Journal of product innovation management*, *21*(2), 79-94.

Leung, T. Y., & Sharma, P. (2021). Differences in the impact of R&D intensity and R&D internationalization on firm performance–Mediating role of innovation performance, *Journal of Business Research*, *131*, 81-91.

Lin, C. Y., Huang, C. K., & Ko, C. J. (2020). The impact of perceived enjoyment on team effectiveness and individual learning in a blended learning business course: The mediating effect of knowledge sharing, *Australasian Journal of Educational Technology*, *36*(1), 126-141.

Lin, H. H., Yen, W. C., & Wang, Y. S. (2018). Investigating the effect of learning method and motivation on learning performance in a business simulation system context: An experimental study, *Computers & Education*, *127*, 30-40.

Lita, R. P., Meuthia, M., Faisal, R. F., & Surya, S. (2018). SME's innovative performance in Indonesia: The linkage between innovation culture and production performance, *International Journal of Supply Chain Management*, *7*(4), 242-253.

Lukas, B. A., & Bell, S. J. (2000). Strategic market position and R&D capability in global manufacturing industries: Implications for organizational learning and organizational memory, *Industrial Marketing Management*, *29*(6), 565-574.

Malik, P., & Garg, P. (2020). Learning organization and work engagement: The mediating role of employee resilience, *The International Journal of Human Resource Management*, *31*(8), 1071-1094.

Mardani, A., Nikoosokhan, S., Moradi, M., & Doustar, M. (2018). The relationship between knowledge management and innovation performance, *The Journal of High Technology Management Research*, *29*(1), 12-26.

Martins, J.M., & Fernandes, M.T. (2015). Too small to innovate? Creating value with fewer resources, *Journal of Business Strategy*, *36*(2), 25-33. https://doi.org/10.1108/JBS-02-2014-0014.

Masroor, N., & Asim, M. (2019). SMEs in the contemporary era of global competition, *Procedia Computer Science*, *158*, 632-641.

Najafi-Tavani, S., Najafi-Tavani, Z., Naudé, P., Oghazi, P., & Zeynaloo, E. (2018). How collaborative innovation networks affect new product performance: Product innovation capability, process innovation capability, and absorptive capacity, *Industrial marketing management*, *73*, 193-205.

Nijssen, E. J., Hillebrand, B., Vermeulen, P. A., & Kemp, R. G. (2006). Exploring product and service innovation similarities and differences, *International journal of research in marketing*, *23*(3), 241-251.

Nitzl, C., & Hirsch, B. (2016). The drivers of a superior's trust formation in his subordinate, *Journal of Accounting & Organizational Change*, *12*(4), 472-503. https://doi.org/10.1108/JAOC-07-2015-0058.

Nyachwaya, J. M., & Rugami, J. M. (2020). Competitive strategies and performance of commercial banks in Mombasa county, Kenya, *International Journal of Business Management, Entrepreneurship and Innovation*, *2*(1), 65-74.

Örtenblad, A. (2018). What does "learning organization" mean?, *The Learning Organization*, *25*(3), 150-158. https://doi.org/10.1108/TLO-02-2018-0016.

Prajogo, D. I., & Sohal, A. S. (2006). The integration of TQM and technology/R&D management in determining quality and innovation performance, *Omega*, *34*(3), 296-312.

Prasongko, A., & Adianto, T. (2019). The Role of the Agile Leadership Model as a Competitive Advantage for the Future Leader in the Era of Globalization and Industrial Revolution 4.0, *Jurnal Pertahanan: Media Informasi ttg Kajian & Strategi Pertahanan yang Mengedepankan Identity, Nasionalism & Integrity*, *5*(3), 126-133.

Psomas, E., Kafetzopoulos, D., & Gotzamani, K. (2018). Determinants of company innovation and market performance, *The TQM Journal*, *30*(1), 54-73. https://doi.org/10.1108/TQM-07-2017-0074.

Puranam, P., & Maciejovsky, B. (2017). Organizational structure and organizational learning, *Puranam, P., & Maciejovsky, B., Organizational Structure and Organizational Learning. In: L. Argote and JM Levine (Eds.), The Oxford Handbook of Group and Organizational Learning. Oxford, England: Oxford University Press, Forthcoming, INSEAD Working Paper*, (2017/33), 1-39.

Putra, A. A. G. A. P., Wahyuni, N. M., Yasa, P. N. S., & Giantari, I. G. A. K. (2020). Examining the linkage among market orientation, learning orientation and innovation performance: The mediation role of knowledge management, *International Research Journal of Management, IT and Social Sciences*, *7*(6), 131-145.

Ratnawati, R. (2019). Partnership strategy and competitive advantage to improve the performance of MSMEs in the creative industry, *Jurnal Aplikasi Manajemen*, *17*(4), 668-676.

Ringle, C., Wende, S., & Will, A. (2005). *SmartPLS 2.0 (Beta)*, Hamburg, (www.smartpls.de)

Robertson, J., Caruana, A., & Ferreira, C. (2021). Innovation performance: The effect of knowledge-based dynamic capabilities in cross-country innovation ecosystems, *International Business Review*, 101866.

Senge, P. M. (1990). *The art and practice of the learning organization, the fifth discipline. Currency doubleday*, London, UK.

Shubbak, M. H. (2019). The technological system of production and innovation: The case of photovoltaic technology in China, *Research Policy*, *48*(4), 993-1015.

Srisathan, W. A., Ketkaew, C., & Naruetharadhol, P. (2020). The intervention of organizational sustainability in the effect of organizational culture on open innovation performance: A case of thai and chinese SMEs, *Cogent business & management*, *7*(1), 1-28.

Tallman, S., Luo, Y., & Buckley, P. J. (2018). Business models in global competition, *Global Strategy Journal*, *8*(4), 517-535.

Wang, L., Jin, J. L., Zhou, K. Z., Li, C. B., & Yin, E. (2020). Does customer participation hurt new product development performance? Customer role, product newness, and conflict, *Journal of Business Research*, *109*, 246-259.

Wang, Y., & Lei, J. (2018). The action mechanism of team learning orientation in promoting team performance, *Social Behavior and Personality: an international journal*, *46*(4), 581-596.

Wang, Z., & Zhou, Y. (2021). Business model innovation, legitimacy and performance: social enterprises in China, *Management Decision*, 59(11), 2693-2712. https://doi.org/10.1108/MD-05-2019-0678

Widiartanto, S. (2013). The effect of transformational leadership on market orientation, learning orientation, organization innovation and organization performance, *IOSR J. Bus. Manag*, *12*, 8-18.

Wong, K. K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS, *Marketing Bulletin*, *24*(1), 1-32.

Xie, L. (2020). The impact of servant leadership and transformational leadership on learning organization: a comparative analysis, *Leadership & Organization Development Journal*, *41*(2), 220-236. https://doi.org/10.1108/LODJ-04-2019-0148.

Xue, L. L., Shen, C. C., & Lin, C. N. (2022). Effects of Internet Technology on the Innovation Performance of Small-scale Travel Agencies: Organizational Learning Innovation and Competitive Advantage as Mediators, *Journal of the Knowledge Economy*, 1-26.

Yang, J., Su, J., & Song, L. (2019). Selection of manufacturing enterprise innovation design project based on consumer's green preferences, *Sustainability*, *11*(5), 1-16.

Resume

Fatma SÖNMEZ ÇAKIR (Assoc. Prof.), After completing bachelor's and master's degrees at Cumhuriyet University, completed doctorate at Gebze Technical University. Area of expertise is numerical methods, analysis methods and operations research. Continues academic career as a faculty member at Bartın University, Faculty of Economics and Administrative Sciences.

Songül YEŞİLOT ZEHİR (Dr.), She completed his PhD in Business Administration at Gebze Technical University, Institute of Social Sciences. Her research interests include management, strategy, leadership and organizational structures.

Zafer ADIGÜZEL (Assoc. Prof.), In 2006, Kocaeli University, Faculty of Economics and Administrative Sciences, In 2010, graduated from Cardiff Metropolitan University with an MBA in Finance. In 2016 graduated from Gebze Technical University, Department of Management and Organization. Continues academic career as a faculty member at Istanbul Medipol University, Medipol Business School.