

THE CHANGING LEADERSHIP APPROACH AND THE IMPORTANCE OF ENTREPRENEURIAL LEADERSHIP IN DIGITIZED ENTERPRISES ¹

DİJİTALLEŞEN İŞLETMELERDE DEĞİŞEN LİDERLİK ANLAYIŞI VE GİRİŞİMCİ LİDERLİĞİN ÖNEMİ

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ABSTRACT

In the world, there is a constant change and development in the economy, industry and politics. The fact that this change and development, especially in the industrial field, has an impact on other areas, is an important factor in shaping the future of the world. In the industrial context, the term Industry 4.0 emerged with the innovations that first took place in line with the Industrial Revolution, reaching the fourth stage. Industry 4.0 can be explained not only by advances in technology or industrial production, but also by the bond created in social areas. Industry 4.0 can be explained not only by advances in technology or industrial production, but also by the bond created in social areas. Digitalization, which has increased its effect in all areas of life with the effect of Industry 4.0, has shown its effect on businesses. While defining the entrepreneur, Schumpeter emphasized that it is an important power in ensuring economic development, developing new techniques in production and expanding the product range (Bayar, M. & Varışlı, N., 2021: 44). The most important aspect of the concept of entrepreneurship is to adopt an entrepreneurial perspective in order to adapt to the changes in the environment. Leaders with an entrepreneurial structure who have innovative ideas and can bring them to life have a great influence on the adaptation of businesses to all these changes. A process is emerging where the classical management styles in today's business life are insufficient in digitalized businesses and where data, analysis and time management are very important in achieving goals. For this reason, networking-oriented entrepreneur leaders who are competent in information Technologies and can make quick decisions, will be effective in shaping the future and continuity of their businesses with a focus on success. Therefore, leaders with an entrepreneurial spirit are increasingly important in businesses and play an important role in the digitalization process. The aim of this study is to examine entrepreneurial leadership conceptually in the context of the rapidly spreading digitalization process and changing leadership understanding with Industry 4.0, and the relationship between these concepts and their results in the light of the relevant literature.

Keywords: Industry 4.0, Digitalization, Management, Leadership, Entrepreneurial Leadership

ÖZET

Dünyada ekonomide, endüstride ve politikada daimî olan bir değişim ile gelişim yaşanılmaktadır. Bu değişim ve gelişimin özellikle de endüstriyel alanda yaşanılmasının beraberinde diğer alanlarda da etki göstermesi dünyanın geleceğinin şekillenmesinde önemli etken olmaktadır. Endüstriyel bağlamda ilk olarak Sanayi Devrimi doğrultusunda gerçekleşen yeniliklerin dördüncü aşamaya ulaşması ile Endüstri 4.0 ifadesi ortaya çıkmıştır. Endüstri 4.0, yalnız teknoloji ya da endüstriyel üretimdeki ilerlemelerle değil, ilaveten sosyal alanlarda oluşturulan bağ ile de açıklanabilir. Endüstri 4.0'ın etkisiyle hayatın her alanında etkisini artıran dijitalleşme, işletmelerde etkisini fazlasıyla göstermiştir. Schumpeter, girişimciyi tanımlarken ekonomik gelişmenin sağlanmasında, üretimde yeni teknikler geliştirilmesinde ve ürün yelpazesinin genişletilmesinde önemli bir güç olduğunu vurgulamıştır (Bayar, M. & Varışlı, N., 2021:44). Çevrede yaşanan değişimlere uyum sağlayabilmek için girişimci bir bakış açısını benimsemek, girişimcilik kavramının en önemli boyutudur. İşletmelerin tüm bu değişime uyum sağlamasında yenilikçi fikirlere sahip olup bunları hayata geçirebilen girişimci yapı sahibi liderlerin etkisi fazladır. Günümüz iş hayatında yer alan klasik yönetim stillerinin artık dijitalleşen işletmelerde yetersiz kaldığı ve hedeflere ulaşma yolunda verilerin, analizin ve zaman yönetiminin oldukça önem taşıdığı bir süreç ortaya çıkmaktadır. Bu nedenle işletmelerinin geleceği ve sürekliliğinin sağlanmasında gerek bugününün gerekse geleceğinin başarıya odaklı şekillenmesinde bilgi teknolojilerine hâkim, hızlı karar alabilen, networking odaklı girişimci liderler etkili olacaktır. Dolayısıyla, girişimci ruha sahip liderler, işletmelerde giderek önemini artırmakta ve dijitalleşme sürecinde önemli rol oynamaktadır. Yapılan bu çalışmanın amacı Endüstri 4.0 ile hızla yaygınlaşan dijitalleşme süreci ve değişen liderlik anlayışı bağlamında girişimci liderliğin kavramsal açıdan ele alınması bu kavramlar arasındaki ilişki ve sonuçlarının ilgili literatür ışığında incelenmesidir.

Anahtar Kelimeler: Endüstri 4.0, Dijitalleşme, Yönetim, Liderlik, Girişimci Liderlik

1. INTRODUCTION

Industry 4.0 is a new industrial revolution as a genre. Production on the basis of cyber-physical systems is the difference of this new industrial revolution from others. The First Industrial Revolution symbolizes the mechanical production facilities working with water and steam energy at the end of the 18th century. The Second Industrial Revolution symbolizes the division of labor and mass production with electrical energy. The Third Industrial Revolution, on the other hand, is a period in which electronic and information

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technologies dominate in practice, in which manufacturing automation reaches its peak (Kılıç and Alkan, 2018: 47). The digitalization process that took place in the 19th, 20th and 21st centuries is an interaction process in which change begins and leadership comes to the fore. The leader, who tends to achieve more prosperity and wealth in company and state management, influences the group members in strengthening creativity and ensuring continuous innovation within the framework of his ever-increasing knowledge. Chang and Chiang, in their study in 2007, revealed that leadership's creativity on employees has a positive effect on behavior perception. In this case, entrepreneurship has a positive effect on leadership. Uçar and Dağlı, in their study in 2017, determined that the communication of leaders on employees had a positive effect and that they had a vision in the direction of entrepreneurship positively affected employees. Uğurlu and Ceylan stated in their study in 2014 that the emotional intelligence of leaders creates a positive creative effect on employees.

Today, rapid progress has been made in production with the development of technology and the effect of Industry 4.0. Entrepreneurial leaders' adaptation to the developments in the technological field is very important in achieving the success they want in order not to be insufficient in the competitive environment of the enterprises and to ensure their continuity. Entrepreneurship-oriented leaders' adaptation to digitalization in terms of technology is important in terms of continuous improvement and their contribution to the success of businesses.

2. AIM AND IMPORTANCE OF THE RESEARCH

Organizations include a comprehensive structure in order to gain the ability to adapt to the constantly changing business environment, as well as to use their existing skills in order to ensure efficiency. Entrepreneurial leadership has been an important element in providing sustainable competitive advantage in today's global economic environment (Wiklund and Shepherd, 2003: 1038). Although many studies have been conducted on this subject and the results of an enterprise's entrepreneurial orientation have been extensively researched, the literature and empirical studies on the factors and conditions that support entrepreneurial leadership orientation remain insufficient.

In an environment where competition is so intense, businesses need a structure formed by innovative and entrepreneurial ideas that can compete with their competitors in order to solve their problems. Entrepreneurial leadership is needed to meet the need for productive and innovative thinking. Entrepreneurial leadership supports the generation of innovative ideas, the adoption of these ideas by the group members, their transformation in accordance with the goals and programs of the company, the formation of a positive attitude of the environment towards thinking and actions for its implementation. In the light of the explanations above, the aim of this study is to conceptually examine the effects and importance of entrepreneurial leadership in digitalized businesses. For this purpose, it is thought that the study can contribute to business managers, employees and the literature.

3. LEADERSHIP AND ENTREPRENEURIAL LEADERSHIP CONCEPTS

Entrepreneurial leaders increase the success in organizations thanks to some of their characteristics. Some of these are (Covin and Slevin, 2002: 311); supporting their skills in the field of entrepreneurship, interpreting the opportunities, questioning the existing business logic, reviewing the simple questions, and associating them with management in the entrepreneurial strategic field. Along with these, flexibility, humility, focusing ability, determination, being competitive, being able to balance trust, possessiveness, positive thinking ability, self-awareness, marketing skills and communication skills are among the characteristics that entrepreneurial leaders should have (Young Entrepreneur Council, 2013: 1).

Leaders are people who have the power to transform group members. Leadership encompasses context, self-view and actions as three basic components. Context refers to the human community, action component refers to people's ability to change, and self-view refers to purpose. The power of influence is decisive for the people who make up the community to act in line with common goals and tend to change (Levitt, 2010: 170). Entrepreneurial leader has the characteristics of opportunity-oriented, success-oriented and entrepreneurial behavior that can mobilize the group in this direction. Entrepreneurial leadership is based on two foundations. These are (Thornberry, 2006; Cunningham & Lischeron, 1991, Renko, 2017:11);

- ✓ Leader's qualities and opportunity-oriented activities,
- ✓ The power of influence, which the leader motivates by encouraging his followers.

The leader, who stands out with his personal characteristics and gains an official authority, is also effective in the emergence or development of industrial revolutions by directing the group members to common goals by making use of power sources (reward, punishment, expertise, legality or identification). Industry 4.0, which is based on superior creative skills, especially requires participation, flexibility, creating a suitable environment, supporting, removing obstacles, taking into account personal needs, highlighting merit and ethical behavior, constantly increasing knowledge, and transferring science into practice. It is true that human resources that are valuable, have unique skills and abilities, are difficult to imitate and are open to change are an important element in ensuring competitive advantage in the Industry 4.0 process (Northouse, 2016: 147). Leadership is the focal point in the creation and sustainability of this human resource.

Entrepreneurial leadership is a conceptual framework that emerges as a result of blending leadership potential with potential entrepreneurial spirit. This situation can create a change in the course of the world (Kuru, 2016: 1). Therefore, in entrepreneurial leadership; In addition to the entrepreneurial style, entrepreneurial orientations also play an important role (Leitch et al., 2013: 348). According to the performances of the employees, the entrepreneurial leadership's recognizing and using the opportunities in the entrepreneurial direction and directing them to achieve the organizational goals are highly effective (Renko et al., 2015:55). Entrepreneurial leadership is not synonymous with entrepreneurship. Entrepreneurial leadership represents a new understanding of leadership. One of the important factors is that entrepreneurs and some specific disciplines in entrepreneurship focus on creating new ventures. On the other hand, entrepreneurial leaders need to work within the existing established order and develop new products, new business processes and new advancement opportunities (Greenberg et al., 2011: 2). It is one of the important points that the entrepreneurial leader has entrepreneurial qualities first of all (Gündüz, 2010: 214). In other words, the entrepreneurial leader should be able to evaluate the opportunities brought by the current situation and ensure that the necessary resources are reached to take advantage of these opportunities (Renko et al., 2015: 57).

Entrepreneurial leader has the ability to take an independent, directing and influencing role for employees, as well as determining strategies that are compatible with the organizational dynamics of a system structure that will develop strategies that are compatible with the organizational structure that will help manage complexity. This situation is an important factor in revealing the leader's vision, abilities and creativity (Gündüz, 2010: 212). The effective role of entrepreneurial leadership on the performance of organizations is still an important focus today. Therefore, in order to ensure the sustainability of organizations in the business world in intense and dynamic competition, leaders must have the power to compete with their competitors. In addition, in order to contribute to the development of the enterprise, it is necessary to have entrepreneurial qualities and to use these qualities effectively (Karcioğlu and Yücel, 2004: 417). In a different definition, managers in organizations should have entrepreneurial leadership characteristics in ensuring business success and continuity. This situation reveals the necessity of leaders, who have a very important role in business management, to have entrepreneurial characteristics (Okudan and Rzasa, 2006: 197).

Zijlstra conducted a study in 2014 that investigated when and at what level entrepreneurial leadership is most effective; He revealed that he is also interested in taking risks, being proactive, autonomous, having a vision, being innovative, having experience, charismatic and creativity (Zijlstra, 2014: 26).

4. THE CONCEPT OF INDUSTRY 4.0

The concept of Industry 4.0 is a concept associated with the development process of the industry. It is known that the industry has taken its current form by going through some stages. The Industry 4.0 revolution, which is the pioneer of a great change and transformation that comes to the fore in reaching the current level of the industry, has gone through three revolution processes until this stage (Yang, 2017: 10).

The rapid change along with the constant change in many fields in the world plays an important role in business life as well as in every field. This variation is due to many factors that differ by time and place. Changes and developments in the field of industry significantly affect all areas of life. The states that hold the industrial leadership have directed that change and development in particular, and their leadership in these areas still continues. Industry 4.0 was conceptually used for the first time in 2011 at a fair in Germany, one of the pioneers of the industry field framework (Drath and Horch, 2014: 57). Factors related to the support of the German government with 200 million euros as a result of the development in the German industry, a revolution in production with the work of many experts, especially its modernization with the effect of the information age, and its move to the next level in production technology were revealed at the fairs (Bulut and Akçacı, 2014). : 56). Following Germany, the leading states in the field of industry also

sought in the same direction. It has been revealed that similar strategies and applications have been made in this direction. In Europe, the concept corresponding to Industry 4.0, one of these applications, is called "Factories of the Future", "Industrial Internet" in the United States and "Internet +" in China (Yıldız, 2018: 550).

Industry Technological developments have brought the Industry 4.0 revolution. As a result of the emergence of Industry 4.0, the advancement and development of technology, a wide variety of solutions have been presented to the increasing requirements, especially the production industry (Xu et al., 2018: 2950). Industry 4.0 includes interoperability, virtualization, decentralization, real-time capability, platform-oriented services, modularity, internet of things, cyber-physical systems, 3D printers, smart factories, smart robots, big data, cloud computing, simulation, virtual reality, horizontal and vertical integration, cyber security and many other innovative approaches (Soylu, 2018: 50). Industry 4.0, which is a process where production is supported by smart systems and smart robots in smart factories, and information is stored with cloud systems, is a revolution that will greatly affect the production processes in the future as well as today.

5. DIGITALIZATION AND LEADERSHIP IN BUSINESSES

Almost all of the changes and developments in the world are created by human hands. While some people in the past were able to make a name for themselves until today, some of them were content with fulfilling the given tasks. However, it has also been seen that people struggle for supremacy with each other in every period. The aforementioned struggle was observed sometimes in the economic field, sometimes in the military field, and sometimes in the political field. One of the active roles that bring success in this struggle is the leadership potential of the leaders of the struggle. The necessity of being strong or holding power in terms of human beings is a phenomenon that raises him in every sense in the ordinary life he lives and has a high impact on behalf of humanity. Power has always attracted people's attention and people's desire to hold power has always existed (Yılmaz, 2012: 252). The desire to have power in human beings has pushed him into a difficult war. This conflict environment has led to different groupings in the society. The need for management, which emerged with the formation of these groups, has been effective in the emergence of qualified leaders.

It is possible to say that digitalization is the process of transferring accessible information to digital media in such a way that it can be read by technological tools such as computers, smart phones, tablets, edited in such environments and included in work flows. In this context, digitalization is a general term used to mean the "Digital Transformation" of societies and economies. Digitization, symbolized by analog technologies, explains the transition from the industrial age to the age of information and creativity, where digital business innovations and digital technologies come to the fore (Northouse, 2016).

In this period called "digital age", digital transformation becomes inevitable with the effect of rapidly developing technologies. With the effect of developments in technology, the digitalization of a significant part of business and living spaces has now become an important key to the system in shaping the future. The harmony between digital transformation and investments planned for innovative technologies and digitalization will play a leading role in making sense of the future. Many factors, from improving existing ones to new structures, from receiving professional support to using new technologies, will determine the future existence of businesses (Northouse, 2016).

The benefits obtained from technology and digitalization are increasing day by day in almost every field such as service, product, business development, education, health, trade and art. Areas such as systems used in businesses, applications for sales, projects used in social responsibility, artistic activities spread digitalization to all areas of life. Changing and evolving needs and solutions to respond to them require adaptation to the digital age. Businesses that do not know the technologies used by the target audience, cannot see digitalization that facilitates in-house management, and develop their future strategy independently of digitalization will miss the digitalization era (Vaidya et al., 2018: 234).

The advantages of digitalization, which will enable you to stay ahead of competitors with technologies and applications that will change performance in businesses, can be briefly listed as follows (Northouse, 2016)

- ✓ Ensuring commercial growth,
- ✓ Increasing operational efficiency,
- ✓ Addressing the target audience,
- ✓ Reaching new individuals,

- ✓ Getting ahead of your competitors,
- ✓ Developing new methods in the field of study,

In order to achieve these and similar advantages, the realization of digital transformation is now a necessity.

According to the researches and predictions made by digital transformation experts, it is stated that until 2023, investments in information and communication technology (ICT) will increase by 53% in the next period. It is also estimated that 65% of organizations will aggressively modernize legacy systems with extensive new technology platform investments by 2023. In addition, it is estimated that digital transformation expenditures will reach 2 trillion dollars by 2022 (Combs, 2019).

In order to survive in the changing competitive environment, businesses should determine new policies and create plans for these policies. While determining these policies, one of the important elements is the organizational leaders who are open to development and have the capacity to adapt to the technologies required by the age (Kuzu, 2019). While it was seen that an autocratic and domination-based leadership approach was dominant in the past, a scientific leadership approach, especially starting with the Industry 1.0 revolution, has emerged. With the effect of the changes and developments, the understanding of leadership has changed a lot, and it has become more democratic and participatory by becoming transparent with the effect of contemporary management approaches. The leader has an important role in the realization and management of digital transformation. Today, there is an age of information and technology that completely changes people's lives, and the changing and developing conditions day by day have led to an increase in the speed of change. Besides that, these changes and developments have also determined the characteristics of leaders who direct people (Memduhoğlu and Yılmaz, 2017: 301). In this context, the definition of leadership, which is a concept as old as the history of humanity, has constantly changed and gained meaning with the influence of the conditions of the age.

6. RELATIONSHIP WITH DIGITALIZED BUSINESSES AND ENTREPRENEUR LEADERSHIP

With digitalization, an unprecedented change has occurred in the concepts of hierarchy and leadership. With the challenges of today's speed and complexity, it is almost impossible for leaders to overcome the additional responsibilities they have assumed and achieve success. In a global leadership survey conducted by IBM with 1,500 senior executives, more than half of the executives stated that they would not be able to accomplish the tasks assigned to them and additional responsibilities alone. The fact that this situation does not include individual leadership with the increasing speed, complexity, intricacy and autocriticism with the digitalization of businesses reveals that it is a necessity to transition to a more collective collaborative leadership style (Tüzmen, 2017). With the introduction of digitalization into the literature, the current situation has changed completely and new realities have emerged for all industrial enterprises, making it necessary to configure new business models in all sectors that are caught unprepared for this, especially in these enterprises.

Capturing the change environment in a short time with the fresh energy required for the implementation of strategic plans and management of change can be achieved with innovation-oriented, multifunctional employees and leaders who have a strategic vision and dreams for the business, do not think that competition is a war, but have the ability to analyze correctly. The rapid continuation of change after the 80s was also reflected in the management understanding of change leaders, and in addition to being more charismatic, influencing people with their collaborative and sharing leadership behaviors came to the fore. Technological, political and economic changes have also affected people's tendencies, and their feelings, values, ethical values, standard or long-term expectations have changed (Northouse, 2016). The most important factor that reveals this situation is the borders of the countries that have disappeared with the effect of globalization.

In addition to the globalization of the world, more personal expectations have emerged in the speed of globalization and the complexity of the process. The expectations of today's people have also led to the emergence of personalized, more satisfying wishes. Information, which is one of the leading elements of organizational inputs, can now be accessed very easily and cheaply. All strategies of the organization, missions that determine the purpose of the establishment, visions containing future goals are focused on knowledge-based products and services. As a result of this concentration, new organizational values are created regarding the activation, use, sharing and dissemination of information, and this can only be possible thanks to the understanding of the digitalization age and entrepreneurial leaders who understand this innovation (Memduhoğlu and Yılmaz, 2017: 302). With the rapidly developing technology, it is seen that the ideas and practices for the radical changes and developments in the production processes, techniques and

outputs are very important. In this context, in the process of adapting to all these changes and developments, the leaders are the most important factor in the quality of the information source, the effective management of information processes and the efficiency in production.

The main issue that needs to be emphasized in industrial digitalization is that the human aspects remain in the background and the changes and innovations are evaluated only technically. Although it is foreseen that there will be some difficulties for individual psychology due to this point of view, this situation has not been given importance for those who think in a technical context in general. Because the main purpose in digitalization is a faster, improved and innovative production with smart robots, human and human emotions have been pushed into the background (Vaidya et al., 2018: 235). The success of the digitization process depends on its very good management. Because business owners and managers are constantly thinking of progress with the realization of industrial revolutions. It is important for businesses that are digitizing and aiming for continuity to have leaders with entrepreneurial characteristics in order to achieve the future success goals of digitalization.

7. CONCLUSIONS

Although some aspects of industry 4.0, which is the global revolution of the age we live in, are known, there are still unknown aspects that we call the "dark side of the moon". This wave of change continues and the fourth industrial revolution will soon engulf the whole world. Industry 4.0 is a philosophy that includes the process of change and transformation in all sectors. Management skills and competencies have changed with Industry 4.0. Communication, cultural awareness, IT technology skills, interdisciplinary work, network technology, data-network security, business process have become more important with industry 4.0. The control and good time management skills of people who are closed to development will not take place in businesses in the future. Technological competence, customer satisfaction, people orientation, lifelong learning skills will be very important. The process experienced with the emergence of digitalization once again reveals how important the role of leadership is.

Changes and radical transformations bring crises from time to time. With digitalization, research, curiosity and analytical skills have come to the fore. In digitalization, it also requires the leader to manage the information effectively after providing it. Because businesses that cannot manage the resulting big data will suffer. In order to survive in the world created by digitalization, it has become a necessity to adapt to changes and developments. Identifying the right needs is a priority for the correct implementation of these expensive systems. This change is inevitable for businesses aiming to survive in the global world.

Entrepreneurial leader is one of the critical factors that ensure success in achieving business goals for businesses. Therefore, the entrepreneurial leadership characteristics of the leaders affect the performance, continuity, effectiveness and efficiency of the companies. These individuals must possess entrepreneurial leadership qualities to gain competitive advantage, grow and develop their companies, and survive in this competitive environment. The person in the leadership position should have entrepreneurial qualities as well as leadership qualities. Entrepreneurial leader features such as influencing others, vision, originality and courage include taking risks, seizing opportunities, following innovations, being innovative, productive, change and strategic. Entrepreneurial leaders can make the impossible possible, see the unseen, ensure the development of existing businesses, create new jobs in the business world, and reveal new ideas and innovations. In this context, the entrepreneurial leader should create the right team by bringing together the talents that complement each other and develop the team by motivating them to achieve common goals. The main motivation of leaders is the desire to create social, environmental and economic opportunities. Lack of resources or uncertainties do not discourage them, rather these problems motivate them and lead them to seek new solutions to overcome these problems.

What is expected from an entrepreneurial leader is to be brave in the face of technological innovations and uncertainties and to produce solutions in the face of problems. Entrepreneurial leaders do not fall into skepticism and are not pressured by problems. They lead individuals to tackle seemingly impossible problems by analyzing and producing solutions with their productive thinking skills. Although the main purpose of many entrepreneurs today is the desire to reach a quick way to make money with short-term investments, the main purpose of the entrepreneurial leader is to create value. Because entrepreneurial leaders know that "money does not create value, but value creates money".

It is very important for businesses that are faced with a great change and transformation with digitalization to adapt to this change and to have employees with an entrepreneurial spirit who can effectively implement entrepreneurial leadership activities. The need for entrepreneurial leaders in modern businesses that want to

catch up with the era is increasing day by day. Therefore, in order to increase the number of entrepreneurial leaders, it is important for businesses to review their human resources policies, organize hands-on training, seminars, conferences, and support projects that will both motivate employees and add value to the business.

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