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THE MEDIATING ROLE OF MANAGEMENT INNOVATION IN THE IMPACT OF AGILE LEADERSHIP ON FIRM PERFORMANCE

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ABSTRACT

In the research, it was tried to determine the mediating role of management innovation in the effect of agile leadership on firm performance. The data were obtained online from authorized employees of a corporate company in January 2022. Questionnaire method was used in the research and questionnaires were distributed to 116 employees, but 103 questionnaires were replied. Pearson Correlation and Regression Analyzes were used to test the research hypotheses. Additionally, Frequency Analysis was used to examine distributions according to demographic variables. Because of the research, it has been determined that agile leadership has a statistically significant effect on firm performance and management innovation, and that the effect of management innovation on firm performance, is statistically significant. The argument that management innovation has a mediating role in the effect of agile leadership, accepted as the main hypothesis of the research, on firm performance has not been statistically proven.

Keywords: *Agile Leadership, Firm Performance, Management Innovation.*

Jel Codes: *M10, M12, M19.*

1. INTRODUCTION

Innovation is a practical structure. The suitability of innovation for an organization depends on whether it can produce the desired results or not (Walker et al., 2015: 408). Damanpour (2014: 1266) emphasizes that, unlike the view that associates the innovation only with invention, new technology and new product/service, the introduction of new management tools, techniques and practices is important to facilitate organizational change and innovation and to increase organizational competitiveness and

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effectiveness. McCabe (2002) states that the important thing is to understand innovation, which is a part of a very complex social process, and it is related to the way people interpret the world and attribute meaning to the world (Birkinshaw et al., 2008: 829). Since technology and product-oriented innovations are imitated in a short time and their lifespan is short, it is important for organizations to have a long-lasting innovation understanding that is not easy to imitate (Soylu and Öztürk Göl, 2010: 115). While Hamel (2006) states that behind the success of General Electric, DuPont, Procter & Gamble, Visa, and Linux companies are their products, great people, and great leaders, when going deeper, he states that the main reason behind their success is management innovation. Management innovation is a type of innovation represented by various corresponding definitions such as managerial, administrative, organizational, social and management innovation (Damanpour, 2014: 1267). Top management can greatly influence management innovation. By implementing major managerial innovation firms can revise their management routines and then they become familiar with these reviewed routines. The result of management innovation transforms organizational routine systems (Wei et al., 2020: 279). The degree to which organizations engage in innovation activities varies according to sectors. There are resource, demand, and opportunity variables for innovation (Walker et al., 2015: 411). Walker et al. (2015: 417) state that management innovation is both complex and difficult to measure. However, despite this challenge, the scarcity of research on management innovation indicates that it offers opportunities for contribution to both science and practice. Organizations in increasingly fierce competition need to be efficient regarding management. In this process, it can be said that the development, growth, and continuity of organizations will depend on the degree of importance they attach to innovation. Because of the fast change in technology, firms must adapt to this change and renew not only their organizational structures, services, but also the management styles accordingly (Vaccaro et al., 2012: 28). Management innovation mainly affects the social systems of organizations. Adoption of management innovation depends on human actions. This adoption includes not only their top executives, but also all employees engaged in implementing management innovation. Therefore, the roles of non-managers as well as the roles of senior managers should be considered. In addition, innovation cannot occur only with the internal knowledge of the organization. External sources of information are also important for creating or adopting management innovation (Simao et al., 2021: 674). It can be said that leadership behaviors affect innovative thinking (Zhou and George, 2003: 558). By creating an organizational culture that supports change, leaders can influence management innovation and help subordinates understand change (Birkinshaw et al., 2008; Vaccaro et al., 2012: 31-32). Leaders should invest more in innovative capabilities and support new initiatives aimed at implementing all kinds of innovations (Günday et al., 2011: 672). Leaders often get caught up in making cycles when they are under stress. That is, they continue to move from task to task with very little thinking. The awareness of leaders coming out of this cycle will increase. Extended awareness is crucial to agility. Because leaders cannot adapt to changes, they cannot see. They will not be able to innovate if they get caught up in the work they already know how to do, without stepping back to think about new possibilities (Joiner, 2019: 5). The agile

leader can turn the company into an agile company in the age of globalization. The more agile the company is in facing global challenges, the more positive effects will occur for the company (Uyun, 2019: 469). According to Camison and Villar-López (2014: 2898), managers should not focus on either the technological or non-technological side of innovation. New management practices are important because of their positive impact on company performance. As it is known, it takes a certain time to observe the reflection of the positive effects of innovative performance on financial performance. Therefore, it can be said that one of the reasons for senior managers' stance against innovative performance is the time interval between the two performances. Following the tradition of innovative research in economics, management research has focused on examining technology-based product and process innovations. Non-technological innovations related to organizational management are less explored. Research on management innovation has recently been revived. However, it is questioned whether management innovation, like technology innovation, is a force for competitive advantage and firm performance. In fact, the adoption of innovation is important for organizational effectiveness, whether it is technology-based or not (Walker et al., 2015: 416). Volberda et al. (2013) state that the sustainable performance and growth of an organization depends on its ability to use new management practices to revitalize its strategy, structure, and processes. Volberda et al. (2014: 1246) state that the increased interest in management innovation is due to the increased awareness that innovative approaches to management and organization drive firm performance. The difference in the results of management innovation depends on how valuable, rare, and difficult to imitate they are. Due to the high level of uncertainty and ambiguity inherent in the environment, management innovation will be an abstract value that is less rare and easier to imitate. Therefore, the role of management innovation in firm performance is both complex and has high variations (Wei et al., 2020: 276-277). Mol and Birkinshaw (2009: 1278) state that if firms invest in innovation in management, product and processes they will get benefit from this investment. Firm performance can be said to be one of the prominent concepts in organizational research. In addition, despite its importance and the many developmental criticisms that have emerged over the years, the performance also remains a difficult concept to implement in a scientifically rigorous way (Miller et al., 2013). This paper covers quantitative research on the mediating role of management innovation in the impact of agile leadership on firm performance. The paper progresses as follows: first, we review the available literature on agile leadership. Next, we review the available literature on firm performance. Next, we review the available literature on management innovation. Then, we include the questions and hypotheses created within the scope of the research and make the necessary tests and analyzes. We conclude with the projected results of the study, the limitations of the research, and the opportunities for future work.

2. LITERATURE REVIEW

2.1. Agile Leadership

The concept of agility was first mentioned by Nage and Dove (1991) in a 1991 report at the Iighco Institute at Lehigh University describing how U.S. companies should progress to become a manufacturing leader again (cited by Şahin and Alp, 2020: 49). According to Sharifi and Zhang (1999), the concept of agility is to be able to cope with unprecedented threats and unexpected challenges in the business environment. In this process, they refer to it as the ability to profit from the advantages that arise due to changes. They also emphasize that there are two factors for the concept of agility: responding to change in the appropriate time and way and taking advantage of changes as an opportunity. The word agile in the dictionary means the ability to move quickly, nimbly and think quickly with an intelligent approach (McKenzie and Aitken, 2012: 179). Tahmasebifard et al. (2017: 141), also states that agility quickly turns into a strategic tool to achieve success and solves to manage the effects of the complex and dynamic environment of the organization. In this context, Akkaya (2019), it is understood that the term agility and its production were used initially in the computer sciences actively (cited in Şahin and Alp, 2020: 49).

The returns of the agile transformation that organizations will experience; a healthy environment of trust, openness to innovation and adaptation to change, increasing technological skills, establishing empathy and synergy teams, developing a sense of cooperation, increasing the emotional flexibility of employees with the support of leaders, and developing a proactive understanding. The most important point here is the importance of the roles of leaders in creating such an organizational environment (Özdemir and Çetin, 2019: 313). Agility is often discussed regarding management practices and organizational structures. Although there is a lot of work from the perspective of consultants and management, there is a shortage of academic research (Katainen, 2020: 17). Parker et al. (2015: 119) the leader is the one who sets the standard and is a role model to others. The leader should consider the members of the organization as individuals and know what motivates each of them at work. Additionally, he must establish a strong business relationship, treating each person with respect. Agility is a need for leaders to survive in different and divided institutions to get stability and coherency in the ever-shifting world (McKenzie and Aitken, 2012: 330). Fernandez (2006: 258-259) stated that it is necessary to be fast and flexible to respond to unexpected events arising from changes in the environment and expressed that being able to respond quickly to rapid change is agile leadership.

It can be said that agile leadership has been an ever-shifting, new and timely term, but not explained clearly in the leadership literature (Katainen, 2020: 10). Studies by Joiner and Joseph (2007) are among the pioneering studies on agile leadership. In their research, broad information was given about the description, qualifications, and the characteristics of agile leadership. Akkaya (2020: 391). In today's rapidly changing environment, leaders need to be agile to be more effective than their

competitors by revealing their own personalities. Such leaders are called agile leader. Thus, it can be suggested that there is a postmodern leadership that reflects the research and thoughts on leadership based on the concept of agility. Agile leaders concentrate on cooperation and communication with their teams to compete with rivals in the globalized world. The most important difference of agile leadership from other leadership is that it has a perpetual demand and urge to enhance its capacity, efficiency, and power. Only that kind of leadership approach can allow organizations to adopt to rapidly changing competitive surroundings (Akkaya and Üstgörül, 2020: 130). The agile leader concentrates on maximizing productivity and values teamwork when he comes across with the unexpected situations (Prasongko and Adianto, 2019: 130). Şahin and Alp (2020: 51) defined agile leadership as an approach with such skills, compromising organizational adaptation and effective leadership, making right decisions quickly, flexibly, supporting teamwork, and adapted to technological changes. When Joiner and Josephs (2007: 36) questioned what the agility of leadership is; it was defined as the ability to lead effectively in conditions of rapid change and high complexity. McPherson (2016: 3) on the other hand, by questioning what agile leadership looks like, an agile leader can deal with discomfort; overcome ignorance of the details; quickly overcome complex problems; can ask the right questions, does not feel the need to cover up the lack of knowledge by bluffing, and defines it as a person whose credibility based on managerial skills, not professional knowledge, or status. Akkaya (2020: 391) defines an agile leader as a leader who can sense the internal and external needs of companies and adapt them to the changing technology and environment in line with the company's needs. Agile leaders could think outside the patterns to make an organization perfectly compatible with their internal and external environment. Agile leaders can reveal the hidden strengths of others, use their opinion in the transition to the desired change of the organization, and take advantage of the opportunities in the change while trying to minimize their negative reflections on the organization. Organizations that incorporate agility into their operations through agile leaders are better able to respond quickly to change and deliver superior business value to their stakeholders. With leadership agility, organizations will be in a better position to quickly identify developments in the business environment and achieve agility with less resources (Attar and Abdulkateem, 2020: 187). They stated that since change and complexity now affect all managers at all organizational levels, it has become an increasingly needed competency not only of the executive team but also throughout the company (Joiner and Josephs, 2007: 36). Rather than hierarchical structure and authority in the institutions with agile leadership understanding, more cooperation, teamwork, positive feedback, and high motivation are observed (Akkaya and Üstgörül, 2020: 131). An agile leader is someone who (proactively) removes obstacles and allows teams to achieve goals and create project value (Bushuyeva et al., 2021: 50). Abbasi and Ruf (2020) state that agile leadership requires a new understanding of leadership and a new leadership attitude. By defining, spreading, and maintaining a guiding vision, an agile leader can guide and continuously influence behavior in the organization (Parker et al., 2015: 119). Even in Mergel (2016: 6), agile leaders are responsible for guiding a team to succeed, even in situations where they are inexperienced. Prasongko

and Adianto (2019: 130-131) agile leader should be adaptable, innovative, visionary, risk-bearer, fast while taking right decisions, sensitive to his environment and productive. An agile leader adapts himself to crisis, changes, and pressures happening in his surroundings and community, and keeps calm to support his team members, learns through experience, and provides feedback. Learning from experience is the best teacher for a leader. Also, agile leadership needs to understand innovation in finding solutions to cope with changes, crises and pressures that may occur at any time. Another feature of agile leadership has always been to learn from experience and give feedback. Experience is the best teacher for a leader. Leader needs feedback from the people around him to be evaluated. Besides, another feature of agile leaders is that they do not hesitate to develop others. This includes the ability to motivate and inspire the people they lead. Parker et al. (2015: 118) state the guiding principles of Agile Leadership as; an inherent ability to cope with change; to be able to see organizations as flexible and adaptable systems consisting of intelligent people; to be able to determine the limits of external control to protect order; ability to see employees in a team as talented and valuable stakeholders; ability to rely on the collective ability of autonomous teams as a problem-solving mechanism; ability to minimize planning based on the assumption of unpredictability; ability to support the ability to adapt to changing conditions; ability to manage results. An agile leader should be able to manage all the possibilities to be encountered within the framework of sustainable action and be able to adapt to the situation through behavior change (Uyun, 2019: 479). McKenzie and Aitken (2012) state that leaders need to make sense of the ongoing changes to understand and sense the forthcoming of the organization. It is especially important for leaders to be sensitive, so that employees remember who they are in the process of change and the goals of the organization. Agile leaders are responsible for forming a learning culture in their organizations and they should enable better communications among the teams and employees, support cooperation and continuous learning daily routines. In turbulent environments the goals and the task of the people may be confusing, then there is a need for an agile leader with emotional intelligence. In the daily routines and conversations of agile leaders, performance must be one of the subjects of discussion. Besides all these routines to get high performance, agile leaders should continuously observe and check all the systems and the processes in the organization. Agile leaders should be accessible, they should have individual talks with the employees and members of teams to achieve understanding, adaptability, and efficiency among the staff. To be successful they should give positive feedback to employees. In short, agile leaders must first provide that the organization is flexible, strive for the best in the organization through continuous improvement, and ensure customer satisfaction. Employees should also support this mission (Cinnioğlu, 2020: 15). Fernandez (2006: 258-259) states that agile leadership has three dimensions and that they are managing the external environment, managing the internal environment, and managing one's private life. The size of the external environment includes the state, customers, competitors, and suppliers. Employees, partners, and head office are in the internal environment dimension. The personal dimension creates family life. For the external environmental dimension, it requires having a long-term vision; taking care of the brand image; controlling the distribution system;

being agile and expecting the unexpected (Fernandez, 2006: 265-266). The internal environmental dimension requires keeping operations and structure simple; continuous development; providing opportunities for education and professional development; having a personal communication with employees and communicating often with the head office (Fernandez, 2006: 270). Its personal dimension requires being an entrepreneur; paying attention to the well-being of the family, and using common sense (Fernandez, 2006: 273). Joiner (2019: 5-6) defines the dimensions of agility/competency skills under the concept of 'leadership agility compass'. To implement context-setting agility, leaders need to have a broader perspective that allows them to research their environment, anticipate important changes, decide which initiatives they should take, cover initiatives, and determine the necessary outcomes. For stakeholder agility to be implemented, leaders need to gain more insight into stakeholder views and priorities by putting themselves in the shoes of their key stakeholders. For creative agility to be applied, leaders need to be able to think both creatively and critically. There must be room for new possibilities. Self-leadership agility, on the other hand, should accelerate their own development. Attar and Abdulkateem (2020: 184-185) stated the agile leadership levels as an expert, achiever, catalyst, co-creator, and synergist. The first level of agile leadership, expertise includes the ability to solve problems analytically. Instead of teams, individuals are more interested, and their development is supported. Achiever, on the other hand, is the second level of agile leadership and includes result-oriented strategies. Plans and strategies are developed in line with the intended results. These leaders argue that power comes not only from the expertise or the position one holds, but also from motivating other people. At the catalyst level, leaders focus on facilitating orientation and vision. To realize the vision, there is the ability to create a participatory culture that empowers and inspires employees. It can be said that it is the first agile leadership level to achieve sustainable success in changing environmental conditions. Co-creator, who is the fourth level of agile leadership, states that leaders believe in mutual benefit and cooperation. It includes providing services for the benefit of humanity. They can provide emotional stability, establish a healthy dialogue, and produce creative solutions. The synergist is the last level of agile leadership. Leaders at this level can switch between leadership styles and determine which leadership style is more appropriate in certain situations. The focus is on conveying leadership experiences. They are successful in challenging and chaotic conditions thanks to awareness centered in the present moment. Akkaya and Meriç Yazıcı (2020: 1461-1464) state that agile leaders have characteristics, principles, values, ideals and concepts that enable leaders to think specifically and creatively. They state that what nurtures the agile leader consists of proactive experiments and creative efforts while seeking quick and appropriate solutions to the needs of the moment. Agile leaders have features such as result-oriented, teamwork and cooperation-oriented, fast, flexible, change-oriented, and competent. Speed is about time and agility. It can be explained as fast decision-making, fast learning, rapid development, fast implementation, and rapid adaptation. Change, on the other hand, is about the agility of unpredictable change and complexity. It is important to be able to respond to such expectations and needs in line with the changes. Flexibility means resource agility. How resources are used is

important. The agile leader is flexible in using the firm's resources. Because the agile leader is aware that the resources are the source or supply where the benefit is produced. Competence refers to the mental and creative agility of leaders. The agile leader attaches importance to critical thinking and generating solutions by establishing new connections to solve complex problems. Team collaboration is about the agility of staff and employers. Leaders are part of the company along with the teams. Leaders have healthy communication with both employees and employers. There is a relationship of respect and trust. Result orientation is about result agility. Agile leaders can take personal responsibility for the most important results. Shamani and Abbas (2020: 11829-11830) state that there are many different studies on the dimensions of agile leadership, and state it as four dimensions: calmness, confidence, wisdom, and humility. Organizations need to develop a level of organizational agility appropriate to the increasing levels of change and complexity to sustain their success. At this point, it is seen that the need for and importance of agile leaders emerges. To develop teams and organizations suitable for the agility level required by the turbulent environment, companies will need leaders with the agility level that can correspond to this environment and situation (Joiner and Josephs, 2007: 36).

2.2. Firm Performance

Venkatraman and Ramanujam (1986: 803) expressed it as the realization of economic targets for firm performance. Porter (1991) defines firm performance as the degree to which the firm achieves its objectives at the end of an operating period. Daft (2001) states that firm performance reflects the degree of success achieved through strategies, operational activities, or overall efforts at the end of a given period. It is defined as the ability of a firm to achieve its goals by using its resources effectively and efficiently. Tarigan et al. (2019) state that firm performance encompasses the firm's activities, management, and competitive advantage. Taouab and Issor (2019) define firm performance as the ability to use its resources effectively and efficiently to achieve firm goals. Chen et al. (2021), on the other hand, express firm performance as a measurement tool that is carried out within the framework of predetermined standards regarding both efficiency and accountability within the scope of a certain period of firm activities. For firm performance, it can be said that it is the output obtained because of the efforts of the firm in a certain time. Thanks to performance measurements made at certain time intervals, companies can be able to update their strategic decisions, which are focused on development and growth, both in the present and for the future. It can be said that firm performance is one of the most important structures within the scope of management research (Özer and Tınaztepe, 2014: 780). Firm performance can be measured by measurements with many different criteria. Singh (2003) proposes three performance measures: return on assets, growth in sales, and price-cost margin. Paul and Anantharaman (2003) stated operational performance as; employee retention, product quality, operating costs, employee productivity and delivery speed; and financial performance as an increase in sales, return on investment and net profit. Both financial and non-financial criteria are used in performance evaluation. As it is known, financial criteria are income, cash flow and profitability ratios. Subjective,

non-financial criteria, which are the other criteria and are usually used in the literature, are the growth rate of sales, brand value, customer satisfaction, holding star employees, customer loyalty, market share of stakeholders, managing change, use-sharing of information and process innovations (cited by Altuntaş and Dönmez, 2010: 56-57). Tseng and Liao (2015) describe firm performance as financial performance, customer satisfaction levels, and customer growth rates. On the other hand, Siagiana et al. (2020) state that it is the increase in sales figures, decrease in operating costs, increase in customer satisfaction, and ability to meet customer needs. As qualitative measures, it includes subjective performance areas like customer, stakeholder and management satisfaction with performance, and ethical behavior. Looking at performance from a non-financial lens can give an idea about organizational processes and results that cannot be seen through financial measures (cited by Jusoh and Parnell, 2008: 8). Hansen and Wernerfelt (1989) define the determinants of organizational performance as environmental (sociological, political, economic, technological), organizational (structure, systems, size, scale, organization history) and individual (skills, personalities, age) factors. The majority of the previous research made on firm performance and leadership used to be understanding how the characteristics of prospering leaders affect the firm performance. Fiedler (1996) stated that organizational performance is largely affected by the effectiveness of leadership. On the other hand, the training and development of leaders were advocated. It has been stated that the argument for effective leadership is not limited to definite success, but also extends to the nations (cited by Puni et al., 2014: 180). Firms that have the resources to develop innovative talent can also expect significant improvement in performance if they promote and implement high-level innovation activities. Managers of companies should pay attention to company performance to achieve sustainable competitive power. Types of innovation have a positive and significant relationship with some aspects of firm performance. Organizational innovations can be said to have a strong and direct impact on performance, rather than merely creating an environment for other types of innovation. Therefore, managers should pay more attention to organizational innovations (Günday et al., 2011: 672). In environments where competition is high, leaders can make a big difference because they directly affect people. This difference to be created against competitors will be a sustainable competitive advantage for companies, especially in the new economic order. For the performance-oriented corporate world, it has become a necessity to strike a balance between being people-oriented and being profit-oriented (Loshali and Krishnan, 2013: 16). The leader has an impact on performance (Wang et al., 2017: 106-107). Companies that want to make their assets, sustainable in the changing environment should continue their management activities in a way that is compatible with each other and with an understanding of integrity while moving forward in line with their goals. Firms must adapt to the changes brought about by the new world order. It can be said that it is important for them to take a leap in their management philosophy and look at their competitors, suppliers, customers, shareholders, and employees with a quantum perspective. Company managers' customer satisfaction, profitability, market share and sales factors related to company performance evaluation measurements are used within the scope of management (Garg et al., 2003).

Therefore, within the scope of the related research, analysis will be carried out in line with the opinions of the company employees on the company's customer satisfaction, profitability, market share, brand image, customer loyalty factors in measuring the company performance.

2.3. Management Innovation

The innovation process is defined as a process consisting of four basic steps that begin with the comprehension of a proposed idea, then a decision is made for its adoption, and finally innovation is implemented (Daft, 1978: 195). Innovation is usually defined as the development or adoption of new products, services, or processes. By developing innovation, enterprises achieve outputs such as products, services or processes while adopting the idea of innovation to provide that the using new products, services, or process penetrates all business units. The organizational performance innovation is directly proportional to how much the concept of innovation was adopted within the organization. For innovation to be implemented, the idea of innovation must be accepted by all users (business employees and customers) (Walker et al., 2010: 369). The first works on innovation focused on the development of new products and new technologies, therefore the definition of innovation was defined as "the embodiment, combination or synthesis of information in original, relevant, valuable new products, processes or services". Therefore, the novelty was initially viewed in purely technological terms and was considered synonymous with invention. However, as the concept has become the subject of studies, it has been accepted that innovation can take various forms (Allahar, 2019: 4-5). Tidd, Bessant, and Pavitt (2005) identified four types of innovation: product innovation (referring to the actual offerings of the company); process innovation (products, including the way it is rendered); position innovation (where it is introduced in the context of products by implication); and paradigm innovation (including changes in mental models of an organization) (cited by Allahar, 2019: 5). Over the past 100 years, management innovation, more than any other type of innovation, has allowed companies to cross new performance thresholds (Hamel, 2006: 1). Innovation has become a trendy topic in different academic studies, especially on firm performance, getting competitive advantage, while establishing new industries and in public institutions (Damanpour, 2014: 1265). Types of innovation focus on the business processes of enterprises, while the focus of management innovation is on the management process of the enterprise. It refers to management principles and processes that change how managers do what. The purpose of management innovation is to develop new and dynamic management practices instead of traditional management practices and to improve management performance (Hamel, 2006: 3). Management innovation refers to the employment of new management practices, processes, initiatives, and structures to achieve organizational goals and objectives (Birkinshaw and Mol, 2006). Hamel and Breen (2007) put management innovation at the top of the innovation pyramid they created (Hamel and Breen, 2007: 43). Management innovation is defined as a leave from traditional management principles, processes and practices that change the way how management work is performed, and as a change how managers do what they do and create rules and routines in which things are done within the organization (Hamel,

2006). Management innovation, that is, the implementation of new management practices, processes, and structures, which represent a significant deviation from existing norms, has significantly changed the way of many functions and activities work in organizations over time (Birkinshaw and Mol, 2006: 81). Management innovation involves the introduction of innovation in an established organization and as such represents a particular form of organizational change (Birkinshaw et al., 2008: 826). Management innovation represents the highest and most valuable one among the innovation types that a business can use (Grant, 2008: 471). Birkinshaw et al. (2008: 829) defined management innovation as "the establishment and implementation of a management practice, process, structure or technique that is new to the state of the art and oriented towards more advanced organizational goals". Management innovation, then, is about changes in the way managers set direction, make decisions, coordinate activities, and motivate people (Hamel, 2006). While the researchers examine the innovation of management innovation under two perspectives of "new according to the latest technology" and "new for the firm", the majority of the overall studies and the focus are focused on innovation for the firm (Vaccaro et al., 2012: 30). Management innovation is primarily a phenomenon at the organizational level (Damanpour, 2014: 1267). There are always ongoing management innovations in organizations. Many fail, some work-and only a few makes history. Over time, the most valuable innovations are imitated by other organizations and spread across all industries and countries. Some management innovations, including Toyota Motor Corp.'s lean manufacturing system and Procter & Gamble Co.'s brand management model, gave leading companies a lasting competitive advantage. Others, such as Material Requirements Planning and investment portfolio analysis, have created broader-based productivity and societal benefits. Indeed, taken as a whole, the management innovation process is probably as important for economic and social progress as technological innovation (cited by Birkinshaw and Mol, 2006: 81-82). Consistent with the current literature, we conceptualize unit-level management innovation as "the implementation of a management practice, process or structure that is new to the unit and aims to advance the goals of the unit". Following this definition, it is expected that management innovations at the unit level will affect the entire unit (Guzman and Espejo, 2018: 76). In general, firms can achieve management innovation by changing their organizational structures, processes, and information technology (IT) practices. Specifically, changes in organizational structures (for example, from hierarchical to horizontal structures) can increase the productivity of labor in the production process. Changes in organizational processes (for example, just-in-time inventory and lean production) can reduce the amount of capital required to support ongoing business (cited by Yang et al., 2020: 224). According to Schumpeter, a management idea, principle, or technique can be said to occur when management innovation: (1) represents a significant change in established management thinking and practice; and (2) meet the minimum demand in the management market, that is, have a real impact on managerial efficiency and have a certain, recognized value that a simple invention lack (David, 2019: 383-384). Looking at the history of the industry, management innovation appears as a kind of innovation that increases the performance thresholds of enterprises and gives them new ways out. The principle of

management innovation is the meaningful changes in the process and application methods that are carried out in management, leaving the traditional forms (Hamel, 2006: 6). Management innovation has potential consequences in three areas; various performance measures within the innovating companies; the performance of the adopter, and its impact on society (Wei et al., 2020: 276). Designing new solutions to management problems, implementing changes in established organizational structures and procedures and motivating people to leave their usual ways of doing business are activities that require successful management innovations and intensively consume the time, attention, and effort of management. Therefore, management innovations are sensitive to the incentives of managers and are prone to the risk of escaping (Hecker and Ganter, 2013: 21). Management innovation improves the appropriateness of organizational routines and technological systems, and then improves firm performance (Wei et al., 2020: 277). Management Innovations, as innovations in corporate strategy, structure, and processes, can be applied primarily to large, complex organizations rather than small, entrepreneurial firms. Therefore, the impact of management innovation on performance should be evaluated in the context of the corporate innovation model and the creative accumulation process (Walker et al., 2015: 409). Due to its dominant role within organizations, top management can significantly influence management innovation. As competition deepens and technological changes gain momentum, companies are forced to renew themselves. The challenge here is not only to introduce new products and services, but also to change the nature of management within organizations (Vaccaro et al., 2012: 28-29).

3. METHODOLOGY

3.1. The Hypotheses of Research

It can be said that agile leadership, firm performance, and management innovation are important and valuable for an organization. At this point, what makes the research different; Does agile leadership have an impact on firm performance? What is the role of management innovation in this effect? Does agile leadership have an impact on management innovation? What is the impact of management innovation on firm performance? The purpose of the research, which emerged in line with the related study questions, is to determine the mediating role of management innovation in the effect of agile leadership on firm performance. The hypotheses formed in line with the questions and the purpose of the research are as follows. As seen in the literature, it is seen that the effects of many leadership types such as supply chain leadership, transformational leadership, transactional leadership, paternalistic leadership, innovation leadership, ethical leadership, affective leadership on company performance or the relationships between leadership types and company performance have been studied. In this context, it can be said that there is a relationship between leadership and firm performance. In that case, it can be thought that agile leadership may also influence firm performance. From this point of view, the following hypothesis was designed, and it is thought that it will contribute to the literature.

H₁: Agile leadership positively affects firm performance

In the literature, no research has been found on the effect of agile leadership on management innovation. Based on the idea that agile leadership may influence management innovation, the following hypothesis has been designed and is thought to contribute to the literature.

H₂: Agile leadership positively affects management innovation

Research by Mol and Birkinshaw (2009) stated that management innovation helps organizations in various ways but has a more important role in improving firm productivity and performance. Because of the analysis, it has been determined that there is a positive relationship between management innovation and firm performance. Walker et al. (2010) examined the mediating role of performance management in the relationship between management innovation and performance, and a statistically significant and positive relationship was found. Walker et al. (2015) found that management innovation positively affects firm performance. Jackson et al. (2016) found that management innovation is an important driving force in achieving high performance in the organization. Hervas-Oliver et al. (2018), it was found that there is a positive effect on the performance of the firm by implementing management innovations with technological innovations. Zhang et al. (2019), it is stated that management innovation makes a significant positive contribution to both the sustainability of technological innovation and organizational performance. Wei et al. (2020) found that management innovation positively affects both organizational efficiency and business legitimacy, and subsequent firm performance. Heij et al. (2020), it was stated that management innovation has a key moderator role in explaining the effectiveness of the R&D department in a company to carry out a successful product innovation. Research by Henao-Garcia and Montoya (2021) found that leaders who are aware of the importance of management innovation help improving the performance of firms. Based on research in the literature, the following hypothesis have been designed for the effect of management innovation on firm performance.

H₃: Management innovation positively affects firm performance

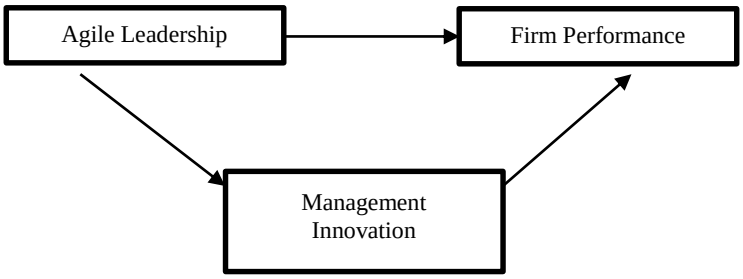
In the literature, no research has been found that examines the mediating role of managing innovation in the effect of agile leadership on firm performance. Based on the idea that management innovation may have a role in the effect of agile leadership on firm performance, the following hypothesis has been designed and is thought to contribute to the literature.

H₄: The mediating role of managing innovation in the impact of agile leadership on firm performance

3.2. The Model of Research

The research model created for the purposes of the research is shown in Figure 1.

Figure 1. Research Model



3.3. Population and Sample of the Research

The universe of the research consists of the managers working in the textile company. There is a total of 116 employees in managerial positions in the relevant company. The data are obtained directly from the employees who are in the managerial position of the company through surveys, and all data are used as primary source data. The data in the research were obtained from authorized employees of a corporate company that started its activities in the textile sector with a retail merchandising service 52 years ago, exports to 25 different countries, is among the top five manufacturers in Europe, and has a strong competitive power in its sector. Considering the minimum sample size that should be at the 95% certainty level, it is seen that the number of 103 surveys is valid when compared to the population volume (Sekaran, 2003; Coşkun, Altunışık and Yıldırım, 2020).

3.4. Data Collection and Analysis Method

The scale, which was prepared to collect the data to be used in the research, consists of four parts. The first part of the scale was prepared with the aim of determining the descriptive characteristics of the participants, and there were questions about 6 demographic variables. In the second part of the scale, the firm performance scale created by Moorman and Rust (1999) and adapted into Turkish by Zehir (2018) was used. Firm performance scale consists of 5 questions. In the third part of the scale, the agile leadership scale created by Akkaya et al. (2020) was used. The agile leadership scale consists of 32 questions statements' and 6 dimensions. In the last part of the scale, the management innovation scale, which was created by Vaccaro et al. (2012) and adapted into Turkish by Karaca (2021), was used. The management innovation scale consists of 6 questions. Questionnaire forms were delivered to the relevant participants via Google Drive and the entire data collection process was completed online. Survey data were collected in January 2022. A total of 103 survey data was obtained. After the preparation of the questionnaire to be used in the research, the necessary application was made to Karabük University Social and Human Sciences Research Ethics Committee to obtain the necessary permission for the applicability of the questionnaire, and it was decided that the questionnaire was applicable with the decision numbered 2021/10. Frequency analysis was used to examine the distribution of participants

according to demographic variables. Pearson Correlation and Regression Analyzes were used to test the hypotheses created within the scope of the research. These tests carried out within the scope of the study, were carried out using the Statistical Package Program and STATA.

4. FINDINGS

4.1. Findings of Demographic Variable

Under the title of demographic characteristics, there is an analysis of the answers to the questions asked to obtain general information about the participants to whom the data were obtained within the framework of the research.

Table 1. Demographic Variables

Gender	**F**	**%**	**Educational Status**	**F**	**%**
Male	37	35,9	Associate degree	63	61,2
Female	66	64,1	Undergraduate	34	33,0
Total	103	100,0	Postgraduate	6	5,8
Age	**F**	**%**	**Total**	103	100,0
24-29	25	24,3	**Number of In-Service Training**	**F**	**%**
30-35	25	24,3	1-3	52	50,5
36-41	28	27,2	4-6	23	22,3
42 and over	25	24,3	7 and over	28	27,2
Total	103	100,0	**Total**	103	100,0
Working Period (year)	**F**	**%**	**Number of Employees They're Responsible for**	**F**	**%**
1-5	22	21,4	1-10	76	73,8
6-10	24	23,3	11-20	3	2,9
11-15	23	22,3	21-30	5	4,9
16-20	12	11,7	31 and over	19	18,4
21-25	16	15,5	Total	103	100,0
26 and over	6	5,8			
Total	103	100,0			

As seen in Table 1, 35.9% of the participants were men and 64.1% were women. It is seen that more women managers are being placed. It is seen that most of the participants are between the ages of 36-41. It is seen that many of the participants have a working period of 6-10 years at a rate of 23.3%. It is seen that 5.8% of them consist of managers who have a working time of 26 or more years. It is seen that 61.2% of the participants were associate degree graduates and 5.8% were bachelor's degree graduates. It was determined that 50.5% of the participants had 1-3 in-service training, 22.3% had 4-6 and 27.2% had 7 or more in-service training. In general, it can be said that the organization gives importance to manager training. It has been determined that 73.8% of the participants were responsible for 1-10 employees, 18.4% were responsible for 31 or more employees, 4.9% were responsible for 21-30 employees, and lastly, 2.9% were responsible for 11-20 employees.

4.2. Findings of the Hypotheses

Within the scope of the research, the average of the ordinal agile leadership 32 questionable statements, the ordinal firm performance 5 questionable statements and the ordinal management

innovation 6 questionable statements were measured by correlation analysis between the three new continuous quantitative variables obtained by taking them among themselves.

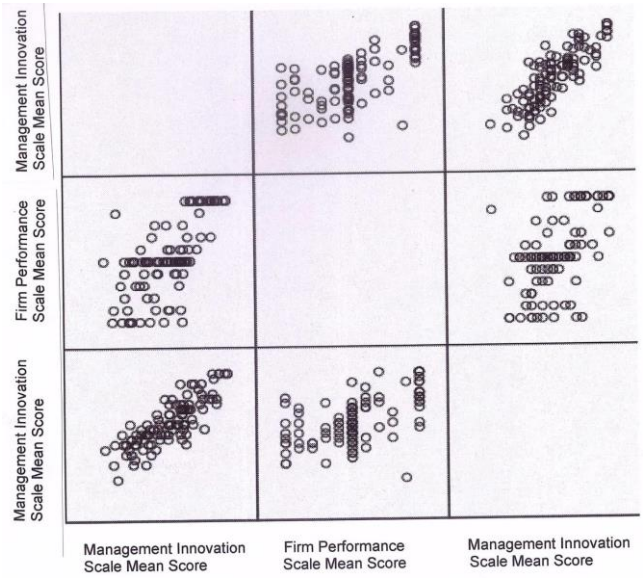
To understand the direction and magnitude of the two-way linear relationship between two or more continuous quantitative, random variables, the Pearson Correlation coefficient was obtained. The correlation coefficient represented by r takes a value in the range of -1<r<1. A positive value for the coefficient obtained because of the analysis indicates that there is a relationship between the analysis variables in the same direction, and a negative variable on the contrary indicates that there is an inverse relationship between the two variables. To use the Pearson correlation coefficient in the analysis, the most basic assumption is the normality assumption. Since the sample size is larger than 30, it is accepted that the normality assumption is met. To prove this reality, the results of the Shapiro-Wilk normality test by using the data are shown in Table 2.

Tablo 2. Shapiro-Wilk Test for Normal Data

Variable	Obs	W	V	Z	Prob>z
Agile Leadership Average	103	0.98378	1.372	0.703	0.24098
Firm Performance Average	103	0.97982	1.708	1.189	0.11720
Management Innovation Average	103	0.98797	1.018	0.040	0.48410

As can be seen in Table 2, since the probability values of all three variables are Prob>z>0.01, it is seen that all three variables comply with the normal distribution at the error level of 0.01. Another important assumption of Pearson Correlation analysis is that the relationship between variables is linear. For this, a scatter plot was drawn, and it was emphasized that the relationship was linear.

Figure 2. Scatterplot



Thus, since the assumption of normality and linearity is provided, it becomes possible to calculate the Pearson Correlation coefficient.

Table 3. Pearson Correlation

		Agile Leadership Scale Average Score	Firm Performance Scale Average Score	Management Innovation Scale Average Score
Agile Leadership Scale Average Score	Pearson Correlation	1	,684**	,833**
	Sig. (2-tailed)		,000	,000
	N	103	103	103
Firm Performance Scale Average Score	Pearson Correlation	,684	1	,569**
	Sig. (2-tailed)	,000		,000
	N	103	103	103
Management Innovation Scale Average Score	Pearson Correlation	,833**	,569**	1
	Sig. (2-tailed)	,000	,000	
	N	103	103	103

As seen in Table 3, the p value obtained for all coefficients is 0.000. Therefore, since p=0.000<0.01, the obtained correlation coefficients are significant. The coefficients regarding the correlation relationship between the variables are given in Table 3.

Among the hypotheses created within the scope of the research, it was determined that agile leadership affects firm performance (0.684), and it can be said that the first hypothesis was accepted. It has been determined that agile leadership affects management innovation (0.833), and the second hypothesis of the research is also accepted. It has been determined that management innovation affects firm performance (0.569), and it is seen that the third hypothesis of the research is also accepted. It was stated that similar results were obtained in the studies conducted in the literature. For the mediating role of management innovation in the effect of agile leadership, which is the last hypothesis of the research, on firm performance, the dependent variable is firm performance, the independent variable is agile leadership, and the mediator variable is management innovation. In order to test the relevant hypothesis, mediator variable analysis is required. The most important assumptions of the analysis are the assumption of normality and multiple distribution (normality of each of the variables). As a matter of fact, since the probability values of all three variables are Prob >z >0.01, it is seen that all three variables comply with the normal distribution at the error level of 0.01.

Table 4. Shapiro-Wilk W Test for Normal Data

Variable	Obs	W	V	z	Prob>z
Agile Leadership Average	103	0.98378	1.372	0.703	0.24098
Firm Performance Average	103	0.97982	1.708	1.189	0.11720
Management Innovation Average	103	0.98797	1.018	0.040	0.48410

Since the assumption of normality is provided, other assumptions can be examined for the use of the test. The first assumption is that the independent variable must affect the dependent variable. Simple regression analysis was performed to determine this.

Table 5. Regression Analysis

regress firmperavg agileadavg						
Source	SS	df	MS	Number of obs = 103		
Model	17.7794852	1	17.7794852	F (1, 101) = 88.82		
Residual	20.2174079	101	.200172355	Prob > F = 0.0000		
Total	37.9968931	102	.37251856	R-squared = 0.4679		
				Adj R-squared = 0.4627		
				Root MSE = .44741		
firmperavg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
agileadavg	.6307646	.0669283	9.42	0.000	.4979968	.7635323
_cons	1.725717	.2507844	6.88	0.000	1.228229	2.223206

As seen in Table 5, the coefficient was 0.630 and the probability value was p=0.000. Since P<0.01, the null hypothesis is rejected. So, the coefficient is significant. The second assumption is that the independent variable should significantly affect the mediating variable.

Table 6. Regression Analysis

regress maninavg agileadavg						
Source	SS	df	MS	Number of obs = 103		
Model	43.4663331	1	43.4663331	F (1, 101) = 228.74		
Residual	19.1927801	101	.190027526	Prob > F = 0.0000		
Total	62.6591132	102	.614305031	R-squared = 0.6937		
				Adj R-squared = 0.6907		
				Root MSE = .43592		
maninavg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
agileadavg	.9862436	.0652103	15.12	0.000	.856884	1.115603
_cons	-.2188764	.2443468	-0.90	0.373	-.7035948	.265842

As seen in Table 6, the coefficient was 0.980 and the probability value was p=0.000. Since P<0.01, the null hypothesis is rejected. So, the coefficient is significant. The third assumption is that when multiple regression analysis is performed together with the independent and mediating variable, the mediator variable should have a significant effect on the dependent variable according to the results of the analysis.

Table 7. Regression Analysis

regress firmperavg agileadavg maninavg						
Source	SS	df	MS	Number of obs = 103		
Model	17.7795297	2	8.88976483	F (2, 100) = 43.97		
Residual	20.2173634	100	.202173634	Prob > F = 0.0000		
Total	37.9968931	102	.37251856	R-squared = 0.4679		
				Adj R-squared = 0.4573		
				Root MSE = .44964		
firmperavg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
agileadavg	.6322659	.1215327	5.20	0.000	.3911485	.8733833
maninavg	-.0015223	.1026345	-0.01	0.988	-.2051462	.2021016
_cons	1.725384	.2530341	6.82	0.000	1.223372	2.227397

As seen in Table 7, the coefficient was -0.0015223 and the probability value was p=-0.988. Since p>0.01, the null hypothesis is accepted. So, the coefficient is meaningless. Therefore, since the assumption of the model is not fulfilled, the mediation effect cannot be mentioned.

Therefore, the last and main hypothesis of the research, the claim that management innovation has a mediating role in the effect of agile leadership on firm performance has not been statistically proven.

5. CONCLUSIONS

Combined with today's global business environment, with a high degree of complexity, volatility, and uncertainty, it is important for businesses to adopt an agile leadership approach in their (private-public) operations (Attar and Abdulkareem, 2020: 182). In a study conducted by Hall and Rowland (2016), they stated that one of the key aspects of leadership is agility. It can be said that agile leaders are leaders who both adapt to rapidly changing environmental conditions and can respond quickly to these changing environmental conditions. Besides, agile leaders attach importance to continuity and sustainability, not once. Agile leaders motivate their employees, give importance to continuous development and improvement, that is, they are flexible, value cooperation, care about teamwork, and receive support for providing support to employees as individuals and teams within the organization as they move towards realizing the strategic goals of the organization addition, agile leaders also encourage individuals and teams to develop because they care about innovation. Finally, the mindset of agile leaders is focused on innovation and learning. As seen, it can be said that agile leadership is one of the prerequisites for adapting to the new world order. Modi and Store (2020: 1) state that agile leadership research requires more attention and more empirical studies are needed to better understand it. As a recommendation, an innovation-oriented, systematic management approach can be established, organizational structures that value the idea of innovation can be created, innovation experiences of other organizations can be benefited from, it is possible for each employee in the top-down organization to adopt an understanding of innovation and to develop their ability to think in that direction, understanding the nature of innovation can be helpful in formulating strategies. For future research, research and comparisons can be made in different sectors. Analyzes can be made by the same company at different time intervals. In the study conducted by Uyun (2019), it was determined that there is a strong positive relationship between agile leadership and innovation behaviors of organizations. It is stated that it is a supportive element for organizational innovations, especially regarding increasing organizational learning.

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