

The Impact of Intellectual Capital on Innovation: A Literature Study

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Abstract

One of the most vital assets of enterprises that want to create a sustainable competitive advantage is intellectual capital, which consists of intangible assets. Intellectual capital is also a crucial strategic resource for business performance. It offers innovative solutions to organizations and increases their performances. In the ever-changing and globalizing world, while developing their strategies, enterprises want to improve their methods and processes, meet the expectations of internal and external stakeholders, and simultaneously benefit from the support of innovation to realize these. Enterprises that use resources with critical importance such as intellectual capital also want to benefit from the healing and developing impact of innovation activities. This study aims to determine whether intellectual capital affects innovation and the existence of its mediating role. The relationship and interaction between intellectual capital and its subcomponents, "human, social and organizational capital" and innovation were also examined separately. Within the scope of the study, the studies in the literature conducted between 2005 and 2019, and their results were examined. The obtained results demonstrated that there was mostly a significant positive relationship between intellectual capital and its elements and innovation and its activities. In addition, in these results, the mediating role of intellectual capital was also determined.

Key words: Intellectual Capital, Human Capital, Social Capital, Organizational Capital, Innovation



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INTRODUCTION

In the scientific world, new phenomena are discovered every day, they are connected to previous information, and thus, this information provides data to enterprises about which paths to follow to become more successful. Enterprises should monitor these developments, be open to new ideas, thoughts, and methods, and be willing while implementing them. It is becoming increasingly crucial for enterprises to focus on their positive aspects within their own structures, to develop their strong resources in line with their strategies, and to innovate by capturing competitive advantages. The source of intellectual capital, which is used correctly in the organization, has become a high power in terms of innovations.

With the acquisition of an international dimension by industrial activities, enterprises have started to feel the need for continuous innovation. Enterprises have started to use the information and communication technologies and their resources intensively and effectively in the challenging competitive environment. However, enterprises are open systems that engage in activities using different tools and affect their internal and external stakeholders through these activities. In this system, while enterprises that use their tangible and intangible resources accurately, effectively and efficiently attain different management styles from their competitors, they will be able to learn the demands of the people, institutions and organizations they are cooperating with and respond to them with new or differentiated products and production processes. Intellectual capital becomes involved here. An enterprise that transforms the human, social, and organizational capital, which are the elements of intellectual capital, into information and data will open its doors to innovations and gain the ability to behave proactively.

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THEORETICAL FRAMEWORK OF INTELLECTUAL CAPITAL

With its most general definition in the literature, intellectual capital is the most important source of competition consisting of the sum of assets that are not seen in the balance sheets of enterprises. It is the information which has the opportunity to be transformed to value (Atalay 2018, 21). John Kenneth Galbraith, who wrote a letter to the economist Michael Kalecki in 1969, became the person who first mentioned the concept of intellectual capital with his statement "I wonder if you realize how much those of us in the world around have owed to the intellectual capital you have provided over these past decades" in the letter. Galbraith approached intellectual capital from an individual perspective. The person who made the concept of intellectual capital popular for enterprises was Tom Stewart, who published his article "Brain Power: How Intellectual Capital is Becoming America's Most Valuable Asset" in June 1991, in Fortune Magazine. With this qualified publication, Stewart enabled the concept of intangible assets to be on the management agenda of enterprises for many years (Serenko and Bontis 2004, 185). Furthermore, he defined the sum of all types of knowledge and experiences related to patents, processes, managerial talents, technology, customers, and resource providers of enterprises as intellectual capital. His book "Intellectual Capital: New Wealth of Organizations" written in 1997 was accepted as the most important resource in this field (Baş et al. 2014, 209). According to Erkanlı and Karsu (2012, 217), intellectual capital is in the list of intangible assets in the enterprise's value chain analysis.

The sum of the intellectual assets that can be used to create wealth and the sum of knowledge, intellectual property, and experience is another definition of intellectual capital. The characteristics of intellectual capital can be summarized as follows:

- . It is the total of intangible assets that cannot be fully obtained from the balance sheet of the enterprise.
- . It plays a key role in the enterprise's achievement of competitive advantage and providing its permanence.
- . The management of intellectual capital is the managerial responsibility of the enterprise.
- . Any increase or decrease in intellectual capital may be called intellectual performance. This performance is measurable and observable.
- . The systematic approach, in which intellectual capital can be measured and observed, becomes increasingly valuable regardless of the type, size, structure, owners and geographical location of enterprises (Zor and Cengiz 2013, 41).

In the content of intellectual capital, there are all kinds of intangible, abstract assets such as skills, experiences, and competitive information, patents, copyrights and licensing agreements that directly affect the existing and/or future success of the enterprise. Intellectual capital is the oldest known concept related to intangible assets and has opened the doors of the knowledge economy to enterprises with the development of technology (Fidanbaş 2017, 5). When the change in the historical process of intellectual capital is examined:

- . While the concept of the information society was used in the 1950s and the idea of the knowledge worker was used in the late 1950s, the idea of intellectual capital was introduced for the first time in the 1960s.
- . In the 1970s, the famous economist Kalachi emphasized the importance of intellectual capital, referring to Galbraith.
- . In the early 1980s, intellectual capital was regarded to be intangible assets and especially goodwill. In the mid-1980s, it was started to be regarded as the difference between the market value of the enterprise and the balance sheet value. In these years, measurement methods for intellectual capital were tried to be created.
- . Its measurement and reporting were completed in the early 1990s, and in the mid-1990s, many publications on intellectual capital were made and training was provided. The end of the 1990s was the time when intellectual capital gained most popularity, and in 1999, the OECD organized a symposium on intellectual capital.
- . In the 2000s, many publications and projects related to the measurement, reporting, and management of the intellectual capital, of which importance was accepted worldwide, continued to be produced (Töre 2017, 36-37).

According to Özdemir and Balkan (2010, 116), intellectual capital is all of the intangible assets that are required for the enterprise to continue its operations. According to Chang and Hsieh (2011, 4), intellectual capital is not only an intangible asset but an ideological process. It is the kind of movement from "having" knowledge and skills to "using" knowledge and skills. According to Zeghal and Maaloul (2010, 41), it is the sum of all information which a company can use in its value creation process. According to Kianto et al. (2014, 364), it is all of "knowledge, practical experience, organizational technology, customer relations, and professional skills" that provide a competitive advantage to a company in the market. According to Nurullah (2011, 250), with the turning of economic reality towards the knowledge economy, the intellectual capital of enterprises has started to be perceived as a valuable asset such as tangible asset or financial capital.

Elements of Intellectual Capital

In order to better understand and use intellectual capital, its elements need to be defined. In the literature, its elements have not been classified universally yet. Nevertheless, in the late 1990s, authors made classifications of elements that are similar to each other with small differences, in order to better understand intellectual capital and incorporate it into studies (Odabaşoğlu 2016, 7). In this study, three elements compatible with the purpose of the study were used. Intellectual capital is the sum of all information that companies use for their competitive advantage and is composed of interrelated human, social, and organizational capital elements (Musteen and Ahsan 2013, 423).

Human Capital

According to Uçar (2017, 27-28), human capital is divided into two as general human capital and company-specific human capital. General human capital involves the knowledge, experience, skills, and competencies of employees. Company-specific human capital aims to incorporate the best candidates for adaptation between person-organization and organization-business into the company. Özevren and Yıldız (2010, 281-282) listed the criteria of human capital as employee satisfaction, added-value per employee, rate of new recruits, education level, training costs, experience period, and recognition by organizations. According to Türkoğlu (2016, 41), it is the accumulation of information that employees bring with them when they start work and that they take along when they leave the job. According to Bayram (2018, 15), it includes both employees' hereditary characteristics, education, values and opinions, and companies' and society's values, cultures, and philosophy. According to Gülcemal (2016, 14), human capital is a source of change and innovation for organizations. It is also an element that can be developed with the continuous education and learning of employees.

Social Capital

Social capital is the relationship and communication capabilities of a firm with external stakeholders such as customers, suppliers, partners, government officials, and non-governmental organizations (Özdemir 2017, 26). According to Demirel and Demir (2011, 88), it is the accumulation of knowledge which is formed from the relationship of the enterprise with the people and organizations, with which it interacts. According to Yılmaz (2018, 56), the social capital consists of the brand, reputation, customer relations, partnerships with suppliers, agreements, licenses, sale channels, bargaining capacities, and network systems. While Turgut and Beğenirbaş (2014, 147) describe the social capital as valuable resources that provide benefits for social actors, they state that its tasks include providing better job to employees and getting an early promotion, creating intellectual capital, disseminating the knowledge, and increasing organizational flexibility. According to Güngör and Celep (2016, 934), if an organization has an improved and sound communication capability, it will gain more information in communication with its stakeholders, develop its organizational learning capacities, and its capital accumulation will be provided.

Organizational Capital

Organizational capital includes all non-human sources of information, such as databases in the organization, organization charts, process maps, strategies, and other routine procedures (Genç 2018, 39). According to Efe (2015, 40), organizational capital is the company's value-creating features, such as both the information, work methods, and processes of employees and the organization's strategies and tactics. According to Yılmaz (2015, 41-42), there are four elements of organizational capital consisting of strategy, systems, structure, and culture. According to the author, intellectual capital can be measured and improved through these elements. According to Sariay and Özulucan (2019, 18), sub-components of organizational capital are patents, copyrights, trade secrets, design rights, trademarks, management philosophy, organizational culture, and information systems. Organizational capital focuses on internal structure and non-formal relations within the enterprise (Akpınar and Akpınar 2016, 143). At the same time, organizational capital is interested in the characteristics of the social system and the relationship network, as a whole (Yıldız et al. 2016, 236).

INNOVATION

According to Cankül (2019, 226), innovation is the implementation of a new, significantly improved or differentiated product, process, new marketing method or the realization of a new organizational method in an enterprise's workplace organization, internal applications or external relations. Therefore, the search for enterprises to increase their innovation activities by using different and unique information continues to grow with each passing day. An essential part of the knowledge and skills required for innovation is found and used by individuals in the organization. Enterprises accumulate, code, and keep personal information in databases and in patents for collective use. This allows them to establish robust structures, systems, and processes (such as creating new goods and service development teams, producing different products). Thus, individual inputs are continuously transferred to the flow of innovative activities (Subramaniam and Youndt 2005, 451). The adoption of new ideas, attitudes, or behaviors by the organization is defined as innovation. At the same time, innovation is a tool that protects the organization from the challenging conditions of the ever-changing environment and ensures that it makes plans and programs for new products, new organizational structures, and new systems. In order to encourage innovation, managers should incorporate the capabilities, skills, and perspectives of each member of the organization into all processes of the enterprise activities (Turgut and Beğenirbaş 2013, 107). According to Belgin and Avşar (2019, 29), the trend towards R&D and innovation activities is gaining momentum all over the World, and countries are trying to provide more added value with fewer resources.

Innovation, which is defined as the driving force, focuses on realizing the long-term objectives of enterprises. In the industry in which it is involved, it provides the emergence of new resources, new sectors, and economic activities. Furthermore, its other tasks are to reveal differences in the production, marketing and distribution methods, business organizations, working conditions, and labor capabilities, and to provide continuous development (Mayda 2019, 5). While listing the power of innovation, Hatipler and Selvi (2019, 564) stated that it provides a unique competitive advantage to a company, provides an energetic, creative and willing working environment for its employees, customers' needs and demands are better met, profit margins, revenues, and positive media support an increase. While enterprises can overcome the challenges they face by making innovations, they can survive by changing their products, production methods, and management approaches (Işık and Aydın 2016, 81).

THE RELATIONSHIP OF INTELLECTUAL CAPITAL AND ITS ELEMENTS WITH INNOVATION

The development of international trade and the expansion of the consumer market volume have directed enterprises to gain competitive superiority and to preserve this superiority. The focal point of enterprises that struggle with their competitors has become to have more knowledge, to use technology intensively, to incorporate its intellectual capital more into its strategic plans, to support organizational capabilities and thus to develop innovations. The most important sources of innovation are the elements of intellectual capital. Human capital, which is one of the most valuable sources of innovation, consists of skills, creativity, and experience. When a firm offers training, development, and learning opportunities to

its individuals, it will have invested in human capital. Thus, it ensures the development of innovation skills. For innovation, getting ideas from the environment of the enterprise, providing customer satisfaction and feedbacks, and developing new applications that can increase sales volume are possible with social capital. For the success of innovation, the participation of the whole organization, customers and suppliers should be ensured, their knowledge and experience should be involved in all processes of innovation from the thought stage to the implementation stage. If knowledge management is also positively influenced by innovation studies and innovation efforts can be combined with competitive orientation and strategies, companies can develop new information and perform new jobs in valuable markets (Ergun and Yilmaz 2013, 132-133). Intellectual capital, which constitutes the structure, system, and strategy in an enterprise and consolidates its culture, will be the pioneer of innovation (Nghah and Ibrahim 2012, 594). According to Dameri and Ricciardi (2015, 864), when a company uses its assets in order to provide its customers with appropriate and inimitable goods and services, it produces distinctive capabilities by increasing the consistency and value of its intellectual capital.

Naturally, those working in a company which has intellectual capital will become open to innovations to learn more and develop themselves. Employees who monitor the sector and develop themselves personally will produce various projects and will even demand training on the subject from their companies. This situation may display differences according to the enterprise's culture, wage system, and its investment in intellectual capital. For example, it may be thought that individuals who are satisfied with their high wages may not want to improve themselves. However, it should not be forgotten that an individual who sees a better opportunity may leave his/her firm. Therefore, in order not to lose their intellectual capital, enterprises should invest in projects and innovations and try to keep the qualified personnel within the enterprise (Altan and Özpehlivan 2019, 158).

When a literature review on the relationship of intellectual capital and its components with innovation is made, empirical and theoretical studies conducted especially in recent years draw attention. Intellectual capital has been mainly dealt with as an independent variable in these studies, and its effects on innovation have been examined. These studies and their results are summarized in Table 1.

Table 1. Studies Conducted on the Relationship Between Intellectual Capital and Innovation

STUDY	DATA	RESULTS
Subramaniam and Youndt, 2005	It is a study conducted in order to examine how the dimensions of intellectual capital (human, social and organizational) affect various innovation capabilities in organizations. The study was conducted by applying a questionnaire to senior executives in companies in the United States of America.	<ul style="list-style-type: none"> - Organizational capital positively affected innovation capabilities. - Human capital interacted with social capital to influence innovation capability positively. However, human capital alone was found to be negatively correlated with innovation capability. - Social capital influenced its innovation capabilities positively.
Cheng et al., 2010	It is a study conducted in order to investigate the effect of intellectual capital on company performance in the firms in the health sector.	<ul style="list-style-type: none"> - It was observed that efficiently managed innovation input increases customer relations. The innovative capacity has a strong and positive impact on sustainable customer relationships.

Sharabati et al., 2010	This study aims to empirically test the relationship between the intellectual capital (human capital, organizational capital, social capital) and business performance of firms operating in the pharmaceutical sector of Jordan.	<ul style="list-style-type: none"> - Intellectual capital is positively affected by human capital, organizational capital, and social capital. - Social capital is positively affected by innovation, learning, education, experience, and expertise.
Yitmen, 2011	It is a study that was tested with surveys in order to examine the relationship between intellectual capital, competitiveness, and innovation in engineering firms in the Turkish construction sector.	<ul style="list-style-type: none"> - Human capital, organizational capital and social capital are positively related to innovation factors.
Mura et al., 2012	This study tested the dimensions of intellectual capital empirically in three health institutions in order to understand the innovative behaviors of employees and to observe its role in information sharing.	<ul style="list-style-type: none"> - It demonstrates that intellectual capital has a positive impact on the practitioners' innovative behaviors through the mediating role played by information sharing behavior.
Atalay, 2012	It is an empirical study that examines the impact of intellectual capital and its elements on enterprise innovation (product, process, organizational, and marketing) and the impact of innovation on business performance in the automotive sector.	<ul style="list-style-type: none"> - Human capital, social capital and organizational capital have a positive impact on product innovation and organizational innovation. - Human capital and social capital positively affected process innovation and marketing innovation. - The impact of human capital on business performance is also positive.

Santos-Rodrigues et al., 2013	It is a study conducted by distributing surveys to service managers of a hospital in Northern Portugal in order to examine the effect of intellectual capital on innovation.	- Human capital, social capital and organizational capital affect the innovative capacity of a firm.
Sivalogathan and Wu, 2013	This study was conducted in order to determine the effect of intellectual capital on innovation and business performance and the mediating role of organizational motivation.	- The firm's intellectual capital has a positive and significant impact on innovation capability and leads to business performance. - Intellectual capital and the motivation of a firm have a positive and significant impact on the innovation capability and lead to business performance.
Cezlan, 2014	This study is an empirical study examining the effect of intellectual capital on business innovation and business performance in healthcare institutions in İstanbul.	- Human capital has a positive relationship with business innovation. -Organizational capital does not affect business innovation. - Social capital affects business innovation positively.
Ayas, 2015	In this study, the effects of intellectual capital on business performance through transferring it to the innovative business behavior were tried to be determined, with the results obtained from the questionnaires.	- While in individuals, human capital increases among the intellectual capital dimensions, the innovative idea finding increases among the innovative business behavior dimensions. - When intellectual capital is evaluated as a whole, it has been found out to have an impact on innovative business behavior. - It was concluded that innovative ideas increase the objective and subjective performance of the enterprise, and therefore, they can achieve the desired increase in their performance in case they transform their intellectual capital into the innovative business behavior.
Uçar, 2017	This study aims to examine the relationship between Quality Management, Information Management, Intellectual Capital, and Institutional	- The intellectual capital variable was observed to have a partially significant effect on the relationship between quality management and

	Innovation Performance. The results were obtained by applying the questionnaire to 191 firms.	organizational innovation performance. - It was concluded that information management and intellectual capital have a significant effect on organizational innovation performance.
Kianto et al., 2017	It is a study that was tested with questionnaires in order to understand how human resources systems affect intellectual capital, and its relationship with innovation performance, in 180 Spanish companies which have knowledge-based human resources practices.	- Intellectual capital positively mediates the relationship between knowledge-based HRM practices and innovation performance, and human capital plays a key role in this relationship. - Knowledge-based HRM practices partially affect organizational and social capital through human capital. Human capital influences innovation performance by increasing organizational and social capital.
Bayhan, 2018	It is an experimental study applied in hotels in İstanbul in order to examine the mediating role of social capital and intellectual capital in the effect of leadership behavior on emotional labor and innovative climate.	- Intellectual capital affects the innovative climate positively and significantly.
Keskin et al., 2018	It is a study which focuses on the interaction effect of innovation quality in the effect of intellectual capital variables on business performance and which is based on the results of the questionnaire applied to firms in İstanbul.	- It is observed that innovation quality affects the relationship between organizational and social capital variables and operational performance positively, and it has a moderating negative effect on the relationship with human capital.
Beydoğan, 2018	It is a study, in which the role of information sharing in business performance is explained with questionnaire results through innovation quality and intellectual capital variables.	- There is no statistically significant relationship between human capital and innovation quality. - There is a positive relationship between organizational and social capital and innovation quality.

Altan and Özpehlivan, 2019	It is an empirical study aiming to determine the effect of the intellectual capital and innovation phenomena of firms in the IT sector on job satisfaction.	- The intellectual capital status of enterprises has a significant effect on innovation activities.
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The basic necessity in the innovation process is the inclusion of all kinds of intellectual accumulation of human capital in enterprises into the innovation process and this becoming an enterprise culture by taking continuous improvement and development as a basis. Nowadays, countries try to attract qualified manpower to themselves in order to contribute to innovation processes in their economies, and they want to benefit from their knowledge, skills, and experiences in business life (Toraman et al. 2009, 106-107).

One of the main tasks of organizational capital is innovation. If the innovative behavior is encouraged, facilitated and improved within the existing structure, the enterprise objectives will be achieved more easily. Intellectual property and rights and patents are the determinants of both the inputs of the innovation process and the outputs of the innovation behavior (Örnek and Ayas 2015, 1393). According to Sakur (2019, 23), within the organizational capital, there are elements of access to information for efficiency, processing times, method innovation, and coding of information. It also supports the cost minimization per employee and the profit maximization.

The flow of information coming from customers can be ensured by using social capital, which includes internal and external links of an enterprise, and other resources. Thus, innovative ideas that respond instantly to the wishes of its customers can be developed. Furthermore, by involving external stakeholders (suppliers, customers, competitors, consulting firms, universities, research and technology organizations, etc.) in the process of innovative behavior in the enterprise, reliability, accuracy, timeliness, and integrity in the operations can be provided. Thus, enterprises can improve themselves, facilitate their entry into new markets, change product and business processes, and share the risks and costs arising from R&D activities with their external stakeholders. They can interpret their performance with the feedback coming to them and make improvements if needed (Ayas 2015, 109-110).

CONCLUSION AND DISCUSSION

In this study, which examines the effect of intellectual capital on innovation, the information obtained from the existing literature was benefited from. In the literature review section of the study, data and comments were presented in order to understand how intellectual capital and its elements are obtained in various industries and economies and how innovation activities are realized. Finally, the data and results of the sixteen studies on intellectual capital and intellectual capital elements and on its effects on innovation were compiled and added to the study. There are also differences in the results obtained because the elements of intellectual capital vary from enterprise to enterprise according to the institutions and organizations with which they interact and communicate such as customers, suppliers, and partners, and according to activities, knowledge, experiences, strategies, and structures of enterprises. While it was observed that intellectual capital affected innovation positively and significantly in almost all studies, it was determined that with effectively managed innovation inputs, human capital and social capital were also affected. In almost all studies, the elements of intellectual capital have roles that support and complete each other. Nevertheless, in the results of one study, it is clearly observed that organizational capital does not affect innovation.

In cases when intellectual capital influences the innovation capability and activities, it has been realized that the enterprise's learning, education, experience, and expertise factors and its communication and interaction with internal and external stakeholders and quality management are positively influenced and the business performance is increased. It is quite positive to observe that innovation efforts are motivated in the right ways and with the right resources and capabilities.

Although the number of studies in that intellectual capital is related to innovation is extremely low, the main themes of its elements are relatively less studied. Future studies that will focus on the relevant fields

will contribute to the field both in theory and in practice. Giving place to these studies in theses and articles that will be written in management, accounting, and marketing sciences will fill this gap in the field. Enterprises can manage the innovation process more effectively by understanding and developing their intellectual capital resources, and by recognizing the driving forces and resources they possess. Thus, they can develop more successful innovation projects. Institutions that carry out successful innovation activities can contribute to the national economy by increasing their productivity and performance and gain international competitive advantage. The result of this study can guide managers and employees in comprehending their intellectual capital and developing their innovation strategies. The effective use of intellectual capital is a process that will have a positive impact on growth on an organizational, sectoral and macro-scale. This process should be planned correctly, and all sectors should also be embraced by the state and universities within a framework.

REFERENCES

- Akpınar, O. and Akpınar, A.T (2016). The Impact of Intellectual Capital Components on Firm Value and Performance: The Sample Of Manufacturing Firms in Turkey. *Kastamonu Üniversitesi İktisadi Ve İdari Bilimler Fakültesi Dergisi*, 12 (2), pp.142-153.
- Altan, S. and Özpehlivan, M. (2019). A Research of The Relationship Among Intellectual Capital, Business Satisfaction and Innovation in It Industry: An Application in İstanbul. *Gümüşhane Üniversitesi Sosyal Bilimler Enstitüsü Elektronik Dergisi*, 10(1), pp.154-167.
- Atalay, B. (2018). Effect of Enterprise Value of Intangible Assets at Fair Presentation Needs: The Case of Turkey. Ph.D. Thesis, Başkent University, Institute of Social Sciences, Ankara.
- Atalay, M. (2012). The Relationship Between Intellectual Capital, Innovation and Firm Performance: A Research in Automotive Supplier Industry. Master Thesis, Akdeniz University, Institute of Social Sciences, Antalya.
- Ayas, S. (2015). The Effect of Intellectual Capital and Innovative Work Behavior on Business Performance: A Practice in Information Technology Sector. Master Thesis, Çanakkale Onsekiz Mart University, Institute of Social Sciences, Çanakkale.
- Baş, M., Mısırdalı Yangıl, F. ve Aygün, S. (2014). A Content Analysis on The Dissertations on Intellectual Capital: 2002-2012 Period. *Uluslararası Yönetim İktisat Ve İşletme Dergisi*, 10,(23), pp.207-226.
- Bayhan, İ. (2018). The Mediating Role of Social Capital and Intellectual Capital In The Effect of Leadership Behavior on Emotional Labour And Innovative Climate: A Study In Hotel Enterprises. Ph.D. Thesis, İstanbul University, Institute of Social Sciences, İstanbul.
- Bayram, M. (2018). Accounting Investigation of Human Resources in Turkey Accounting Standards Framework Human Resources and Accounting Practices Area. Ph.D. Thesis, Dicle University, Institute of Social Sciences, Diyarbakır.
- Belgin, Ö. and Avcı, B. A. (2019). Measuring R&D and Innovation Performance At Regional and Provincial Level in Turkey Using Grey Relational Analysis. *Verimlilik Dergisi*, (2), pp.27-48.
- Beydoğan, A. (2018). Relationship Between Knowledge Sharing, Intellectual Capital And Company Performance. Master Thesis, Yıldız Technical University, Institute of Social Sciences, İstanbul.
- Cankül, D. (2019). Innovation Practices in Businesses: The Case of Restaurants. *Gastroia: Journal of Gastronomy and Travel Research*, 3(2), pp.225-240.
- Cezlan, E.C. (2014). The Effect of Intellectual Capital on Firm Innovativeness And Firm Performance: A Study in Healthcare. Ph.D. Thesis, Beykent University, Institute of Social Sciences, İstanbul.
- Chang, W. S. and Hsieh, J. J. (2011). Intellectual Capital And Value Creation-Is Innovation Capital A Missing Link?. *International Journal Of Business And Management*, 6(2), pp. 3-12.
- Cheng, M. Y., Lin, J. Y., Hsiao, T. Y. and Lin, T. W. (2010). Invested Resource, Competitive Intellectual Capital, And Corporate Performance. *Journal Of Intellectual Capital*, 11(4),pp. 433-450.
- Dameri, R. P. and Ricciardi, F. (2015). Smart City Intellectual Capital: An Emerging View Of Territorial Systems Innovation Management. *Journal Of Intellectual Capital*, 16(4),pp. 860-887.
- Demirel, E. T. and Demir, Y. (2011). The Importance of Intellectual Capital in The Creation of Competitive Advantage. "İş, Güç" Endüstri İlişkileri Ve İnsan Kaynakları Dergisi. 13(1), pp. 81-104.

- Efe, M. N. (2015). The Effects of Entrepreneurial Orientation, Intellectual Capital and Organizational Learning Capability on Firm Performance. Ph.D. Thesis, Beykent University, Institute of Social Sciences, İstanbul.
- Ergun, E. and Yılmaz, O. (2013). An Overview To The Relationship of Intellectual Capital With Competition and Innovation in Terms of Literature. *Bilgi Ekonomisi Ve Yönetimi Dergisi*, 8(1), pp. 129-134.
- Erkanlı, H. and Karsu, S. (2012). Intellectual Capital in Value Chain. *Ömer Halisdemir Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 5(2), pp. 216-237.
- Fidanbaş, Ö. (2017). The Contribution of The Intellectual Capital And Its Accounting. Master Thesis, Institute of Social Sciences, Beykent University, İstanbul.
- Genç, K. (2018). The Effect of Intellectual Capital and Large Scale Business To Value Added: A Study in Turkey. PhD Thesis, İstanbul University, Institute of Social Sciences. İstanbul.
- Gülcemal, T. (2016). The Effect of Intellectual Capital on Performance of The Firms That Have Gone Public. Ph.D. Thesis, Erciyes University, Institute of Social Sciences, Kayseri.
- Güngör, G. and Celep, C. (2016). The Relationship Amongst Knowledge Sharing, Organizational Learning and Intellectual Capital Levels of Secondary Education Teachers. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 12(3), pp. 932-947.
- Hatipler, M. and Selvi, F. (2019). Effects of Innovative Features on Total Quality Management. *International Balkan and Near Eastern Social Sciences Congress. Ibaness Congress Series XI. March 2019.* pp. 562-569.
- Işık, C. and Aydın, E. (2016). The Impact of Knowledge Sharing on Innovative Work Behaviour: An Application in Accommodation Establishment in Ayder. *Girişimcilik Ve İnovasyon Yönetimi Dergisi*, 5 (2), pp. 75-103.
- Keskin, H., Şentürk, H. A. And Beydoğan, A. (2018). The Relationships Among Knowledge Sharing, Intellectual Capital And Performance From Innovation Quality Perspective. *Business & Management Studies: An International Journal*, 6 (3), pp.71-94.
- Kianto, A., Ritala, P., Spender, J. C. And Vanhala, M. (2014). The Interaction Of Intellectual Capital Assets And Knowledge Management Practices In Organizational Value Creation. *Journal Of Intellectual Capital*, 15(3),pp. 362-375.
- Kianto, A., Sáenz, J. and Aramburu, N. (2017). Knowledge-Based Human Resource Management Practices, Intellectual Capital And Innovation. *Journal of Business Research*, 81,pp. 11-20.
- Mayda, B. (2019). Relation Between Innovation, High Technology and Knowledge-Based Economy And Economic Growth: An Application on To Turkey in Finland Example. Master Thesis, Bartın University, Institute of Social Sciences. Bartın.
- Mura, M., Lettieri, E., Spiller, N. and Radaelli, G. (2012). Intellectual Capital And Innovative Work Behaviour: Opening The Black Box. *International Journal Of Engineering Business Management*, 4(39), 1-10.
- Musteen, M. and Ahsan, M. (2013). Beyond Cost: The Role Of Intellectual Capital In Offshoring And Innovation In Young Firms. *Entrepreneurship Theory And Practice*, 37(2), pp. 421-434.
- Ngah, R. and Ibrahim, A. R. (2012). The Relationship Of Intellectual Capital, Innovation And Organizational Performance: A Preliminary Study In Malaysian Smes. *Advances In Global Business Research*. Vol. 9 No. 1, pp. 593-596.
- Nurullah, K. (2011). Social Information in Intellectual Capital Report. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 25(2), pp.249-264.
- Odabaşoğlu, Ş. (2016). The Effects of The Intellectual Capital To Financial Performance in Aviation Managements. PhD Thesis, Haliç University, Institute of Social Sciences, İstanbul.
- Örnek, A. Ş. and Ayas, S. (2015). The Relationship Between Intellectual Capital, Innovative Work Behavior And Business Performance Reflection. *Procedia-Social And Behavioral Sciences*, 195, pp. 1387-1395.
- Özdemir, L. and Balkan, O. (2010). Benefits of Intellectual Capital Components To Organizations. *Organizasyon ve Yönetim Bilimleri Dergisi*, 2 (1), pp. 115-121.

- Özdemir, N. (2017). Intellectual Capital Management in The Context of Internationalization. Master Thesis, Tobb University of Economics and Technology, Institute of Social Sciences, İstanbul.
- Özevren, M. and Yıldız, S. (2010). A Research on Identifying of The Measurement Methods and Criteria of Intellectual Capital. *Marmara Üniversitesi İktisadi Ve İdari Bilimler Dergisi*, 29 (2), pp.275-289.
- Sakur, R. (2019). The Relationship Between Intellectual Capital and Firm Financial Performance: An Application on The Companies in The Bist Sınai Index. Ph.D. Thesis, Atatürk University, Institute of Social Sciences, Erzurum.
- Santos-Rodrigues, H., Faria, J., Cranfield, D. and Morais, C. (2013). Intellectual Capital and Innovation: A Case Study of A Public Healthcare Organisation In Europe. *Electronic Journal Of Knowledge Management*, 11(4), pp.361-372.
- Sarıay, İ. and Özulucan, A. (2019). Reporting In Financial Statements of Intellectual Capital In Terms of Turkish Accounting Standards. *Mali Çözüm Dergisi/Financial Analysis*, 29 (152), pp. 16-61.
- Serenko, A. and Bontis, N. (2004). Meta-Review of Knowledge Management and Intellectual Capital Literature: Citation Impact and Research Productivity Rankings. *Knowledge and Process Management*, 11(3),pp. 185-198.
- Sharabati, A. A. A., Naji Jawad, S. and Bontis, N. (2010). Intellectual Capital And Business Performance in The Pharmaceutical Sector of Jordan. *Management Decision*, 48(1), 105-131.
- Sivalogathan, V. and Wu, X. (2013). Intellectual Capital for Innovation Capability: A Conceptual Model for Innovation. *International Journal of Trade, Economics And Finance*, Vol. 4, No. 3, pp. 139-144.
- Subramaniam, M. and Youndt, M. A. (2005). The Influence of Intellectual Capital on The Types of Innovative Capabilities. *Academy of Management Journal*, 48(3), pp.450-463.
- Toraman, C., Abdioglu, H. and İşgüden, B. (2009). Evaluation of Intellectual Capital and Management Accounting in Innovation Process in Enterprises. *Afyon Kocatepe Üniversitesi İktisadi Ve İdari Bilimler Fakültesi Dergisi*, 11 (1), pp. 91-120.
- Töre, E. (2017). A Study on Examination of The Impacts of Intellectual Capital on Innovative Work Behavior in The Perspectives of Knowledge Sharing, Self-Efficacy and Internal Locus of Control. PhD Thesis, İstanbul University, Institute of Social Sciences. İstanbul.
- Turgut, E. and Beğenirbaş, M. (2014). The Mediating Role of Tacit Knowledge Sharing Intention on The Effects Of Relational Social Capital on Innovative Behavior. *Ömer Halisdemir Üniversitesi İktisadi Ve İdari Bilimler Fakültesi Dergisi*, 7 (1), pp.146-160.
- Turgut, E. and Beğenirbaş, M. (2013). The Role of Social Capital and Innovative Climate on Innovative Behaviour of Employees: A Research In Health Sector. *Kara Harp Okulu Bilim Dergisi*, 23 (2), pp.101-124.
- Türkoğlu, N. (2016). The Analysis of The Relationship Between Institutionalization, Intellectual Capital and Competitive in Accommodation Establishments. Ph.D. Thesis, Akdeniz University, Institute of Social Sciences, Antalya.
- Uçar, D. (2017). Measuring Relationship Between Quality Management and Organizational Innovation Performance: Mediating Effects of Knowledge Management and Intellectual Capital. Ph.D. Thesis, Bahçeşehir University, Institute of Social Sciences. İstanbul.
- Yıldız, T., Aykanat, Z. and Tüzemen, S. (2016). A Study on The Impact of Ethical Leadership on Social Capital. *Dokuz Eylül Üniversitesi İktisadi İdari Bilimler Fakültesi Dergisi*, 31 (2), pp. 229-250.
- Yılmaz, F. (2018). The Effects of Generic Strategies on Firm Performance: The Role of Intellectual Capital and Innovative Relations. Ph.D. Thesis, Trakya University, Institute of Social Sciences. İstanbul.
- Yılmaz, O. (2015). The Effects of Relative Capital, Structural Capital and Human Capital on Company Performance. Ph.D. Thesis, Gebze Technical University, Institute of Social Sciences, Gebze.
- Yitmen, I. (2011). Intellectual Capital: A Competitive Asset For Driving Innovation In Engineering Design Firms. *Engineering Management Journal*, 23(2), pp. 3-19.
- Zeghal, D. and Maaloul, A. (2010). Analysing Value Added As An Indicator Of Intellectual Capital And Its Consequences On Company Performance. *Journal Of Intellectual Capital*, 11(1), pp.39-60.
- Zor, İ. and Cengiz, S. (2013). The Relationship Between Intellectual Capital and Firm Value: A Study in İstanbul Stock Exchange. *Çankırı Karatekin Üniversitesi İİBF Dergisi*, 3 (1), pp. 37-56.