The Challenges of the VUCA World in the Development of Sustainable Investment Projects

Mihaela MINCIU¹ Florin Aurel BERAR² Răzvan Cătălin DOBREA³

ABSTRACT

DOI: 10.24818/mer/2021.12-04

The volatility, uncertainty, complexity and ambiguity (VUCA) of the business environment require that investment projects carried out within organizations also include sustainability aspects, in order to maintain a superior competitive position. Investors as well as other stakeholders from organizations are more inclined to companies that implement sustainable investment projects compared to traditional ones for which only profit and financial benefits matter.

Thus, the purpose of this paper is to reveal how the rapid and often unfounded changes specific to today's world, the VUCA world influences the way that projects are carried out within organizations. Particular attention was also paid to the way in which organizations implement project-specific activities and sub-activities, in order to ensure sustainable development, even in a crisis situation.

In order to achieve these objectives, a bibliometric and systematic analysis of the specialized literature was carried out, analyzing the present studies and articles from the area, that revealed the influence of the VUCA world on the business environment. Thus, this paper aims to present how the VUCA world affects organizations, the effects that complex and rapid organizational changes specific to the VUCA world have on the sustainability of investment projects, the impact of crises of the sustainable development on organizations, the implications of the VUCA world on strategies organizations. Following the analyzes carried out, the results showed that the elements specific to the VUCA world have a great influence on the sustainable development of organizations and, implicitly, on the projects carried out within it.

KEYWORDS: investment, project, sustainability, VUCA

JEL CLASSIFICATION: G11, Q01, Q56

1. INTRODUCTION

The business environment has become volatile, uncertain, complex and ambiguous (VUCA), given that past investment projects within organizations are no longer a source of information for current projects. If until recently the results of an investment project could be achieved within the previously set timeframe this has become increasingly difficult to obtain, because today's world, the VUCA world is an environment with rapid and unexpected changes often difficult to understand. Projects carried out within organizations have many activities and variables that are interconnected, so changes that occur as a result of an unknown event

¹ Bucharest University of Economic Studies, Romania, mihaela_minciu@yahoo.com, Corresponding author

² Bucharest University of Economic Studies, Romania, florinberar@yahoo.com

³ Bucharest University of Economic Studies, Romania, razvan.dobrea@man.ase.ro

(changes in prices of raw materials and materials needed, changes in consumer preference, fluctuation in demand and supply) produce effects in chain at the level of the whole project. Thus, the world of VUCA explains that learning is a component part of crisis events that occur within organizations whether they arose from mistakes or were generated by certain environmental, social, economic or political forces that can be considered very rare, critical events (Antonacopoulou, 2018).

In fact, the investment projects implemented within the organizations start to draw attention on the concept of sustainability, respectively on those investment processes that, in addition to profit, take into account the way of influencing social and environmental aspects. The sustainability of investment projects has been a problem for several decades, because every organization wants to ensure a certain competitive advantage for future activities, such as cost savings, risk reduction, satisfying consumer requirements, attracting financial incentives, efficient use of resources (Kim & Lee, 2018).

Thus, sustainability requires the development of investment projects that accomplish the current needs of consumers, but without jeopardizing the ability of future generations to satisfy their own needs (Kudratova et al., 2018). This approach brings to the attention of researchers the social and environmental responsibility of organizations, in addition to economic by pointing out that resources are limited; therefore, they should be used intelligently, even in a world of business that is constantly changing to be sufficient for future generations, but without endangering the quality of life of today's society.

In the VUCA world organizations need to become socially responsible by implementing sustainable investment projects that ensure the protection of the environment, as well as the balance between human and natural systems. In any organization investments play a particularly important role, thart significantly influencing the economic growth of each state. In general, investment projects involve research and analysis, but in the VUCA world this is very difficult to accomplish because situations change frequently and the effects of change are often difficult to predict. The challenges of the VUCA world on the development of investment projects involve the approaching of the three pillars of social, environmental and economic objectives, in order to incorporate sustainability issues into decision-making processes within organizations (Kaveh & Soheil, 2013; Kudratova et al., 2018).

Environmental protection is the most frequently approached topic in organizations, mainly referring to the reduction of the carbon footprint, as well as all forms of pollution (water, soil and air), in order to eliminate inefficient and harmful processes along the supply chain. Social development refers to the fair treatment of all employees of an organization, as well as all parties involved. Regarding the economic side, in order to be sustainable, an investment project carried out within an organization must bring it income that will allow it to carry out activities in the future.

The concept of sustainability, in the current context indicate that all environmental changes (technological development, resource exploitation, investment processes) must be achieved in a balanced way ensuring the coexistence of people with nature.

The adoption of sustainable development by the United Nations has played a crucial role in expanding policy factors, as well as in the decisions of practitioners and researchers, and environmental concerns have become increasingly important (Sharma et al., 2021). The 2030 Agenda for Sustainable Development, adopted by the United Nations states, includes 17

objectives that address the aspects of sustainable development, in order to ensure the prosperity of people and the planet, both in the present and in the future (United Nations, 2021). The introduction of sustainable development aspects is an urgent call for action for organizations because their strategies, which include increasing financial benefits and growth, need to be updated, taking into account climate change, as well as the conservation and protection of natural resources.

The development of sustainable investment projects involves improving the quality of life, given the ability to support the environment. Thus, this paper aims to describe the connection between the VUCA world, a complex and uncertain world with rapid changes and the way to achieve sustainable investment projects within organizations. Therefore, the first part will present theoretical aspects about the VUCA world, sustainable development and sustainable investment, and the next part will use all the information to analyze the influence of VUCA's implications on the business environment and implicitly on the organizations and projects developed within them.

2. LITERATURE REVIEW

Unpredictable changes specific to the business environment, economic instability, difficult forecasting of future activities, the large number of factors that must be taken into account when designing sustainable investment projects determine significant changes in organizations. Today's world has become volatile, uncertain, complex and ambiguous (VUCA) (Gao et al., 2021) being composed of unstable events whose positive or negative impact is difficult to assess.

Each of the four components of the VUCA world (volatility, uncertainty, complexity and ambiguity) significantly influences the investment projects carried out within the organizations. Volatility refers to the speed with every change occur in the business environment, the strategic objectives set today in an organization may be completely different from those valid in the next day. In fact, many times the projects developed in organizations in the past no longer provide information for the current situations because the priorities then do not coincide with those now. Uncertainty reveals the difficulty of organizations to make predictions, as change cannot be anticipated, so more attention must be paid to the sustainable development of companies.

Complexity consists of the multitude of factors (customers, competitors, suppliers, technology, organizational culture, possible crisis situations, etc.) that must be taken into account when the managers of the organizations have to adopt a decision regarding an investment project. Often not only the large number of factors create problems for managers, but the interdependencies that exist between them, a minor change of a factor can cause changes in the whole chain. Ambiguity, the last component of the VUCA world, refers to all possible variants, every investment project containing a series of unclear information, which must be understood by the managers of the organizations. The four components of the VUCA world interact with each other within organizations sometimes in chaotic and conflictual ways (Hadar et al., 2020; Yehezkel, 2020) due to the lack of predictability towards the activities carried out.

The unpredictable and dynamic business environment requires conscious managers, able to face the challenges, both those imposed by the competition and those due to the VUCA world (Bakshi, 2017). In order to occupy a top position in the conditions of the modern economy, a

permanent development of organizations is necessary, which can be achieved by attracting external funds or through investments (Minim, 2019). Lately, more and more organizations are turning their attention to sustainable investment projects, as the current generation supports the harmonious development of the environment together with the industry.

The emergence of government regulations and consumers' propensity to purchase products and services from companies which gives special importance in promoting a clean and unpolluted environment have led members of organizations to focus on adopting sustainable investment project decisions. Therefore, if in the early 1990s the concept of the VUCA world was used only in military terminology to describe precarious conditions after the end of the Cold War, in time this term was used to describe rapid adaptation to changes in the business environment and consumer requirements by implementing new strategies to manage a difficult system to control.

Sustainable development and implicitly the development of sustainable investment projects by organizations that require changes in supply chain members, has gradually become a key requirement, so manufacturers can motivate suppliers to increase the level of sustainable investment by adopting different types of contracts, such as for example price commitment or cost-sharing contracts (Xiao et al., 2020). According to existing research in the area, sustainable project management must focus on planning, monitoring and control of component processes, to ensure that the project is up to date and ready to solve sustainability issues, taking into account social and environmental principles, and project life cycle (resources involved, characteristic activities, results and effects produced) (Marcelino-Sádaba et al., 2015; Sfakianaki, 2015; Yu et al., 2018). The need to balance the economic, social and environmental goals causes sustainable enterprises to become more ambiguous and less attractive to traditional investors, compared to those strictly profit-oriented (Messeni et al., 2019; Maehle, 2020). However, sustainable investment provides investors an opportunity to express their values, beliefs and ethics in investment decisions by enabling them to earn a financial return (Sharma et al., 2021).

Numerous studies have also shown that people argue that sustainable choices are often cheaper (Brunen & Laubach, 2021). Toptal et al. (2013), following the analysis of joint replenishment and sustainable investment decisions in trade and tax policies, showed that sustainable investment can lead to both carbon and cost reductions. Thus, companies should develop different strategies to gain a competitive advantage that will ensure a superior position on the market. In addition, the positive effects of sustainability consist in combining the part of social entrepreneurship with economic profitability by recognizing the social return on investment and triggering the process of improving business strategies (Kerr, 2007; Zein et al., 2019). Despite the fact that it is difficult to have an overview of an ongoing project due to the multiple interconnected activities and sub-activities within it, the VUCA world demands a new organizational culture that emphasizes integrity, lifelong learning, sustainable development, environmental protection, trust (Figure 1).



Figure 1. The influence of the VUCA world on sustainable investment projects *Source: the authors' own contribution*

Regardless of the strategy chosen to orient the four components of the VUCA world towards the four directions of response vision, understanding, clarity and adaptability, organizations must create an environment that allows employees to take action and adopt decisions regarding sustainable investment projects at times crisis, with assuming mistakes together. Today it is increasingly recognized that projects play a particularly important role in creating

a sustainable society, so the integration of sustainability concepts in project management is considered an essential global trend in project management (Silvius & Schipper, 2019). Huang and Ng (2013) consider that today's project manager no longer fulfills only the traditional role of managing and monitoring the processes characteristic of the project, but must organize the project in the most efficient way, in terms of sustainability. The sustainability of investment projects in the VUCA world requires a balance between the development of organizations in order to obtain high financial results and environment.

The responsibility that organizations assume in order to achieve social effects and sustainability inevitably leads to changes in products, services, resources, as well as in the processes carried out in organizations (Tulder et al., 2013). Renewal projects are crucial requiring special attention to social, environmental and economic aspects (Buzási & Szalmáné, 2017; Lin, et al., 2021).

In order to address the issues of sustainability in each project, to ensure a sustainable way of life for future generations, project managers have to work hard and make great efforts (Stanitsas et al., 2021). Therefore, even in a turbulent and chaotic business environment, the policies promoted by organizations must take into account the social, ecological and economic performance of the projects implemented in order to remain competitive in the market. Also, in order to comply the legal requirements on sustainability and to reduce the harmful effects on the environment and society, organizations must develop projects with clear objectives and achievable in a certain time frame.

3. METHODOLOGY

Within this study, two types of analysis were carried out (a systematic analysis and a bibliometric analysis), in order to identify the effects of the VUCA world on the development of sustainable investment projects. In order to achieve this goal, were analyzed articles and specialized studies that approached topics related to: VUCA world, the influence of VUCA world components on projects within organizations, sustainable investments, sustainable development, investment projects, VUCA world impact on employees.

Thus, in order to collect the data necessary for the systematic analysis, various researches and studies were analyzed using the following databases: "Web of Science", "Science direct", "Proquest", "Jstor" and "Emerald". The research in the aforementioned databases was carried out according to the following keywords: "volatility", "uncertainty", "complexity", "uncertainty", "VUCA", "sustainable investment", "sustainable project", "sustainable development".

All the studies that included the keywords after which the search was performed in the composition of the text or even in the abstract and title were selected for analysis, resulting in a number of 500 articles. Following the analysis and elimination the studies that were not "article", or that did not fall into the economic field and generally addressed the topic of sustainable investment, as well as the link between the VUCA world and sustainable investment projects within organizations resulted a number of 25 articles, which were studied in depth. The bibliometric analysis was carried out using exclusively the Web of Science (WoS) database because it includes the most famous journals from the economic field, and its publications cover several areas and can be filtered until are obtained the studies that treated the researched subject. Given the novelty of the concept of "VUCA world" in order to establish the relationship between the VUCA business environment and sustainable investment projects, a research was conducted on "VUCA" or "sustainable investment" and "project investment" and "sustainable development". "and" sustainable project "obtaining over 800 articles. Only "articles" type studies were selected, from the "Environmental Studies or Economics" category, from 2017-2021, all "open access", resulting in 472 articles. Therefore, in the first part of the study different aspects were presented regarding the theoretical notions about the VUCA world and the investment projects in the next part are presented the results obtained regarding the effects of the chaotic business environment on investments. The 472 articles were analyzed using VOSviewer software created by van Eck and Waltman.

4. RESULTS AND DISCUSSION

All the changes specific to the VUCA world have produced numerous changes within the organizations, more and more companies turning their attention to sustainable investment projects. The sustainability of projects carried out in organizations refers to their ability to exist permanently without affecting future resources.

To approach the frequent vulnerability of the business environment, leaders of organizations must find an effective way to balance exploration and exploitation activities in today's VUCA world (Bartscht, 2015). Performing a simple search of the word VUCA in the WoS database resulted in 212 articles. After studying the appearance of the keywords, were obtained the terms that are used predominantly together with the concept of the VUCA world, depending on the color shade. Thus, among the most common terms are "uncertainty", "complexity", "leadership", "performance", "innovation" (figure 2).



Figure 1. Keyword co-occurrence VUCA world Source: the authors' own contribution

Regarding the research conducted on the 472 articles, with the help of VOSviewer software was analyzed the frequency of keywords encountered in articles specific to the VUCA world, sustainable development and implicitly sustainable investment projects. As can be seen from Figure 3, among the most commonly used words in the literature are "sustainable development", "investments", "sustainability", "sustainable" development goals ".

The least common keywords in the researched articles are: "flexibility", "cost" and "impact". As can be seen from the image below, among the most common keywords found in articles on VUCA's business environment and sustainable investment projects within organizations are the two components of the VUCA world, respectively "volatility" and "uncertainty", as well as the key elements required by a sustainable development, respectively: "innovation", "ecosystem", "investments".



Figure 3. Keyword co-occurrence VUCA world and sustainable developments Source: the authors' own contribution

Regarding the countries from which the authors of the researched articles came, they are revealed in figure 4. For this analysis, the countries with at least two published articles were taken into account. This resulted in a total of 11 countries grouped into 4 clusters. The 11 countries are represented in the figure below according to the intensity and the ratio of influence that exists between them.

Therefore, the most common group of countries is represented by China, Spain and Russia, and the least common is composed of the following countries: Australia, Canada and Italy. Given the aging trend of societies, urbanization, the rapid pace of innovation, climate change and increasing pressures for sustainability, according to Sathirathai (2021) China has promoted multilateral cooperation all around the VUCA world, thus the VUCA area has been analyzed in more depth by researchers from China. It is also worth mentioning the number of citations for each group, so the most common countries have a total of 93 citations, while the countries less common have a cumulative number of 79 citations.



Figure 4. The countries of the authors of the researched articles Source: the authors' own contribution

Sustainability and implicitly the development of sustainable investment projects has become a particularly important requirement, both for retaining customers and for attracting new customers, especially in a volatile, uncertain, complex and ambiguous business world (VUCA).

Although the VUCA world has become a condition for understanding the environment in which an organization operates it causes restlessness among employees and subordinates, influencing all organizational processes by disrupting the activities of departments (Watt et al., 2017). Also, today's business climate is closely monitored and analyzed by many stakeholders (Khavul & Bruton, 2013).

In the VUCA world, decisions on investment projects no longer largely depend on the past experience of managers, as in the implementation of activities and sub-activities there are often differences from the initial planning (the Gantt chart), the situations being in most cases new, not presenting clear some factors of influence.

It can also be said that the high financial performance of an organization will lead managers to carry out more sustainable investment projects in order to become as competitive as possible. Sarkis's (2006) study found that people in organizations that adopt environmental practices early become more efficient than those who adopt later, in terms of more efficient management of organizational risks.

Wiengarten and Pagell (2012) argue that sustainable investment and environmental protection directly influence organizational performance, bringing companies a number of benefits and not just high costs. At the same time, Sarkis (2006) considers that managers of organizations regardless of the area of activity must pay special attention to environmental issues, in order

to achieve the conditions and compliance criteria for a win-win relationship and improve the economic base.

A "healthy" business environment with organizations able to adapt quickly to changes and take advantage of every opportunity can provide people the products and services they need, given the limited nature of natural resources.

5. CONCLUSIONS

The concept of the VUCA business environment reveals a volatile, uncertain, complex and ambiguous environment with insecure situations that demands speed of reaction from organizations through investment projects carried out to protect the environment and ensure the well-being of the community. In the VUCA world, organization managers need to establish sustainable development strategies without being able to anticipate change and without researching all possible influencing factors.

Although they are aware that change will come at some point during the implementation of an investment project, they cannot approximate that period and also cannot create a response strategy because they do not know what will influence the change (level production, company image, etc.).

The analyzed studies showed that sustainable investments can produce a series of positive effects on organizations operating in a turbulent environment: efficient management of carbon emissions, cost reduction, improving the company's image. Thus, it can be concluded that sustainable investment projects present critical importance in the long-term, contributing to the progressive development of the activity of organizations. Basically, they represent the solution for extremely urgent problems, being necessary an approach at the level of all departments within an organization for maintaining and developing the business in these times of crisis. Despite the fact that today's business world is a complex world, organizations must also pay special attention to natural resources and implicitly the environment, because some resources are not renewable and the activities currently carried out must not affect negatively the further development of generations.

Therefore, sustainable investment projects represent the main way to adapt to the VUCA world, to develop organizations in harmony with nature, as well as to ensure competitive advantage.

REFERENCES

- Antonacopoulou, E. P. (2018). Organisational Learning for and with VUCA: Learning Leadership Revisited. *Teoria e Prática em Administração*, 8(2), 10-32. doi:http://dx.doi.org/10.21714 /2238-104X2018v8i2S-40869
- Bakshi, V. (2017). The Forward Looking Manager in a VUCA world. *New Delhi: SAGE Publications*, 284, 450. doi:https://doi.org/10.1177/0972262918821210.
- Bartscht, J. (2015). Why systems must explore the unknown to survive in VUCA environments. *Kybernetes*, 44(2), 253-270. doi:https://doi.org/10.1108/K-09-2014-0189
- Brunen, A-C., & Laubach, O. (2021). Do sustainable consumers prefer socially responsible investments? A study among the users of robo advisors. *Journal Pre-Proof.* doi:https://doi.org/10.1016/j.jbankfin.2021.106314.

- Buzási, A., & Szalmáné, M. (2017). Ex-ante assessment of urban development projects. European Journal of Sustainable Development, 6(4), 267-278. doi:https://doi.org/ 10.14207/ejsd.2017.v6n4p267
- Gao, Y., Feng, Z., & Zhang, S. (2021). Managing supply chain resilience in the era of VUCA. *Frontiers of Engineering Management*, 8(3), 465–470. doi:https://doi.org/10.1007/s425 24-021-0164-2.
- Hadar, L., Ergas, O., Alpert, B., & Ariav, T. (2020). Rethinking teacher education in a VUCA world: student teachers' social-emotional competencies during the Covid-19 crisis. *European Journal of Teacher Education*, 43(4), 573-586. doi:https://doi.org/10.1080/026 19768.2020.1807513.
- Hwang, B-G., & Ng, W. J. (2013). Project management knowledge and skills for green con-struction: Overcoming challenges. *International Journal of Project Management*, 31(2); 272-284. doi:https://doi.org/10.1016/j.ijproman.2012.05.004.
- Kaveh, K., & Soheil, S. (2013). A hybrid fuzzy multiple criteria group decision-making approach for sustainable project selection. *Applied Soft Computing*, 13(1), 339-352. doi:https://doi.org/ 10.1016/j.asoc.2012.07.030.
- Kerr, J. E. (2007). Sustainability Meets Profitability: The Convenient Truth of How the Business Judgment Rule Protects a Board's Decision to Engage in Social Entrepreneurship. *Cardozo Law Review*, 29, 623. doi:http://dx.doi.org/10.2139/ ssrn.1296270.
- Khavul, S., & Bruton, G. D. (2013). Harnessing innovation for change: Sustainability and poverty in developing countries. *Journal of Management Studies*, 50(2), 285–306.
- Kim, K., & Lee, S-M. (2018). Does Sustainability Affect Corporate Performance and Economic Development? Evidence from the Asia-Pacific Region and North America. *Sustainability*, 10, 909. doi:https://doi.org/10.3390/su10040909.
- Kudratova, S., Huang, X., & Zhou, X. (2018). Sustainable project selection: Optimal project selection considering sustainability under reinvestment strategy. *Journal of Cleaner Production*, 203, 469-481. doi:https://doi.org/10.1016/j.jclepro.2018.08.259.
- Lin, S-H., Huang, X., Fu, G., Chen, J-T., Zhao, X., Li, J.-H., & Tzeng, G.-H. (2021). Evaluating the sustainability of urban renewal projects based on a model of hybrid multiple-attribute decisionmaking. *Land Use Policy*, 108, 1-21. doi:https://doi.org/10.1016/j.landusepol.2021.105570.
- Maehle, N. (2020). Sustainable crowdfunding: insights from the project perspective. *Baltic Journal of Management*, 15(2), 281-302. doi:https://doi.org/10.1108/BJM-02-2019-0079
- Marcelino-Sádaba, S., González-Jaen, L., & Pérez-Ezcurdia, A. (2015). Using project management as a way to. *Journal of Cleaner Production*, 99, 1-16. doi:https://doi.org/10.1016/j.jcle pro.2015.03.020.
- Messeni Petruzzelli, A., Natalicchio, A., Panniello, U., & Roma, P. (2019). Understanding the crowdfunding phenomenon and its implications for sustainability. *Technological Forecasting and Social Change*, 141, 138-148.
- Minim, D. (2019). Investment's features in order to ensure sustainable development in the longterm . *The European Proceedings of Social & Behavioural Sciences EpSBS CIEDR 2018 (Future Academy)*, 579-589. doi:https://dx.doi.org/10.15405/epsbs.2019.04.62.
- Sarkis, J. (2006). The adoption of environmental and risk management practices: Relationships to environmental performance. *Annals of Operations Research*, 145, 367–381.
- Sathirathai, S. (2021). *Living in a VUCA world*. Retrieved June, 6, 2021 from Chinadaily.com: http://www.chinadaily.com.cn/a/202107/12/WS60eb8ac0a310efa1bd6611a2.html
- Sfakianaki, E. (2015). Resource-efficient construction: Rethinking construction towards sustainability. *World Journal of Science, Technology and Sustainable Development*, 12(3), 233-242. doi:https://doi.org/10.1108/WJSTSD-03-2015-0016.
- Sharma, G. D., Tiwari, A. K., Talan, G., & Jain, M. (2021). Revisiting the sustainable versus conventional investment dilemma in COVID-19 times. *Energy Policy*, 1-11. doi:https://doi.org/10.1016/j.enpol.2021.112467.
- Silvius, G., & Schipper, R. (2019). Planning Project Stakeholder Engagement from a Sustainable Development Perspective. *Administrative sciences*, 1-22. doi:https://doi.org/10.3390/admsci 9020046.

- Stanitsas, M., Kirytopoulos, k., & Leopoulos, V. (2021). Integrating sustainability indicators into project management: The case of construction industry. *Journal of Cleaner Production*, 279, 1-14. doi:https://doi.org/10.1016/j.jclepro.2020.123774.
- Toptal, A., Özlü, H., & Konur, D. (2013). Joint decisions on inventory replenishment and emission reduction investment. *International Journal of Production Research*, 52, 243-269. doi:https://doi.org/10.1080/00207543.2013.836615.
- Tulder, R., Tilburg, R., Francken, M., & Rosa, A. (2013). *Managing the transition to a sustainable enterprise*. London: Routledge. doi:https://doi.org/10.4324/9781315879956.
- United., N. (2021). United Nations Department of Economic and Social Affairs. Retrieved June, 6, 2021 from https://sdgs.un.org/goals.
- Watt, S. R., Javidi, M., & Normore, A. (2017). INCREASING DARKNESS: COMBINING TOXIC LEADERSHIP AND VOLATILITY, UNCERTAINTY, COMPLEXITY, AND AMBIGUITY (VUCA). Advances in Educational Administration, 26, 195-206. doi:https://doi.org/10.1108/ S1479-366020160000026015
- Wiengarten, F., & Pagell, M. (2012). The importance of quality management for the success of environmental management initiatives. *Int. J.ProductionEconomics*, 140, 407-415.
- Xiao, D., Wang, J., & Lu, Q. (2020). Stimulating sustainability investment level of suppliers with strategic commitment to price and cost sharing in supply chain. *Journal of Cleaner Production*, 252, 1-15. doi:https://doi.org/10.1016/j.jclepro.2019.119732.
- Yehezkel, O. (2020). Traditional Organizations in a VUCA World. Advancement in Management, 4-22.
- Yu, M., Zhu, F., Yang, X., Wang, L., & Sun, X. (2018). Integrating Sustainability into Construction Engineering Projects: Perspective of Sustainable Project Planning. *Sustainability*, 10(3):784. doi:https://doi.org/10.3390/su10030784.
- Zein, S., Consolacion-Segura, C., & Huertas-Garcia, R. (2019). The Role of Sustainability in Brand Equity Value in the Financial Sector. *Sustainability*, 12, 254. doi:https://doi.org/10.3390 /su12010254