

Roles of Leadership in Building a Strategy for Iran’s Oil Corporates toward the Sustainability

AliAsghar Sadeghi Mojarad¹

¹Bucharest Academy of Economic Studies, Bucharest, Romania

Abstract— Today, in the globally competitive market, there is always a need for rapid change and creativity. Sever competition has forced organizations to adopt new methods after decades of continuing their established procedures. One of the most important factors that gradually have changed the core business of companies is sustainability. The required movement towards sustainability, especially in oil and gas companies, has led to the constant attention to internal and external factors and monitoring trends. In a timely manner and as needed in the long-term towards sustainability, they can adapt to changing circumstances. For instance, Iran is among the world’s top 5 countries with up-stream carbon intensity, and there is an imminent need for changing policies and procedures for promoting sustainability. In such a situation, the leaders, as the main strategists, are those who must coach their organizations toward sustainability and are responsible to develop the best strategies for change and motivate all members in their organization with profit considerations. This article examines the roles of leadership/CEOs in building a strategy for Iran’s oil corporates toward sustainability, and highlights some challenges to be overcome for a more sustainable industry.

Keywords— Sustainability, leadership, Oil Corporation, corporate strategy, growth, learning.

I. INTRODUCTION

Masnadi et al. (2018) believe that 40% of the greenhouse gases are produced in the oil and gas production process, and released into air before being consumed by end-users. They estimated that 15 - 40 % of the total gas emissions per unit comes from fossil fuel, such as gasoline. The greenhouse gases are generated during the "well to the wheel" process (Figure 1), i.e. carbon dioxide produced during the process of exploration for crude oil, drilling, production, transportation to refineries, and distillation. Thus, production processes in the oil and gas industry in terms of carbon emissions and emissions on the fields have a significant role in creating environmental crisis. Some oil and gas companies claimed that they have implemented plans about each of these challenges, and billions of dollars have been invested annually on improving methods and technologies such as renewable energy sources (Zhong & Bazilian, 2018). They also interact with communities living around oil and gas facilities.

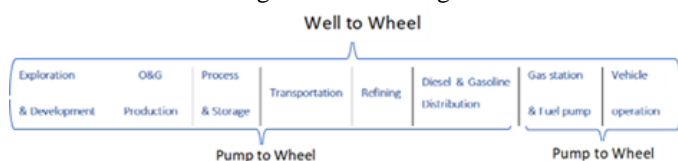


Figure 1. Well to wheel process

BP (2017) reported that Iran has the fourth largest oil reserve, with 10% of the world's total proven petroleum

reserves, and second largest gas reserves with 17.8% of world's total reserves. This makes Iran the biggest holder of hydrocarbons reserves in the world (oil + Gas reserves). Oil and gas production activities are normally associated with greenhouse gas emission. In country level up-stream carbon intensity, Iran is among the top 5 countries in the world (Jing et al., 2020). This highlights an imminent need for change within Iran's oil and gas industry, and companies have to improve their strategies toward more sustainability.

Could one argue that the strategy of oil companies that have been established merely based on producing hydrocarbon sources without caring about sustainability is on the brink of extinction? Do oil and gas companies have to change their strategies in order to keep their shareholders, the public, and governments satisfied? Since leadership is the key to successfully implementing sustainable corporate strategies (Engert, Rauter, & Baumgartner, 2016), the main question here is that what is the role of the leadership in developing sustainable strategies in oil and gas corporates? What strategy Iran’s oil corporates could follow toward reaching the upper levels of sustainability?

The oil companies’ approach toward sustainability could be explored from two literature streams: First, from the *strategy developing* literature, because during moving toward sustainability, most organizations must inevitably redefine their direction and their relationship with the external economic, technological, social, and political environment. Second stream is the *change* literature, because during moving toward sustainability, most organizations must inevitably redefine their culture, structure, routines, and most importantly, their teams and employees. The *strategy* literature itself can be divided into several categories (Mintzberg & Waters, 1985).

- Some scholars emphasize the importance of existence of a visionary leader, who can create new directions (visions) for his/her organization and mobilize all employees to pursue that vision. This kind of leaders have been referred to as *Entrepreneurial* or *Visionary*.
- Some other scholars highlight the role of analysis, forecasting, and market segmentation, especially those conducted by the planning departments, illustrated in the form of detailed quantitative milestones and predefined products and markets to be met by the organization.
- Some other scholars, referring to the uncertain environment and unknown future as well as the necessity of innovation, emphasize the importance of venturing and grassroot learnings conducted by engaged, autonomous, and free-to-try-and-error teams, which may be located in

every part of the organization. Best exemplar of this approach to strategy is the grassroots model of strategy formation (Mintzberg, 2007) which is clearly visible in high-tech and creative firms and R&D centers.

In a similar manner, the change literature can also be divided into three broad streams (Huy and Mintzberg (2003); Seo, Putnam, and Bartunek (2004)):

- One stream emphasizes top-down, large-scale, and episodic change which is led by the leader/CEO who is referred to as transformational or charismatic leader.
- The second stream highlights the importance of systematic change, which is full of techniques and almost done by analysts in the planning units.
- The third stream, referring to an uncertain and rapidly-changing environment, highlights the importance of bottom-up, incremental, organic, and capacity-building change, which includes all teams and individuals (P. M. Senge (1990) and P. Senge et al. (1999), Garvin, Edmondson, and Gino (2008), and Mojarad et al. (2020)).

Indeed, redefining the strategy and implementing change are completely on the shoulders of a visionary leader/CEO, and the end result is conditioned to his/her capabilities in creating a unique vision, and motivating and mobilizing employees in perusing that vision. The role of leadership has been partly discussed in the context of learning organization approach (Mojarad et al., 2020). This paper will shed more lights on the characteristics of leaders and their impact on the growth of an organization.

Companies' response to sustainability requirements can be any of the followings (Benn et al., 2018): "rejection; non-responsiveness; compliance; efficiency; strategic proactivity; and the sustaining corporation". Particularly, the last phase, the sustaining corporation, is an organization in which, leaders and all members of the organization have strongly internalized the purpose of working for a sustainable world, in such a way that sustainability is an integral element of the cultural DNA,

and they actively participate with their supply chain to ensure that the whole production process is fully sustainable. In such an organization, there is a constructive culture that encourages openness and innovation.

Based on the above literature, this study aims to analyze the role of leaders in building developing strategy and change process for moving Iranian oil companies toward the upper levels of sustainability according to six phases' models of Benn, Edwards, & Williams, 2018. Results of a quantitative and qualitative survey are analyzed, and implications for the oil and gas industry in Iran are further discussed.

II. RESEARCH METHODOLOGY

The research design of this study is comprised of two qualitative and quantitative sections:

A. Qualitative Research

In the qualitative section, initially purposeful sampling is conducted (Lincoln & Guba, 1988) to select key information-rich informants (Patton, 2002) in Iran's oil industry for in-depth interviews. These interviews themselves are comprised of one-on-one interviews and focus groups. Focus group is used when the researchers want to collect the shared understanding of multiple key informants (Clark & Creswell, 2014). Both one-on-one interviews and focus groups are strongly dependent on open-ended questioning and a probing strategy (Clark & Creswell, 2014) to gather in-depth insights from informants. A specific selection scheme was applied to qualify the expert panelists. The selection criteria are:

- have more than 15 years of oil and gas industry experience;
- hold an executive level position within their organization;
- be actively engaged in strategic decision-making and sustainability issues; and
- pose a proven track record in professional practice

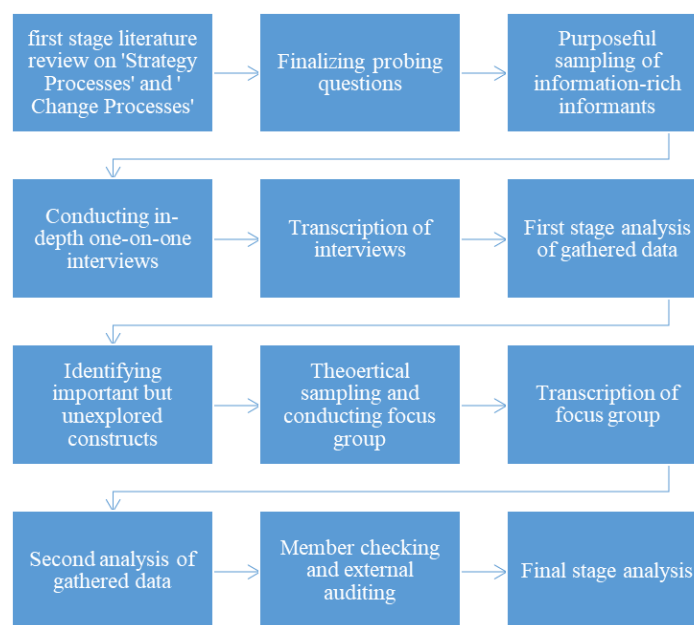


Figure 2. Survey and analysis flow chart

Survey and data collection is an essential step in any research, and the data quality determines quality of the study. Hence, this study undertakes a robust methodology to ensure the quality and applicability of results and conclusions. The following flow chart illustrates the flowchart of the survey.

During the interviews, the following questions are pursued:

- What is the overall approach of oil companies in developing countries regarding Benn et al. (2018) six sustainability phases?
- How and why this approach has been formed? What are the root causes?
- How to move oil companies through such approach toward upper sustainability phases?
- Regarding the *strategy* and *change* literature, would the solution be found in existence of a visionary and transformational leader, or existence of an elaborated analytic plan, or building an organic learning organization?
- Why previous similar endeavors (with other aims) have failed in persuading oil companies for better sustainability? What implications the answer to this question will have for moving oil companies toward upper sustainability phases?

B. Quantitative Research

Based on the result of the qualitative section, a survey questionnaire is designed and surveyed on a sample of 112 middle-level managers in the companies of Iranian oil industry's selected segment. The findings in the qualitative section indicate the critical role of a visionary and transformational leader, therefore, the survey questionnaire is designed to assess the leadership success of CEOs in the selected companies. For this aim, the survey introduced by Bass and Avolio (2000), Multifactor Leadership Questionnaire (MLQ), the most widely used survey in leadership studies (Bass and Riggio (2006); Muenjohn and Armstrong (2008)) is used as the basis of the study. Regarding sustainability literature, a sustainability leadership questionnaire is designed to assess visionary and transformational capabilities of companies' CEOs and leadership styles of Iranian oil industry's selected segment. After conducting the survey, the gathered data are interpreted to discover the critical weaknesses of leaders/CEOs which have hindered the oil companies' approach toward upper sustainability phases. The survey has targeted 112 correspondents from several oil companies, and correspondents are selected from Management/Leadership and departments of Technical, Planning, HSE and Human Resource. After conducting the survey, the gathered data are evaluated to discover the critical weaknesses of oil companies' leadership that have impacted the sustainability.

In terms of assessing data quality, Cronbach's alpha test for measuring the scale reliability for part B of Questionnaire was performed. Moreover, one sample Kolmogorov-Smirnov test or Kolmogorov-Smirnov normality test was applied for testing the normality of distribution of variable. Finally, the one Sample t-Test is performed to determine whether the

sample mean is statistically different from a known or hypothesized population mean. Preliminary results reveal that;

- data distribution is normal;
- the reliability of the research tool is close to one, indicating a high degree of credibility of the data collected.
- The average of 3 in the data in some variables indicates a favorable condition and less than 3 indicators of undesired condition. To determine the significance of the variables, wherever the t statistic is negative, the average is not more than 3, which indicates an optimal situation.

It is worth noting that this research is partially based on a questionnaire, of which some results were used in earlier articles (Mojarad et al., 2020; Sadeghi Mojarad, Atashbari, & Tantau, 2018). Most of the results presented herein are primary data to be published in this paper. However, some secondary data from abovementioned studies are also used and properly cited wherever needed.

III. RESULTS AND DISCUSSION

A. Qualitative Analysis

When asked directly from panelists "What is the overall approach of selected oil companies regarding the six sustainability phases? All panelists stated that "oil companies are in compliance stage". Generally, the respondents stated that: "The main target of our company is to increase profits. Top management under pressure of shareholders is trying to minimize the costs. They indirectly want us to accomplish the projects with minimum standards." They argue that "the minimum standards are an optimum point". Summary of Expert Panel View Point:

- Business leaders play a critical role in defining and implementing sustainability initiatives. Leaders must communicate their vision with enthusiasm to convince their organizations to commit to sustainability programs. Most oil companies have not developed a strategy and clear business plan for sustainability.
- Most of the leaders are trying to act in a compliance manner. However, in the company's vision and mission, they claim that the level of sustainability needs to be maximized. This is behavioral paradox.
- Business leaders must gather hard data on the financial, social and environmental benefits of sustainability in order to create a compelling business plan and strategy
- Leaders must communicate their vision with enthusiasm to convince their organizations to commit to sustainability programs.
- Top management paid attention to the sustainability, but they believed that sustainability is a top-down issue.
- In staff point of view, actions like paying attention to sustainability at the level of managers are just a propaganda activity. They may not necessarily believe that.
- Leaders find it difficult to construct a business plan for sustainability because the results are often intangible and delivered over a long-term frame.

- Sustainability is a complex issue inherently. Definitions of sustainability differ among companies and industry sectors.
- Most of the time, the fines that companies have to pay is less than the cost of executing sustainability due to non-compliance with HSE. This has become an incentive to disregard the sustainability.
- Regulators do not have a proper understanding of the sustainability of oil companies.
- HSE compliance must be important especially in the environment of price fluctuation and cost savings.
- In the framework of sustainability, Companies have to Pay more attention to social responsibility and spend more on education.
- Based on past experiences, oil companies' leaders believe that the risk of non-compliance can be managed through lobbying among local and central governments. Albeit, the public pressure on oil companies is on the rise.
- This is while the global oil price is fluctuating, and shareholders only concern about profits.
- The market in the oil and gas industries is very competitive, so the projects must be delivered at the lowest risk and cost.
- Production of oil and gas are getting more complex, and technology plays a key role in production of the remaining reserves.
- Employees are not generally interested in changing routine work processes in their organizations. If they do not participate in the change process, they will not cooperate.
- The change is a complex process; the corporate culture of the company must also be prepared for change.
- Stakeholders are not motivated to change, so risks and rewards are not understood and the change is not embraced as beneficial to the organization. In this context, change cannot be sustained.



Figure 3. Word Frequency Visualization, data from Mojarad, Atashbari, and Tantau (2020)

The above findings may be somehow demonstrated by the word frequency visualization of the expert panel shown in Figure 3. The size of the words in the figure indicate frequency of the word during the interview with expert panel participant.

As seen in the above figure, leader is one of the most frequently used words during the interview. Now, from the results of quantitative analysis, leaders' attitude in the studied companies will be examined, and their role in the growth of an organization will be discussed.

B. Quantitative Analysis

There are still several elements of traditional management practiced and performed in the Middle East region. However, almost instant access to information and media, has significantly changed this culture over the past two decades. According to the survey, managers in the studied companies are more welcoming about new ideas, and acceptance for challenging opinions are even on rise (Figure 4).

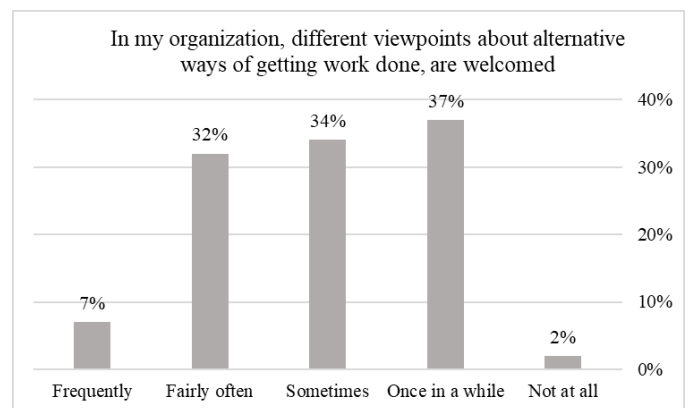


Figure 4. Leaders' acceptance of different viewpoints and approaches.

Not only leaders, but also employees can contribute to improving business attitude in their respective organizations. The dialogue and debate about different viewpoints may indicate the working environment of a company. Similar to the previous chart, companies in this region exhibited a promising figure as 45% of the respondents believe that such debates and dialogues are often or frequent (Figure 5)

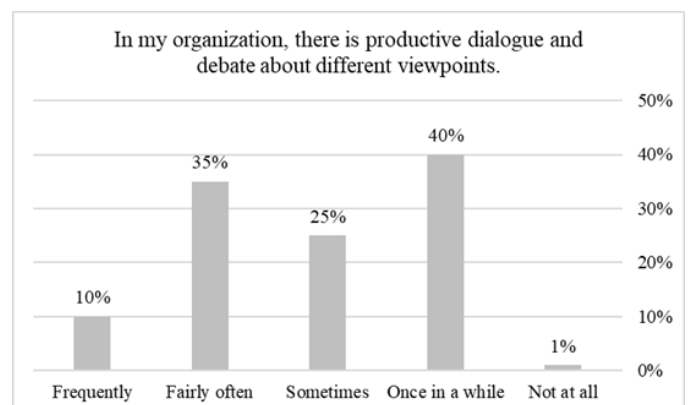


Figure 5. Frequency of having dialogue and debate about different viewpoints in studied companies.

Now, coming back to leaders' role, success of a company depends on whether the dialogues and debates are utilized by company management, or they are left as expression of opinion. According to Figure 6, 27% of the respondents believed that their senior management don't ask probing questions, nor do they listen attentively (they do once in a while or not at all). This can be added to the 49% of those who responded sometimes, reaching 76%, which is an alarming sound for business. Listening attentively is a key to success in thriving and developing organizations. Therefore, they will have to revise their internal procedures with the aim of improving business approaches.

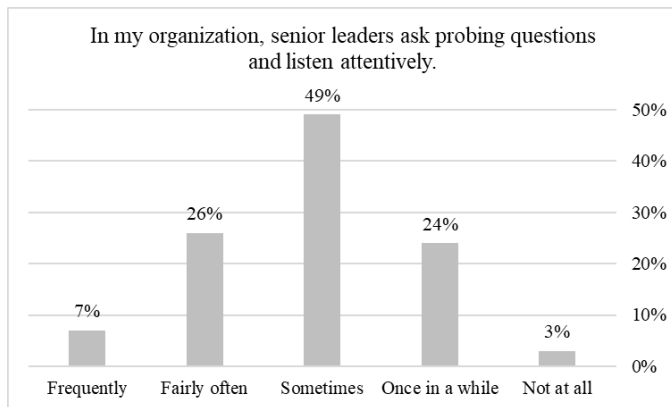


Figure 6. Leaders' attitude toward promoting different opinions

Once there is a comfortable condition for expressing ideas and sharing viewpoints between managers and employees is created, organizations will be on the run for higher levels of performance. Employees and managers must share the same vision as well as the approach to aim the set goals. Figure 7 presents statistics of responses to a question about senior leaders' intentions to specify the importance of having strong sense of purpose. Reasoning and purposeful activities in any company have greater chance of success, and any shortcoming may have roots in this issue.



Figure 7. Leaders' attitude toward specifying the goals and sense of purpose with employees.

There is a strong relationship between growth of a company and mindset of its readers. Leaders who believe in change, are ready to start from themselves, and participate in

the change process along with their employees, have the best chance of success. The growth mindset has several aspects, of which progressive approach about business processes are essential. As shown in Figure 8, from the studied companies, the leaders who wait until things go wrong then fix them, are mostly those who don't adhere to moral and ethical consequences of their decisions (cyan bar charts).

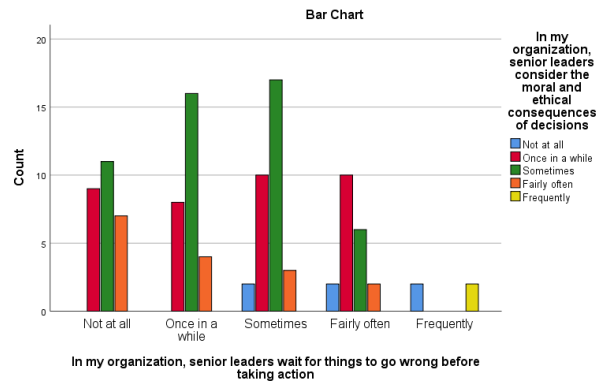


Figure 8. Cross-plot of leaders' commitment to consequences of their decisions with their attitude toward preventive actions. Data partially from Mojarad et al. (2020)

On the other hand, leaders are supposed to assist employees improve their professional capabilities, which in return, can improve knowledge and capabilities of the company. In this study, there seems to be a reasonable attitude among leaders in this regard (Figure 9). There are few leaders who don't exercise this at all among the studied companies.

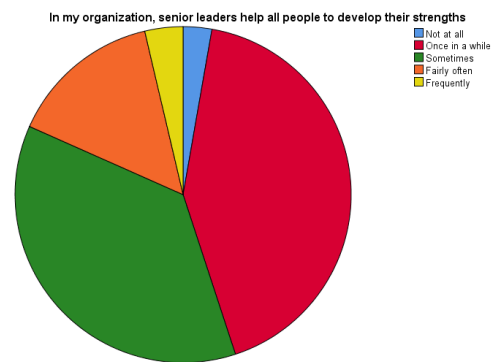


Figure 9. Frequency of leader's efforts assisting employees develop their strengths.

IV. CONCLUSION

Leaders' role is essential in success of any organization. More specifically for achieving the goals of sustainability, leaders must get prepared for significant change while undertaking necessary responsibilities. Indeed, employees' contribution is as important as managers, but the focus of this paper was on the role of leadership. Management in the Middle East region still carries some elements of traditional methods, which in turn pose some challenges on short and long term performance of organizations. Nonetheless, some promising attitude among managers in this region have been observed. As an example, they seem to be open to new ideas

and promote dialogue and debates. On the other hand, they don't listen attentively, which means open discussions and debates don't lead to necessary organizational changes. Moreover, leaders in this region don't properly attend to the consequences of their decisions, which correlates with some old management mindset that doesn't fix anything before it breaks. All of these indicate a need for fundamental change in the management methods in the Middle East region.

REFERENCES

- [1] Bass, B. M., & Avolio, B. J. (2000). Multifactor leadership questionnaire: MLQ; sampler set; technical report, leader form, rater form, and scoring key for MLQ form 5x-short: Mind Garden.
- [2] Bass, B. M., & Riggio, R. E. (2006). Transformational leadership.
- [3] Benn, S., Edwards, M., et al. (2018). Leading towards sustainability Organizational Change for Corporate Sustainability (pp. 1-65): Routledge.
- [4] BP. (2017). Energy outlook 2017. Retrieved from <http://www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2017/bp-energy-outlook-2017.pdf>
- [5] Clark, V. L. P., & Creswell, J. W. (2014). Understanding research: A consumer's guide: Pearson Higher Ed.
- [6] Engert, S., Rauter, R., et al. (2016). Exploring the integration of corporate sustainability into strategic management: a literature review. *Journal of cleaner production*, 112, 2833-2850. doi:<https://doi.org/10.1016/j.jclepro.2015.08.031>
- [7] Garvin, D. A., Edmondson, A. C., et al. (2008). Is yours a learning organization? *Harvard business review*, 86(3), 109.
- [8] Huy, Q. N., & Mintzberg, H. (2003). The rhythm of change. *MIT Sloan management review*, 44(4), 79-84.
- [9] Jing, L., El-Houjeiri, H. M., et al. (2020). Carbon intensity of global crude oil refining and mitigation potential. *Nature Climate Change*, 10(6), 526-532.
- [10] Lincoln, Y. S., & Guba, E. G. (1988). Criteria for Assessing Naturalistic Inquiries as Reports.
- [11] Masnadi, M. S., El-Houjeiri, H. M., et al. (2018). Global carbon intensity of crude oil production. *Science*, 361(6405), 851-853.
- [12] Mintzberg, H. (2007). *Tracking strategies: Toward a general theory*: Oxford University Press on Demand.
- [13] Mintzberg, H., & Waters, J. A. (1985). Of strategies, deliberate and emergent. *Strategic management journal*, 6(3), 257-272.
- [14] Mojarad, A. S., Atashbari, V., et al. (2020). Developing a Strategy Process toward Sustainability for Leading Oil Corporates in a Developing Country: A Learning Organization Approach.
- [15] Muenjohn, N., & Armstrong, A. (2008). Evaluating the structural validity of the multifactor leadership questionnaire (MLQ), capturing the leadership factors of transformational-transactional leadership. *Contemporary management research*, 4(1).
- [16] Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, Cal.: Sage Publications, 4.
- [17] Sadeghi Mojarad, A. A., Atashbari, V., et al. (2018). Challenges for Sustainable Development Strategies in Oil and Gas Industries. Paper presented at the The 12th International Conference, on Business Excellence, Innovation and Sustainability in a Turbulent Economic Environment, Bucharest, Romania.
- [18] Senge, P., Kleiner, A., et al. (1999). The dance of change: The challenges to sustaining momentum in learning organizations. *Performance Improvement*, 38(5), 55-58.
- [19] Senge, P. M. (1990). *The art and practice of the learning organization*: New York: Doubleday.
- [20] Seo, M., Putnam, L. L., et al. (2004). Dualities and tensions of planned organizational change. *Handbook of organizational change and innovation*, 73-107.
- [21] Zhong, M., & Bazilian, M. D. (2018). Contours of the energy transition: Investment by international oil and gas companies in renewable energy. *The Electricity Journal*, 31(1), 82-91.