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ABSTRACT
DOCTORAL THESIS

RESEARCH ON THE INFLUENCE OF ORGANIZATIONAL CULTURE ON MANAGERS' RESISTANCE TO CHANGE

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Keywords: *attitudes, change, collectivism-individualism, distance from power, management, masculinity-femininity, organizational culture, perceptions, resistance to change, uncertainty avoidance, willingness.*

Concepts

The influence of *organizational culture* on managers' *resistance to change* is a topical and important issue in modern *management*. In a world characterized by rapid and continuous *change*, the ability of organizations to adapt and implement *change* effectively is crucial for long-term success.

Organizational culture plays a key role in this process, directly influencing managers' *attitudes* and behaviours in the face of *change*. *Organizational culture* is part of every company. It represents the core values, norms and general rules that govern the company. Even in Romanian companies, it is becoming an increasingly prominent concept. Every organization has a collective awareness of the importance of hierarchy and authority, different ideas about work commitment, about what it means to be a member of an organization and how a member of the organization should behave.

Organizational culture is meant to strengthen the cohesion of people, who make up the organization. It *change*s people's individuality according to the requirements of the organization and tries to alleviate the feeling of alienation that occurs in large companies.

With increasing globalization in today's world, it seems necessary to consider *organizational culture* as an important factor influencing *change*.

In the context of climate *change*, legislative changes in the energy sector, the emergence of new technologies on the market, the emergence/disappearance of competitors, as well as the energy crisis generated by the war between Ukraine and Russia, energy companies are going through a period of transition. It is therefore important to understand the concepts of *organizational culture*, *change* and *resilience to change* in order to support *management* to effectively manage the transition to cleaner and sustainable energy sources.

Energy companies are having to change their *organizational culture* to cope with unforeseen changes and to ensure their business continues to operate in a sustainable way. These changes may include adopting strategies to diversify energy sources, improve operational efficiency and reduce dependence on particular markets or resources. Emphasis can also be placed on innovation, the development of a sustainability-oriented *organizational culture* and adaptability to market changes. It is important for companies to be proactive in adjusting their *organizational culture* in order to respond effectively to the challenges posed by the current energy crisis. It is therefore very important to understand the concepts of *organizational culture*, change and *resilience to change* in order to support *management* to effectively manage the transition process that energy companies are forced to go through.

Organizational culture has a significant impact on how change is managed in the energy sector. A strong *organizational culture*, oriented towards innovation and adaptability, can facilitate the implementation of positive change within an energy company. On the other hand, an *organizational culture* that is rigid, resistant to change or dominated by inertia can hinder progress and make it difficult to adopt more sustainable and energy efficient practices. It is important that energy organizations recognize the influence that *organizational culture* has on change and invest in creating a culture that supports progress and innovation in the sector. This includes involving employees in decision-making, promoting open and transparent communication, supporting employees' personal and professional development and creating a safe and stimulating working environment.

By fostering a healthy and change-oriented *organizational culture*, energy companies will be able to more easily navigate the transformations needed to meet today's challenges and contribute to better *management* of energy resources.

Another important aspect that energy companies should not neglect is resilience to change. Resistance to change is the negative reaction of employees or groups in the company to proposed changes. This can include *attitudes* and behaviors that try to prevent or delay change. Reasons for resistance can range from fear of the unknown, loss of control, to discomfort caused by the disruption of daily routines, old habits and practices, the economic interests of some companies, but also but also possible negative consequences of change.

However, it is important to understand that the transition to cleaner and sustainable energy sources is essential for protecting the environment and ensuring a sustainable future for future generations. Education and awareness can play a crucial role in overcoming this resistance and promoting the adoption of more environmentally friendly energy solutions.

Taking into account the topics addressed in the research, *organizational culture* and change, we can state that the two concepts are highly complex and that treating them synergistically can generate new opportunities and directions for *management* action.

The motivation for the choice of the research topic emerged from the desire to explore and examine the impact of *organizational culture* on change from multiple perspectives (national, industries, companies) and to make a significant contribution to understanding the complexity of *organizational culture* for the changing business environment.

The topicality of the research topic resides in the recent approach in the literature, on the one hand, and in the managerial implications that the two key concepts that accompany the whole PhD thesis - *organizational culture* and change - have for national economies and business in particular. In recent times, a number of researches have highlighted the influence of national culture on human resource development and social responsibility, but nowhere in evidence are studies focused on analyzing the influence of *organizational culture* on change in national approach, industries and businesses.

In this context, the topic proposed for research through this PhD thesis entitled „Research on the influence of *organizational culture* on managers' resistance to change" will contribute to the development of the field of „engineering and *management*" by substantiating a topic of interest for both the academic and business world.

The topic is of great **topicality and relevance** in the field of engineering, management and organizational behaviour. It involves examining how shared values, norms, beliefs and practices within an organization can influence managers' *attitudes* and behaviours towards change.

The current state of knowledge in **the field of research** undertaken, does not highlight a plethora of literature (national and international) generated by the complexity of the topic.

By exploring this complex topic, the purpose of the research is to identify and analyze the *organizational culture* of companies operating in the energy sector, how managers of the companies perceive change in their companies and how they are influenced by various factors such as gender, age and seniority, as well as their *willingness* to participate in the process of change in *organizational culture*.

Given the aim of the research, the general objectives of this scientific endeavor are based on the current state of knowledge in the field and on the limitations generated by the existing literature:

- theoretical grounding of the concepts of *organizational culture*, change and resistance to change, as well as highlighting their role in previous studies;
- identifying and evaluating the Hofstede model for determining and measuring *organizational culture* at the level of nations, industries and companies;
- presenting and describing perspectives on Hofstede's four broad cultural dimensions identified in the literature;
- addressing the relationship between *organizational culture* - change - resistance to change and identifying trends in the field;
- investigating and determining the relationship between cultural dimensions at national and company level in the national energy system;
- proposing and developing strategies for *organizational culture* change, i.e. managing resistance to change each of the four cultural dimensions according to the characteristics of the culture type.

The scientific approach was based on a comprehensive bibliographical resource base including specialized books and scientific articles from academic journals indexed in prestigious databases such as SCOPUS, Web of Science, Science Direct, etc. Also, for the analytical, synthetic approach of the research and the realization of empirical research, sources that provide credible data and information were used, namely databases - web sources such as: Hofstede - for culture.

The structure of the thesis follows a logical, well-defined path and emphasizes the main theoretical and methodological aspects in accordance with the stated objectives, respecting the rules of ethics and conduct in research.

In order to respond to the complexity of the topic, the thesis is structured in five chapters, plus the introduction, bibliographical references and appendices (1-4). The content of the thesis is based on 288 bibliographical references, 46 tables, 92 figures and four appendices.

In order to understand the *organizational culture*, managers' *perceptions* and *attitudes* towards change, we conducted a research in Complexul Energetic Oltenia SA (CE OLTENIA), a fossil fuel (lignite coal) based power generation company, a component of the Romanian energy system, which is undergoing necessary transformations to meet current challenges and to contribute to better *management* of energy resources. CE OLTENIA is in a broad process of transition towards cleaner and sustainable energy sources to protect the environment and ensure a sustainable future for future generations.

The organization CE OLTENIA was selected for the research because it is a representative energy company in the energy sector. During the research period March-June 2022, there were 32 energy companies in the national energy system in Romania with a total of 62,248 employees, 567 of which were in managerial positions (managers) according to the information published on the official websites. Out of the total number of employees in the national energy system, CE OLTENIA employed 11,030 people, 496 of whom were university graduates in managerial positions (managers), as can be seen in Appendix 1 to this thesis.

So far, no formal study has been conducted on *organizational culture* and managers' *perceptions* and *attitudes* towards change in CE OLTENIA. The importance of such a study is more than necessary in order to help companies with local capital in the energy sector to reach the same level of performance as companies with foreign capital.

This study is timely and necessary not only to determine the basis or theory in use of managers, but also to form the baseline for future studies on planning and change *management* taking into account the components of *organizational culture*, change and resistance to change.

The general objectives of the formulated research were based on addressing how the concept of change management can be shaped by the implementation of *organizational culture*, highlighting the evolution of this concept and identifying ways for companies to change their existing *organizational culture*. Thus, in this thesis we have formulated two general objectives as follows:

General Objective 1. *„To analyze how organizations in the Romanian energy system reflect the national culture as measured by Geert Hofstede's method".*

General objective 2. *„Analysis of the way managers show willingness to participate in the process of organizational culture change, regardless of socio-demographic and professional characteristics".*

The research was conducted between March and June 2022 in CE OLTENIA, in which, based on the data collected using the Questionnaire composed of three Sections consisting of 19 questions with 47 items, we conducted two studies that focused on two general objectives, ten general hypotheses (IG) and eight specific hypotheses (IS).

Through Study 1 we analyzed how the *organizational culture* of CE OLTENIA, a company in the Romanian energy system, reflects the national culture measured by Hofstede's method. This study is based on Hofstede's massive research on the four major cultural dimensions identified, namely: distance to power (PDI), individualism-collectivism (IDV), *masculinity-femininity* (MAS) and *uncertainty avoidance* (UAI). Study 1 was conducted by analyzing the responses to 32 items of questions 6, 7, 8, 9 found in the Questionnaire-Section II and is schematized in the figure below:

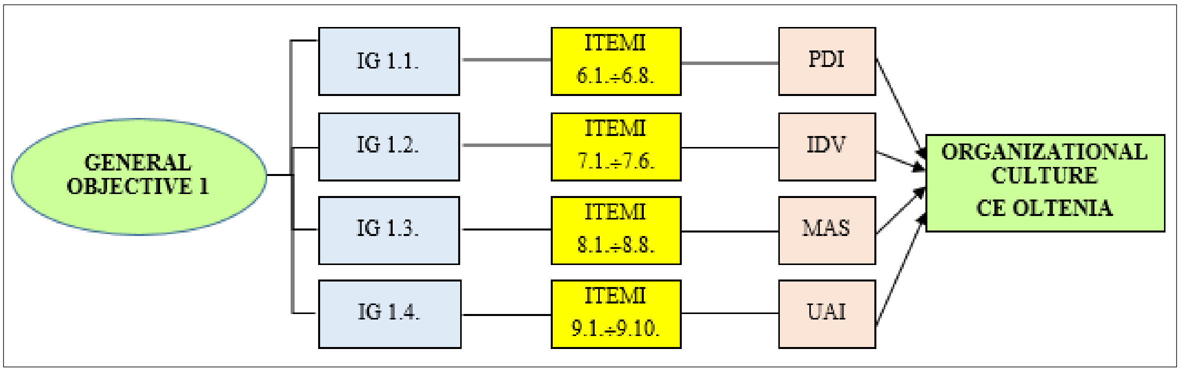
GENERAL OBJECTIVE 1
IG 1.1.
IG 1.2.
IG 1.3.
IG 1.4.
ITEMI 6.1.÷6.8.
ITEMI 7.1.÷7.6.
ITEMI 8.1.÷8.8.
ITEMI 9.1.÷9.10.
PDI
IDV
MAS
UAI
ORGANIZATIONAL CULTURE CE OLTENIA

Fig.a: Study 1- Analysis of organizational culture dimensions in CE OLTENIA
Source: own processing

Through Study 2 we analyzed managers' *perceptions* of *change*, i.e. how managers show *willingness* to participate in the process of change in the *organizational culture* of CE OLTENIA, regardless of socio-demographic and professional characteristics. Study 2 was carried out by analyzing the answers to the 10 items of questions 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, found in the Questionnaire-Section III and is schematically presented in the figure below:

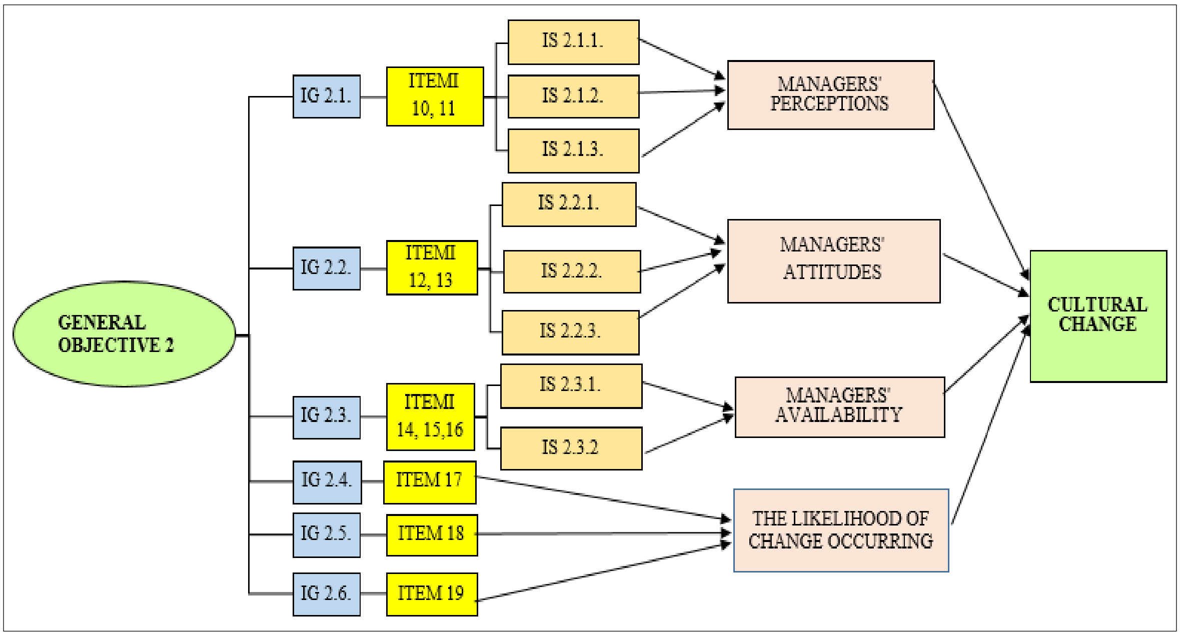
GENERAL OBJECTIVE 2
IG 2.1.
IG 2.2.
IG 2.3.
IG 2.4.
IG 2.5.
IG 2.6.
ITEMI 10, 11
ITEMI 12, 13
ITEMI 14, 15,16
ITEM 17
ITEM 18
ITEM 19
IS 2.1.1.
IS 2.1.2.
IS 2.1.3.
IS 2.2.1.
IS 2.2.2.
IS 2.2.3.
IS 2.3.1.
IS 2.3.2
MANAGERS' PERCEPTIONS
MANAGERS' ATTITUDES
MANAGERS' AVAILABILITY
THE LIKELIHOOD OF CHANGE OCCURRING
CULTURAL CHANGE

Fig.b: Study 2 - Analysis of managers' perceptions and attitudes towards organizational culture change in CE OLTENIA
Source: own processing

The research hypotheses required empirical verification, in accordance with scientific requirements, using various methods (experiments, reference to reality or inductive reasoning of empirical research). In this case, the targeted method consisted in collecting, analyzing and interpreting data in order to relate them to reality.

Research Methodology

The scientific research in this thesis was a primary-quantitative research, with the main aim of achieving the general objectives set. These were transformed into empirical representations, which in turn led to the development of a theoretical model guaranteeing the ability to measure certain correlations and thus establish trends.

The research methodology consisted in collecting data from the selected organization, processing and analyzing them. The research methodology also involved the development of a Questionnaire appropriate to the overall objectives and conducting the research on a representative sample from the energy company in order to concretize the analysis of specific elements of *organizational culture* and change.

The questionnaire administered online via Google Forms was sent to 496 university-educated employees holding managerial positions in the company, and the responses were recorded to ensure anonymity. They collected 261 completed questionnaires, representing 52.62% of the 496 questionnaires distributed.

The independent variables were cultural dimensions (power distance, *collectivism-individualism, masculinity-femininity* and *uncertainty avoidance*) and the dependent variables were considered as gender, age and length of service of the responding managers. Logit regression analysis, T-test, Cronbach's Alpha test, Chi squared test, as well as Spearman correlations, Pearson bivariate correlations and Kendall correlations were used to analyze the data.

Relevance of the research topic

In a broader sense, this thesis will help corporate departments dealing with change to learn more about national culture, *organizational culture* and use this knowledge to help them come up with a new approach for their change implementation plan. In addition, they will identify the advantages and disadvantages of different aspects of *organizational culture* and apply this to determine the success of the process, including leadership.

For those who are actually implementing change, this thesis can be a good resource for identifying the limitations of their approach and making the necessary changes in terms of cultural differences to account for. For example, to transform an inward-focused organization into an outward-focused, customer-focused organization will require a change in *organizational culture*, which in turn may be driven by managers' understanding of *organizational culture*. Furthermore, this can then help to strategize and find more effective means of reaching their customer base, addressing their weaknesses while maintaining their strengths.

Academically and literarily, this thesis can help students and researchers better understand *organizational culture*, change, resistance to change, and the role of leadership in the context of change. It also creates a good platform for them to conduct future research in the field, potentially addressing limitations of this research that they may feel the need to improve. These could be new more specific research topics and potentially good contributions to the academic areas of *organizational culture* management, change management and social sciences.

Chapter 1 entitled *„General conceptual considerations on organizational culture"* is structured in 12 sub-chapters presenting the concept and foundations of organizational culture, national culture, particularities of national culture, organizational climate, description of the typology of the four most important cultural dimensions identified by Hofstede for Romania, namely *distance from power*, *collectivism-individualism*, *masculinity-femininity* and *uncertainty avoidance*, criticism of the Hofstede model and conclusions.

Chapter 2 entitled „*Change Management*” is structured in six sub-chapters presenting an overview of change management, the impact of *organizational culture* on *change*, describing the role and importance of communication in change management, the importance of leadeship in change management and conclusions.

Chapter 3 entitled „*Resistance to Change*” is structured in nine sub-chapters dealing with the concept of resistance to change, how resistance to change manifests itself at individual, group and organizational level, its impact on *organizational culture* change, the importance of leadership in managing resistance to change in the energy system, global, European and national in the current context of the energy crisis, the ambitions of the European Union to achieve the targets set for electricity production using renewable energy sources, and conclusions.

Chapter 4 entitled „Empirical research on *organizational culture* and managers' resistance to change in Romanian energy companies, case study - CE OLTENIA” is structured in seven sub-chapters presenting the organization studied, the research methodology, the objectives and research hypotheses of the thesis, the problem statement, the research instruments, the questionnaire design, the sampling population, the empirical research conducted in a local company with majority state capital in the energy sector, as well as the partial conclusions from the research.

The empirical data that were found through the two research studies conducted in the energy company were presented in two sections. In the first section we conducted Study 1 to analyze the *organizational culture* based on Hofstede's typology. We determined the values of cultural indices for the four most important cultural dimensions, i.e. *distance from power*, individualism-collectivism, *masculinity-femininity*, *uncertainty avoidance*, and their correlations. In the second section, we conducted Study 2 to analyze managers' *perceptions*, *attitudes*, and their *willingness* to participate in *organizational culture* change process, according to certain demographic and socio-professional characteristics and whether managers show resistance to change. We presented how managers perceive change in the company and how they are influenced by various factors, namely gender, age and seniority in the company, as well as managers' *willingness* to participate in the process of *organizational culture* change in the company. We also analysed employees' opinions and *attitudes* towards various aspects of the organization, such as: recognition of change achieved in the last 3 (three) years and the advantageous forces behind them, identification of obstacles to organizational change, *willingness* to engage in the process of *organizational culture* change, recognition of key means and facilitators of implementing organizational change.

As a result of the empirical analysis, a number of research findings emerged, among the most relevant are:

- The cultural index for the dimension Distance to power, estimated by us for CE OLTENIA, presents the value PDI=56, representing an average value that indicates the manifestation of the characteristics of the cultural dimension Great distance to power, and for Romania the value estimated by Hofstede is PDI=90, which means that both in CE OLTENIA and in Romania, the culture of the Great distance to power type is manifested.
- The cultural index for the Individualism-Collectivism dimension, estimated by us for the EC OLTENIA, presents the value IDV=51, representing an average value which indicates the manifestation of the characteristics of the cultural dimension of the Individualism type, while for Romania the value estimated by Hofstede is IDV=30, which means that in the EC OLTENIA there is a culture of the Individualism type, while in Romania there is a culture of the Collectivism type. This suggests that the organization
- The cultural index for the *Masculinity-Femininity* dimension, estimated by us for the EC OLTENIA, presents the value MAS=61, representing an above average value which indicates the manifestation of the characteristics of the cultural dimension of Masculinity type, while for Romania the value estimated by Hofstede is MAS=42, which means that in the EC OLTENIA there is a Masculinity type culture, while in Romania there is a Femininity type culture.
- The cultural index for the dimension *Uncertainty Avoidance*, estimated by us for the EC OLTENIA, presents the value UAI=86, representing a high value which indicates the manifestation of the characteristics of the cultural dimension of the type high degree of *Uncertainty Avoidance*, while for Romania the value estimated by Hofstede is UAI=90, which means that in both the EC OLTENIA and Romania, the culture of the type high degree of *Uncertainty Avoidance* is manifested.
- There are no significant differences in respondents' *perceptions* of the main changes realized in the last 3 (three) years in the energy company between the 2 (two) subgroups, male and female managers.
- The *perceptions* of managers under 44 years of age and those over 45 years of age do not differ significantly with regard to the changes realized in the last 3 (three) years in the energy company.
- The *perceptions* of managers with less than 20 years of job seniority regarding the main changes realized in the last 3 (three) years in the energy company do not differ significantly from the *perceptions* of managers with more than 21 years of job seniority.
- *Willingness* of male managers to participate in the process of *organizational culture* change in the energy company does not differ significantly from the willingness of female managers.
- The *willingness* of managers under 44 years of age to participate in the process of *organizational culture* change in the energy company, does not differ significantly from the *willingness* of managers over 45 years of age.
- *Willingness* of managers with less than 20 years of working experience to participate in the process of *organizational culture* change in the energy company does not differ significantly from the *willingness* of managers with more than 21 years of working experience.

- Managers' age and seniority in the company do not influence how they perceive the changes realized in the energy company.
- Managers' age and seniority in the company influence their *willingness* to participate in *organizational culture* change in the energy company, this relationship is inversely proportional, in the sense that the older the age of employees, the lower their *willingness* to participate in *organizational culture* change in CE OLTENIA.
- Male managers are more likely to participate in change than female managers.
- Managers willing to participate in change encourage the likelihood of change.
- Changing the employee appraisal process influences the likelihood of change.

Chapter 5 titled „Discussion, theoretical implications, practical implications, research strengths, research limitations, future research directions, author's contributions, conclusions" is structured in eight sub-chapters presenting all the specified elements.

Complex and in-depth **discussions** can take place based on the concepts of *organizational culture*, change and resistance to change, exploring different aspects of organizational transformation and the role of managers in this process. We propose some important topics for such discussions: the definition of *organizational culture*, the concept of organizational change, resistance to change, the role of managers in the change process, case studies and practical examples.

The PhD thesis addresses several main questions:

- How is the national culture reflected in the *organizational culture* of the energy company based on Hofstede's typology?
- What *perceptions* and *attitudes* do managers show towards the change of the company's *organizational culture*?
- How can *organizational culture* influence the results of organizational change implementation, considering the complexity of challenges faced by energy organizations?

Theoretical implications regarding theoretical perspectives that can be used to better understand the complex of mechanisms linking *organizational culture* and change outcomes. The implications also address the perspectives that the results have for the general literature beyond *organizational culture*, with a focus on organizational climate and human resources, organizational *management* research.

Practical implications emphasize that practitioners should be aware that changing an organization's culture is a complex and long-term effort that requires dedication, perseverance, and attention to detail without losing sight of the big picture. It is therefore surprising that successful cultural change is usually a matter of years (e.g., Paul et Fenlason, 2014; Small et Newton, 2014), whereas superficial, rushed change efforts are often doomed to fail (Kotter, 1995; Heskett, 2011).

Strengths of the research are represented by the two studies conducted, which address relevant and current issues in the field of *organizational culture* and change. The two studies complement each other well one another providing diverse perspectives on this issue that collectively contribute to a better understanding of these topics. The thesis not only addresses the important issues mentioned, but also advances the field by indicating options for researchers who seek to break new ground by investigating the relationship between *organizational culture* and resistance to change from innovative perspectives and with cutting-edge methods.

Limitations of the research primarily represented by the fact that the results of the empirical studies based on the sample of a single organization, allowed to obtain a very comprehensive sample from this organization (as opposed to investigating several organizations in a rather superficial manner). Despite this advantage, the generalizability of the results is obviously limited. In order to provide evidence of generalizability, future research in other organizations in the energy system attempting to replicate the findings of this thesis is needed; second, the empirical studies in this thesis are cross-sectional and have measured cultural as well as outcome variables at a given point in time. The limitations identified in carrying out the scientific endeavor can be transformed into insights for future research.

Future research directions

1. Investigate additional cultural elements that are still underrepresented in the current literature.

2. Investigating dysfunctional cultural elements - an area of research that seems to be of particular interest. While most models of *organizational culture* explicitly or implicitly assume that each cultural dimension is related to different, but generally still positive, outcomes (e.g., Denison et Mishra, 1995; Sarros, Gray, Densten, & Cooper, 2005; Cameron et Quinn, 2006), there is some research (e.g., Balthazard, Cooke et Potter, 2006; Ashkanasy et Härtel, 2014) as well as considerable anecdotal evidence (e.g., Flamholtz et Randle, 2011; Heskett, 2011) suggesting that *organizational culture* may contain elements that are categorically negative. In particular, from a theoretical point of view, it might be of theoretical interest to examine these types of negative cultural elements and test, for example, whether these elements are absent in high-performing organizations or whether there is a specific culture that can buffer negative effects.

3. Analysis of how the transition to renewable energy sources influences *organizational culture*.

4. Explore the impact of new technologies, such as artificial intelligence and green energy, on values, norms and behaviors within energy organizations.

5. How diversity and inclusion, in terms of both employees and customers, influence *organizational culture* and performance of energy companies.

6. Working with universities and research institutions to bring new ideas to the energy industry.

7. To extend the research on more entities in the energy sector to a larger number of subjects, in order to allow a more accurate relief of the manifestations of *organizational culture* and change in Romanian energy organizations.

8. To extend the research to other industrial sectors, since *organizational culture* and change management may vary from one entity to another and from one industry to another.

9. *Organizational culture* research based on qualitative approaches, such as in-depth interviews or ethnographic methods, which could complement the quantitative data obtained in the research in this thesis.

10. To develop the study, building on Hofstede's typology, by identifying the types of *organizational culture*s prevalent in different energy organizations.

11. To extend the study on the literature views on the concepts of *organizational culture* and change in terms of time horizon.

12. Development of statistical models of change in organizations, to be tested for both managers and executive employees.

13. Further analysis of *organizational culture* in the energy sector, addressing the other two cultural dimensions added by Hofstede, i.e. long-term orientation and indulgence. The research in this thesis was limited and focused on analyzing cultural differences only from the perspective of Hofstede's four cultural Hofstede cultural dimensions (power distance, individualism-collectivism, *masculinity-femininity* and *uncertainty avoidance*).

14. Conduct further research on the impact of cultural dimensions on HRM practices, taking into account other aspects that have an effect on them, such as regulations, legislation, political and social environment.

Personal contributions and elements of originality

1. Outlining a conceptual framework of *organizational culture*, from the general to the particular, targeting the energy sector.

2. Reviewing the literature by analyzing works published in leading journals in the area of *organizational culture* and identifying the main research directions, such as: cultural variables, the culture of institutions, the concept of change, as well as that determined by the cultural and historical origins of the area in which it manifests itself.

3. To facilitate the analysis of *organizational culture* from the perspective of Hofstede's four cultural dimensions of Hofstede's four cultural dimensions, namely *distance from power*, individualism-collectivism, *masculinity-femininity* and *uncertainty avoidance*.

4. Understanding the consequences of changing the value system, complex of *organizational culture*.

5. Clarifying how multiple cultural elements interact for change outcomes.

6. Providing new theoretical and methodological impulses that researchers seeking to apply alternative, more holistic approaches can draw on to investigate *organizational culture* as a predictor of change outcomes.

The originality of the research undertaken lies in the fact that through the two studies conducted, which aimed at investigating *organizational culture*, managers' *perceptions* and *attitudes* towards the change process, we investigated the perception of the relationship between *organizational culture*, change and resistance to change among managers in a major Romanian state-owned energy company.

We identified the presence of all four cultural dimensions according to Hofstede's typology in the Romanian energy system, namely, *distance from power*, individualism-collectivism, *masculinity-femininity*, *uncertainty avoidance* and the forms of manifestation of *organizational culture*, depending on the organizational configuration and the role of the *management*.

We analyzed the *organizational culture*, the *perceptions*, respectively the *attitudes* of managers regarding the change of *organizational culture* in an important energy company that is part of the local energy system and from the perspective of variables such as age, gender and seniority in the organization, as well as the influence of differentiating factors of the four cultural dimensions, on them.

This thesis makes an important contribution to facilitating the analysis of *organizational culture* from the perspective of Hofstede's four cultural dimensions, provides a better understanding of the consequences of changing the value system, the complex of *organizational culture* as a whole, and clarifies how multiple cultural elements interact to achieve change outcomes. It also provides insights that practitioners can identify with as they relate to the real complex challenges they face. At the same time, the thesis provides many new theoretical and methodological impulses that researchers seeking to apply alternative, more holistic approaches can draw on to investigate *organizational culture* as a predictor of change outcomes.

Conclusions

In the context of the energy crisis and climate change, energy companies face numerous challenges in implementing *organizational culture* change.

Change managers should not wait until they hit the wall of resistance before realizing that *organizational culture* issues are key points to consider at the outset. If the *change* management plan is designed with the components of *organizational culture* in mind, and if communication strategies are tailored around these components, the process will not face such a high level of resistance.

Managing these challenges requires strong leadership, a clear vision and well-defined strategies to successfully navigate the necessary transformation towards a sustainable and adaptable business model to meet the demands of the global energy future.

In today's work environment, which revolves around technological advances, *change* management will increasingly become an essential tool for companies striving to continually move forward.

Technology, by its very nature, has been developed with the aim of increasing efficiency and ease, both of which will help any organization remain agile in a competitive marketplace. With the development of new technologies, comes the need to develop new skills and change the current method of accomplishing a particular task. However, as we have shown through this thesis, changing the way something is done does not happen easily or with immediate acceptance. *Change* is often rejected and people show resistance to anything that threatens the familiar and comfortable status quo. This is when change management becomes a vitally important tool.

Change management enables those implementing change to monitor change, be proactive in addressing factors that might obstruct change and, ultimately, to ensure that change is instituted in the way it should be.

The first step in managing change is to realize that *change* is a process and not an end product. It is a period of transition that people need to go through in order to accommodate change and implement it with as little resistance as possible. There are many resources that address going through this transition process - for decades, researchers have published collections of tips, best practices, and steps to success for change implementers to use in any situation. But not every situation involves the same type of people, and yet the most important aspect of managing change is managing how people deal with it. In this case, *organizational culture* becomes a vital component to consider when implementing *change*.

The culture of an organization determines how people in the group communicate with each other and vice versa: how people communicate determines the culture of the organization. If an organization communicates mainly through informal face-to-face meetings, it would be neither appropriate nor effective to communicate the *change* through a formal email. Or, if an organization is made up primarily of scientists, engineers, or other professions that work with numbers and data, it would not be appropriate to communicate through a lengthy verbal message without supporting data.

All organizational researchers agree that knowing how the organization works is a very important preliminary step to take. But there is no collection of published literature that tailors change management strategies to specific types of organizations. Each industry, profession or position within a company attracts a different type of person who will respond best to different change management tactics.

Companies differ based on factors that are much easier to identify and define - the tone and style of their communication, the symbols and artifacts associated with the culture, and the hierarchical qualities of their organization’s leadership. Therefore, conducting a cultural assessment before implementing a *change* plan can help change managers determine which strategies to employ. There are several diagnostic tools to help define culture an organization. Using these tools in conjunction with appropriate *change management* strategies will help to ensure success in the change *management* process.

Organizational culture actually functions as a compass that tells the members of an organization how to face challenges and overcome obstacles in the best interest of the organization by defining what managers need to pay attention to, how to react emotionally and what actions to take in different types of situations. The findings suggest that culture can take on this role as an invisible guide at a general macro level and at a more detailed micro level. At the macro level, *organizational culture* as a whole appears to establish a general framework, which provides security and stability for managers and supports them in their daily tasks by reducing complexity and providing guidance. At the micro level, the findings indicate that understanding how *organizational culture* as a whole is composed and the specific elements of which it is made up are extremely important in order to analyze the link between *organizational culture* and *change*.

In the future, as the business world continues to embrace new technologies, *change management* will continue to be extremely important. With new technological opportunities that will help professionals advance, companies will need to be able to adapt quickly and effectively to rapid change.

Organizational culture remains one of the important factors that will help companies navigate through this period of change and ensure that change *management* efforts will be successful. It is important never to forget the human aspect of *change* and what needs to be considered about the people going through the process. By making the *organizational culture* a priority during *change*, those implementing the change can be confident that their strategies and tactics are appropriate for that population and are more likely to be met with success.

Exploiting research results

Valorization of the results of the research undertaken was achieved through the defense and publication of papers, in proceedings of conferences/symposia or Journals indexed ISI or BDI, among which can be listed:

Papers published in journals indexed web of science (ISI)

1. Furdui A., Edelhauser E. V. et **Popa** E. I., (2019). *Innovation Management Correlated with the Models of Development of Technological Entrepreneurship*, Quality-Access to Success, Volume: 20, Supplement:1, Pages: 513-518, Published: Jan 2019, Accession Number: WOS:000459686300090, ISSN:1582-2559, IDS Number: HM7UX. https://doaj.org/article/71c2890274214081819713233ea694ce https://doi.org/10.1051/matecconf/201929007011

Papers published in proceedings indexed web of science (ISI)

2. **Popa** E. I., Furdui A. et Edelhauser E. V. (2019). *Organizational Culture an Important Vector for the Performance of a Company*, Matec Web of Conferences, 290, 07010 (2019), The 9th International Conference on Manufacturing Science and Education-MSE 2019 „Trends in New Industrial Revolution”, June 5-7, Sibiu, Romania. Accession Număr: WOS:000569367700087, ISSN:2261-236X, Numărul IDS: BP9HB. https://www.matecconferences.org/articles/matecconf/pdf/2019/39/matecconfmse201907010.pdf

3. **Popa** E. I., Furdui A. et Edelhauser E. V. (2019). *Considerations on Management for Technological Entrepreneurship*, Matec Web of Conferences, 290, 07011, The 9th International Conference on Manufacturing Science and Education-MSE 2019 „Trends in New Industrial Revolution”, 5-7 iunie, Sibiu, România. Număr de acces: WOS:000569367700088, ISSN:2261-236X, IDS Number: BP9HB. https://www.matecconferences.org/articles/matecconf/pdf/2019/39/matecconf mse201907011.pdf

Papers published in BDI indexed journals and conferences

4. **Popa** E. I. (2018) *Aspects of organizational culture and change management*, Annals of the University of Petrosani, Economics, 18(1), 205-212. https://www.upet.ro/annals/economics/pdf/2018/p1/Popa.pdf

5. **Popa** E. I. (2017). *The manager-key element in the process of change*, Annals of the University of Petrosani, Economics, 17(1), 251-262. https://www.upet.ro/annals/economics/pdf/2017/p1/Popa.pdf

Other published works

6. Furdui A., Edelhauser E. V. and **Popa** E. I. (2018). *Innovation management correlated with models of technological entrepreneurship development*, International Multidisciplinary Symposium „Universitaria Simpro 2018”, 8th edition „*Challenges and opportunities for sustainable development through quality and innovation in engineering and research management*”, University of Petrosani, October 11-13, 1043-1048. https://www.upet.ro/simpro/2018/downloads/Proceedings%20SIMPRO %202018.pdf

7. Furdui A., Edelhauser E. V. and **Popa** E. I. (2020). *The Impact of Information Technology on Entrepreneurship*, The 19th International Conference on Informatics in Economy (IE 2020) Education, Research & Business Technologies, Online Conference Bucharest, Romania May 21st, 2020. http://www.conferenceie.ase.ro/wp-content /uploads/2020/05/Program-IE-2020.pdf

8. **Popa** E. I. (2018). *Organizational culture-concept and manifestations*, Volumul lucrărilor celui de-al XVI-lea Simpozion Studențesc „GEOECOLOGIA” ISSN 2559-2106, ISSN-L 1842-4430, Petroșani, 207-210. https://www.upet.ro/geoeco/doc/vol/Volum%20Geoecologia%202018.pdf

9. **Popa** E. I. (2017). *Change-instrument usable for continuous improvement*, Volumul lucrărilor celui de-al XV-lea Simpozion Studențesc „GEOECOLOGIA” ISSN 2559-2106, ISSN-L 1842-4430, Petroșani.183-187. https://www.upet.ro/geoeco/doc/vol/Volum%20Geoecologia%202017.pdf