
PRELIMINARY REPORT

Organizational Structure and Organizational Culture - Impact on Innovative Behavior of the Organization

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ABSTRACT

The innovative capacity of an organization is determined by numerous factors which operate in the external and internal environment. Without diminishing the role and importance of external environmental factors, the focus of this paper is the analysis of the impact of the organizational structure and culture on the innovative behavior of organizations. The paper starts from the assumption that business innovation is under the strong influence of the above-mentioned elements of the internal environment. The research results indicate that this influence can be positive or negative depending on the dimensions of the organizational structure and the values promoted by the organizational culture. The findings in the paper can contribute to the existing literature to interpret the nature of the relationship between the organizational structure and culture and the innovative ability of a company, as well as to find a way to improve the existing business innovation practice based on the creation of the organizational design that encourages workplace creativity and innovation. The desk research method has been used in this research. The papers and publications from scientific journals that addressed similar topics, along with other specialized literature focusing on the impact of organizational design on organizational innovativeness, have been used as data sources.

Keywords: *innovation, organizational structure, organizational culture, centralization, formalization, creativity*

JEL Classification: L20, M21,031

INTRODUCTION

Nowadays, business innovation has become the basic condition for organizations' survival and the key source of competitive advantage. The increased complexity and dynamism of the environment result in increasing unpredictability and risk in business, posing a danger, especially to organizations that do not possess the competencies in the field of innovation activities. To be precise, organizations that are not able to follow the dynamics dictated by the market and constantly adapt to new emerging circumstances, which occur due to innovative solutions, are doomed to stagnation and loss of gained competitive advantages.

We should also take into account that innovation is an extremely complex phenomenon, and the capacity of an organization to innovate is influenced by various factors that operate at individual, organizational, and external environment levels. It is the motivation and creativity of employees that can develop the ability of an organization to innovate (Deni and Gandhi, 2022).

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Innovation is also determined by organizational factors such as corporate strategy, organizational culture and structure, leadership, resources, and the technology available to the organization (Smith et al., 2012; Qudah, 2018). According to the literature, innovative activity is also determined by the size of the company, but there is no consensus on the nature of that influence. Some authors believe that small systems possess strong innovative ability (Dess et al., 2007; Drucker, 2003), while others state that large organizations display a higher level of innovation (Umar et al., 2018; Maravelakis et al., 2006). Certain events in the business environment have a profound impact on an organization and its behavior; in particular, technological progress, the intensity of competitive struggle, and informed and demanding consumers. Modern information technology has imposed numerous changes in the behavior of an organization and its organizational design and proved to be one of the key factors for overcoming difficulties faced by companies, especially in crisis situations (Lazarević-Moravčević and Kamenković, 2021).

Organizations that strive to be innovative need to create an internal environment that encourages creativity and innovation, which primarily implies the implementation of an organizational structure model that ensures flexibility and efficient exchange of information and knowledge, as well as the development of the organizational culture whose values encourage the innovative behavior of individuals. Numerous analyses and studies point to the fact that these two factors of the internal environment determine the business results and innovation performance of an organization (Smith et al., 2012; Qudah, 2018; Slevin and Covin, 1990), bearing in mind that these two factors are also interdependent.

The organizational structure represents one of the key so-called "hard" elements of organizations. It defines the distribution of roles and administrative mechanisms that facilitate exercising control and integrating the organizational activities of a company (Hall and Saies, 1980). The structure defines the executive, managerial and administrative organization of a company, indicating appropriate responsibilities and hierarchical relationships (Dess et al., 2007), and represents the internal pattern of relationships, authority, and communication (Thompson, 1967). To put it simply, the organizational structure is the "skeleton" of a company that clearly and precisely determines the schedule of work and activities, workflows, the system of authority and responsibility, the roles of individuals, and approaches to coordination and reporting. Furthermore, the organizational structure defines communication flows and the ways in which information and knowledge are transferred in a company.

Organizational culture, just like the organizational structure, is one of the key elements of the internal environment which can most simply be described as a system of values, beliefs and attitudes of the members of an organization (Williams, 2010). To be specific, the organizational culture represents "a system of assumptions, values, norms and attitudes manifested through symbols, which the members of an organization have developed and adopted through common experience helping them determine the meaning of the world around them and how to behave in it" (Janićijević, 2011, p. 70). Certain elements of the organizational culture, such as symbolic features, are visible and easy to modify, unlike values, beliefs and unwritten rules that are deeply rooted in the organization, which are not visible and cannot be changed easily. The creation and development of the organizational culture are the essence of leadership, that is, culture and leadership are two sides of the same coin (Schein, 1992).

Organizational elements, being the determinants of the success of innovative companies, began to be considered at the end of the twentieth century. Some authors include certain elements of organizational design as the aspects that influence the innovative behavior of organizations: organizational structure, organizational culture, organizational learning, teamwork, leadership, and motivation. The importance of organizational factors is also considered within the OECD statistics on innovation activities in companies because the statistical monitoring of innovations in organizations has been performed since 2006 (Mosurović and Kutlača, 2011).

The purpose of the paper is to describe the model of organizational structure and the type of organizational culture that can represent an adequate solution for organizations that strive to be innovative.

THE INFLUENCE OF THE ORGANISATIONAL STRUCTURE ON THE INNOVATIVE CAPACITY OF ORGANISATIONS

The challenge of managers in modern organizations is to create an organizational structure that enables a strategic way of thinking and performing, cross-functional sharing of resources and knowledge, effective communication and coordination, successful conflict resolution, as well as the focus on finding and implementing innovative business solutions. Creating such an organizational structure implies taking into account the effects of various factors that operate within the company itself, but also outside it. The design of the organizational structure is influenced by the size of the company and its age, strategic orientation, ownership, the technology available to the organization, and the nature of the environment in which the organization operates (Mintzberg, 1979).

The company's strategy and the environment in which the company operates have a strong influence on the creation of the organizational structure. For a long time, the relationship between the strategy and organizational structure has solely been observed through the influence the strategy has on the organizational structure – the structure follows the strategy (Chandler, 1962), but not the other way around. However, contemporary literature claims that there is a causal relationship between these two elements in an organization, as well as dependence on the influences coming from the external environment. Additionally, it is necessary to emphasize the fact that the organizational structure is not a static category; that is, once implemented, the organizational structure model does not represent a permanent solution. Under the influence of external and internal environmental factors, the organizational structure is subject to certain changes and modifications.

Organizations can implement different organizational structure models. The most common forms are functional, divisional, and matrix models. Furthermore, as a response to the intense changes in the external environment, modern forms of structures such as network, modular, virtual, team, etc., are increasingly present in practice. Among the above-mentioned models of the organizational structure, significant differences can be noticed in terms of key parameters such as the level of specialization and formalization, the number of hierarchical levels and the span of control, the way units are grouped (departmentalization), the size of organizational units, the way of establishing connections and relationships between the units, approaches to decision-making (centralization/decentralization), planning, and the control system. Depending on the configuration of the mentioned parameters, organizational structures are more or less flexible. To put it differently, organizational structures can be designed in a way that encourages but also limits the organization's capacity to adapt to change, learn, innovate, and generate additional value for its customers (Martínez-León and Martínez-García, 2011).

Guided by the mentioned dimensions (specialization, formalization, centralization, departmentalization, a span of control, etc.), organizational structures can be systematized into two categories - organic (adaptive) and bureaucratic (mechanistic) structures. Mechanistic structures are closed and highly formalized systems where the focus is on maintaining the status quo, internal problems, systems, and procedures.

Mechanistic (bureaucratic) structures are systems in which there is a hierarchy, a high level of formalization, centralized decision-making and a high level of specialization. Due to the central focus on what happens in the organization itself, mechanistic structures are not characterized by flexibility and agility, but by the resistance to change and difficulty to adapt. Therefore, they are not designed to support innovation (McNamara, 2009). In bureaucratic, i.e., mechanistic systems, there are conditions for achieving a high level of productivity and control, but not for creativity

and innovation. Consequently, these systems are usually characterized by a high level of efficiency, but a low level of innovation capacity (Thompson, 1965).

Table 1. Mechanistic vs. Organic structures

Mechanistic structure	<ul style="list-style-type: none"> – High level of specialization and rigid departmentalization – Hierarchic structure of control, authority, and communication – Clear delegation of responsibility and centralization of knowledge and decision-making – Strict chain of command based on centralized authority and vertical communication – High level of formalization – it relies to a large extent on rules, regulations, standardized tasks – Responsibility is owed from the bottom up – Members of the organization are obliged to be loyal and to comply with each other, the managers, and the organization – Team members have clearly defined, formal job/role descriptions – To ensure predictability and accountability, each position is narrowly defined in terms of duties and responsibilities, without overlap or duplication – Communication tends to be one-way or top-down – the managers dictate what subordinates should do – Low level of flexibility – Working under the condition of relative stability
Organic structure	<ul style="list-style-type: none"> – Decentralised decision-making (delegation of authority) – Horizontal communication based on knowledge of the task – Broadly defined jobs and responsibilities – Loosely defined roles which change frequently – Wide span of control – Orientation towards organizational learning, creativity, and teamwork – The centers of control, authority and communication are specific for each problem and depend on the expertise to solve the problem – There is a division of labor, but jobs are not standardized – All well-informed associates participate in decision-making – The emphasis is on discussion and negotiation – Minimum rules and direct control – The possibility of simpler and faster adaptation to the changes in the environment – It is suitable for a dynamic environment

Source: Robbins and Coulter, 2005; Dess, et al., 2007; Courtright et al., 1989; McNamara, 2009; Williams, 2010; Thompson, 1965.

Certain empirical research has confirmed the negative impact of centralization and formalization on innovative business behavior. Research has proven that if employees are burdened with procedures and are not involved in decision-making processes, they do not express considerable interest in generating new ideas, which limits the innovative performance of the company (Hage and Aiken, 1967; Dedahanov et al., 2017). Centralization, which implies the concentration of power in the hands of individuals, can prevent the effective circulation of ideas and creative discussion, and, consequently, limit the innovative behavior of the employees in the organization. As a result, some authors evaluate it as a dimension that has a significant and negative impact on innovation (Kalay and Lynn, 2016). The negative impact of centralization and formalization is particularly noticeable in the initial stages of an innovation process, i.e., in the stage of idea generation. The opinion of the authors Dekoulou and Trivellas (2017) is that organizational innovation capacity can be increased by a planned approach to staff development and by minimizing direct supervision and strict guidance. On the other hand, some authors do agree that decentralization can significantly promote an idea-generation process, but they emphasize that the implementation of ideas requires a certain level of centralization and formalization (Pierce and Delbecq, 1997). To sum up, decentralization is always a better solution

compared to centralization in the initial and final phases of an innovation process, whereas in the commercialization phase, it is necessary to incline towards a decentralized and formal structure. Decentralized decision-making supported by a formal structure improves innovation performance in the majority of cases. Nevertheless, the companies operating in high-tech sectors with informal structures predominately tend to be innovative, which points to the fact that the optimal solution for creating an organizational structure differs depending on whether they are high-tech or conventional sectors (Cosh et al., 2012).

In general, centralized and formalized organizational structures can be appropriate solutions for large organizations with highly complex R&D departments, which mostly foster incremental innovation (DeSanctis et al., 2002). Moreover, centralization and formalization can facilitate the top-down process of administrative innovation, while high professionalism, low centralization and formalization facilitate the process of technological innovation (Damanpour and Gopalakrishnan, 1998). Some researchers state that a high level of specialization can also have a negative impact on creativity, but its impact is far less significant compared to centralization and formalization (Hassan et al., 2014).

Unlike bureaucratic, organic structures are characterized by a low level of process standardization, teamwork, decentralization, and a wider span of control. These are structures in which there is a positive attitude towards change, acceptance of risks, and open communication. Organic structures are aimed at organizational learning, teamwork, and efficient and quick exchange of knowledge and information. They entail decentralized decision-making, a wider span of control, loosely defined roles of individuals, intensive horizontal communication, and a low level of formalization. The organizational structures dominated by the elements of the organic design have proven to be a more appropriate solution for performing specific and complex tasks that tend to constantly change (Miller, 1986).

Within the framework of the most common models of organizational structures, the matrix form contains the most elements of the organic design. On the other hand, the division structure, and especially the functional one characterized by a high level of formalization and control, i.e., the dimensions that have been proven to be in conflict with innovative behavior, represent the models with dominant features of the mechanistic design. The main advantage of the matrix structure is flexibility and the organization that facilitates the engagement of specialized personnel, equipment, and capacities. It is the structure in which teamwork is emphasized, promoting coordinated, multidisciplinary activity in functional areas, broad participation in making decisions and exchanging of information and knowledge. However, the matrix structure has some drawbacks. This is, actually, the structure where there is dual responsibility (the dual-reporting structure) and, thus, the principle of unity of command is violated, leading to unclear roles and responsibilities, disagreement and frequent conflicts. The aforementioned phenomena may disrupt the working atmosphere and relations between employees (Dess et al., 2007; Mäkimattila et al., 2014).

Compared to the usual forms, the matrix structure represents a more effective solution for modern organizations that seek to improve their flexibility and innovation. However, it is vital to know that the transformation process from the traditional structure to the matrix one requires time, a planned approach and maximum commitment, bearing in mind that the results in the field of innovative capacity do not come immediately. The authors Saunil et al. (2014) state that the matrix structure itself cannot solve all the challenges faced by organizations in the domain of innovation. In order to achieve the advantages offered by this form of organizational structure, it is necessary to keep in mind that a successful matrix must be developed, not just simply installed (Davis and Lawrence, 1977).

Table 2. The features of the matrix organizational structure

Advantages	Drawbacks
<ul style="list-style-type: none"> – Higher level of flexibility – Efficient and flexible use of resources – The possibility of interdisciplinary cooperation – Specialised knowledge is available for all projects on an equal basis – Accelerates business development by giving a greater level of responsibility – Enables the development of skills, especially in the segment of innovation, adaptability, and communication. 	<ul style="list-style-type: none"> – Unclear roles and responsibilities (dual responsibility) – Dual reporting, role ambiguity and conflicting goals that can lead to conflicts, stress, and employee turnover – A strong struggle for supremacy leading to frequent conflicts – Plenty of "meetings" and discussions about certain decisions and actions which can result in a cost increase – The danger of power and dominance on one side of the matrix

Source: Dess et al., 2007; Erić, 2000; Schnetler et al., 2015; Mäkimattila et al., 2014.

Regardless of the extent to which the systems are developed for defining and upgrading innovative products and processes, they are unlikely to be successful if the organizational context is not suitable enough. Achieving this is not easy and involves creating organizational structures and processes that enable technological change to flourish. For instance, a rigidly hierarchical organization in which there is weak integration between the functions and where the communication is top-down and one-way is unlikely to be suitable for smooth information flow and cross-functional cooperation, which are known to be essential prerequisites for the success of innovative companies. Based on the above -mentioned, it can be concluded that there is not one universally applicable model of the organizational structure, but a successful organization needs to strive to achieve optimal harmony. For instance, it makes sense to structure McDonald's in a mechanistic and controlled manner so that it can establish similar standards of products and services worldwide. However, the development of a new computer system and genetic engineering would not be successful enough in such a structure. Henry Mintzberg, based on a detailed review of the theory, summarized a large number of papers elaborating on the structure and proposed a series of archetypes that represent the templates for the basic structural categories (Table 3).

Table 3. Structural archetypes according to Mintzberg

Simple structure	Centralized organic type is centrally controlled, but it can respond quickly to changes in the environment. Normally, it is a small company under the direct control of one person who has all the decision-making authority. The advantage is a prompt response. The drawbacks are vulnerability due to one person's misjudgment and limited resources for further growth.	These are small, newly founded high-tech companies. The advantages are energy, enthusiasm, and entrepreneurial zeal – simple innovation that is extremely creative. The drawback is the absence of long-term stability and growth, as well as excessive dependence on individuals who do not always have the same business vision.
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<p>Mechanical Bureaucracy</p>	<p>Centralized mechanistic organizations are controlled by the system. The structure is designed as a complex machine where the people are seen as cogs in the system. This design emphasizes the functioning of the whole and the narrow expertise of its parts so that they can be easily substituted. Success is based on the development of an efficient system that simplifies tasks and turns the work into a routine. The advantage of this system is its ability to perform complex integrated processes like car assembly. The downsides are the potential alienation of the individuals and additional reinforcement of the rigidity to the already inflexible system.</p>	<p>It depends on an innovation specialist and spreads on the entire design of the existing system. This includes fast food chains (McDonald's), and mass production (FORD) and there is always a high degree of innovation that is oriented towards the experts of one system level. The advantage is stability and the focus on technical skills when designing the system for complex tasks. The drawbacks are rigidity and inflexibility of responding to changes, as well as the limitation of innovation, which could come from people who are not experts.</p>
<p>Divisional Form</p>	<p>A decentralized organic form designed to adapt to the challenges of the local environment is usually associated with larger organizations. This model implies specialization within semi-autonomous units. The advantage is the ability to analyze specific problems with continuous support from the center. The drawback is the internal conflict between the parts and the center.</p>	<p>Innovation most often implies a core-periphery model in which R&D is performed in the central part while the applied specific tasks take place within the parts. The advantage is the ability to concentrate on developing competence in specific areas and share the acquired knowledge with the rest of the organization. The drawback is centrifugal tendency - moving away from R&D to peripheral innovative efforts as well as competition between the parts that inhibit sharing the acquired knowledge.</p>
<p>Professional bureaucracy</p>	<p>A decentralized mechanistic form where the power is distributed among individuals with common standards. This type of organization has a relatively high level of professional skills and it is typical for teams of consulting professionals such as hospitals and law firms. Control is achieved through the consensus of views, professionalism and the individuals have a high level of autonomy. The advantages are the high level of professional knowledge and the possibility of mutual cooperation between several teams.</p>	<p>This type of structure is typical for design and innovation consulting activities inside and outside the organization. R&D, IT or engineering groups are the best examples of these groups where technical and professional knowledge is highly valued. The advantages are technical capabilities as well as professional standards. The drawback is the difficulty in managing individuals with a high degree of autonomy and knowledge.</p>
<p>Variations in cases</p>	<p>This type is designed to manage volatility and complexity. It is often not long-lasting, but it offers a high degree of flexibility. It is based on a team with a high degree of individual skills with the possibility of individuals working together. The internal rules and structure are minimally loose and make sure the job is done as quickly as possible. The advantage is the ability to face a high degree of uncertainty and creativity. The drawbacks are the impossibility of joint work due to unresolved conflicts and the lack of control due to the absence of formal structures and standards.</p>	<p>This is the form most often associated with the teams dealing with innovation projects - when a new product is developed, or a major process is changed. The advantage is a high level of creativity and flexibility. The drawbacks are lack of control and also excessive commitment to the project to the detriment of the old organization.</p>

Achieving the goal	It is based on the common value system. The advantages are a high degree of dedication and the possibility of individual initiative. There is no special agreement with the other members because everyone shares the same goal. The drawbacks are the lack of control and the lack of formal sanctions.	The innovation as a result of the mission can be successful, but it requires putting in energy and having a clearly defined purpose. The advantages are the common goal and the freedom of individuals to take the initiative to achieve the goal. The drawback is over-dependence on a few key people with the initial vision.
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Source: Adapted and modified from Tidd, J., Besant, J., Pavitt, K., (1997). *Managing Innovation*. Wiley & Sons Ltd. 313-314.

To conclude, there is a positive correlation between strategic flexibility, dynamism of the environment, and innovation performance (Cingöz and Akdoğan, 2013). Flexibility in business is achieved, among other things, by creating a structure dominated by the elements of organic design. Furthermore, the potential for creating flexibility is not only in the organizational structure, but also in other dimensions of the organizational design such as strategy, organizational culture, leadership, and a reward system. By certain modifications of the mentioned elements, it is possible to eliminate the basic drawbacks of the bureaucratic structure and make the system more flexible and ready for changes imposed by the business environment (Marković et al., 2022).

THE IMPACT OF THE ORGANISATIONAL CULTURE ON THE INNOVATIVE CAPACITY OF ORGANISATIONS

Organizational culture determines the behavior of employees in an organization and affects all aspects of business. It determines the attitude towards risk, affects the speed of response to changes and events in the environment, determines the orientation towards goals and results, defines the degree of competitive spirit in the work environment, control mechanism, and the level of autonomy that employees have while performing their tasks, etc.

In the professional literature, there is a lot of evidence about the influence of organizational culture on business success, effectiveness and innovation (Turró et al., 2013; Lemon and Sahota 2004; Schuldt and Gomes, 2020; Shahzad et al., 2017; Robins and Coulter, 2007; Williams, 2010). A number of research studies have been performed to identify the values and norms based on which a certain culture could be developed, simultaneously encouraging innovative behavior of employees. The author McLean (2005) selects the following elements of the organizational culture that positively correlate with innovation: 1) organizational encouragement, 2) supervisory encouragement, 3) workgroup encouragement, 4) freedom/autonomy, and 5) resources. The same author emphasizes that control is an obstacle to creativity and innovation. Aboramadan et al. (2020) maintain that innovation in an organization can be fostered by values such as marketing orientation, risk acceptance, continuous learning, entrepreneurial mindset, and encouraging staff performance (Aboramadan et al., 2020). Moreover, the existence of a positive correlation between employee creativity and good interpersonal relations, a higher degree of identification of employees with the organization's values, a higher level of open communication in a team, and a higher degree of acceptance of employees' ideas have been confirmed empirically (Taha et al., 2016).

The author Taha et al. (2016) highlight the existence of a strong relationship between creativity and the atmosphere of psychological safety in the workplace. The working environment characterized by psychological safety is the environment that encourages employees to express their opinions, that is, the environment in which there is mutual respect and trust, experimentation with new work methods, and open communication.

The influence of psychological safety in the workplace on innovation has been analyzed in other research. Zhang et al. (2023) have discovered that, in addition to power distance and collectivism,

psychological security has a great influence on creativity and innovation as well. To be more specific, the authors prove that psychological safety and collectivism have positive indirect effects, while power distance has a negative indirect effect on innovation performance. High power distance does not encourage individual autonomy and discussion and, therefore, has a negative impact on psychological safety, but also on innovative thinking and behavior. On the other hand, collectivism contributes to the strengthening of emotional commitment to the team, as well as to the harmonization of the interests of individuals, the team, and the organization. To conclude, organizations that strive to be innovative need to encourage direct communication between their employees at different levels of power, strive to establish low power distance, and foster a culture of equality (Zhang et al. 2023).

Depending on its content, i.e., the values it promotes, the organizational culture can positively or negatively affect the company's performance and its innovative ability. Different types of culture imply different strategies, models of organizational structure, leadership styles, reward and control systems, and other aspects of management (Janićijević, 2012); and, accordingly, have an influence on the innovative behavior of the organization.

Different classifications of organizational cultures can be identified in professional literature. For the purpose of this paper, the classification of the following types of organizational culture is used: clan, hierarchical, market and adhocracy cultures (Cameron, 1985, Cameron and Quinn, 2011). Hierarchical cultures are characterized by the focus on stability, predictability, and smooth functioning. Adhocracy cultures emphasize the pursuit of new resources and growth. In market cultures, the focus is on achievement and gaining a competitive advantage. Clan cultures are characterized by the development of human resources and the maintenance of cohesion. External orientation is supported by adhocracy and market cultures, while hierarchical and clan cultures are internally oriented. Each culture (Table 4) has characteristics that are the opposite of the diagonal culture, but also share certain similarities with the cultures in the neighboring squares.

The question arises as to which of the mentioned cultures represents a suitable area for creativity and innovation. It seems that an agreement has been reached among the authors that depending on the situation all types of these cultures, except the hierarchical one, can be a suitable solution for the development of innovation. Hierarchical culture focuses on formalization, hierarchy, control, and it is internally oriented, i.e., excessively focused on the events within the company, and, according to the experts, it is considered unsuitable for the development of new ideas and their implementation. Moreover, this type of organizational culture has proved to be an obstacle to the development and application of both types of open innovation - inbound and outbound open innovation (Naqshbandi et al., 2014).

Table 4. Types of organizational cultures

FLEXIBILITY AND DISCRETION			
INTERNAL FOCUS AND INTEGRATION	<p>Clan/Family Culture</p> <ul style="list-style-type: none"> – Internal orientation – Flexibility – LEADER STYLE: Mentor, Facilitator – STRATEGIC EMPHASIS: Human Resources, Cohesion – The culture insists on trust, teamwork, and boosting morale – Caring for people and corporate commitment to employees – Emphasises the concept of motivation and employee development – Management of the work environment through teamwork – Friendly and supportive work environment – The sense of belonging to a clan plays a vital role in building interpersonal relationships and developing individual talents and competencies 	<p>Adhocracy Culture</p> <ul style="list-style-type: none"> – External orientation – High level of flexibility – LEADER STYLE: Entrepreneur, Innovator – STRATEGIC EMPHASIS: Growth, Acquiring New Resources – External positioning rather than seeking stability and control – Mainly represented in the extremely dynamic environments and the organizations aspire to achieve leadership positions – Supports individuality, creativity, and risk-taking – Entrepreneurially-oriented – Emphasises social connectedness, but compared to clan culture, the focus is more on enthusiasm for change 	EXTERNAL FOCUS AND DIFFERENTIATION
	<p>Hierarchical culture</p> <ul style="list-style-type: none"> – The focus is on control – Internally-oriented – LEADER STYLE: Coordinator, Organiser – STRATEGIC EMPHASIS: Permanence, Stability – The goal is to achieve efficiency – It relies on formalization and hierarchy – High work specialization – It strives for predictability, evaluation, and centralization – Formal qualifications and knowledge are valued – Routines, norms and standardized procedures are key factors for system maintenance – Clear guidelines for actions are given through communication (from the top of the hierarchy to lower levels) 	<p>Market culture</p> <ul style="list-style-type: none"> – Control and stability – Externally-orientated – LEADER STYLE: Producer, Hard Driving Person – STRATEGIC EMPHASIS: Competition, Actions, Achievement – Orientation towards achieving results and goals (competitiveness and productivity) – The management is oriented towards competitiveness, achieving high results, and achievements – Oriented to external relations and competence improvement – Building relationships with external stakeholders (i.e. the market) is prioritized in order to obtain necessary and differential resources 	
STABILITY AND CONTROL			

Source: Cameron, 1985; Cameron and Quinn, 2011; Ghiasi et al., 2022; Oh and Han, 2020

The authors Naranjo-Valencia et al. (2016) notice that external orientation and flexibility are equally important for innovation and, therefore, assess adhocracy culture to be the most acceptable solution for innovative organizations. This culture is characterized by external orientation and unlike clan culture, adhocracy culture encourages change and supports individuality, risk-taking, and entrepreneurship. It is risk-taking, experimenting, openness, trust and autonomy that are part of the organizational support that provides the basis for innovation (Mumford et al., 2002). Other empirical research has confirmed that cultures that are focused on human relations (clan culture) and an open system orientation (i.e., adhocracy culture) promote performance at the individual, group, and organizational levels (Oh and Han, 2020). These two

types of culture, in contrast to market and hierarchical cultures, have a strong and positive relationship with organizational learning and represent an adequate solution for innovative organizations. Clan culture, as the most suitable area for knowledge exchange, is also recognized by Wiewior et al. (2013). Their opinion is that in companies dominated by the elements of clan-type organizational culture, the employees express a significant willingness to share knowledge, which, in their opinion, is not the case with organizations dominated by the elements of market culture. The completely opposite opinion is expressed by the authors Stoffers et al. (2015), confirming the existence of a significant influence of market culture on employees' innovative work behavior. Research has confirmed that internal motivation leads to innovation in the case of adhocracy, clan and market cultures, but not when it comes to the hierarchical one (Ritala et al., 2020).

Based on the above-mentioned, it can be concluded that organizational cultures based on flexibility, external orientation, employee participation, clear vision and consistency can improve business operations through sales growth, profit, quality, and employee satisfaction (Denison and Mishra, 1995). Moreover, as good cultures, we can characterize the cultures that are open to new ideas and innovation, i.e., the cultures where mutual cooperation, respect and trust prevail. On the other hand, these are not the cultures that are characterized by the arrogance of leaders and an inadequate motivation system, i.e., the cultures that insist on loyalty to superiors and performing the assigned tasks (Ahmetagić and Fazekas, 2010). The cultures that support innovation tolerate failures and value risk-taking. In such cultures, leaders encourage risk-taking and promote an open communication style, participation, delegation of authority, and granting of autonomy. Organizational culture has a mediating effect on innovation through organizational learning (Abdi and Senin, 2014; Abdi et al., 2018); therefore, a higher level of innovation is associated with cultures that emphasize learning, development, and participative decision-making (Hurley and Hult, 1998).

Finally, it is necessary to highlight the fact that all organizations have a certain culture, but the culture itself does not always have a strong influence on employees. Strong cultures have a substantial influence on employees, their way of thinking, and the activities they perform. Consequently, such cultures stimulate achieving high organizational results (Williams, 2010). On the other hand, due to their limited flexibility and insistence on uniformity, loyalty and strong cohesion, they cannot promote creativity and innovation (Nemeth, 1997). Emphasizing this fact, the author Nemeth indicates that the ability to think "outside the box" in order to find truly original solutions to old problems requires the freedom to break the rules and consider different options without fear of reprisals or rejection. Dissent actually stimulates originality and better decision-making procedures. Dissent is a very economic mechanism for producing innovation (Nemeth, 1997, p. 10).

CONCLUSION

The paper analyses the influence of two key elements of the internal environment (organizational structure and organizational culture) on the innovative behavior of organizations. These are the elements for which there is solid evidence that they have a strong impact on all business segments, that is, they mold the behavior of employees and influence business results. Furthermore, these two elements of an organization, depending on the configuration and content, can encourage, but also limit the innovative behavior of employees and, based on that, influence the innovative performance of the organization.

The research conducted in the paper produces evidence that all models of organizational structures are not equally stimulating for the development of innovation. The authors of the paper highlight that the structures dominated by the elements of the bureaucratic design do not have an adequate level of flexibility and, therefore, cannot be an effective solution for organizations that strive to improve innovation capacities. Mechanistic (bureaucratic) organizations do not have the

ability to adapt; they overly focus on internal events and show resistance to changes. These structures are characterized by centralization and a high level of formalization, i.e., the dimensions, for which there is clear evidence that hinder the innovation process, especially in the initial stages.

The paper also reaches the conclusion that different stages of the innovation process have different characteristics and needs in terms of the elements of the organizational design. It is established that decentralization has a positive impact on an innovation process in all its phases; that is, it is a more suitable solution compared to centralization in the phase of creating ideas, as well as in commercialization. On the other hand, the research points to the fact that in the final stages of an innovation process, it is necessary to establish certain mechanisms for the implementation of ideas, which implies decentralization with a certain level of formalization. The organic structure has a high level of flexibility and represents a good base for idea generation; however, such a structure lacks adequate mechanisms for implementing creative solutions (Pierce and Delbecq, 1977; Agbim, 2013). Therefore, designing an effective organizational structure implies finding a balance between certain parameters of the organizational design, i.e., finding an adequate combination of the elements of the organic and mechanistic design. Namely, the goal is to create an organizational structure that is primarily directed towards flexibility and innovation, and efficiency as well.

Improving flexibility and innovation can be encouraged by creating not only an adequate organizational structure, but also by developing an organizational culture that promotes teamwork, cohesion, commitment, external orientation, and the focus on the future. The findings of the research confirm that innovative organizations are characterized by a clear vision, entrepreneurial spirit, risk acceptance, commitment and responsibility, as well as involvement and autonomy in business. Good cultures are characterized by energetic and pleasant interactions between employees, open communication, and a non-judgmental approach when it comes to different opinions or possible mistakes.

The observations made in the paper can contribute to the existing literature in interpreting the nature of the relationship between the two key elements of an organization (structure and culture) and its capacity to innovate. Furthermore, they can serve as the guideline for improving the organizational design and creating a work environment that acts as a stimulus for the development and implementation of innovative solutions. The paper does not consider in detail the influence of certain dimensions of the organizational structure and culture on innovation, depending on the type of innovation (radical and incremental), the size of the company and the activity the company is engaged in. The above can be considered as a basic limitation of the research conducted in the paper, but it also represents a challenging topic for future empirical research that the authors of the paper plan to conduct.

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REFERENCES

- Abdi, K., & Senin, A.A.** (2014). Investigation on the Impact of Organizational Culture on Organization Innovation. *Journal of Management Policies and Practices*, 2, (2), 01-10.
- Abdi, K., Mardani, A., Senin, A.A., Tupénaitė, L., Naimavičienė, J., Kanapeckienė, L., & Vladislavas, K.** (2018). The effect of knowledge management, organizational culture and organizational learning on innovation in automotive industry. *Journal of Business Economics and Management*, 19 (1), 1-19.

- Aboramadan, M., Albashiti, B., Alharazin, H., & Zaidoune, S.** (2020). Organizational culture, innovation and performance: a study from a non-western context. *Journal of Management Development*, 39 (4), 437-451.
- Agbim, K.C.** (2013). The Impact of Organizational Structure and Leadership Styles. *Journal of Business and Management*, 6 (6), 56-63.
- Ahmetagić, D., & Fazekaš, T.** (2010). Neke determinante inovacionog uspeha. *Montenegrin Journal of Economics*, 12(6), 234.
- Cameron, K. S.** (1985). Cultural Congruence, Strength, and Type: Relationships to Effectiveness. ASHE 1985 Annual Meeting Paper. <https://eric.ed.gov/?id=ED259627>
- Cameron, K. S., & Quinn, R. E.** (2011). Diagnosing and changing organizational culture: Based on the competing values framework (3rd ed.) San Francisco, CA: JosseyBass.
- Chandler, A.D.** (1962). *Strategy and Structure*, Cambridge: MIT Press.
- Cingöz, A., & Akdoğan, A.** (2013). Strategic flexibility, environmental dynamism, and innovation performance: An empirical study. *Procedia - Social and Behavioural Sciences* 99, 582 – 589.
- Cosh, A., Fu, X., & Hughes, A.** (2012). Organisation structure and innovation performance in different environments. *Small Bus Econ*, 39, 301–317.
- Courtright, J.A., Fairhurst, G.T., & Rogers, L.E.** (1989). Interaction Patterns in Organic and Mechanistic Systems. *The Academy of Management Journal*, 32 (4), 773-802.
- Davis, S., & Lawrence, P.** (1977). Matrix. Massachusetts: Addison-Wesley.
- Dani, M.V., & Gandhi, A.V.** (2022). Understanding the drivers of innovation in an organization: a literature review. *International Journal of Innovation Science*. 14 (3/4), pp. 476-505.
- Damanpour, F., & Gopalakrishnan, S.** (1998). Theories of organizational structure and innovation adoption: the role of environmental change. *Journal of Engineering and Technology Management - JET-M*. 15, 1–24.
- Denison, D., & Mishra, A.** (1995). Toward a Theory of Organizational Culture and Effectiveness. *Organization Science*, 6(2), 204-223.
- Dess, G., Lumpkin, G., & Eisner, A.** (2007). *Strategijski menadžment*, Data Status, Belgrade.
- Dedahanov, A.T., Rhee, C., & Yoon, J.** (2017). Organizational structure and innovation performance: Is employee innovative behavior a missing link? *Career Development International*, 22 (4), 334-350.
- DeSanctis G., Glass J.T., & Ensing I.M.** (2002). Organizational designs for R&D, *Academy of Management Executive*, 16 (3), 55–66. <https://cafetarjome.com/wp-content/uploads/260/translation/order-z-1428315529-5322.pdf>
- Drucker, P.** (2003). *Moj pogled na menadžment*, Adižes, Novi Sad.
- Erić, D.** (2000). *Uvod u menadžment*, Čigoja, Belgrade.
- Ghiasi, A., Lord, J., Banaszak-Holl, J., Davlyatov, G., Hearld, L. & Weech-Maldonado, R.** (2022). Organizational Culture and High Medicaid Nursing Homes Financial Performance. *Journal of Long-Term Care*, 142–153. <https://doi.org/10.31389/jltc.115>
- Hage, J., & Aiken, M.** (1967). Program change and organizational properties, A Comparative Analysis, *American Journal of Sociology*, 72, 503-519.
- Hall, D.J., & Saias, M.A.** (1980). Strategy follows structure. *Strategic Management Journal*, 1, 149-163.
- Hurley, R. F., & Hult, T. M.** (1998). Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing*, 62(3), 42-54.
- Janićijević, N.** (2011). Methodological Approaches in the Research of Organizational Culture. *Economic Annals*, LVI (189), 69 -100.
- Janićijević, N.** (2012). Uticaj organizacione kulture na kontrolu ponašanja u organizacijama, *Ekonomске teme*, 59 (3), 283-300.
- Kalay, F., & Lynn, G.S.** (2016). The impact of organizational structure on management innovation: An empirical research in Turkey. *Journal of Business, Economics and Finance -JBEP*, Vol. 5(1), 125-137.

- Lazarević-Moravčević, M., & Kamenković, S.** (2021). The Impact of the COVID-19 Crisis on the Serbian Economy - Consequences and Recovery. *Economic Analysis*, 54 (2), 41-54.
- Lemon, M., & Sahota, P.S.** (2004). Organizational culture as a knowledge repository for increased innovative capacity. *Technovation*, 24 (6), 483-498.
- Mäkimattila, M., Saunila, M., & Salminen, J.** (2014). Interaction and innovation - Reframing innovation activities for a matrix organization. *Interdisciplinary Journal of Information, Knowledge, and Management*, 9, 131-152. <http://www.ijikm.org/Volume9/IJIKMv9p131-152Makimattila0758.pdf>
- Marković, S., Carić, M., & Đoković, V.** (2022). Dizajniranje fleksibilnog modela organizacije preduzeća u dinamičnim uslovima poslovanja. *Ekonomija – teorija i praksa*, 3, 33-53.
- Maravelakis, E., Bilalis, N., Antoniadis, A., Jones, K. A., & Moustakis, V.** (2006). Measuring and benchmarking the innovativeness of SMEs: A three-dimensional fuzzy logic approach. *Production Planning & Control*, 17(3), 283-292.
- Miller, D.** (1986). Configurations of Strategy and Structure: Towards a Synthesis. *Strategic Management Journal*, 7 (3), 233-249.
- McLean, L.** (2005). Organizational culture's influence on creativity and innovation: A review of the literature and implications for human resource development. *Advances in Developing Human Resources*. https://journals.sagepub.com/doi/pdf/10.1177/1523422305274528?casa_token=QhLFANcWoAcAAAAA:zTClDpc0tJg58YnKbjd0olpLI iPz6G dsndsKBQe5M9daV58TILlISKc4f4mvARI-pqhOHxM83e
- McNamara, D.E.** (2009). From Fayols Mechanistic to Today's Organic Functions of Management. *American Journal of Business Education (AJBE)*, 2(1), 63-78.
- Mintzberg, H.** (1979). *The Structuring of Organizations*. Englewood Cliffs NJ: Prentice Hall.
- Mintzberg, H.** (1980). Structure in 5's: A Synthesis of the Research on Organization Design. *Management Science*, 26 (3), 322-341.
- Martínez-León, I.M., & Martínez-García, J.A.** (2011). The influence of organizational structure on organizational learning. *International Journal of Manpower*, 32 (5/6), 537-566.
- Mosurović, M., Kutlača, Đ.** (2011). Organizational design as a driver for firm innovativeness in Serbia. *The European Journal of Social Science Research*, 24(4), 427-447.
- Mumford, M., Ginamarie, M.S., Gaddis, B., & Strange, J.** (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly* 13, 705 - 750.
- Naqshbandi, M.M., Kaur, S., & Ma, P.** (2014). What organizational culture types enable and retard open innovation? *Quality & Quantity*, 49(5), 2123-2144.
- Naranjo-Valencia, J.C., Jiménez-Jiménez, D., & Sanz-Valle, R.** (2016). Studying the links between organizational culture, innovation, and performance in Spanish companies. *Casopis Revista Latinoamericana de Psicología*, 48, 30-41.
- Nemeth, C. J.** (1997). Managing innovation: When less is more. *California Management Review*, 40(1), 59-74.
- Oh, S., & Han, H.** (2020). Facilitating organisational learning activities: Types of organisational culture and their influence on organisational learning and performance, *Knowledge Management Research & Practice*, 18 (1), 1-15.
- Patterson, F., Karrin, M., Gatto-Roissard, G., & Coan, G.** (2009). *Everyday Innovation: How to enhance innovative working in individuals and organizations*. NESTA: National Endowment for Science Technology & the Arts, UK.
- Pierce, J., & Delbecq, A.** (1997). Organization structure, individual attitudes and innovation. *The Academy of Management Review*, 2, 27-37.
- Qudah, M.A.** (2018). The Impact of Entrepreneurship Initiatives in Enhancing Creativity and Innovation. *International Journal of Business and Management*. 13 (7), 157-168.
- Pierce, J.L., & Delbecq, A.L.** (1977). Organization Structure, Individual Attitudes and Innovation. *Academy of management review*, 2 (1), 23-37.

- Ritala, P., Vanhala, M., & Järveläinen, K.** (2020). The role of employee incentives and motivation on organisational innovativeness in different organisational cultures. *International Journal of Innovation Management*, 20 (4), https://lutpub.lut.fi/bitstream/handle/10024/160963/ritala_et_al_the_role_postprint.pdf?sequence=1&isAllowed=n
- Ritala, P., Vanhala, M., & Järveläinen, K.** (2020). The role of employee incentives and motivation on organisational innovativeness in different organisational cultures. *Journal of Innovation Management*, 24 (4). <https://doi.org/10.1142/S1363919620500759>
- Robbins, S., & Coulter, M.** (2005). *Menadžment*, Data Status, Belgrade.
- Stoffers, J., Neessen, P., & Van Dorp, P.** (2015). Organizational Culture and Innovative Work Behaviour: A Case Study of a Manufacturer of Packaging Machines. *American Journal of Industrial and Business Management*. 5 (4), 198-207.
- Slevin, D.P., & Covin, J.G.** (1990). Juggling entrepreneurial style and organizational structure: How to get your act together, *Sloan Management Review*, 31 (2), 43-53.
- Smith, M., Busi, M., Ball, P., & Van Der Meer, R.** (2012). Factors influencing an organisation's ability to manage innovation: A structured literature review and conceptual model. *International Journal of Innovation Management*. 12 (4), 655-667.
- Schnetler, R., Steyn, H., & Van Staden, P. J.** (2015). Characteristics of matrix structures, and their effects on project success. *South African Journal of Industrial Engineering*. 26(1),11-26.
- Schein, E. H.** (1992). *Organizational culture and leadership* San Francisco: Jossey-Bass Inc.
- Saunila, M., Mäkimattila, M. & Salminen, J.** (2014). Matrix structure for supporting organizational innovation capability, *International Journal of Business Innovation and Research*, 8 (1), 20-35.
- Schuldt, K.S., & Gomes, G.** (2020). Influence of organizational culture on the environments of innovation and organizational performance, innovation and organizational performance, *Gestão & Produção*, 27, (3). <https://doi.org/10.1590/0104-530X4571-20>
- Shahzad, F., Yi Xiu, G., & Shahbaz, M.** (2017). Organizational culture and innovation performance in Pakistan's software industry. *Fakhar Technology in Society*, 51, 66-73.
- Taha, VA., Sirkova, M., & Ferencova, M.** (2016). The impact of organizational culture on creativity and innovation. *Polish Journal of Management Studies*, 14 (1), 7-17.
- Tidd, J., Besant, J., & Pavitt, K.** (1997). *Managing Innovation*. Wiley&Sons Ltd.
- Turró, A., Urbano, D., & Peris-Ortiz, M.** (2013). Culture and innovation: the moderating effect of cultural values on corporate entrepreneurship. *Technological Forecasting and Social Change*, 88, 360-369.
- Thompson, V.A.** (1965). Bureaucracy and Innovation. *Administrative Science Quarterly*, 10 (1), 1-20.
- Thompson, J. D.** (1967). *Organizations in Action*. New York: McGraw-Hill.
- Umar, A., Omar, C., & Hamzah, M.S.G.** (2018). The Mediating Effect of Innovation on Entrepreneurial Competencies and Business Success in Malaysian SMEs. *International Business Research*. 11 (8),142-153.
- Williams, C.** (2010). *Principi menadžmenta*, Data Status, Belgrade.
- Wiewiora, A. Trigunarsyah, B., Murphy, G., & Coffey, V.** (2013). Organizational culture and willingness to share knowledge: A competing values perspective in Australian context, *International Journal of Project Management*, 31(8), 1163-1174. <https://doi.org/10.1016/j.ijproman.2012.12.014>
- Zhang, W., Zeng, X., Liang, H., Xue, Y., & Cao, X.** (2023). Understanding How Organizational Culture Affects Innovation Performance: A Management Context Perspective. *Sustainability*, 15(8), 6644. <https://doi.org/10.3390/su15086644>

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