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THE MUTUAL IMPACT OF ORGANIZATIONAL CULTURE AND STRUCTURE

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ABSTRACT: *This paper explores the relationship between the structure and culture of an organization. The starting assumption is that organizational structure and organizational culture impact each other, and that there is a causal relationship due to which the agreement of the two components of organization leads to better performance. First, the mechanism through which organizational culture impacts the design of organizational structures and the manner in which organizational structure affects the maintenance, strengthening,*

or changing of organizational culture is explained at the conceptual level. Then, based on the known classifications of organizational structure and culture, they are put into a relationship of direct mutual interdependence. This is done by generating hypotheses about the agreement of particular types of organizational culture and particular types of organizational structure.

KEY WORDS: *organization, organizational structure, organizational culture*

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1. INTRODUCTION

Organizational structure and organizational culture belong among the concepts with the highest explanatory and predictive power in understanding the causes and forms of people's behaviours in organizations. Consequently, these two concepts are often used in research as independent variables in explanations of numerous phenomena found in companies and other types of organizations. The influences of organizational structure and culture on other components of management are usually researched separately and independently from one another. However, there are examples of research that analyzes the influence on management of both culture and structure in their mutual interaction (Wei, Liu, Herndon, 2011; Singh, 2011; Zheng, Yang, McLean, 2010). Unfortunately, although it is intuitively clear that organizational culture and organizational structure must greatly impact one another, there has been very little extensive research exploring their direct mutual impact.

Exploring the relationship between organizational structure and culture would be highly beneficial, since both of them determine the behaviour of organization members. However they do it in different ways. Organizational culture is an intrinsic factor of organizational behaviour, inasmuch as it directs the way people behave in an organization by operating from within and by determining assumptions, values, norms, and attitudes according to which organization members guide themselves in everyday actions in the organization. On the other hand, organizational structure is an extrinsic factor which influences people's behaviour from the outside, through formal limitations set by division of labour, authority distribution, grouping of units, and coordination. Therefore one's behaviour in an organization is the result of the impact of its culture and structure, as well as the influence of other factors. Therefore studying the mutual impact of organizational culture and structure is important for a comprehensive understanding of the behaviour of an organization's members.

Organizational culture can be defined as "a system of assumptions, values, norms, and attitudes, manifested through symbols which the members of an organization have developed and adopted through mutual experience and which help them determine the meaning of the world around them and the way they behave in it" (Janićijević, 2011: 72). As this definition implies, organizational culture has a cognitive and a symbolic component in its content. The cognitive component consists of mutual assumptions, beliefs, norms, and attitudes that the organization's members share, and which also shape their mental (interpretative) schemes (Alvesson, 2002; Martin, 2002; Smircich, 1983). Organizational culture

therefore determines the way the organization members perceive and interpret the surrounding world, as well as the way they behave in it. The cognitive content of organizational culture ensures a unique manner of assigning meaning and a unique reaction to phenomena within and around the organization. Hence, if a strong culture exists in an organization, all the members of the organization will make decisions, take actions, or enter interactions in a similar and foreseeable fashion. Symbols are a visible part of organizational culture, and they manifest its cognitive component. Semantic, behavioural, and material symbols strengthen, transmit, and also modify organizational culture (Alvesson, Borg, 1992; Dandridge, Mitroff, Joyce, 1980).

The significance of organizational culture emerges from the fact that, by imposing a set of assumptions and values, it creates a frame of reference for the perceptions, interpretations, and actions of the organization's members (Schein, 2004). In this way it influences all the processes that take place in an organization, and even its performance. Through managers' and employees' mental maps, organizational culture influences the dominant leadership style, organizational learning and knowledge management, company strategy, and also the preferred style of changing the management, employee reward system, commitment, and other aspects of connections between individuals and the organization. It would, therefore, be rational to assume, as this paper initially postulates, that organizational culture impacts on a company's organizational structure. With its assumptions, values, and norms, the culture influences top management's frame of reference that shapes organizational structure. Organizational structure is, therefore, a sort of cultural symbol and it mirrors key assumptions and values dominant in an organization.

Organizational structure is defined as a relatively stable, either planned or spontaneous, pattern of actions and interactions that organization members undertake for the purpose of achieving the organization's goals. This understanding of organizational structure is based on a fundamental assumption of it being purposeful, i.e., on the idea that organizational structure has its purpose (Dow, 1988). Purposefulness of structure implies that it is a rational instrument in the hands of those governing the organization, used for directing the course of activities in the organization towards realizing its objectives. Rationality of the organizational structure is ensured by its differentiation and integration of organization members' individual and collective activities (Lawrence, Lorsh, 1967). The differentiation process involves differentiation of operational and managerial activities. Differentiation of operational activities is realized through division of labour, or in other words, job design, and it results

in the organization's specialization level. Differentiation of managerial activities determines who decides on what, and results in a certain level of centralization or decentralization of authority within the organization. Integration is realized in unit grouping and coordination. Unit grouping, or departmentalization, implies structuring of activities and tasks into organizational units, and it can be based on input (functional), output (market or project), or a combination of the two (matrix). Individual and group activities and tasks in an organization are harmonized by coordination, in order for it to function as a unified whole. Coordination can be achieved through five basic mechanisms: direct supervision, mutual communication, process standardization, output standardization, and knowledge standardization (Mintzberg, 1979). Differentiation and integration in organizational structuring therefore imply four essential dimensions of organizational structure: job design, delegation of authority, unit grouping, and coordination. These dimensions of organizational structure are congruent, which means that there is harmony or concordance between them. Presumption of congruency is fundamental for the concept of organizational structuring (Miller, 1990; Mintzberg, Miller, 1984; Mintzberg, 1979). It assumes that congruency or harmony as dimensions of the organizational structure leads to better performance of the organization. In order for an organization to be successful it has to provide mutual congruency of the dimensions of its own organizational structures. This, then, leads to the formation of configurations of congruent structural dimensions, which is just a different name for models of organizational structure. An organizational model is actually a unique configuration of congruent structural dimensions: a certain level of specialization and (de)centralization levels, a certain unit grouping mode, and a certain coordination mechanism. The most prominent classification of models of organizational structure as configurations of structural dimensions has been provided by Mintzberg, (Mintzberg, 1979), and it will be used in this paper.

Organizational structure models, as a particular configuration of structural dimensions, direct and shape the manner in which organization members perform their tasks in the course of achieving the organization's goals. In different organizational models the organization members make decisions, take actions, and interact within the organization's functioning in entirely different ways. Thus it can be assumed that the model of the organizational structure influences organizational culture. It is quite possible that the compatibility of the behaviour determined by the structural framework in an organization, on the one hand, and the behaviour determined by cultural assumptions and values, on the other hand, has an impact on strength, i.e., in strengthening or weakening of organizational culture.

Based on the understanding of organizational culture and structure, a causality of their relationship, or rather their mutual influence, can be postulated as a reasonable presumption. It can also be assumed that the compatibility of organizational culture and structure would have a positive impact on an organization's performance. This paper's goal is to explain the mechanism of mutual influence between organizational culture and structure, but also to operationalize the said relation through developing hypotheses on the compatibility of particular types of organizational culture and particular models of organizational structure.

The paper is structured as follows. First, we will explain the manner in which organizational culture influences selection and implementation of organizational structure, as well as the mechanism through which organizational structure influences strengthening or changing of organizational culture. Afterwards, we will present classifications of organizational culture types and organizational structure models, in order to postulate hypotheses on the compatibility of particular types of organizational culture and particular models of organizational structure, all based on similarities between the criteria of their differentiation.

2. THE MECHANISM OF MUTUAL IMPACT BETWEEN ORGANIZATIONAL CULTURE AND STRUCTURE

In this section we will give a conceptual explanation of the mechanism of mutual impact between organizational culture and structure. First, the manner in which organizational culture impacts design and implementation of organizational structure will be explained, and this will be followed by a description of the manner of impact of organizational structure on organizational culture.

Organizational culture generates its impact on organizational structure both through its design and its implementation. Organizational culture realizes its impact on shaping organizational structure through forming the interpretative schemes of the top management, which selects the organizational structure model (James, James, Ashe, 1990). The culture creates a frame of reference in which the organization management's considerations and reasoning circulate in the process of decision-making concerning the organizational structure model. The word 'organization' originates from the Greek word 'organon', meaning 'tool'. From a managerial perspective, organizational structure is a sort of tool in the hands of management, who uses it in order to accomplish the organization's goals. What that tool should be like depends on the managers' ideas regarding what the

organization is, what its role is, what its meaning is, and what it should be like. Culture shapes the interpretative schemes of the majority of the organization's members, and even the management's interpretative schemes. Culture thus imposes on the leader and his associates a specific view on the organization, its meaning, its purpose, and also a suitable mode of its structuring. Thus the conscious and planned shaping and formal sanctioning of relations between individuals and groups in an organization will be strongly influenced by the meaning that the management assigns to the said relations, which has been imposed on them by organizational culture (Ranson, Hinings, Greenwood, 1980). Organizational culture thus creates the frame of reference in which organizational structure is designed. The organizational structure model formed in an organization must, therefore, be in accordance with the dominant cultural assumptions, values, and norms. If, for instance, an assumption of unequal distribution of power and the necessity to concentrate power at the top prevails in an organizational culture, then it is very likely that a centralized organizational structure will occur. If organizational culture imposes on employees and managers the metaphor of the organization as a machine, i.e., as a systematized, standardized, and regulated system which minimizes uncertainties in its functioning, then the organizational structure is very likely to turn out as highly formalized and specialized and having functional departmentalization.

Organizational culture does not impact organizational structure only *ex-ante*, during the selection of an adequate organizational model, but it also does it *ex-post*, during its implementation. The nature of this impact can be twofold – positive and negative, depending on compatibility between the new organizational structure model and the existing organizational culture. When the new organizational structure and the existing organizational culture are compatible, organizational culture impacts the implementation of the selected organizational structure through the process of its legitimization. Every organizational structure directs the behaviour of employees in their everyday work. It determines the employees' methods of conducting tasks, the manner of their interactions with others, and the way they make decisions. Each organizational structure model induces a different behaviour in organization members. If the behaviour induced by the selected organizational structure is compatible with the values of the existing culture it will legitimize the structure in the eyes of the organization's members as the proper and useful model in terms of achieving both organizational and individual interests. In such cases the assumptions, values, and norms of the organizational culture designate the selected organizational structure model as useful, desirable, good, or 'right', and thereby make it legitimate in the eyes of the organization members. This means that employees accept the organizational

structure that is in compliance with the cultural assumptions, values, and norms as the only one suitable for meeting their needs and goals. In that case the organizational culture will have a positive effect on the implementation of the selected organizational model.

If the selected organizational structure is not compatible with the existing organizational culture, it will not be legitimate in its members' eyes. In that case either culture or structure must be changed, depending on the manner of solving the state of cognitive dissonance. If the new organizational structure directs employees to behave in their everyday work in a manner incompatible with the existing cultural values and norms which they respect, the implementation of the new organizational structure will induce a state of so-called cognitive dissonance among employees (Fiske, Taylor, 1991). This is an unpleasant and frustrating state that occurs when values respected by an individual are not in accordance with the manner in which s/he is forced to behave. In other words, people must work in a way they do not consider as good, correct, or useful. Employees are frustrated by the dissonance between values and norms on the one hand, and activities in which they are involved through implementation of the new organizational structure on the other. People have the need to be consistent and operate in accordance with their beliefs: hence the state of cognitive dissonance is unpleasant. Consequently, organization members will tend to get out of this state as soon as they can. This can be done in two ways. First, they can strictly follow the values and norms determined by the existing culture, and return to their earlier behaviour which complies with those values. Second, if it is for any reason impossible for them to go back to the previous model of behaviour, organization members will change their values and norms for the sake of subsequent rationalization and legitimization of their new behaviour. In the first situation, where cognitive dissonance is solved by persistently operating in accordance with the existing cultural values and norms, organizational culture prevails and the new organizational structure will not be implemented. Organizational culture thus, in fact, delegitimizes organizational structure, i.e., makes it seem useless, wrong, or inefficient in the eyes of the organization members. Organizational culture then rises as an insurmountable barrier for implementation of the selected organizational structure. In such cases the newly proclaimed model of organizational structure remains a 'dead letter', since employees and managers continue to work as usual, potentially adapting their behaviour on a symbolic level in order to (falsely) manifest acceptance of the new structure. The new organizational structure is applied only formally and does not have any ramifications. It is also possible to still implement the new organizational structure, but only partially or in a modified form which ensures consistency with the existing cultural values. The other way of solving the state

of cognitive dissonance is for the organizational structure to prevail and the organizational culture to change; this will be discussed later.

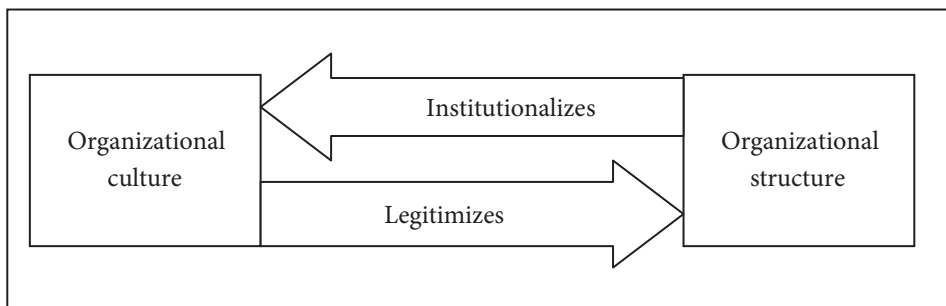
In the introduction we stated that the nature of the relation between organizational culture and organizational structure implies that it goes both ways, meaning that culture influences organizational structure, and also that organizational structure influences organizational culture. Organizational culture influences selection and implementation of an organizational model in the described way, but also the long-term implementation of an organizational structure model can affect organizational culture, i.e., it can consolidate or modify the existing type of organizational culture within a company. The effect that organizational structure will have on the company's culture depends on the compatibility between cultural values and norms on the one hand, and modes of performing work and completing tasks implied by implementation of the particular organizational structure model in question on the other.

If the new organizational structure implies a behaviour of organization members which is in accordance with the existing cultural values, then the organizational structure will have a positive impact on the existing organizational culture: it will strengthen its values. It will do this through a process of institutionalization. Every organizational structure induces specific behaviour in organization members regarding tasks they conduct daily and the manner in which they perform them. On the other hand, such behaviour of organization members has certain symbolic and cognitive implications. Organization members inevitably accept and incorporate in their interpretative schemes the assumptions, values, and norms that justify their behaviour. At the same time they accept the existing values and create new symbols of these values in order to publicly manifest this acceptance. Thus, when the new organizational structure implies a behaviour that is in accordance with the already existing cultural assumptions, values, and norms, then these assumptions will be strengthened by implementation of the structure and repetition of the behaviour it induces. With this process the culture becomes institutionalized through organizational structure. Institutionalization of culture represents a process through which the cultural assumptions, values, and norms in an organization are being built in its structure. By directing and shaping organization members' behaviours in a manner compatible with the dominant cultural values and norms, the structure is strengthened and the culture institutionalized.

If the new model of organizational structure requires organization members to behave in a way unacceptable to the values and norms of the existing

organizational culture, two situations can develop. One has already been described in the text above: when the organizational culture prevails, and so the organizational structure is either completely unimplemented or is implemented in a modified way. However, if the organizational structure prevails, it can change the existing organizational culture. In this case the organizational structure deinstitutionalizes culture, and thus starts the process of its transformation. By radically and permanently changing the organizational structure model, the organization's management forces employees to behave for a certain period of time in a manner that is not compatible with the dominant cultural assumptions, values, and norms. This leads employees to the already described state of cognitive dissonance (Fiske, Taylor, 1991), from which they can be relieved in two ways. First, they can stick strictly to the values determined by the existing culture and thus return to the previous behaviour which is in accordance with the said values. This situation has already been described as a prevalence of culture, which results in delegitimizing, and, consequently, in either lack of implementation or modification of the new structure. However, organization members can also escape cognitive dissonance by abandoning the values and norms that they respect, and adopting the new ones that legitimize new behaviour, which is enforced by the new organizational structure. The massive relief from organization members' cognitive dissonance that this method provides leads to transformation of organizational culture. Therefore, if management persists in implementing the new organizational model, employees will have no other choice but to change their values and norms, and to do so by complying with the new organizational structure. This will finally result in harmony between culture and structure, but with a new culture that legitimizes the new structure. In this way, the new organizational structure shapes a new organizational culture.

Figure 1. Mutual relations between organizational culture and structure



Source: Author's calculation

3. MUTUAL CONDITIONING OF ORGANIZATIONAL CULTURE TYPES AND ORGANIZATIONAL STRUCTURE MODELS

In order to operationalize the relation of the mutual impact of organizational culture and organizational structure, we will establish causal relations between types of organizational culture and types of organizational structure. It will then become clear that a certain type of organizational culture implies a certain type of organizational structure and vice versa, i.e., that implementation of a particular type of organizational structure leads to the development of a particular type of organizational culture. In order to demonstrate this we must first differentiate specific types of organizational culture and specific models of organizational structure, and then set a correlation between them.

3.1. Types of Organizational Culture

There are numerous classifications of organizational culture types, and they all differ according to the criteria used to differentiate culture types (Cameron, Quinn, 2011; Deal, Kennedy, 2011; Balthazard, Cooke, Potter, 2006; Denison, Mishra, 1995; O'Reilly, Chatman, Caldwell, 1991). The two most suitable organizational culture classifications for the analysis of the impact of organizational culture on organizational structure are given by Charles Handy (Handy, 1979) and Fons Trompenaars (Trompenaars, 1994). Handy's classification differentiates between power culture, task culture, role culture, and people culture. Trompenaars' classification identifies family culture, 'Eiffel Tower' culture, 'guided missile' culture, and incubator culture. These two classifications use the same criteria to differentiate organizational culture types: hence the described types are similar.

Power culture, or family culture, is based on the assumption that power should be concentrated at the organization's top. This type of culture implies the metaphor of the family, which means that members regard the organization as a sort of patriarchal family led by the 'father', i.e., pater familias. The nature of relations in an organization reflects the nature of relations that exist in families. Thus, the 'father' of the family centralizes all power in his hands, and makes almost all decisions. The source of the leader's power lies either in his charisma or in his control of resources, while the amount of power which the organization members have depends on the level of their closeness to the leader. As in families, in organizations with power or family culture the relationship between members has priority over tasks and structure. This results in a low formalization level, simple structure, and underdevelopment of the systems, procedures, and other formal restrictions of individual and collective actions. Enforcement of the

leader's decisions is conducted through his direct and personal influence on the organization members. This type of culture implies a high level of flexibility, since the organization members readily accept all the changes coming from the leader.

Role culture, or 'Eiffel Tower' culture, is the culture of bureaucratic organizations. In this type of culture the organization is represented by the metaphor of a machine. This metaphor suggests a high level of formalization and standardization, since the organization, like a machine, must accomplish its purpose in a precise and prescribed way. This is the reason why formal rules, procedures, systems, and structures are highly developed and have a critical role in the organization's functioning. Role or 'Eiffel Tower' culture predominantly values rationality, so the organization must, first of all, be a rational tool for achieving the stakeholders' objectives. In order to be rational, the organization must be specialized, standardized, and formalized. It also has to be depersonalized, since every personal or social influence needs to be excluded for the sake of rationality. It follows that organizations with role or 'Eiffel Tower' culture rely on work structure, division of labour, and tasks, while social relations between people are of secondary importance. This type of culture implies uneven distribution of power within the organization, since the top of the organization prescribes the rules with which the members are obliged to comply. Role or 'Eiffel Tower' culture leads to rigidity and resistance to change, since changes disturb the harmonious functioning of the 'machine'.

In task or 'guided missile' culture the organization is represented by the metaphor of a tool for solving problems and completing tasks. This type of culture values results, competence, creativity, accomplishments, and change. Teamwork is also highly appreciated, since the tasks that such organizations need to accomplish are usually complex and demand various sorts of knowledge and abilities. In organizations with task or 'guided missile' culture, professionals who have the required knowledge solve the complex problems. In order to perform their tasks they need autonomy in their work and the possibility of independent decision-making. Therefore in this type of culture the power in an organization is relatively equally distributed among its members. Since this is a culture in which organization is seen as a tool for problem solving and performing set tasks, it is quite clear that the focus will be on the work structure and tasks, while social relations will be secondary.

In people or incubator culture, individualism and individual growth represent the highest values. The organization is understood as an incubator of people and ideas. For the members of such an organization the realization of their individual

goals has more importance than the realization of the organization's goals. To its members the organization is a mere context in which they realize their personal goals. This context can be more or less adapted to the individual needs of the organization members, and this is the basic criterion according to which they evaluate the organization's quality. Consequently equality in distribution of power is preferred in organizations with this type of culture. The organization members, usually experts, participate in organizational decision-making in order to provide conditions for their growth. Since everything is perceived through the prism of the personal growth of the organization members, this type of culture is focused on social structure and interpersonal relations, while work structure is of secondary importance.

The described types of organizational culture differ according to several criteria, but the key differences arise according to two criteria. The first criterion for differentiation of organizational culture types in Handy's and Trompenaar's classifications is set according to the assumption of distribution of power in the organization. Distribution of power among the members of a social group, such as an organization, always arises as one of several key issues that every social group, and thus also an organization, must resolve. A solution of this issue is incorporated into the social group's culture in the form of cultural assumptions (Hofstede, 2001). According to the criterion of distribution of power, we can make a distinction between the organizational cultures that assume the need for authoritarian, or unequal, i.e., hierarchical, distribution of power, and those that assume the need for egalitarian, or equal, distribution of power. Authoritarian or hierarchical organizational cultures assume that an unequal distribution of power within a social system is inevitable, useful, and necessary for realizing the system's goals and purposes. Such cultures are Handy's power and role cultures and Trompenaar's family and 'Eiffel Tower' cultures. Egalitarian cultures, conversely, assume that within a social system, such as an organization, distributing power as evenly as possible is something useful, possible, and necessary; and that only such a distribution can ensure the realization of the social system's goals. Task and people cultures in Handy's classification, and 'guided missile' and incubator cultures in Trompenaar's classification, belong to such cultures.

The second criterion according to which the described types of organizational culture are differentiated is the primary frame of collective action through which the organization realizes its goals. The collective action frame is the second fundamental issue that a social group such as an organization must resolve in order to function efficiently. Every organization is formed in order to realize its members' or stakeholders' goals by taking collective and coordinated actions.

On the other hand, the organization’s nature is dichotomous: it contains a work component (tasks and structures) and a social component (people and their relationships). Therefore, an organization must decide whether it will meet the stakeholders’ and members’ goals and interests primarily through social or through work structure. In other words, organizations decide whether they are going to accomplish their tasks through collective action within the work or task structure, or whether they are going to do it through collective action within the social structure or social relations network. The assumption of a suitable collective action frame becomes incorporated in organizational culture and thus becomes one of the important criteria for its differentiation from other types of culture. According to the criterion of a suitable collective action frame in organizations, we can differentiate between organizational cultures which assume that collective action should be taken within the frame of the work structure, and organizational cultures which hold the assumption that collective action should be taken within the frame of the social structure. The first type, which implies domination of work over social structure, includes role and task cultures, i.e., ‘Eiffel Tower’ and ‘guided missile’ cultures. The second type of culture, which implies domination of social instead of work structure, includes power culture and people culture, as well as family and incubator culture.

By combining both criteria for differentiation of organizational cultures, we can construct the following matrix:

Table 1. Differentiation of organizational culture types

Distribution of power	Collective action frame	
	Work structure, tasks	Social structure, relations
Authoritarian, hierarchical distribution of power	Role culture (H) ‘Eiffel Tower’ culture (T)	Power culture (H) Family culture (T)
Egalitarian distribution of power	Task culture (H) ‘Guided missile’ culture (T)	People culture (H) Incubator culture (T)

Source: Author’s calculation

3.2. Organizational Structure Models

The classification of organizational structure models has been dealt with in the works of Henry Mintzberg (Mintzberg, 1979). His classification of organizational structure models completely dominates in literature related to organizational structuring. This comprehensive classification is based on nine

structural parameters and five organizational parts, and it differentiates five basic organizational models, or configurations, of organizational structure: simple model, bureaucratic model, professional model, model of adhocracy, and divisional model. Each model is characterized by a specific configuration of structural dimensions, from which their particular characteristics, advantages, and disadvantages are derived.

The simple organizational model can be found in small and young organizations, primarily privately owned. It is characterized by simplicity (hence the name). The second important characteristic of this model is its flexibility. This organizational model enables a company to react quickly and readily to changes in its environment, as well as to adapt its operating modes. The third significant characteristic of this organizational model is its orientation toward the leader. In the simple organizational model everything is oriented towards and depends upon the company's leader. Labour distribution in this organizational model is highly undeveloped, and the level of specialization is low. Practically, everyone does everything, i.e., they do what the organization's leader directs them to do. This contributes to the organization's flexibility, but it also decreases its productivity and, consequently, its efficiency. The degree of centralization in decision-making is very high. Practically all important decisions, not just those of strategic but also those of operative importance, are made by the leader, alone or with the aid of his closest associates. This is the reason why this model is restricted to small businesses: in large companies, the number of necessary decisions exceeds the intellectual capacities of a single person. Unit grouping is functional and undeveloped. Coordination is conducted through the direct control of the leader, who supervises and controls everything by himself. Formalized systems of control and coordination are not yet developed.

The bureaucratic model is usually found in large and mature organizations. This model is highly efficient but very inflexible and rigid, and has a negative impact on employee satisfaction. There is a very high level of labour division: therefore specialization is very high, which implies high productivity and product quality. The level of formalization is exceptionally high and coordination is conducted through standardization of processes. Every process that is even remotely important in the organization is covered by written procedures: there are many instructions, manuals, and organizational regulations, and they are all obeyed to a great extent. Centralization is relatively high, since decision-making takes place at the organizational top, although in this model that does not imply only one person, but a technostructure which prescribes procedures and has a real impact on the functioning of the organization. The number of hierarchical levels

is very high, and the structure is therefore 'deep'. Unit grouping is developed and functional, since it suits a high level of specialization.

The professional model can usually be found in organizations that work with sophisticated technologies, in which workers in the operational field are experts or highly educated professionals. Therefore it can be found in institutes, universities, hospitals, research laboratories, and such. It is not a flexible model, since the professionals in this model apply standard working procedures in standard situations. It is characterized by a relatively high level of formalization, with the application of knowledge standardization as a coordination mechanism. It is a decentralized organizational model, since the decision-making authority must be delegated to professionals who are solely competent to make decisions within their field of work. The labour division level is relatively high, and unit grouping is functional or project-based.

The adhocracy model is implemented in smaller organizations operating with complex and sophisticated technology, which must manifest a high level of flexibility, creativity, and innovation in their operations. It is mostly found in high-tech companies, research laboratories, and consulting agencies. In the adhocracy model the workers in the operational field are also professionals, but they do not operate according to standardized patterns, instead solving problems and conducting assignments ad hoc (when needed, on a case-by-case basis). The company consists of a series of working teams, with variable membership. Coordination within teams is conducted by direct mutual communication, which is also why this organizational model cannot be implemented in larger companies. The professional specialization level in working teams is not particularly high, because of the necessity of teamwork. The organizational structure is highly decentralized, since teams must be provided with sufficient authority to carry out tasks.

Large and mature companies operating in a heterogeneous market, where they operate in very different market segments and apply diversification strategy, implement the divisional model. The company is divided into several partially autonomous organizational units (divisions) that are assigned to conduct company activities in specific market segments. The key characteristic of this organizational model is its selective decentralization of authority, from company level to division level. Another important characteristic is divisional or market grouping. Interestingly, within the divisional model of organization, divisions can vary a lot in their organizational structures. Since they are autonomous in their business operations as well as in their choice of organizational model,

the divisions will implement the structural model that is most suited to their conditions. Those organizational models can be very different from one another.

Four out of the five described organizational models can be differentiated according to two basic criteria. The divisional model is complex, and it cannot be unambiguously classified into a specific category. The first criterion according to which we can differentiate between the described organizational models is the level of decision-making centralization within the structure. We can use this criterion to differentiate between centralized and decentralized models. The former includes simple and bureaucratic models of organizational culture, while the latter includes the adhocracy model and the professional model.

The second criterion for differentiating organizational models is the degree of formalization of its structure, which is reflected in the extent to which the processes are covered by formal procedures, as well as in the extent of specialization and task standardization in the given structure. Models with a high level of formalization include the bureaucratic and professional models, with standardization (of processes or knowledge) as their main mechanism of coordination. Models with low formalization include the simple model and the adhocracy model, with their flexible mechanisms of coordination: direct control and mutual communication.

By combining these criteria we can construct the following matrix of organizational structure types:

Table 2. Differentiation of organizational structure types

Centralization	Formalization	
	High	Low
High	Bureaucratic model	Simple model
Low	Professional model	Adhocracy model

Source: Author's calculation

The divisional model of organizational structure is complex. It is basically a system of divisions as individual organizations, and each of them can choose to adopt different organizational models. It is therefore impossible to locate the divisional model within the matrix above.

3.3. Matching of Organizational Culture Types and Organizational Structure Models

The presented classifications of organizational cultures and organizational structure models indicate a high level of accordance between the criteria used for differentiating organizational culture types and organizational models. The assumptions of suitable distribution of power within an organization, based on which organizational cultures are differentiated, are evidently connected with centralization level, based on which organizational structure models are distinguished. On the other hand, assumptions regarding the suitable form of collective action in an organization, based on which organizational cultures are differentiated, are evidently related to the formalization level in models of organizational structure. This enables us to postulate hypotheses on causal relations between specific types of organizational culture and specific models of organizational structure.

Authoritarian or hierarchical cultures, with a dominant assumption of unequal distribution of power within the organization, are mutually conditioned with the models of organizational structure that possess a high level of centralization. In cultures that assume unequal distribution of power in an organization as something desirable, useful, and good, it is most likely that centralized models of organizational structure will occur and be effective: the decision-making authority in these models of organizational structure is at the organizational top, and the organization members situated on lower levels do not participate in decision-making. On the other hand, long-term implementation of centralized models of organizational structure will gradually lead to development and/or strengthening of authoritarian organizational culture, which has a dominant assumption of unequal distribution of power as something desirable, useful, and good. Therefore, we may establish the following hypothesis:

H₁: Organizational cultures which assume authoritarian or hierarchical distribution of power are compatible with centralized models of organizational structure.

Based on this hypothesis, we may expect Handy's power culture and role culture, as well as Trompenaar's 'Eiffel Tower' culture and family culture, to imply implementation of simple and bureaucratic models of organizational structure, and also that the implementation of these models will lead towards development of the aforementioned types of organizational culture.

Egalitarian cultures, with a dominant assumption of the need for more equal distribution of power within an organization, are mutually conditioned with the models of organizational structure in which the degree of decision-making centralization is low. In cultures that have a dominant assumption of equal distribution of power as something desirable, good, and useful, it is most likely that decentralized models of organizational structure will occur and be effective: the decision-making authority in these models of organizational structure is more evenly distributed among all hierarchical levels, and the level of organization members' participation in decision-making is relatively high. On the other hand, the long-term implementation of decentralized models of organizational structure will gradually lead to the development and/or strengthening of an egalitarian organizational culture, which has a dominant assumption of equal distribution of power as something desirable, useful and, good. Therefore, we may establish the following hypothesis:

H₂: Organizational cultures which assume egalitarian distribution of power are compatible with decentralized models of organizational structure.

Based on this hypothesis, we may expect Handy's task and people cultures, as well as Trompenaar's incubator and 'guided missile' cultures, to imply implementation of the professional model and the adhocracy model, and that implementation of these models will lead to development of the aforementioned types of organizational culture.

Cultures in which problem-solving and accomplishment of organizational goals are primarily conducted through work or formal structure are mutually conditioned with highly formalized models of organizational structure. In cultures with the predominant assumption that organizational collective action is most effectively realized through work structure and tasks, it is most likely that the models of organizational structure with a high degree of formalization will occur and be effective: these models of organizational structure precisely prefer work structure and tasks over social structure and relationships. On the other hand, the long-term implementation of formalized organizational structures will lead to development and/or strengthening of an organizational culture in which a formal work structure and tasks will be highly appreciated. Therefore, we may establish the following hypothesis:

H₃: Organizational cultures oriented towards work structure and tasks are compatible with formalized models of organizational structure.

Based on this hypothesis, we may expect Handy's role and task cultures, as well as Trompenaar's 'Eiffel Tower' and 'guided missile' cultures, to imply implementation of professional and bureaucratic models of organizational structure, and that the implementation of these models will lead to development of the aforementioned types of organizational culture.

Cultures in which problem-solving and accomplishment of organizational goals are primarily conducted through social structure and relations are mutually conditioned with models of organizational structure with low level of formalization. In cultures with the dominant assumption that organizational collective action is most efficiently realized through social structure and relationships, it is most likely that models of organizational structure with a low level of formalization that prefer social structure and relations over work structures and tasks will occur and be effective. On the other hand, the long-term implementation of an organizational structure with low level of formalization will lead to the development and/or strengthening of an organizational culture in which social structure and relationships will be highly appreciated. Accordingly, we may establish the following hypothesis:

H₄: Organizational cultures oriented towards social structure and tasks are compatible with models of organizational structure with low level of formalization.

Based on this hypothesis, we may expect Handy's power and people cultures, as well as Trompenaar's family and incubator cultures, to imply implementation of the simple model and the model of adhocracy, and that the implementation of these models of organizational structure will lead to the development of the aforementioned types of organizational culture.

Based on the correspondence of the basic criteria for differentiating organizational cultures and organizational structure models, we can construct the following matrix that supports the hypotheses on the direct causal relations between specific types of organizational culture and suitable models of organizational structure.

Table 3. Mutual correspondence of organizational culture types and organizational structure models

Distribution of power / Centralization level	Collective action frame / Formalization level	
	Work structure, tasks High formalization	Social structure, relations Low formalization
Authoritarian, hierarchical distribution of power High centralization	Role culture (H) 'Eiffel Tower' culture (T) Bureaucratic model of organizational structure	Power culture (H) Family culture (T) Simple model of organizational structure
Egalitarian distribution of power Low centralization	Task culture (H) 'Guided missile' culture Professional model of organizational structure	People culture (H) Incubator culture (T) Adhocracy model of organizational structure

Source: Author's calculation

There is a relation of mutual conditioning between role or 'Eiffel Tower' culture and a bureaucratic model of organizational structure, because there is a high degree of correspondence between the assumptions of this type of organizational culture and the assumptions on which the bureaucratic model is based. Role culture and 'Eiffel Tower' culture assume that the organization is a rational instrument for achieving goals, which is also the basis of the bureaucratic model of organizational structure. Since this type of culture assumes the rationality of all the processes in an organization, it is only natural to design the organizational structure to provide that rationality. It does this through a high level of formalization and centralization, and by relying on procedures and rules constituting the core of a bureaucratic organizational model. Role and 'Eiffel Tower' culture assume the necessity of unequal distribution of power in an organization, and this is in full accordance with the centralization of authority in the bureaucratic model. In this model the technostructure based at the organization's top has the highest authority, and it prescribes the procedures that everyone within the model complies with. On the other hand, long-term implementation of the bureaucratic model, with its centralization of power in the technostructure, leads to development and/or strengthening of authoritarian values of unequal distribution of power, and this is at the very basis of role culture or 'Eiffel Tower' culture. Role culture and 'Eiffel Tower' culture hold the assumption that the most suitable form of collective

action is conducted through the work structure and tasks, and this is in complete accordance with high formalization and focus on procedures, systems, and structures in a bureaucratic organizational model. On the other hand, the very implementation of the bureaucratic organization model, with its strong presence of procedures, standards, and rules, develops and/or strengthens the values of rational collective action through the work structure and tasks which constitute the basis of role culture and 'Eiffel Tower' culture. Based on the above, we may establish the following hypothesis:

H₃: Role culture or 'Eiffel Tower' culture implies implementation of the bureaucratic model of organizational structure, while implementation of the bureaucratic model of organizational structure implies development and/or strengthening of role culture or 'Eiffel Tower' culture.

Power culture, or family culture, is mutually conditioned with the simple model of organizational structure. In this type of culture the starting premise is that the organization is a tool in the leader's hands, made for the realization of organizational goals in the way s/he finds suitable. It is also assumed that the leader, or the 'head of the family', should control all the power within the organization, while the rest of organization 'family' members should obey. Starting from these assumptions, a simple model of organization is designed; it is highly centralized in order to provide the leader with all the power, and it has a low degree of formalization, so that the leader her/himself, instead of some procedures, can direct all the processes in the organization. Since the metaphor of organization of this type of culture is a family with a father figure at the head, it is clear that everything in this culture depends on the organization's leader. Therefore the organization members expect the leader to personally and informally shape all business processes and to make all important decisions. The assumption of the need for authoritarian or hierarchical distribution of power within the organization is in every way compatible with the metaphor of the family. This assumption implies implementation of a simple organization model, since it is centralized and its members do not have decision-making authority. On the other hand, long-term implementation of the simple model of organization introduces or strengthens the assumption that the centralization of power in the leader's hands is necessary for the efficient functioning of the organization, whereby power culture, or family culture, is actually being built. The metaphor of the organization as a family in this culture type also leads to orientation towards social structure and relationships. Just as interpersonal relations, and not tasks, are primary in a family, likewise social structure and relationships constitute the key component in organizations with power, or family, culture.

Therefore a simple organizational model with underdeveloped structure and low level of formalization is suitable for this type of culture. On the other hand, long-term implementation of a simple organizational model strongly suggests the assumption that interpersonal relations are more important for effective functioning of an organization than formal structure, whereby power culture and family culture are actually being developed and/or strengthened. Therefore, we may establish the following hypothesis:

H₆: Power culture, or family culture, implies implementation of a simple model of organizational structure, while implementation of a simple model of organizational structure implies development and/or consolidation of power or family culture.

Task culture, or 'guided missile' culture, is mutually conditioned with the professional model of organizational structure. This culture assumes that management and employees perceive their organization as a tool for solving problems and completing tasks. In this culture type the organization members highly value results and accomplishments. Therefore, in organizations with task or 'guided missile' culture, the most suitable model of organization is the professional model, which ensures focus on projects by its team or project structure. Task culture and 'guided missile' culture assume the need for equal, or egalitarian, distribution of power, whereby all the members of the organization can influence its functioning. This type of culture creates the conditions for implementation of the professional model in which workers in the operational field are professionals who conduct sophisticated tasks and who, therefore, must have the authority for independent problem-solving, as well as a high level of participation in decision-making. On the other hand, long-term implementation of the professional model of organization strengthens the assumption that it is necessary for all the members of an organization to equally participate in decision-making within the organization, and this creates the basis for the development of task or 'guided missile' culture. Task culture and 'guided missile' culture force their members to focus on tasks and work structure, which complies with the implementation of the professional model of organization, based on the application of standardized, formalized procedures to realize projects and solve clients' problems. On the other hand, the implementation of the professional model of organization will in time strengthen the assumption that a formal structure is more important than interpersonal relations, which will then constitute the basis for the development of task and 'guided missile' culture. Thus, we may establish the following hypothesis:

H₇: Task or 'guided missile' culture implies implementation of the professional model of organizational structure, while implementation of the professional model of organizational structure implies development and/or strengthening of task or 'guided missile' culture.

People or incubator culture is mutually conditioned with the adhocracy model of organizational structure. This type of culture implies the metaphor of the organization as an incubator for the individual growth of its members. The fundamental purpose of an organization is seen as assisting its members in their individual development. Hence, individual objectives are more important than organizational ones, and individual autonomy and organization members' creativity are at the very top of the hierarchy of values. In this type of culture it is perfectly natural to develop the adhocracy model, since this model's characteristics provide precisely individual autonomy, creativity, innovation, the conditions for learning, and the development of professionals as organization members. People or incubator culture assumes the need for egalitarian distribution of power in an organization, which creates the conditions for the implementation of the adhocracy model of organizational structure, which implies a high level of autonomy for the organization's members. On the other hand, implementation of the adhocracy model of organization gradually develops the organization members' assumption that equal distribution of power within the organization is necessary for the organization's functioning, and thereby creates the conditions for development of people or incubator culture. This type of culture also assumes that people and their competences and interpersonal relations, and not formal structures, are crucial for the organization's functioning. In this way incubator and people cultures create the conditions for implementation of the adhocracy model of organization, with its low level of formalization and its basis in the competences and creativity of teamed professionals. On the other hand, implementation of the adhocracy model in an organization will consolidate its members in the belief that competences, creativity, and their interpersonal relations are more important than formal or work structures, which will lead to development of people or incubator cultures. Therefore, we may establish the following hypothesis:

H₈: People or incubator culture implies implementation of the adhocracy model of organizational structure, while implementation of the adhocracy model of organizational structure implies development and/or strengthening of people or incubator culture.

4. CONCLUSIONS

Organizational culture and organizational structure are among the most researched concepts within the organizational field, since they have an exceptionally strong influence on the behaviour and performance of both the organization members and the organization as a whole. This paper started from the premise that these two concepts impact one another, and therefore when they match they will have a stronger influence on organizational performance. If organizational culture and structure are not in accord, there will be serious tensions and problems which will affect the organization's functioning and its results. It is therefore important to know how organizational culture and structure impact on each other.

Organizational culture affects the design and implementation of organizational structure. With its assumptions, values, norms, and attitudes, the culture creates the context and the frame of reference used by those who design the organizational structure. Also, the cultural context can significantly facilitate or protract the implementation of the selected structure in its implementation phase. Organizational culture legitimizes the behaviour and decisions imposed on employees and management by the organizational structure within the context of valid values and norms of behaviour. On the other hand, organizational structure institutionalizes the culture, i.e., reflects its values, norms, and attitudes. However, the organizational structure can strengthen or even change the existing organizational culture. Therefore, the relation of organizational culture and structure is twofold.

The operationalization of matching organizational culture and structure becomes possible when we compare Handy's and Trompenaars' classifications of types of organizational culture (Handy, 1996; Trompenaars, 1991) with Mintzberg's models of organizational structure (Mintzberg, 1979). In these classifications both cultures and structures differ from one another according to the same criteria: the criterion of distribution of power in an organization, and the criterion of orientation towards tasks or people. As a result the hypotheses on matching individual types of organizational culture and models of organizational structure can be established. Role culture or 'Eiffel Tower' culture implies the implementation of the bureaucratic model of organization; task culture or 'guided missile' culture corresponds to the professional model of organization; power culture, or family culture, corresponds to the implementation of the simple model of organizational structure; and people culture, or incubator culture, implies the implementation of the adhocracy model.

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