

EFFECTS OF STRUCTURAL CONFIGURATION AND ORGANIZATIONAL CULTURE OF COLLECTIVE INTELLIGENCE IN PUBLIC ORGANIZATIONS FROM SOUTH-WEST DEVELOPMENT REGION OLTENIA

Prof. Mihai Varzaru Ph.D
Assist. Anca Antoaneta Varzaru Ph.D
University of Craiova
Faculty of Economics and Business Administration
Craiova, Romania

Abstract: For an organization to function, it must be designed in a logical manner and follow a few simple principles. Example of nature, defined as "active force that establish and maintain order in the universe", can also seduce the world of organizations, subject to many external constraints: economical (profitability in the private sector / supply of services performed in the public sector), technological, institutional, cultural etc. Methods offered by Mintzberg and Crozier, Hofstede and Schein, Ernst and Janov provide a good opportunity to analyze the influence that chosen structural variants influence selected collective intelligence and perfect in public organizations. The study conducted in a representative sample of public sector organizations evolve in South-West Region Oltenia was based on a set of questionnaires that made a diagnosis of multiple structural forces, the positions of life in work groups and valuable component of organizational culture.

JEL classification: M12, M21, M50

Key words: diagnostic, public sector, structure, collective intelligence, performance

1. EVOLUTION OF THE STRUCTURAL DESIGN PROCESS

Organizational structure design is a process that consists in determining the appropriate structure and its implementation in a business reality (Osborn, 1984). This process has evolved in close connection with the development of organizational theory. First reflections on the organizations develop in the early twentieth century, with the acceleration of industrialization and the emergence of big business, where the owners of capital and power (leadership) are dissociated. These reflections correspond to an empirical approach, in which practitioners such as Taylor, Weber, Fayol and Ford examine a normative way the organization to rationalize its operation.

The classical concept supports the existence of an ideal model of a business organization, whose effectiveness is based on division of tasks, which is convenient as long as individuals do not realize only implementation tasks and do not show initiative. All decisions and all coordination is provided by management, employees, considered incapable of initiative, being responsible exclusively with execution.

Purely technical dimension of scientific organization of labor begins to be challenged by representatives of human relations school (Mayo, Herzberg, Likert, Lewin, Argyris, Maslow, McGregor), which highlights the importance of concessions

(increased autonomy) and new managerial behaviors for increasing the role of human factor in the growth of organization performance. Since the 1960s, contingency theories (Woodward, Burns and Stalker, Chandler, Mintzberg, Lawrence and Lorsh) dispute the principles of previous theories and prescription "one best way", rejecting the idea of the existence of optimal structures that adapt to environmental influences. More researches from the period 1960-1980 characterize the contexts and factors that influence and determine structural choices.

Mintzberg summarizes the four contingency factors of the organization (age and size, technical system, environmental characteristics and location of authority), identifying five coordination mechanisms and its seven structural types. Thus contingency theories put endpoint to classic paradigm of organizations and enriched the school of human relations. Defining and designing the structure is, according to Mintzberg, forecast of the means used to divide work in specific tasks and ensure their coordination distinct. Depending on the environment around them, on its strategies, the human resource management methods and the objectives chosen, the authority will be more or less centralized, hierarchical lines more or less numerous and short, techno-structure and logistics support more or less important (Lecrivain, 2010).

The analysis of mechanisms that can be used to coordinate work (mutual adjustment, direct supervision, standardization of tasks, standardizing of results and standardization of skills) and their use in organizational context allows the author to identify and describe the seven structural variants known (Mintzberg, 1998):

- simple structure, specific to small organizations with few formal rules;
- mechanistic bureaucracy, based on a standardized techno-structure, that normalize work procedures that work specific to simple and stable environments;
- professional bureaucracy based on skills, in which a person identifies more with his position, rather than its function and less with the structure in which it evolves;
- divided structure, with a strong division of tasks;
- adocracy a structural variation specific to projects, integrating teams of specialists and is adapted to turbulent environments and strategic logic of competitiveness and innovation;
- missionary organization, with a high level of organizational culture and value system;
- politicized organization or political arena, in which appear intense power games.

Professional trend (Sloan, Drucker, Gelinier), developed after the 1980s, focuses on management elements that can provide increasing of organizational performance, such as self-subunits and their transformation into profit centers, enrichment of management mission, focusing on activities that bring value added, participatory management by objectives etc.

Sociological approach (Crozier and Friedberg) considers the organization a social construction and dynamic organization and a coalition of actors, highlighting the need for constant change and taking into consideration the potential of groups in the management group and its administration. This journey of organizational theories provide a suitable set for relevant information to the proposed research, allowing the achievement of structural diagnosis compared with two referential interesting:

- structural variant appropriate of contingency factors present in the area of public organizations;
- structural variant appropriate proper to wishes of organizations' staff.

2. CULTURE AND COLLECTIVE ACTION

In any business there are many actions and subjective aspects that determine the choices of management. They can be considered of cultural significance if it is acquired, persistent and shared that the organization's members apply to themselves and to the environment around them (Camilleri, 1989). These representations combine specific local experiences, habits and values more or less shared in collective action. They coexist with internal conflicts, because the agreements do not preclude the retention of antagonisms of interest or sense between organizational actors (Louart, 2003). Distinctive culture of an organization can have a determining effect on its overall performance and on the quality of working life of its members. Through this collective experience members of an organization are able to solve two main problems related to the durability of its capital, namely external adaptation and internal integration. The last one refers to how to solve everyday problems related to teamwork and organization (Schermerhorn, Hunt, Osborn, Billy, 2006).

Mobilization of human resources depends on the proper use of elementary factors of motivation, but it requires something extra, which is done on another axis, the axis of personal values (de Person, 2001). To mobilize people, the manager must sample three qualities:

- to do well in the sphere of individual psychology;
- to let employees know how to communicate the direction to follow;
- be able to stimulate the energy that is in emotional dimension.

The link between values and individual is very close, almost inseparable. Faced with the universe of values, the manager is faced with difficult concepts to coordinate. Values can be characterized by two dimensions, namely consistency and insecurity, and their conjunction provides interesting information for the manager concerned about this chapter of the culture.

Consistency can be defined as the ability to not vary by outside influences, to maintain authenticity in case of turbulence. When someone says that a person is influenced, we understand that is judged as a malleable depending on the influences. People and consistent things have characters that remain consistent, which retains its identity regardless of continuous changes that occur around them. There are several degrees of consistency, and from this point of view, the individuals and groups, organizations can be classified according to their capacity of resistance to destructive forces. Where appropriate to mobilize a team work, the degree of consistency considered determines the multiplicity and variety of resources used by managers to respond to the factors of disintegration.

Precariousness is defined as a feature which is in inverse relationship to need. An entity is precarious if its existence was a priori unlikely and is not maintained and propagated only by an apparent miracle. A value is precarious since its improbability to emergence on the risks that the construction was not promoted, recognized and respected. One evokes the idea of the precarious fragility. Many values that are considered accurate are hard to maintain, ie are particularly precarious.

When the manager is thinking of values as part of organizational culture, he can not choose and believe in a single value for the simple reason that the values are multiple, irreducible and rival some over others. In terms of management is important not to confuse preferential values with referential values. Preferential values are beliefs that in choosing the most intimate and most decisive determine the preferences of an individual, being its' personal morality. Referential values are those required by the

management of the organization, and they are the ethic of the organizations (de Person, 2001). These values are based on game rules to be respected in the organization and are the origin of normative behavior within the organization. The values are based on attitudes, which in turn determine the behaviors at work.

3. COLLECTIVE INTELLIGENCE (CI)

More research on collective intelligence (Morel, 2002) show that expression of each individual in the group must be fostered to determine the apparition of a higher creativity, which is characteristic. This personal expression is defined by inner conviction and feeling, spontaneity and emotion. It is not about facts in the strict sense, but leaving a free course to this form of immediate knowledge not use reasoning, in other words must be given at a plenary expression of human nature's own intuition. Showing that there are no barriers will free the individual thinking and a full reflective participation of all group members. Without this you may experience a feeling of embarrassment and non productive participation. Such a situation is often evoked as one of the limits that hinder the full realization of collective intelligence. Thus, the concept of collective intelligence and initiate interaction occurs at three levels: the psychological level (involved in communication), the inter-relational level of relational structure and social level. This concept reveals, in fact, that man with his full expression is important in increasing organizational productivity.

Concept first introduced by Levy (1994), collective intelligence has been linked to the emergence of the internet, enriching knowledge and economic intelligence. Intelligent enterprise, a subsidiary notion used in the presentation of collective intelligence, it serves as a leverage of economic value of knowledge and integrate knowledge in the design of its products and services. The author gives the transition gradually to this notion, considering that the performance results from the conjunction of individual intelligences in a suitable configuration shall finally called *collective intelligence*.

One of the first steps we take considers the main features of collective intelligence:

- general distribution, because within the smart team, individual skills vary from one individual to another;
- continuous improvement, as individual skills not used are lost or are moving in another direction;
- multiple interactions, multilateral, simultaneous, trained in real-time to solve problems and anticipate solutions.

Managerial behavior when using this new and exciting concept should focus on two areas:

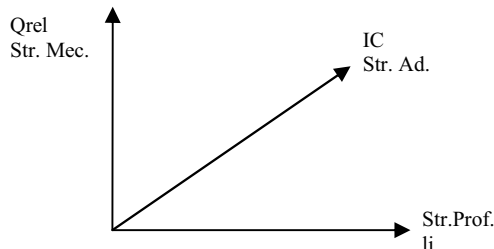
- to develop collective intelligence skills going from competences and individual strategies to exploit them;
- to start from existing collective intelligence, generated naturally, optimizing its effects.

The formula of collective intelligence (de Person, 2001) went from two factors that must record a positive value (necessary condition):

- a) the presence of individual intelligences (ii);
- b) relational quality to achieve a collective dimension (Qrel).

The sufficient condition is considered how to combine those two factors and the formula used is as follows:

$$IC = \Sigma (I * Qrel)$$



In the current economic system, the private organization aims to maximize the profit and public organizations to improve performance. From the formula and graph collective intelligence and in association with structural types of Mintzberg, results the concept below:

- must necessarily developed where the environment is complex and dynamic (adhocratic force);
- it is theoretically weak when the environment is stable and simple (mechanistic force);
- has the potential of increased individual intelligence, but less interactive (strength training);
- its development depends on management style (entrepreneurial force).

Current environmental developments have complicated the essence of structural forces affecting public organizations. In fact, the requirement of a minimum of collective intelligence in each particular case proves that the mechanistic, professional and entrepreneurial forces evolve better with a complement of adhocracy. If the reasoning is reversed, an organization concerned with the development of collective intelligence is able to address a complex and dynamic environment. The environmental trends incite organizations to prepare for an environment where collective intelligence will become a necessary asset.

4. STRUCTURE, ORGANIZATIONAL CULTURE AND INTELLIGENCE ORGANIZATIONS IN THE LOCAL SOUTH REGION - WEST OLTENIA

The study focused on municipalities, county councils and prefectures in the towns and villages of this area. Research methodology of the survey used questionnaires and scales for the interpretation of results (de Person, 2001), the scheme of life positions in the organization (Ernst, 1998), graphic representations of structural balance and cultural norms (staff), statistical averages.

For data collection and interpretation were used three types of questionnaires with their assessment grids:

- diagnosis of structural forces in the organization (Q1);
- diagnosis of dominant procedures in the organization (Q2);
- identification of life positions in the organization (Q3).

Data processing was performed in a first phase (which is the subject of our study) in the entire region, without going to refining the analysis of different segmentation criteria (urban / rural, between counties, between the three types of institutions analyzed).

Structural diagnosis was based on data provided in the table.no 1 and graphically presented in figure no. 1. Analysis and interpretation of the data reveals a situation where entrepreneurial and adhocratic strength is easily in advantage over mechanistic-bureaucratic tandem. The reality of these organizations requires mechanistic structure trends, while staff aspirations tend to entrepreneurial-adhocratic configuration. Although this situation does not mean, in terms of theory, a collective intelligence level and requires a mechanistic structure type, the diagnosis reveals a predominantly entrepreneurial behavior and structure. The explanation may come from specific media type, but it is linked, in our opinion, the frequent changes in leadership and specific behavior of the manager.

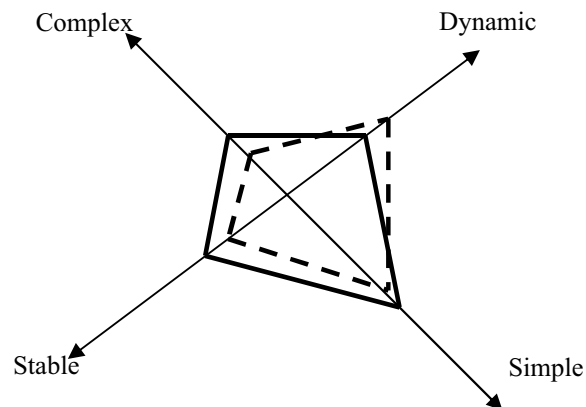


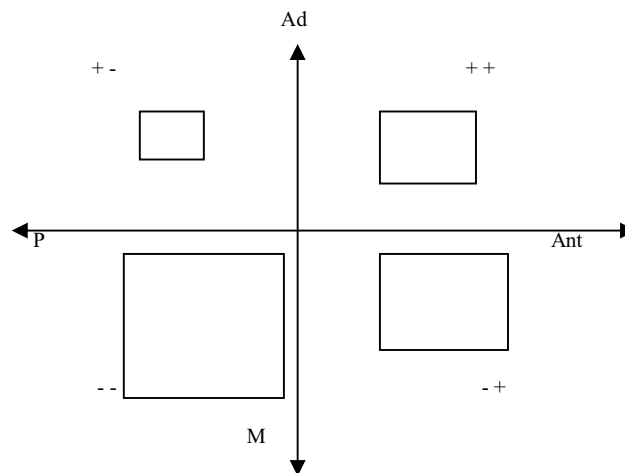
Figure no. 1 Structural diagnosis based on data

In terms of organizational culture, it is noted that in all these institutions the concept of declarative state still remained. In the absence of formalized tools (implementation) of organizational culture, the second questionnaire used the most common organizational values and norms, and analyzed how they are applied to the sample chosen. This time the comparison was made to a system of rules considered representative and found that there are big differences as negative chapters such as concern for good management, customer care, trust in management, care for excellence etc (tabel no.2). Actual profile of dominant norms reveals, in turn, the existence of a large gap between cultural reality and the wishes of staff, in which both attitudes and behavior patterns are not conducive to the emergence of the phenomenon of collective intelligence.

Table no.1 The general results of processing structural diagnosis

Nr. crt.	County	No of organizations	No. of respondents.	Type of structure							
				Entrepreneurial		Mechanistic		Professional		Adhocratic	
				E	D	E	D	E	D	E	D
1	Dolj	15	152	2,66	2,68	2,55	2,56	2,56	2,48	2,22	2,12
2	Gorj	9	65	2,48	2,54	2,49	2,70	2,53	2,20	2,45	2,31
3	Mehedinti	4	49	2,39	2,43	2,53	2,63	2,48	2,31	2,48	2,33
4	Olt	4	35	2,51	2,55	2,40	2,61	2,38	2,30	2,38	2,21
5	Valcea	4	66	2,36	2,22	2,54	2,34	2,47	2,49	1,81	2,13
6	Average	X	X	2,52	2,53	2,52	2,51	2,51	2,39	2,24	2,19

Relational sphere in the team and organizational level scheme has been studied by Ernst's life positions. Overall we see that the individuals surveyed are situated themselves and their teams, the dial - - which means an atmosphere of distrust and hopelessness, feature type bureaucratic organizations. Moreover, the highest score is recorded on the configuration of mechanistic-bureaucratic, mechanistic-entrepreneurial followed by configuration. The adhocratic score recorded shows, in turn, a greater desire for collaboration and mutual support among employees.



5. CONCLUSIONS

Both the given situation and the desired one are specific to an entrepreneurial type structure. Environment and reality requires a mechanistic bureaucratic structure with adhocratic component. Culture is not a tool and a way to increase managerial performance. Relational quality analysis shows perpetuate an atmosphere nonfavourable

to organizational performance. Cultural deficiencies do not favor the development of collective intelligence, which turns out more than necessary in public organizations studied, while the conditions where the environment evolves acquire characteristics of complexity and dynamism.

Table no.2 Profile standards in organization

No.	Standards	TOTAL		-100	-50	0	50	100
		E	D					
1.	Proud to be part of an organisation	+13	+45					
2.	Care for excellence	-23	+23					
3.	Team spirit	+15	+57					
4.	Trust in hierarchy	+8	+63					
5.	Care for a good management	-31	+41					
6.	Care for teammates	+5	+67					
7.	Customer care	-10	+55					
8.	Innovation	-24	+10					
9.	Interest in training	+13	+37					
10.	Trust in the organisation	+10	+45					

REFERENCES

1. Camilleri C., Chocs de culture. Concepts et enjeux pratiques de l'interculturel, Cohen-Emerique L'Harmattan, Paris, 1989
2. Lecrivain G. Des ressources en management des organisations et en marketing, www.Managmerket.com, 2010
3. Levy P. L'Intelligence collective: pour une anthropologie du cyberspace, La Decouverte, Paris, 1997
4. Louart P. La culture d'entreprise, in Allouche J., *Encyclopedie des Ressources Humaines*, Editions Vuibert, Paris, 2003
5. Mintzberg H. Le Management. Voyage au centre des organisations, Les Editions d'Organisations, Paris, 1998
6. Morel Ch. Les Décisions absurdes. Sociologie des erreurs radicales et persistantes, Editions Gallimard, Paris, 2002
7. Osborn R., Hunt J., Jauch L. Organization Theory Integrated Text and Cases, Melbourne(Floride), Kriger, 1984
8. De Person J. Organon. L'outil systemique du manager, Edition Celse, Paris, 2001
9. Schermerhorn J.Jr., Hunt J., Osborn R. Comportement humain et organisation, 3e ed., ERPI, Quebec, 2006

