

Organizational practices in the context of innovation to improve organizational competitiveness under the light of Complexity Theory

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Abstract— The rapid and constant changes in the environment influence individuals and organizations. Under these pressures, organizations need continually to learn how to cope with fierce competition at both global and local level, which represents constant challenges to organizations and those working in them. In this context, the question is: How can organizational practices impact the innovation process to enable organizations to compete more effectively? In order to answer this question, our general objective is to study the organizational practices in the face of innovation concepts aimed at organizational competitiveness (1) to raise the conceptual meanings of innovation that contribute to the organization's competitiveness; (2) to characterize organizational practices in an institutional locus; and to make a confrontation between the meanings of innovation and practices (3). The theoretical basis chosen for this essay lies in Complexity Theory, considering the antagonistic concepts and, at the same time, complementary to the perspective proposed here. The research has a qualitative approach and was elaborated through the method of Content Analysis, aiming to analyze the core of innovation by focusing on organizational practices, observing the dynamic relationship between the organization's many

interdependent levels, assuming that this serves as a lens for understanding the phenomenon under review, how organizational practices can interfere in the process of innovation in organizations intended to improve organizational competitiveness.

Keywords— Organizational Practices, Innovation, Organizational Competitiveness, Complexity Theory.

I. INTRODUCTION

In the nineteenth century, from the Industrial Revolution onwards, organizational practices and structures demanded a change linear technical and paradigmatic formation, due to the economic development and the consequent demand of labour for the industries, nowadays this ingrained form of observing the practices organizational structure is obsolete and precarious, since the highly competitive market requires new models that lead to innovation and constant evolution.

The simplistic view of the world was replaced by another with more complex foundations, where mechanistic thinking through Cartesian science believed that in any complex system the behaviour of the whole could be analyzed through its parts, it was replaced by systemic science where the parts need to be understood

within the context of their totality. Thus, for Teece, Pisano and Shuen (1997) capacities become dynamic, they represent the company's ability to integrate, build and reconfigure internal and external skills to address rapidly changing environments. Therefore, new organizational practices require dynamic capabilities that constitute new and innovative forms of competitive advantage.

In this context, the digital revolution reached a climax with the emergence of the Internet, which created a profound transformation in society. People are now widely connected by systems, which allow virtual interactivity. These changes reach organizational models by fostering rationality in processes at the same time as they allowed large-scale production, resulting in maximization of profit. These occurrences were not enough to satisfy the highly complex market; such internal and external intervention measures require knowledge in a surprising dynamic, which seems to be the main factor in the future generation of wealth, following the new rhythm of organizational learning.

The survey in Schwab (2016) allows us to interpret the new industrial revolution as a continuation of the third revolution driven at the speed of unprecedented discoveries, characterized by their transformational impact on integrated structures of governance. Schwab points out that this revolution empowers billions of people once they are interconnected through mobile devices, in processing, storing and accessing unlimited knowledge. They are operational cognitive models that can be multiplied by the merging technological additives, through artificial or robotic intelligence, by the Internet of Things or by autonomous vehicles, as well as 3D printing, nanotechnology, biotechnology, materials science, energy storage, quantum computing and other forms that will surely emerge at great speed. It is in this scenery that the main challenges facing modern and complex organizations emerge as the ideal vehicles for achieving competitive advantage, to an extent that ensures the survival of business in the market driven by the dynamics of the time. Managers then seek to develop competencies whereby others can be trained in collaborative innovation by which these advantages can be ensured.

Organizational practices are supported by new ideas and concepts which enable businesses, processes or products to innovate. These fundamental assumptions provide the basis for this task and the answer to the following question: How can organizational practices impact the innovation process to enable organizations to compete more effectively? In order to address this question, this study aims to study organizational practices and their relationship with innovation for competitiveness. Its specific objectives are (1) to examine the conceptual meanings of innovation that contribute to the

competitiveness of the organization; (2) to characterize organizational practices in an institutional locus; and (3), to make a confrontation between the meanings of innovation and practices. This task demands the construction of topics and subtopics; after this introduction the paper contains a theoretical-conceptual review, an account of the methodology treatment, the results of the research and a conclusion. This task demands the construction of topics and subtopics; after this introduction the paper contains a theoretical-conceptual review, an account of the methodology treatment, the results of the research and a conclusion.

II. THEORETICAL AND CONCEPTUAL REVISION

The theoretical basis chosen for this essay lies in the Complexity Theory as a way of exploring the concepts of innovation that make it possible to offer an understanding of the perspective of organizational practices that lead to the improvement of organizational competitiveness.

2.1 The complexity of systems

The systemic approach is based on the general theory of systems. The emergence of this new approach has received several denominations such as systemic analysis, systems analysis, systemic approach, structural analysis, functional analysis (Le Moigne, 1990).

This new perspective in the field of administration started from the study of the German biologist Ludwig Von Bertalanffy in the late 1940s but began to have repercussions only in the 1950s when the scientific community sought to intensify greater consistency for studies, thus observing the benefits of each branch of knowledge, began to structure a common theoretical conception, in order to counteract the tendency of fractionation of the sciences in specialties isolated from each other, a new way of observing and understanding the behaviour of the man arises.

For Bertalanffy (2008), a system would be a complex of interacting elements, where the whole is larger than its parts, and its integration cannot be reduced in parts, as that would destroy it. In the context of open systems, for this author, these would be a complex of elements in interaction and in continuous interchange with the environment, forming an activity to reach a goal, operating on inputs (information, energy, matter) and providing outputs (information, energy, matter) processed. For Bertalanffy (2010), a system is a set of mutually connected parts, from which emanate two concepts, namely: (a) purpose, when the units direct an order that always intends a goal and (b) globalism, action that it generates change in one of the units of the system propitiating modifications in all its other units. For the author, a systems approach is

necessary, when aiming to reach a certain goal, and for this, the systems specialist needs to find ways or means to reach it, considering as a choice between possible solutions, those that promise optimization of resources, with maximum efficiency and minimum cost, in a network of tremendously complex interactions. Considering the elements of analysis of systems theory, it is noted that its logic was developed based on the concepts of the biological sciences, so it builds a theorisation based on the prediction, in control and in the intention to maintain a constant equilibrium, being incompatible with the complex nature of the social sciences (Demo, 1989).

Therefore, the concept of open systems presents a more complex analysis of social reality and points to a reorientation of the observer's vision for the diversity, interrelationships and adaptation mechanisms that occur in the system and between it and the environment (Morin, 2000).

For Morin (2006), "complexity is a fabric (complex, which is woven together) of heterogeneous constituents inseparably associated: it places the paradox of the one and the multiple", that is, the complexity paradigm brings together and at the same time, distinguishes the parts. and, in addition, clarifies that they are "... part of phenomena at the same time, complementary, competing and antagonistic, respects the diverse coherences that unite in dialogical and polylogical and, with this, faces the contradiction by several routes" (Morin, 2000, p.387). Bringing the reformulation of the concept of systems, which no longer has a linear cause-effect relationship, starting to consider the reciprocity relationships that are associated with self-organization and the dynamism of the system.

From then on, new concepts emerge that seek to demonstrate the complexity of systems, starting to address principles such as uncertainty, indeterminism, non-linearity, self-organization, emergence, interrelations, coupling, dynamic equilibrium, coevolution, recursion and path dependence (Morin, 2006). These new concepts have brought to the term a greater potentiality to represent the reality of complex phenomena. Non-linear behaviour demands interactions between agents and occurs when a small change is able to fundamentally change the behaviour of the system, and the whole diverges from the sum of its components, which results in self-organization (Anderson 1999). As for the issue of emergency, appear when dynamic interactions of multiple agents follow local rules as opposed to top-down commands (Escobar, 2003).

For Morin (2002, p. 133), in this process of self-organization, organization is "[...] the chain of relations between components or individuals that produces a complex unit or system, endowed with qualities unknown to the components or individuals. " As for the

complementary, competing and antagonistic form, the process of recursion is established "[...] by which an active organization produces the elements and effects that are necessary for its own generation or existence, a circular process by which the product or the ultimate effect becomes the first element and the first cause (Morin, 2002, p. 186). In other words, an organization must be capable of producing itself, of regenerating, in the end, of reorganizing itself permanently, proposing innovative organizational practices for a complex environment.

In this way, "interaction between the parties can lead to the self-organization of the system, without the need for central control. This implies that local interactions can generate behaviours that emerge from the bottom up" (Furtado, 2015, p.22), new behaviours, new organizational practices, new processes, that is, constant innovation. Thus, it is assumed as presupposition for the present study that the interaction between the parts of an organizational system causes collective behaviour to emerge through organizational practices, and this interacts simultaneously with its environment as a way of seeking its self-organization by means of changes in its structure. This collective behaviour is non-linear, that is, disproportionate to its causal factors, and its agents change and adapt in response to feedback in order to interact toward self-organization and the emergence of new behaviour.

2.2 Review of concepts related to innovation

In recent years, innovation has been the focus for many researchers, resulting in a number of research projects that deal with innovation per se, and others which tackle innovative organizations. Thus, the innovation phenomenon, as it is called, is subject to different interpretations within the literature which leads to a multiplicity of theoretical concepts and models.

One of the first relevant studies on innovation was conducted by Joseph Schumpeter, who made his contribution by a study of economic development through technological progress. Schumpeter (1978, translation 1997) links the concept of development to innovation, and shows that what keeps the capitalist engine in motion results from new consumer goods, new production methods, new markets, new sources of raw material, and new forms of organization; thus, it attributes to innovation the role of continuously revolutionizing the economic structure, annulling old habits of consumption by new ones, through a dynamic defined as 'creative destruction'. For Schumpeter, the terms invention and innovation are distinct and at the same time complementary; he states that the term invention relates to the simple fact of creating new technical or organizational artefacts, and innovation comprises the entire process encompassing the invention

and its effective incorporation into the economic system, which it then transforms.

In this context, Schumpeter (1997) argues that transformative innovations cannot be predicted ex-ante, but when they are set in motion in the system itself, they can produce changes, which are different from those occurring on a day-to-day basis, leading to a break in the equilibrium achieved in a circular flow. For the author, organizations may be influenced by the market, but they must anticipate change by altering the flow and persuading consumers to want new things, or things that differ in one aspect or another from those they were in the habit of using, thus breaking the balance of the circular flow.

The resources needed to make the new combinations feasible, according to Schumpeter (1997), are available in society, being employed in the activities that make up the circular flow. They depend on innovations, waiting for new forms of combination to be created that will dislodge them from the places where they were employed or to allocate them to new activities to be produced in the future; these interacting activities are what Schumpeter terms economic development. This process of innovation encompasses the following five possibilities: I - Introduction of a new product (something people are not familiar with) or a new quality of a good; II - Introduction of a new method of production, that is, something not experienced in the activity itself, which in no way needs to be based on a new scientific discovery, but results in a new way of commercially managing a commodity; III - Opening of a new market, that is, one that the product has not yet entered, whether or not that market already existed; IV- Obtaining a new source of resources, again whether or not this source already existed or had to be created; V) Establishment of a new organizational structure, such as a new position or fragmentation of a monopoly, a new method or a new process.

To this Schumpeterian scenario where competition is based on innovation, on the contest between price and performance, and on the creative destruction of skills possessed by companies, Teece, Pisano and Schuen (1997) bring the concept of dynamic capabilities as the capacity of the company to integrate, build and reconfigure internal and external competencies in a rapid response to changes in competitive environments through which the level of success and failure of companies can be explained. For Teece, Pisano and Schuen (1997), dynamic capabilities emphasize the development of managerial skills and combinations of organizational, functional and technological skills, difficult to imitate, integrated and grounded in research in areas such as Research & development (R & D) management, product and process development, technology transfer, intellectual property, production, human resources and organizational learning.

With this approach, innovation can be seen as a dynamic capacity of the organization.

Innovation processes, as evidenced by Nelson and Winter (1982), can be viewed as broader evolutionary processes whereby firms have improved and transformed their products, processes, and market approaches individually or in different combinations into a continuous learning process. The definition adopted by Lam (2005) for innovation is similarly a process of learning and creating knowledge, in which new problems are defined and, consequently, new knowledge is developed to solve them. In terms of organizational innovation, Lam (2005) clarifies that it responds to the idea of creative destruction, when social rules are routinely destroyed although their stability was a source of meaning, in order to create new ways of thinking, new modes that replace the familiar ones.

The Organization for Economic Cooperation and Development (OECD), seeking to standardize the concept of innovation, defines innovation as the implementation of a new product (a good or service) or a considerably improved product or process, or a new marketing method, or a new organizational method in business practices, workplace organization or external relations. In this definition it presents four main areas of innovation: in product, process, the organization and marketing, as follows: (a) Product Innovation is the insertion of a new or significantly improved good or service; (b) Process Innovation is the implementation of a new or significant better form of production or method of delivery; (c) Organizational Innovation is the implementation of a new organizational method in business practices, work environment or external relations; and (d) Marketing Innovation is a new market method involving significant changes in the design or packaging of products. As part of its definition, the OECD states that all innovations must contain some degree of novelty, something new to the company, new to the market or new to the world.

Finally, in Karlsson and Tavassoli (2016), innovations are presented as the result of new combinations of inputs in the form of innovation resources, ideas, information, knowledge and/or technologies, which are variables that are internally generated in resource saving and R&D insofar as they touch organizational innovation, elucidate authors who are concerned with the knowledge of land surveying, practical databases, lessons learned from experience and other tactical resources, the introduction of training programs for developers and employees or the initiation of supplier or customer development programs. Thus, for these authors, organizational innovations are related to all processes of organizational change, procedures, systems, etc., and promote teamwork,

information exchange, coordination, collaboration, learning and innovation.

2.3. Brief context about organizational practices

The term practice has been gaining ground in academic debates, especially in approaches to organizational strategy, which seek to reduce the impacts of constant changes by extending knowledge and to encourage organizational competitiveness in the globalized market. A study in Bedani and Veiga (2015) exposes the epistemological deficiencies observed in the national and international literature with regard to organizational practices, observing that this construct needs epistemic and methodological deepening.

Jarzabkowski, Balogun and Seidl (2007) clarify the difference between praxis and practice. According to these authors, praxis means the interconnection between the actions of individuals or groups and institutions, which may or may not be dispersed, that is, they involve different actors in a social, political or economically established context and have a significant impact on the direction and survival of the organization. As far as practice is concerned, the authors elucidate that it is intrinsically linked to doing, since it provides the behavioral, cognitive, procedural, discursive and physical resources through which multiple actors are able to interact in the social performance of collective activities, and the way in which they are used routinely determine the patterns that reveal how the activity is constructed.

Organizational practices, in Kostova's (1999) view, evolve over time, influenced by organizational history, people, interests, and actions that have been institutionalized by organizations. Thus, for Kostova, the organizational practices are related to the shared knowledge and competencies of the organization, and can be accepted and approved by its members, because they are perceived as the correct way to carry out certain tasks. With this in mind, Kostova (1999) considers that the practices are constituted by two distinct elements: (1) a set of written or tacit guidelines showing the way that the organizational functions should be coordinated; (2) cognitive elements (values and beliefs) that establish how to understand and interpret such guidelines.

From this perspective, Bedani and Veiga (2015) clarify that practices are moderately independent of organizational values, because they are more flexible and changeable, and different from organizational beliefs and values. Hence they can fit into the internal control systems and the pressures that arise from an organization's external environment. Thus, two organizations with similar cultures or values can produce completely divergent organizational practices. Within this approach, Bedani and Veiga (2015) explain that practices represent fundamentally a set of tacit items of knowledge, which makes it difficult to

communicate them explicitly to the members of the organization. Therefore, the learning of the practices depends on the efforts of the individuals to carry out the tasks and the participation of the group in solving the organizational problems.

For Le Clus (2011), the workplace and co-workers are crucial in supporting, valuing and producing learning opportunities and therefore learners have to be updated and have their own work practices, permanent work programs and good performance, to sustain the organization's competitive advantage. Le Clus reports that learning can be implanted as an integral part of social practice, in which the work environment gives the members of the organization the chance to acquire knowledge that connects to the genuine and efficient practice. Thus, according to the author, non-local learning can be divided into two forms: (1) formal learning that is planned and organized by the organization in an effort to increase income without work; and (2) informal learning that is unintentional or unplanned and results from other activities, including observation, repetition, social interaction, and problem solving.

In support of the above approach to learning practices, Teece, Pisano and Schuen (1997) clarify that learning is a process whereby repetition and experimentation allow tasks to be performed better and faster. In such conditions, they believe that learning involves not only organizational but also individual ability. Learning requires common communication codes and coordinated search procedures. These authors explain that the organizational knowledge generated by the learning activity consists of new activity patterns and practices, or a new organizational logic.

Thus, in a scenario of permanent change and high competitiveness, Bedani and Veiga (2015) believe that new organizational practices can emerge which emphasize speed, flexibility and innovation, such as employee alliances, the outsourcing of activities considered non-strategic, fragmentation of business units, reduction of organizational boundaries, flexible working groups and the temporary hiring of staff.

2.4. Concept of innovation with reference to organizational practices

Global market scenarios indicate that innovations determine the improvement of performance and, consequently, the increase of organizational competitiveness. For Teece, Pisano and Schuen (1997), the competitive advantage of companies lies in three aspects: (a) in managerial and organizational processes, that is, how the company does things, or what can be referred to as its routines, or patterns of current practice and learning; (b) shaped by the position of its specific assets, i.e., the specific technologies that the company possesses, its patent and intellectual property records, complementary

assets, customer base and external relations with suppliers and other complementary companies; and (c) the paths and options available to these assets, which are the strategic alternatives available to the company, such as the paths already taken by the company that allow it to direct its actions.

For the OECD (2005), an organizational firm can be seen as an example of one type of organization in business enterprises, with the power to innovate by organizing local work and its external relations. This type of innovation aims at improving the performance of organizations by reducing labor costs, providing workplace satisfaction and improving labor productivity, gaining access to non-tradable assets (since external knowledge is not coded), or the cost of supplies. Technological innovations in product and process (TPP) are defined by the OECD (2005) as a process of implementing products and processes requiring new technological knowledge and new technology. Because it is a process innovation TPP innovation when implemented in a market can be seen as a form of product innovation if it is used in a production process.

Finally, to understand the behavior of innovation in companies, Karlsson and Tavassoli (2016) record the need for practices such as the search for different sources of information and knowledge to create innovation and complementarities, together with exchanges between them. For these two writers the influence of previous information and knowledge resources of the companies should be recognized, with the external networks and the capacity to use information and knowledge about the various activities. They conclude that the ability to obtain external sources probably depends on internal R & D being carried out continuously and on the internal absorption capacity

being sufficiently high. They also emphasize that larger firms generally have a greater internal pool of innovation inputs, more links with external sources, greater financial resources, and greater opportunity to pool risks for a number of innovation projects. Thus, they infer that larger companies are more inclined to innovate than smaller companies' human uneasiness in the virtuous circle of transcendental existentialism in itself, situated on the agenda of discovering the concreteness of being and existence, which will bring about the incorporation of a new truth verified throughout the context.

III. METHODOLOGY

This essay is elaborated through the Content Analysis Method whereby, according to Bardin (2011), the analysis of content can be defined as a cluster of communication analysis techniques with the objective of revealing, through systematic and objective description procedures of the contents of messages, indicators that allow the inference of knowledge about the conditions of production and the reception of these messages. The method requires categories related to the search object.

The systematic diagram of the application of the content analysis method (Fig.1) was divided into three stages (pre-analysis, material exploration and the treatment of results and interpretation), so as to compare the meanings of innovation in the context of the organizational practices, based on the documents used to generate productive indications for the inference process and contributing to the interpretations to reflect the validated results, followed by a specification of the items used with a description of each the diagrammed elements.

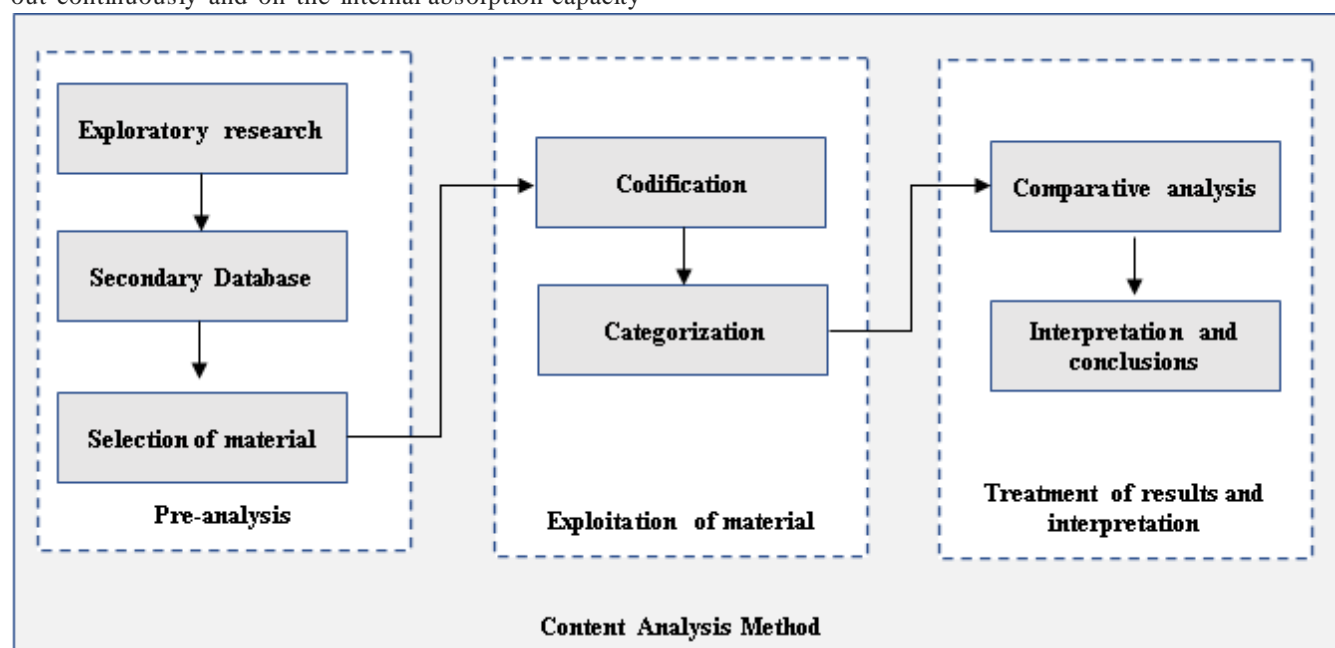


Fig.1: Diagram of the Content Analysis method considered in this research

Source: Prepared by the authors on the basis of Bardin (2011).

Table.1: Specifications for the Diagram of the method of analysis considered in this research.

Elements	Descriptive
Content analysis	Set of message content decomposition techniques for the reconstruction of meanings.
Pre-analysis	A reference to the organization of the material to be investigated. Such structuring allows the analyst to conduct the successive analysis operations.
Exploratory research	Preparatory study of the main objective of the research, in order to allow greater clarity and precision.
Secondary Database	Source of findings on the theoretical reference of the discourses related to innovation and organizational practices.
Selection of material	Step of choosing the documents that will be used for the elaboration and analysis of the content
Exploitation of material	Step for construction of cut-outs of the texts in units of registers; definition of classification and aggregation of information into categories.
Codification	Process for marking the analysis units, with signs or symbols that allow their subsequent grouping (in categories or subcategories).
Categorization	Process of systematizing raw data and allocating it to categories or subcategories, for further discussion of relevant characteristics.
Treatment of results and interpretation	Capturing the evident and potential content of all the collected material.
Comparative analysis	overlapping of the various categories in each analysis, highlighting the aspects considered similar and those understood as different
Interpretation and conclusions	Procedures that use the results for interpretation and inferences to elaborate the conclusion of the research

Source: Prepared by the authors.

For Bardin (2011), when using the method one must create categories related to the research object, complementing that the logical deductions or inferences obtained from the categories are responsible for identifying the relevant questions contained in the content of the messages. In the material exploration stage, two phases were performed: the first one refers to the coding process in which the most relevant aspects in the analyzed literature were selected; and the second phase, the categorization process, where the selected data were

divided into categories and subcategories in order to compare the meanings of innovation in the context of organizational practices, presented in Table 2.

As a result, the productive indications for the third stage (Treatment of results and interpretation) were generated, from the identification of the analytical categories, the inference procedure was carried out, in order to contribute to the interpretation process, for the subsequent description of each diagrammed element and confronted, reflecting the results.

Table.2: Specification of analysis categories and subcategories

Category (innovation)	Subcategorias	Source
Breaking the balance	Transformation	Nelson e Winter (1982); Schumpeter (1997); Teece, Pisano and Schuen (1997);
	Different combinations	
Innovative Capacity	Continuous learning	Nelson and Winter (1982); Karlsson and Tavassoli (2016)
	Development of new ideas	
Category (Organizational practices)	Subcategories	Source
Guidelines	Determine patterns	Kostova's (1999); Jarzabkowski; Balogun; Seidl (2007); Le Clus (2011);
Behavioral resources	Cognitive elements	Kostova's (1999); Jarzabkowski, Balogun and Seidl (2007); Bedani e Veiga (2015)
Shared knowledge	Learning	Teece, Pisano and Schuen (1997); Bedani e Veiga (2015); Le Clus (2011)

Source: Prepared by the authors.

IV. RESULT OF THE STUDY OF INNOVATION IN THE CONTEXT OF ORGANIZATIONAL PRACTICES

This section presents the results of the study, after the analysis of content in accordance with the proposed objectives. The section deals with three topics: (1) a survey of the conceptual meanings of innovation that contribute to the competitiveness of the organization; (2) a list of characterization of organizational practices at an institutional locus; and (3) a confrontation between the meanings of innovation and a firm's practices under the

complexity theory approach in order to provide the required study.

4.1 Survey of the conceptual meanings of innovation that contribute to the competitiveness of the organization

Innovation becomes an indispensable condition for the survival of organizations in a highly competitive world. Table 3 and the fig.2 presents the categorization of the content and main contributions of innovation to organizational competitiveness, based on the concepts discussed in this essay.

Table.3- Innovation categories and subcategories.

Category	Subcategories	Contribution
1. Breaking the balance	1.1 Transformation 1.2 Different combinations	- New goods or services - New organizational methods - New markets - New features - New forms of organization
2. Innovative Capacity	2.1 Continuous learning 2.2 Development of new ideas.	- New organizational routines - New technologies - New skills

Source: Elaborated by the authors from the research data.

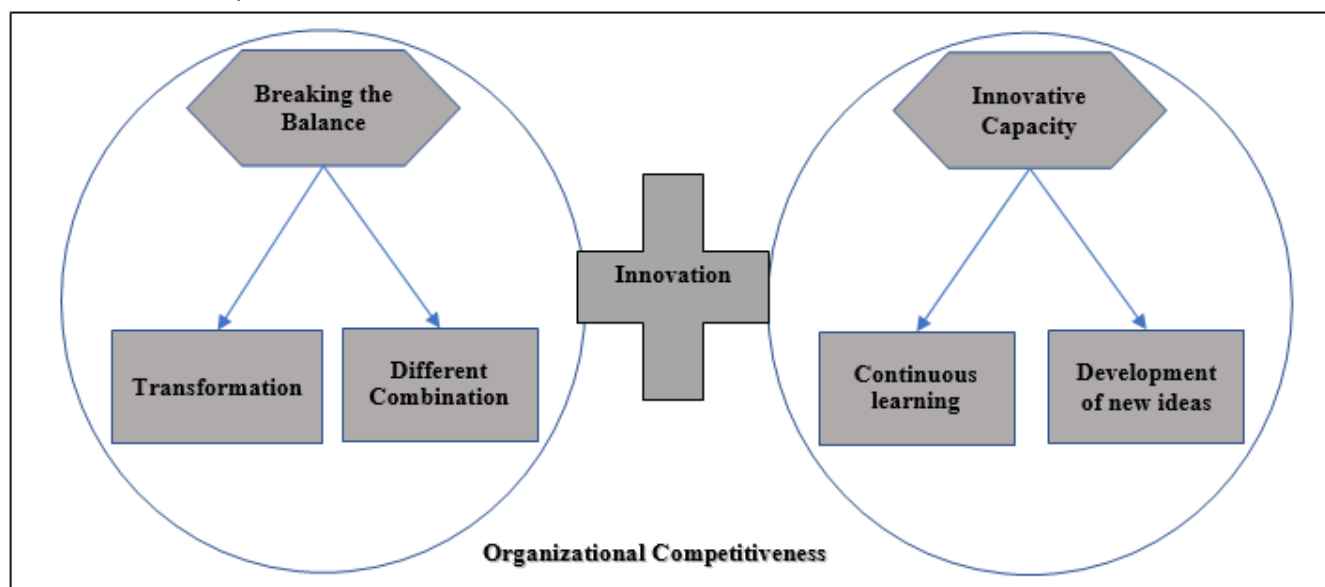


Fig.2: Diagram of the Categories of innovation that contribute to organizational competitiveness

Source: Prepared by the authors

The breakthrough categories of balance and innovative capacity are related to the decision-making process that precedes organizational change, which allows the competitiveness in the market to be included in the deliberations. The category of innovative capability is related to innovation as made up of a series of gradual improvements in existing methods, products, services, or processes in the organization which are intended to implement innovations focused on development efficiency, productivity and competitive differentiation. With regard to the breaking the balance category, they are actions that

modify the status quo and lead to innovation in the form of a new product, service, process or strategy with significant impact, completely replacing existing technologies and methods. Organizational competitiveness demands speed and flexibility, with an intention to reduce development time, seeking quality and the satisfaction of its consumer market – this is the great challenge of innovation for organizations. Thus, these categories through the transformation, combination and development of ideas, make possible the practice of continuous learning and the

generation of innovation in the organizational environment.

4.2 Characterization of organizational practices in an institutional locus

In an economy based on information and knowledge, where people are increasingly recognized as essential

elements in the organization, we need to look for practices that help these people learn, unlearn and learn continuously. Table 4 and the fig. 3 presents the categorization and main characteristics of organizational practices, based on the concepts discussed in this essay.

Table 4: Organizational practices categories

Category	Subcategories	Feature
Guidelines	<i>Determine patterns</i>	<i>Organizational competence that establishes the direction of actions</i>
Behavioral resources	<i>Cognitive elements</i>	<i>They suffer internal and external influence; are flexible and changeable; they comprise the tacit knowledge, mental activities, emotional states and motivations of a set of individuals</i>
Shared knowledge	<i>Learning</i>	<i>It allows interaction, is collectively active in activities such as observation, repetition, social interaction and problem solving.</i>

Source: Elaborated by the authors from the research data.

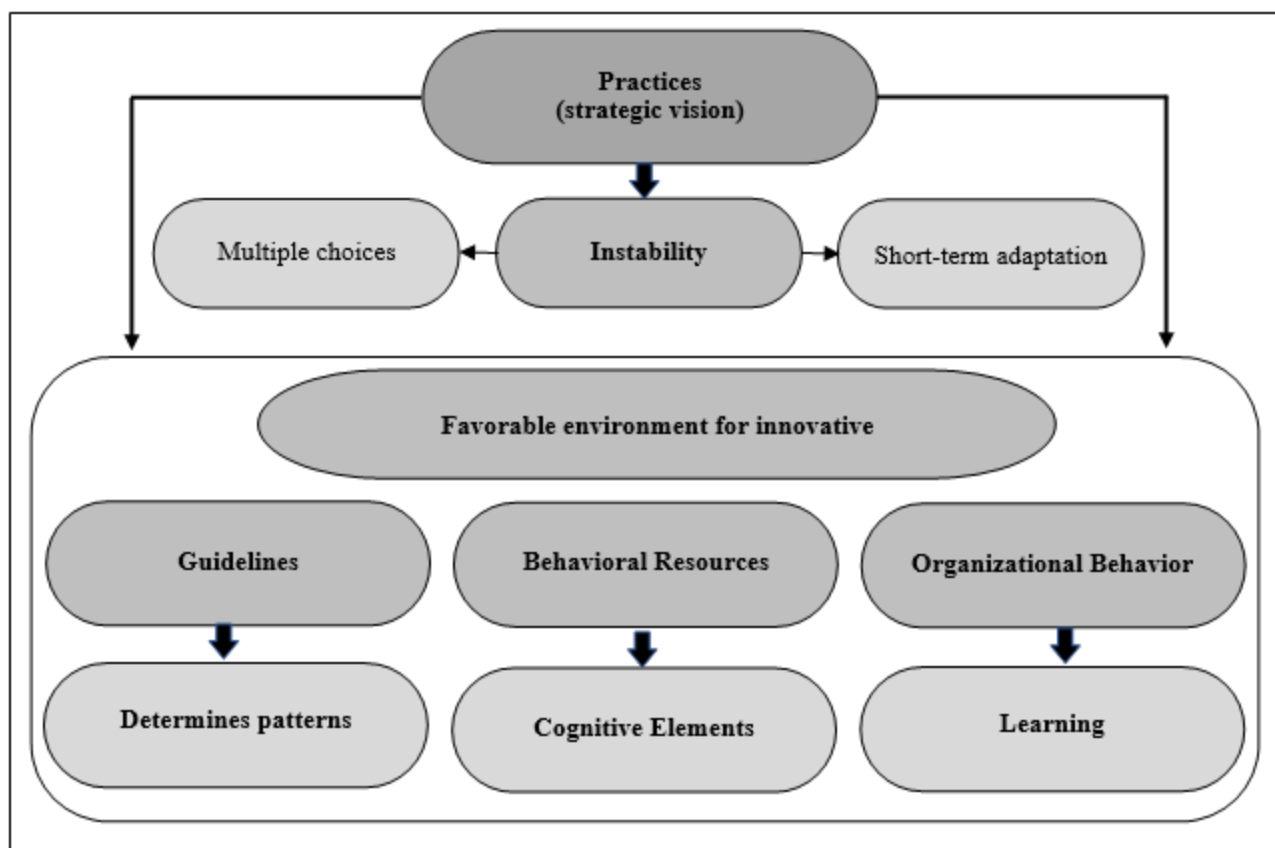


Fig. 3: Diagram of the Categories of innovation that contribute to organizational competitiveness

Source: Prepared by the authors

It is observed in this context that the practice is a matter of survival for the companies, because it allows the formation of an environment that favours the creation of new solutions to meet the needs of the organization and the market. Thus, it is not only a question of implementing practices, but also of connecting them to a strategic vision where knowledge and other behavioral resources are at the centre of decision-making.

As a way of contextualizing organizational practices, one can illustrate the ways of communicating, managing people and processes, controlling, monitoring, socializing, developing processes and strategies, that is, the manner of any activity developed by human beings that leads routines awaiting development in the organization. These organizational practices can reduce operational costs, improve productivity, and prevent quality problems.

In the case of more traditional businesses, the organizational culture must be transformed through the establishment of practices that encourage collaboration, safeguarding, sharing, internalization, retention and the creation of new knowledge in a strategic, engendered and measurable way.

4.3 Confrontation between the meanings of innovation and organizational practices under the focus of complexity theory

Organizational practices widely used in the recent past are no longer effective in complex systems, they become unpredictable and irregular. Organizations in this new environment need to be able to cope with turbulence, learning and relearning constantly, in order to allow their evolution, that is, to create an adaptive system capable of responding to or changing each new information that it receives from the environment. And the best way to adapt is through the behavioral resources inherent to their agents of transformation, that is, the individual adopts a behavior

that changes as it evolves and interacts with the environment. Organizations seek to adapt to changes in the external environment in search of stability, that is, return to balance. This process, represented by the interrelation and reciprocity between the parties, lead to the decisions and actions that lead to self-organization through the dynamism of the environment.

From the concepts presented above, it is possible to visualize the existing harmonization between the meaning of innovation and the organizational practices, represented in Fig. 4. This time, the concepts and characteristics that are presented allow us to relate and assess the relationship between innovation and organizational practices.

In this context, the Complexity Theory allows analyzing the organizational practices and the relation of their various functions, it allows to conceive how the processes of external pressure break the internal balance and direct to the processes of self-organization which allows the evolution and the organizational innovation.

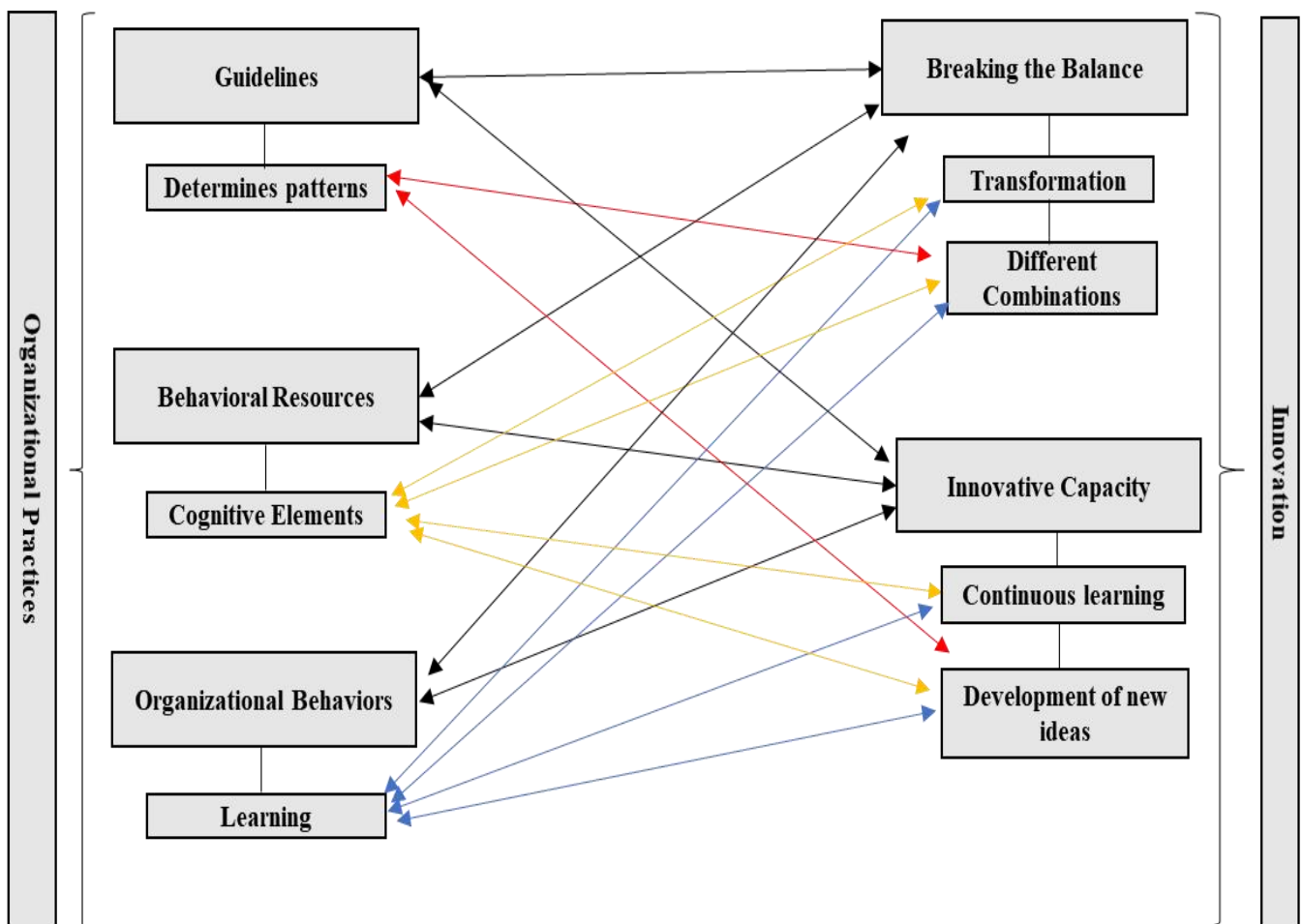




Fig. 4: Conceptual model of the Confrontation of innovation meanings with organizational practices

Source: Elaborated by the authors from research data.

Table 5 - Descriptive of the conceptual model of the confrontation of innovation meanings with organizational practices

Element	Descriptive
1 Organizational Practices	Behavioural, cognitive, procedural, discursive and physical resources that determine the patterns which allow us to understand how the activity is constructed.
1.1. Guidelines	Precepts which establish the direction of actions, process standards and procedures.
1.1.1 Determines patterns	It indicates the direction of actions, elaboration and improvement of organizational activities that are interrelated, allowing the generation of new ideas, continuous learning and new combinations in the organization.
1.2 Behavioral Resources	Formed by cognitive elements that undergo influence and in turn influence the processes of innovation, thus necessarily being flexible and changeable.
1.2.1 Cognitive Elements	Set of tacit items of knowledge (mental activities, emotional states and motivations) that make possible the exchange of information and the generation of knowledge.
1.3 Organizational Behaviors	Change the decision-making process as a way to establish self-organization, through communication and creativity.
1.3.1 Learning	Socialization of information in formal or informal communication processes among members of the organization, that is, process by which members acquire knowledge, connect theory to practice.
2. Innovation	Implementation of something new (product, service, process, methods).
2.1. Breaking the Balance	The effect of actions that change the status quo and lead to innovation in a product, service, process or strategy with significant impact, completely replacing existing technologies and methods.
2.1.1. Transformation	Ability to reduce environmental pressure through actions that address significant organizational changes.
2.1.2. Different Combinations	Combinations of organizational, functional and technological skills, integrated and based on research, product development, processes, technology, production, human resources and organizational learning.
2.2. Innovative Capacity	The ability to integrate, build and reconfigure internal and external competencies so as to respond rapidly to changes in the competitive environment.
2.2.1 Continuous learning	Something which results in a series of gradual improvements in existing products, services, processes or methods in the organization.
2.2.2. Development of new ideas	Patterns of internal and external interaction and organization, and the ability to mobilize and promote interactions between individuals and explicit tacit knowledge.
	Interconnection between categories of organizational practice (guidelines and behavioural resources) and categories of innovation (breaking the balance and innovative capacity).
	Interconnection of the subcategory of organizational practices determining patterns with their respective subcategories of innovation, different combinations; information sharing and knowledge creation.
	Interconnection between the subcategory of organizational practices /cognitive elements and all subcategories of innovation.
	Interconnection between the subcategory of organizational learning practices and all subcategories of innovation.

Source: Elaborated by the authors from research data.

The breakup of balance is the moment in which the organization realizes that the activities developed no longer produce positive effects, this is due to the set of interpretations and interactions of the actors involved in the process, allowing to generate new ideas through the establishment of new organizational guidelines, that is, to establish new strategies capable of directing the company to innovative actions, this process is a continuous learning that allows the self-organization. Organizational behavior

is based on learning, where routines and operational processes go through combinations, both in terms of organizational structure of the firm and structural characteristics of the market, creating a dynamic of transformation, through the exchange of information between the members of the firm and the market. In addition, it is inferred that there is a correspondence between the innovation process and organizational practices, since the organization is subjected to external

and internal pressures, leads to the improvement of its practices and, consequently, directs the company towards innovation. In this way, organizational practices that encompass the generation and / or adoption of new ideas, techniques, procedures and work structures, leading to a better management of the technical and social system, which increases the efficiency and effectiveness of the organizational process, creating a capacity innovative way to achieve organizational competitiveness.

V. CONCLUSION

In outlining the proposal of this essay, how organizational practices can influence the innovation process and allow a company to have competitive capacity, the objective is that the presented results can serve as reflection for a new perspective of analysis based on complexity theory, considering that the organizational practices can suffer various interferences and adapt to the continuous changes of the market, while the interactions can generate behaviors that emerge from the bottom up and allow the structuring of new directions that propitiate the development of organizational innovations, since the priority is to remain competitive in order to survive in the market.

Organizational practices can suffer various interferences and adapt to changes, both internal and external, which allows to generate a new system capable of changing the routines of the company and, consequently, create a new organizational culture that inspires the search for innovation. This process is stimulated by new guidelines for continuous learning and a constant search for new ideas, which changes the organizational behavioral pattern for practices aimed at improving organizational competitiveness. Thus, it is fundamental that the culture and the organizational climate are favorable to the search for innovation, and that the agents of the organizational practices are the differential for the competitiveness, therefore, the engine that drives the innovation machine and guarantees the competitive differential of the company.

Finally, it is believed that the answer to the question of research is achieved by confronting the meanings of innovation with organizational practices, inferring that, empirically, they are concepts influenced by interdependent actions taken between them, and are in continuous process of improvement. In this way, organizational guidelines are geared towards large-scale, effective and feasible solutions, and the tools and processes that enable the coordinated action of agents must be available in abundance, allowing innovation to be part of the organizational culture. This study may attract the interest of academia and other academics in the area

of organizational strategy and management through a new focus on organizational practices as a tool for innovation.

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