XXIV SEMEAD
Seminários em Administração

novembro de 2021
ISSN 2177-3866

Leadership and Organizational Ambidexterity: A Study with Professionals from Brazilian Financial Sector

OSEAS XAVIER NETO
FUNDACAO GETULIO VARGAS/EBAPE

ANDERSON DE SOUZA SANT'ANNA
ESCOLA DE ADMINISTRAÇÃO DE EMPRESAS DE SÃO PAULO (FGV-EAESP)

CYNTIA VILASBOAS CALIXTO

Agradecimento à orgão de fomento:
The São Paulo Research Foundation - FAPESP

Leadership and Organizational Ambidexterity: A Study with Professionals from Brazilian Financial Sector

ABSTRACT

The main purpose of this article is to investigate the relationships between the constructs *Leadership* and *Organizational Ambidexterity*. To this end, research is conducted with a quantitative approach, developed through the *survey* technique with professionals from institutions in the Brazilian financial sector. From an extensive literature review on the target constructs of the study, it is adopted to operationalize the empirical data survey, ambidextrous leadership characteristics - administrative and generative (Hasy & Ulh-Bien, 2015) - and organizational ambidextrous indicators, from approach developed by Eboli (1996) with financial institutions. The results reveal that both leadership characteristics present influence on ambidextrous organizational configurations, but generative characteristics stand out in terms of influence power. This, both when analyzed separately, and in conjunction with management leadership characteristics. With regard to organizational ambidexterity - balance between *exploration* and *exploitation* - the data denote a strong tone in short-term strategy, centered on rules, procedures and standards already defined. Although consistent with the current profile of the sector, such characteristics may imply limitations to the development of an ambidextrous culture.

Key-words: Leadership; Organizational Behavior; Organizational Ambidexterity; Ambidextrous Culture; Complex Adaptive Environments.

INTRODUCTION

The last twenty years have been marked by the massive application of digital-based technologies, which, insofar as it enables organizations to develop new products and services, implies the need for continuous re-significations in traditional modes of supply, given the changes in habits and behavior of the consumer market.

At the same time, associations face the challenges of the systematic reduction of the life cycles of products, technologies, processes and management systems, catalyzed by the loss of loyalty of customers, suppliers and distributors (Madhani, 2019).

In addition, the globalization of markets intensifies and diversifies competition, in increasingly intense ways, requiring a high degree of flexibility and adaptability from associations in order to ensure new factors of competitiveness and sustainability of their businesses (Sant'Anna, Oliveira, Diniz, 2013).

Similarly, workers find themselves demanded for constant adaptation of their ways of working (Guhr, Lebek, Breitner, 2018). In short, the current contemporary business environment is marked by volatility, unpredictability and uncertainty (Madhani, 2019; Roh, Min, Hong, 2011).

Wide range of authors, including Matthysen and Harris (2018), Bereznoy (2017), Uhl-Bien and Arena (2017), Johansen and Euchner (2013), Juillerat (2010), highlighting the capacities of dealing with the complexity and with the interconnectivity as the main challenges to be faced by organizational leaders in this transition to the fourth industrial revolution (Schwab, 2017).

Teece, Raspin, Cox (2020) even come to an advocate that, in order to remain competitive, as contemporary organizational leadership must be able to respond in an

increasingly agile way to the radical transformations ongoing. For Jansen, Bosch, Volberda (2006), as the competitiveness intensifies, they are required to be recurrently renewing themselves, maximizing the installed competences (*exploitation*), as well as exploring the development of new ones (*exploration*).

As a result, vertical, rigid structures with clearly defined and standardized functions tend to make room to structures with more organic, flexible and adaptable characteristics to the demands of this new environment, emphasizing the horizontalization of business, arrangements, architectures and organizational processes with a focus on development and leadership of teams distributed and decentralized in ecosystems, networks, virtual platforms and structures (Green Jr. & Inman; 2014; Mansoor, Aslam, Barbu, Capusneanu, Lodhi, 2012; Birou, 2011; Owen, 2009; Burns & Stalker,1961).

In other words, the associations and leaders of the digital age should systematically become more dynamic, creative, competitive and innovative, which presupposes re-signifying long-established paradigms, structuring modes, cultural artifacts and *performance* optimization (Madhani, 2019).

Given this scenario, the proposal of this paper arises, which consists of investigating the existence of statistically relevant relationships between the constructs *Leadership* and *Organizational Ambidextry*, based on empirical research carried out with professionals from associations in the Brazilian financial sector. In other words, it aims to provide elements that analyze to what extent the demand for greater organizational ambidexterity - *for example,* a balance between *exploration* and *exploitation* - is associated with leadership characteristic in responding to demands both by scale and scope - *for example* conjugation between management of administrative and innovation systems.

2. THEORETICAL FRAMEWORK

2.1. Organizational Ambidexterity

Both at the organizational and academic level, there is growing emphasis on the indication of more organic, distributed, horizontal, decentralized, virtual and networked organizational architectures. This, in particular, in view of the expansion of shared business models, configured under notions such as platforms, ecosystems, networks and complex adaptive systems (Osborn, Hunt, Jauch, 2002).

Despite the wide diffusion of such models, few authors seem to be able to describe them in more systematic ways. Aiming to overcome this gap, for Uhl-Bien and Arena (2017), such configurations can be understood as arrangements that involve high interconnectivity between different components of the macro, meso and micro business environments, emphasizing that any changes in one of them tend to result in unexpected - and even irreversible - changes in others.

For Backlander (2019), such interdependence, catalyzed by systematic drivers of complexity, ends up intensifying levels of uncertainty and ambiguity, resulting in constant changes and dependence on continuous feedback from innovations (Riolli-Saltzma & Luthans, 2001; Clegg, Waterson, Axtell, 1996; Davenport, 2005; Eisenhardt, 1989).

With a view to answering the challenges arising from this context, studies on the *Complex Leadership Theory* intend to investigate the role of leadership through the analysis of the interdependence relationships between different contexts and social agents that combine in the pursuit of common goals (Meyer, Gaba, Colwell, 2005; Drath, 2001).

According to Uhl-Bien, Marion, McKelvey (2007), the joint use of different intellectual assets of the organization in the creation and distribution of knowledge, by including dependence on key people at the highest levels of associations, highlights the need for

distributed leadership, able to deal with emergent and dynamic events (Uhl-Bien, Marion, McKelvey, 2007; Lichtenstein, Uhl-Bien, Marion, Seers, Orton, Schreiber, 2006).

In this sense, the *Complex Leadership Theory* presents itself as an approach that seeks to show leadership as a phenomenon capable of dealing more effectively with knowledge-oriented businesses, in high complexity competitive scenarios, in which the rapid production of knowledge and innovation are crucial. This, however, without disregarding day-to-day processes and routines (Backlander, 2019; Uhl-Bien, Marion, Mckelvey, 2007).

Similarly, Lichtenstein *et al.* (2006) argues that the *Complex Leadership Theory* has as a fundamental contribution to provide a consolidated view of interactive interpersonal dynamics, whose importance has already been recognized by other emerging leadership approaches, such as "Shared Leadership" (Pearce & Conger, 2003), the "Collective Leadership" (Weick, 1993), the "Distributed Leadership" (Gronn, 2002), the "Relational Leadership" (Drath, 2001; Uhl-Bien, 2006), the "Adaptive Leadership" (Linsky & Heifetz, 2002) and the "Leadership as Emerging Organizational Meta-Capacity" (Hazy, 2004).

In other words, under the *Complex Leadership Theory*, leadership assumes an important role in the creation and support of environments that sponsor social interactions aimed at the development of people and, consequently, of associations as a whole. According to Hazy and Prottas (2018), although interactions are conducted in similar ways in traditional structures, according to the *Complex Leadership Theory* such interactions can impact a structure in a systemic way, by leading its members to define specific goals and achieve them through constant deliveries, which to organize activities (*organizing*) and improve collective effectiveness. Thus, theory comprises an interaction between order and the apparent chaos created by changes, fostering an interaction between the rigidity of the organizational environment and the volatility of the social environment (Weick, Sutcliffe, Obstfeld, 2005; Weick, 1979).

In this context, the exercise of leadership implies resignifying as expected competences, with emphasis on the value of those associated with the dimension of social capital (Arena & Uhl-Bien, 2016). The focus of leadership thus becomes the feasibility of adaptability, learning, knowledge and agility of organizations, instead leadership focused exclusively on efficiency and control (Uhl-Bien, Marion, Mckelvey, 2007).

Thus, *Complex Leadership Theory* presents itself as a privileged theoretical milestone for the analysis of the challenges of organizations in a balance of order and disorder, recognizing them as composed of bureaucratic and administrative functions - which seek to maintain the day-to-day -, as well as dynamic, emerging and informal functions - which tend to lead to diverse innovations (Backlander, 2019).

Furthermore, highlighted by Backlander (2019), the search for balance between formalized organizational structures and informal structures, when carried out in an environment that considers the complexity and adaptability of systems, leads to increased productivity, collectiveness, creativity and new knowledge. As a result, the search for the development of organizational environments that are maintained on a day-to-day basis, while opening up to innovations, becomes a focus for leadership. For authors such as Uhl-Bien and Marion (2009), Uhl-Bien, Marion, Mckelvey, 2007; Lichtenstein *et al.* (2006) such ambiences brought the name of *Complex Adaptative Systems*.

From the perspective of *Complex Adaptative Systems*, these authors seek to explore how leadership is affected - and is affected - by the social interactions that occur in the networks of contacts of which they are part, as well as by the way in which these networks are used so that the systems adapt to the evolution of the environments in which they are inserted (Uhl-Bien & Marion, 2009; Holland, 1995).

In general terms, it can be emphasized that complex adaptive systems use the dynamic relationship between different individuals or agents that are collaboratively linked in the search for a given shared purpose or objective (Uhl-Bien, Marion, Mckelvey, 2007).

Connected to the logic of *Complex Adaptative Systems* there is growing interest in the notion of organizational ambidexterity, which can be understood as an ability of organizations to develop strategies to explore the environment in search of new concepts (*exploration*), while optimizing their installed capacity (*explotation*), in an integrated and balanced way in order to ensure its adaptation through rapid and effective adaptation to changes that occur in its operating environment by developing organizational capacities that adapt contradictory logics (Teece, Raspin, Cox, 2020; Chen, 2017; Cantarello, Martini, Nosella, 2012).

Thus, the concept of organizational ambidexterity rests on two pillars: the search for new knowledge, concepts and solutions (*exploration)* and the search for optimization in the use of existing knowledge, a search for efficiency and advances in controls and predictability, will be named as "Optimization" (*exploitation)*. Both aspects, linked to organizational prosperity and the longevity of associations in highly complex and interconnected contexts (Baskarada, Watson, Cromarty, 2016).

As for O'Reilly III and Tushman (2013), organizational ambidexterity occurs through the exploration of three main characteristics: 1. emphasizes on individuals and your ability to decide how to allocate your time; 2. the fact that ambidexterity is achieved when those involved agree that their business unit will seek both the exploitation of routine activities and the organization's adaptability when exploring new concepts; 3. the definition that the present organizational systems and processes that allow this individual adjustment between exploitation and exploration will never be concretely granted and, going further, promote the search for individual development, discipline and trust among those involved.

On a practical level, Chen (2017) points out as an emblematic example of organizational ambidexterity, structures adopted by companies such as *Google*, in which engineers reserve 20% of their time to explore new projects (*exploration*), without requiring prior approval.

Since the business environment, the culture and the behavior of consumers undergo constant changes, the management forms are, consequently, required to reflect the changes in the environment. Changes, in which leading managers are challenged to break the mold, be innovative, go beyond the limits and focus on the complex demands of 21st century situations, while being compelled to short-term operational responses, to operational efficiency and scale increments (Kramer, Page, Klemic, 2019; Burns & Stalker, 1961).

As defended by Uhl-Bien and Arena (2017), as contemporary associations need to review the understanding of management the organizations seeking only efficiency and results, in general a short-term view, characteristics of a culture of exploitation. The need to look beyond is a consequence of current business environment, with its increasingly frequent and impactful changes.

Under this line of reasoning, Arraes *et al.* (2017) defends that the development of a culture, supported by management policies and practices that seek, in addition to formal performance, the commitment of people as essential factors for achieving organizational effectiveness.

In view of this and before gaps in studies on the subject, still of a fundamentally theoretical nature, with a lack of empirical surveys of a quantitative nature (Lichtenstein *et al.,* 2006; Hazy & Uhl-Bien, 2015), for measuring characteristics of organizational ambidexterity, for the purposes of this study, an approach proposed by Eboli (1996) is used, based on a survey of organizational modernity factors in the banking sector, later validated by Sant'Anna (2002), which aims to describe the main characteristics of modernity based on the ideas of the French thinker Alain Touraine, pointing out for a set of attributes of a modern society, considering its cultural, political, social, administrative, economic and technological dimensions, relevant to

the construct under analysis, as verified through scale confidence results, patterns in the methodological procedures of this paper.

According to Eboli (1996), establishing the indicators of organizational modernity is a fundamental step for conducting research in this area, since only from the identification and selection of the main variables can modernity in business management be evaluated in a more complete and comprehensive way (Table 1).

TABLE 1
Factors of organizational ambidexterity, according to Sant'Anna (2002)

Factors	Emphasis
The unit in which I work encourages individual initiative and responsibility	Exploration
At the unit there is a stimulating climate for people to carry out their activities in order to excel	Exploration
Decision-making processes are participatory and transparent	Exploration
With regard to the political aspect, the regime in force in the unit can be used as democratic	Exploration
The decision-making process is decentralized	Exploration
The unit favors autonomy for decision-making	Exploration
The unit has participatory management systems that encourage people to take action	Exploration
The unit encourages and favors work in cross-functional teams	Exploration
The strategy, mission, objectives and goals of the unit in which I work are defined	Exploration
In general, employees know what they must do to collaborate with the organization's goals	Exploration
The unit's policies and practices encourage people to be always well-informed and up-to-date	Exploration
The main criteria for promotion are the person's competence and productivity*	Exploitation
Human resources policies and practices encourage people to be concerned about continuous learning	Exploration
The unit is strongly results-oriented	Exploration
The unit properly balances the concern with financial results, with people and with innovation*	Exploitation
The unit properly combines the use of advanced technologies with people's creativity	Exploration
The technology used favors an interaction between people and different units/areas	Exploration
In the unit, dissenting ideas and opinions are respected and explored	Exploration
The unit admits the diversity of standards and respects individual differences	Exploration
The work environment facilitates the relationship between people, even from different hierarchical levels	Exploration

Source: Adapted by the authors from Sant'Anna (2002).
Note: (*) Inverted questions.

2.3. Leadership in the context of ambidexterity

For Uhl-Bien and Arena (2017), in complex systems, leadership is manifested when individuals, from different seniorities and abilities, are mobilized and their joint efforts work in the search for new opportunities and solutions to problems and challenges. In this direction, leadership seeks to leverage current competitive advantages in search of optimizing an installed *performance* (*exploitation*) while enabling ways for an organization to innovate, and adapt efficiently, to future challenges (*exploration*) (Arena & Uhl-Bien, 2016; Hazy & Uhl-Bien, 2015).

Thus, the objective of leadership is to provide an enabling environment to generate constants among the individuals, in which the interaction between agents creates tensions, through which new information emerges and, when implemented, lead to positive organizational changes (Uhl-Bien, 2006).

Throughout these interactions, the individuals may experience the tension of having our personal knowledge base challenged, through mutual questioning, in a space that maintains

constructive dialogue and conflicting ideas as leader-sponsored practices (Backlander, 2019; Lichtenstein *et al.*, 2006).

From these constant interactions, in response to pressures and challenges presented, opportunities for performance improvement and organizational innovation are identified by combining different experiences, skills and points of view, in order to achieve the proposed objective (Uhl-Bien & Marion, 2009).

In this environment, in which interactions occur recurrently, involving different individuals, indifferent to hierarchical levels and skills, it is left aside the belief that the role of leadership is that of "minimize conflicts", since the conflict experienced in this environment is the key to innovation and adaptability in associations (Arena & Uhl-Bien, 2016).

As a result, leadership comes to be perceived as a key part in sponsoring and creating an environment that fosters discussion between different people involved, failing to observe only the management of previously aligned results and controlling the way in which the individuals perform their routine, taking advantage of the tensions generated by constant ongoing interactions.

Thus, in order for the leadership to act in a way that maintains the day-to-day, observe the market with its new demands and also create an environment of discussions, the functioning of a complex adaptive system requires three different dimensions of leadership: the entrepreneurial or creative dimension, the administrative or operational dimension and the enabling dimension (Uhl-Bien & Arena, 2017).

According to Uhl-Bien and Arena (2017), leadership will be more effective the greater the leadership's ability to move coherently and agilely between these dimensions, in order to introduce, adapt and advance with innovative ideas, as needed.

Leadership in an environment that explores ambidexterity is forced to deal with the contradictions and consequent tensions inherent to the paradox between optimizing organizational routines, aiming short-term results and less complexity versus exploring new knowledge and solutions aimed at the long-term sustainability of the organization in an increasingly complex environment. With this, leadership plays a key role in reconciling tensions and in the search for integration (Cantarello, Martini, Nosella, 2012) between exploitation and exploration, as studies demonstrate its crucial role in mediating the options for innovation and change, the result of exploration, against the inertia resulting from the exploitation and maintenance of the *status quo* (Lin & McDonough III, 2011).

The challenge of leadership becomes to create a structure capable of successfully competing while optimizing the use and alignment of resources, considering strategy, structure, culture and processes, and, simultaneously, preparing for the inevitable revolutions arising from changes in the environment (Tushman & O´Reilly III, 1996), through the exploration of new knowledge and concepts. In this way, the traditional conception of leadership undergoes profound revision since its context encompasses radically different and different scenarios (Uhl-Bien, Marion, McKelvey, 2007).

To deal with the ambiguities involved with ambidexterity, organizations are increasingly demanding to consider different structures and processes as they seek to optimize their installed capacity and explore for new knowledge, demanding from leadership a balance between transactional and transformational leadership characteristics (Backlander, 2019; Baskarada, Watson, Cromarty, 2016; Hazy & Uhl-Bien, 2015).

In this universe of constant change, the notion of leadership has also undergone changes and updates in order to better face emerging challenges. Uhl-Bien, Marion and McKelvey (2007), in this sense, point out that leadership approaches from the last century are the result of hierarchical and bureaucratic paradigms. For the authors, such models are effective in environments based on the production of tangible goods, but they are not suitable for knowledge- and intangible capital-oriented economies.

In a scenario of increasingly organic proposals, innovating in solving emerging problems and with a high degree of complexity stands out in the face of seeking definitive solutions so problems that can no longer be a priority in a short period of time. Thus, more than managerial competencies to the manager are the demand associated with the exercise of leadership.

The role of leadership thus becomes increasingly important to innovation, development, mentoring and team *coaching* activities, capable of dealing with the ambiguities and uncertainties of organizational and business dynamics (Harms & Credé, 2010), no longer limited to management control functions, typical of the *Scientific Managment* tradition. With such a change in the manager's scope of activities, leadership becomes the essential device for the organizational survival (Hazy, 2011).

As a result, new skills are expected, including an ability to solve complex problems, development of critical thinking, creativity, people management and integration of teams in virtual, distributed and networked configurations (Uhl-Bien & Arena, 2018).

In essence, the notion of leadership extrapolates the individual abilities of the "leader", becoming the result of intra- and inter-organizational interactions, tensions and exchange relationships (Lichtenstein *et al.*, 2006). In other words, understanding the phenomenon of leadership is subject to the need for adjustments, altering its focus from models based on technical skills to an emphasis on social capital, seeking to facilitate the movement of ideas through a resource of connection and intermediation (Arena & Uhl-Bien, 2016).

Thus, there is a strict relationship between leadership characteristics and the development of ambidextrous organizational cultures. It is not, however, a relationship not previously studied, with an existing theoretical basis. However, the search for an optimal degree of influence between the characteristics of Administrative and generative leadership on ambidexterity or structural organicity (Hazy & Uhl-Bien 2015; Burns & Stalker, 1961), presents space for new research agendas. After all, in the search for differentiation of their services and products, organizations are not responsible for limiting their efforts in the efficiency of resources (Madhani, 2019).

On the contrary, leaderships, in addition to exploring the value of their proprietary assets and removing costs from existing operations, must also focus on finding a balance between adaptability, as a basis for innovation and knowledge creation, and the alignment of organizational architecture for results, an element recurrent in studies on ambidextrous organizational culture (Birkinshaw & Gibson, 2004).

That said, to operationalize the investigation of leadership, the approach developed by Hazy and Uhl-Bien (2015) is adopted, which proposes to measure administrative and generative characteristics of leadership, directly related to organizational ambidexterity. Based on this, it is possible to collect from the interviewees the perceived characteristics of leadership in its way of dealing through incremental adjustments, centralization of decisions, clear definition of objectives and short-term vision, characteristic of administrative leadership, as well as with revolutionary and decentralized processes, with rapid tests and deliveries aligned with long-term goals, characteristic of generative leadership (Table 2).

TABLE 2
Characteristics of leadership in contexts of ambidexterity, according to Hazy and Uhl-Bien (2015)

Characteristics	Emphasis
Leadership in the unit where I work delimits those responsible for the actions	Administrative
Leadership clearly describes the roles and responsibilities of those involved.	Administrative
Leadership establishes clear metrics for defining success and failure	Administrative
Leadership aims to minimize space for opinions not aligned with the unit's objective and purpose	Administrative
Leadership demands more and more engagement, time and energy from team(s)	Administrative
Leadership establishes specific objectives and deliverables	Administrative
Leadership uses clear controls of the resources used in projects	Administrative
Leadership specifies clear roles, specialized training and monitoring of activities carried out	Administrative
Leadership defines challenging yet achievable goals	Administrative
Leadership using resources such as projects and *budgets* as attractions	Administrative
Leadership encourages visiting other organizations for learning	Generative
Leadership encourages new ways of acting	Generative
Leadership provides room for mistakes and failures	Generative
Leadership provides support for different opinions.	Generative
Leadership resources and time to search for new solutions	Generative
Leadership rotates the members of team looking for new ways of thinking	Generative
Leadership aspires for new products, services and processes without specifying how to achieve them	Generative
Leadership provides to the team space for them to organize in the best way to deal with challenges	Generative
Leadership explores the learnings resulting from unexpected results and even from mistakes	Generative
Leadership encourages the use of innovations in the way the team works	Generative

Source: Adapted by the authors from Hazy and Uhl-Bien (2015).

By correlating the characteristics of leadership - administrative and generative - and factors associated with the ambidextrous organizational culture - exploration of the new (*exploration*) and optimization of installed resources and competencies (*exploitation*) - the aim is to verify the hypotheses outlined for this study, according to the follow.

3. HYPOTHESES

As Tushman and O'Reilly III (1996) point out, the effectiveness of leadership is in its ability to align strategy, structure, people and culture, through incremental, evolutionary or discontinuous, revolutionary changes, but achieving balance in the allocation of resources between optimization and exploration is a challenge, as the logic involved in overall optimization overlaps with exploration due to the pursuit of short-term results and profits in a consistent manner (Chen, 2017).

Therefore, the demand for short-term results and the safety of controlled environments reinforces the challenge of leadership in implementing a culture that seeks to explore operational characteristics with its focus on the effective and efficient use of resources, without leaving aside the dynamic capacities, necessary for the renewal of its competences and alignment with market changes (Uhl-Bien & Arena, 2018).

Especially for large companies, which have a history of success, developing an ambidextrous culture becomes a challenge due to their hierarchical structures, and fixed routines focused on efficiency and scale management, which lack diversity for learning and rapid changes and they are paradigms difficult to change (Reeves & Deimler, 2011). As organizations develop, effect of good results achieved, interconnected structures and systems

are developed in order to deal with the complexity of the work, thus generating an environment in which resistance to changes, which are not small and incremental, appears (Tushman & O'Reilly III, 1996).

Thus, this study seeks to demonstrate that an ambidextrous organizational culture, which comfortably explores the paradox between the search for efficiency and the flexibility necessary for revolutionary innovation (O'Reilly III & Tushman, 2013), is directly influenced by the current leadership and its management characteristics. Seeking to identify the influence between two variables, the following hypothesis is proposed:

> *H1: Characteristics of generative leadership present greater influence on the ambidextrous culture when compared to the influence of management leadership characteristics.*

The structuring for the second hypothesis aims to analyze whether the development of an optimization culture is something "natural", derived from the fact that organizations feel more comfortable in the search for efficiency and control exploitation (Uhl-Bien & Arena, 2018), implying low demand for leadership:

> *H2: The greater the set of ambidextrous characteristics, the greater the presence of administrative and generative leadership characteristics.*

4. METHOD

The research that supports the data presented in this paper can be characterized as a quantitative approach, developed through the *survey* technique, involving 124 professionals from institutions in the Brazilian financial sector. For data collection, a questionnaire consisting of measures measured using Likert scales, seven points, was applied, made available through an electronic platform (Gupta & Mukhopadyay, 2014).

Based on the non-random sampling process, with a sample defined intentionally and for convenience, the respondents were identified from the researchers' contacts plus initial participant consultations, according to procedures inspired by the "snowball" technique (Handcock & Gile, 2011; Biernarcki & Waldorf, 1981).

As a result, 77% are male; 70% have postgraduate education (Specialization or Masters); 79% hold management positions, and 71% have focused on their current position for more than three years

In relation to the research design, the proposed *survey* made use of a correlational structure, when it proposed to identify the degree that leadership influences the formation of a culture based on the notion of organizational ambidexterity. Burns, Grove, Gray (2015) expose the aspects of this type of survey, which underpinned its adoption for this study: 1. the search for the relationship between variables, through data collection and analysis, through correlational statistical models; 2. the determination of degrees of influence between measurements, different degrees of strength and types of correlation; 3. failure to determine cause-and-effect relationships.

It is noteworthy that to measure leadership characteristics - administrative and generative - a scale developed by Hazy and Uhl-Bien (2015) is used. In turn, with a view to measuring the respondents' perception of organizational ambidexterity, a version of the questionnaire validated by Sant'Anna (2002) is adopted, based on an approach developed by Eboli (1996). The questionnaire also includes questions related to the respondents' sociodemographic and professional aspects.

It is worth noting that for an analysis of the collected data, the calculation of multiple linear regression is adopted, in order to measure the degree of influence of the independent variables, the leadership characteristics, together with the dependent variable, as well as the ambidextrous characteristics of the investigated organizational culture (Naghettini & Pinto, 2007).

In order to verify the consistency of the scales adopted, the Cronbach's alpha coefficient is distributed for each of the measures investigated, obtaining for the set of coefficient values greater than 0.70. It should be noted that Cronbach's alpha is composed by the mean value of the confidence coefficient resulting from the combination of the set of variables for each measure. Vaske, Beaman, Sponarski (2017), more directly, point out that Cronbach's alpha is a measure that aims to measure the consistency between responses in bipolar scales, which can have a value between 0 and 1 - or present a negative value in case of non-positive correlation between the items -, with results above 0.70 indicating internal consistency of the measures analyzed.

4. RESULTS

From the descriptive analysis of the set of data obtained, it can be contacted, from the global data, presented in Table 1, that both administrative leadership characteristics (LAdm) and generative leadership (LGen) are perceived as factors of influence on organizational ambidexterity, corroborating reviewed studies. It is also possible to realize that more senior professionals - greater experience - are more favorable to ambidextrous behavior. It is also interesting to note that other demographic factors such as gender, age and educational level were not evidenced as significant factors influencing ambidexterity (*p-value* >0.05).

TABLE 1
Correlation matrix

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**
LAdm	1,000										
LGen	0,459*	1,000									
Ambidexterity	0,520*	0,740*	1,000								
Gender	-0,040	,0540	,069	1,000							
Age	0,099	,000	,0400	,073	1,000						
Education	0,174	0,140	0,092	0,059	0,114	1,000					
Position	0,191*	0,024	-0,019	0,187*	0,342*	0,160	1,000				
Experience	-0,068	-0,059	-0,074	0,150	0,354*	0,004	0,218*	1,000			
Local	0,094	-0,092	0,096	0,071	-0,093	-0,010*	-0,039 *	0,031	1,000		
Capital	0,103	0,122	-0,060	-0,076	0,031	-0,010	0,018	0,029	-0,445*	1,000	
Size	-0,037	-0,186*	-0,054	-0,051	,036	0,048	-0,030	0,094	0,270*	-0,436*	1,000

Source: Survey data.

In a vertical analysis, results of the descriptive analysis of the administrative leadership factor, the relevance of characteristics such as engagement, time and energy of the teams is registered. Other characteristics are the definition of clear and specific deliverable objectives, specific to the optimization of the cost-return ratio of the sector organizations (Table 2). Interesting to highlight, too, the larger the organizations, smaller the highlight in generative leadership characteristics. It is possible to infer those themes such as the constant search for optimization, short-term goals and regulatory obligations reinforce the efforts for a more administrative than generative leadership in organizations in the current financial sector.

TABLE 2
Administrative Leadership

Variables	*n*	Mean	Deviation Standard	Asymmetry	Kurtosis
Leadership in the unit where I work delimits those responsible for the actions	124	3.855	0.96	-1.035	3.824
Leadership clearly describes the roles and responsibilities of those involved.	124	3.879	1.033	-0.824	2.736
Leadership establishes clear metrics for defining success and failure	124	3.484	1.122	-0.756	2.711
Leadership aims to minimize space for opinions not aligned with the unit's objective and purpose	124	3.21	1.251	-0.226	1.888
Leadership demands more and more engagement, time and energy from team(s)	124	4.331	.872	-1.284	4.289
Leadership establishes specific objectives and deliverables	124	3.944	1.084	-1.041	3.33
Leadership uses clear controls of the resources used in projects	124	3.573	1.197	-0.643	2.482
Leadership specifies clear roles, specialized training and monitoring of activities carried out	124	3.452	1.245	-0.574	2.192
Leadership defines challenging yet achievable goals	124	3.823	1.176	-0.827	2.626
Leadership in the unit where I work delimits those responsible for the actions	124	3.427	1.251	-0.548	2.281

Source: Survey data.

With regard to generative leadership, the data reinforce the perception of the search for new forms of management and work organization, as well as the encouragement of innovative ways of acting by the teams (Table 3). At the same time, the data in Table 3 highlights efforts in knowledge management, however, the use of rotation of team members is the least emphasized factor.

TABLE 3
Generative Leadership

Variables	*n*	Mean	Deviation Standard	Asymmetry	Kurtosis
Leadership using resources such as projects and *budgets* as attractions	124	3.073	1.547	-0.108	1.511
Leadership encourages visiting other organizations for learning	124	3.71	1.235	-0.735	2.458
Leadership encourages new ways of acting	124	3.581	1.155	-0.467	2.23
Leadership provides room for mistakes and failures	124	3.798	1.119	-0.786	2.827
Leadership provides support for different opinions.	124	3.548	1.122	-0.677	2.623
Leadership resources and time to search for new solutions	124	2.968	1.373	0.058	1.7
Leadership rotates the members of team looking for new ways of thinking	124	3.613	1.153	-0.677	2.691
Leadership aspires for new products, services and processes without specifying how to achieve them	124	3.758	1.092	-0.9	3.173
Leadership provides to the team space for them to organize in the best way to deal with challenges	124	3.677	1.079	-0.581	2.459
Leadership explores the learnings resulting from unexpected results and even from mistakes	124	3.774	1.209	-0.559	2.019

Source: Survey data.

As for the degree of organizational ambidexterity, it is possible to observe the role attributed to the result variable, followed by themes such as diversity and communication (Table 4). On the other hand, the low scores in the decision process stand out, which according to the respondents' perception remains centralized, reinforcing the hierarchical character still present in the structures to which the investigated financial sector professionals are linked.

TABLE 4
Generative Leadership

Variables	*n*	Mean	Deviation Standard	Asymmetry	Kurtosis
Leadership in the unit where I work delimits those responsible for the actions	124	4.032	1.043	-1.315	4.323
Leadership clearly describes the roles and responsibilities of those involved.	124	3.702	1.182	-0.68	2.456
Leadership establishes clear metrics for defining success and failure	124	3.355	1.27	-0.425	1.996
Leadership aims to minimize space for opinions not aligned with the unit's objective and purpose	124	3.411	1.162	-0.471	2.248
Leadership demands more and more engagement, time and energy from team(s)	124	2.855	1.395	-0.082	1.54
Leadership establishes specific objectives and deliverables	124	3.298	1.21	-0.366	2.009
Leadership uses clear controls of the resources used in projects	124	3.395	1.202	-0.598	2.455
Leadership specifies clear roles, specialized training and monitoring of activities carried out	124	3.847	1.06	-0.968	3.427
Leadership defines challenging yet achievable goals	124	3.895	1.096	-1.17	3.824
Leadership using resources such as projects and *budgets* as attractions	124	4.008	.975	-1.125	4.032
Leadership encourages visiting other organizations for learning	124	3.694	1.142	-0.795	2.83
Leadership encourages new ways of acting	124	3.452	1.232	-0.517	2.178
Leadership provides room for mistakes and failures	124	3.435	1.27	-0.452	2.069
Leadership provides support for different opinions.	124	4.242	0.983	-1.428	4.683
Leadership resources and time to search for new solutions	124	3.677	1.101	-0.695	2.84
Leadership rotates the members of team looking for new ways of thinking	124	3.516	1.165	-0.349	1.992
Leadership aspires for new products, services and processes without specifying how to achieve them	124	3.532	1.108	-0.55	2.389
Leadership provides to the team space for them to organize in the best way to deal with challenges	124	3.605	1.088	-0.575	2.468
Leadership explores the learnings resulting from unexpected results and even from mistakes	124	4.161	0.923	-1.072	3.684
Leadership encourages the use of innovations in the way the team works	124	4.129	0.937	-1.033	3.543

Source: Survey data.

As for the verification of the proposed hypotheses, in relation to the first (H1), which calls into question the power of influence of generative leadership in ambidextrous organizational contexts when compared with the influence power of administrative leadership, empirical evidence that supports it, demonstrating that the characteristics of administrative leadership have responsibility with the AO (β = 2.646, *p-value* < 0.01, *R-Squared*: 0.321) as well as the characteristics of generative leadership (β = 2.544, *p-value* < 0.01, *R-Squared*: 0.585)[1], however, it can be observed that generative leadership has a greater power of

determination (*R-squared*) along with organizational ambidexterity. These data reinforce what was explored in the theoretical review presented herein, which defines organizational ambidexterity as a combination between the optimization of routine activities and the creation of space to explore for the new, generating tension in the heart of the company in search of its perpetuity (Uhl-Bien & Arena, 2018).

It is possible to infer that the respondents in this study observe current leadership as administrative characteristics, but at the same time, looking for a new path in which there is care for today without extinguishing the search for exploration and innovation that will support the organization's tomorrow (Tushman, 2014).

As for the second hypothesis (H2), which states that a verification of the relationships between the characteristics of ambidexterity and the characteristics of administrative and generative leaderships is required, such characteristics, when analyzed in isolation against ambidexterity, affect positively and automatically; but with marginal significance in the case of administrative leadership ($\beta = 1.069$, *p-value* < 0.05), or standard significance in the case of generative leadership ($\beta = 2.111$, *p-value* < 0.1).

As the characteristics of leadership are analyzed together - administrative and generative - it is possible to observe that the degree of significance of these variables assumes new relevance, with standard significant for the administrative leadership ($\beta = 2.243$, *p-value* < 0.05) and greater significance for the generative leadership ($\beta = 3.383$, *p-value* < 0.01). Such data are reinforced by the greater power of determination of the model, represented by *R-square* of 0.634. Based on the data, it is possible, therefore, that ambidexterity maintains a positive and significant relationship with investigated leadership characteristics.

The data demonstrate how the role of leadership seems to become increasingly complex activity as it has to create environments in which there is encouragement for the flow of information, autonomy, risk-taking, knowledge creation, etc. at the same time it does not give up the total structures and guides so that employees know what they need to do (Reeves & Deimler, 2011).

In addition, the study makes it possible to infer that the existence of characteristics of a type of leadership does not influence the development of characteristics of other type of leadership. It is important to consider that organizations can be found in an environment, or moment, that does not allow the use of the two characteristics of leadership and, consequently, the development of organizational ambidexterity (Gibson & Birkinshaw, 2004).

In parallel, current concepts involved with leadership often do not recognize efforts linked to generative leadership, which can be misinterpreted or even misunderstood (Uhl-Bien & Arena, 2017).

Based on the data collected, it is possible to say that there is empirical evidence that organizations that have the characteristics of both types of administrative and generative leadership influence positively for the creation of an ambidextrous organizational culture, supporting our first hypothesis (H1).

6. CONCLUSION

The first contribution that this study brings to the reading of leadership and ambidexterity is a demonstration that the characteristics of a generative leadership have greater influence when compared separately with the characteristics of administrative leadership with organizational ambidexterity.

When considering the definition of ambidexterity, as proposed by O'Reilly III and Tushman (2013), as the ability to maintain a long-term integration between exploration and exploitation, with emphasis on the “long term”, characteristics of generative leadership gain space in a business environment in which demand for leadership that exploits existing

competitive advantages - improving the organization's current performance - but, at the same time, allowing for innovation and adaptability to future challenges (generative leadership) - they gain more and more breadth (Arena & Uhl-Bien, 2016).

The second contribution of this study is that ambidextrous organizational characteristics are amplified when both characteristics of generative and administrative leadership are applied together, making the challenges of leadership an even more complex issue. For this, the development of an environment that can adapt to the present complexities through the desire of all involved for a common goal, appetite for change, common technological vision and the communion of values and beliefs (Uhl-Bien & Arena, 2017), are evidenced by determining factors for organizational effectiveness in the contemporary context. The demonstration of the potential of the environment with the development of an ambidextrous organizational culture, in addition to leadership characteristics, reinforces the idea that success factors go beyond just leadership characteristics.

In addition to the aspects of addition to the bibliography on the theme of leadership and ambidexterity, this study helps organization leaders, in a practical way, to identify the characteristics to be explored in the search for the development of an ambidextrous culture. It is necessary that themes such as the implementation of high aspirations in the search for new solutions, the creation of space for mass testing, the use of flexible teams, have an influence on the generation of an ambidextrous culture.

The questionnaires used in the study are a practical tool for managers in the business environment to measure the perception of their teams in terms of the characteristics of active leadership and the degree of ambidexterity present in their business unit. From the results of these questionnaires, it is possible that strategic decisions are retrieved regarding the form of leadership, the characteristics of the work environment considering ambidexterity and consequent alignment with the organization's strategy.

Finally, in future surveys, it is interesting to explore how a company's capital structure - open, closed, mixed capital -, gender, age and education level influence the acceptance of an ambidextrous organizational culture, as they constitute themes of significant importance in the search for more diverse and inclusive societies and organizations.

REFERENCES

Arena, M.; & Uhl-Bien, M (2016) Complexity Leadership Theory: Shifting from Human Capital to Social Capital. *People & Strategy*. v. 39, n, 2, p-22-28.

Backlander, G. (2019) Doing complexity leadership theory: How agile coaches at Spotify practice enabling leadership. *Create Innovative Management*, 28:42–60.

Baskarada, S.; Watson, J.; & Cromarty, J. (2016) Leadership and organizational ambidexterity. *Journal of Management Development*, v. 35, n. 6, p. 778-788.

Bereznoy, A. (2017) Corporate foresight in multinational business strategies. *Foresight and STI Governance*, 11(1), p. 9–22.

Biernarcki, P.; & Waldorf, D. (1981) Snowball sampling-problems and techniques of chain referral sampling. *Sociological Methods and Research*, v. 10, n. 2, p. 141-163.

Birkinshaw, J.; & Gibson, C. (2004) Building ambidexterity into an organization. *MIT Sloan Management Review*. v..45, n.4.

Burns, T.; & Stalker, G. (1961) *The Management of Innovation*. London: Tavistock Publications.

Cantarello, S.; Martini, A.; & Nosella, A. (2012) A multi-level model for organizational ambidexterity in the search phase of the innovation process. *Creativity and Innovation Management*. v. 21, n. 1.

Chen, Y. (2017) Dynamic ambidexterity: How innovators manage exploration and exploitation. *Business Horizons*, Volume 60, Issue 3, May–June 2017, Pages 385-394
Clegg, C. W.; Waterson, P. E.; & Axtell, C. M. (1996) Software development: Knowledge-intensive work organizations. *Behaviour & Information Technology*, 15, p. 237–249.
Davenport, T. H. (2005) *Thinking for a living*: how to get better performances and results from knowledge workers. Boston, MA: Harvard Business School Press.
Drath, W. (2001) *The deep blue sea*: rethinking the source of leadership. San Francisco: Jossey-Bass & Center for Creative Leadership.
Eboli, M. P. (1996) *Modernity in bank management.* Dissertation (Doctorate in Administration) - São Paulo University, São Paulo.
Eisenhardt, K. M. (1989) Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32, 543–576.
Gibson, C.; & Birkinshaw, J. (2004) The Antecedents, Consequences and Mediating Role of Organizational Ambidexterity. *Academy of Management Journal*, v. 47, v. 2, p. 209-226.
Green Jr., W. K; Inman, A.; & Birou, L. (2011) Impact of JIT-selling strategy organizational on structure. *Industrial Management & Data Systems*, v. 111, n. 1, p. 63-83.
Guhr, N.; Lebek, B.; & Breitner, M. (2018). The impact of leadership on employees' intended information security behaviour: an examination of the full-range leadership theory. *Info Systems Journal*, 29:340-362.
Gupta, R.; & Mukhopadhyay, S. (2014) Survey of Qualitative Research Methodology in Strategy Research and Implication for Indian Researchers. *Vision*, v. 18, n. 2, p. 109-123.
Handcock, M. S.; & Gile, K. J. (2011) On the Concept of Snowball Sampling. *Sociological Methodology*, v. 41, n. 1, p. 367-371.
Harms, P. D.; & Credé, M. (2010) Emotional intelligence and transformational and transactional leadership: A meta-analysis. *Journal of Leadership and Organizational Studies*, v. 17, n. 1, p. 5–17, 2010.
Hazy, J. (2011) Parsing the 'influential increment' in the language of complexity: uncovering the systemic mechanisms of leadership influence. *International Journal of Complexity in Leadership and Management*, v. 1, n. 2, 2011.
Hazy, J.; & Uhl-Bhien, M. (2014) Changing the Rules: The Implications of Complexity Science for Leadership Research and Practice. In: Day, D. (Ed.). *The Oxford Handbook of Leadership and Organizations*. Oxford: Oxford University Press.
Hazy, J.; & Uhl-Bien, M. (2015) Towards operationalizing complexity leadership: How generative, administrative and community-building leadership practices enact organizational outcomes. *Leadership*, v. 11(1), p. 79-104
Holland, J. H. (1995) *Hidden order*: how adaptation builds complexity. New York: Helix Books.
Jansen, J.; Bosch, F.; & Volberda, H. (2006) Exploratory innovation, exploitative innovation, and performance: effects of organizational antecedents and environmental moderators. *Management Science*, v. 52, n. 11, p. 1661-1674.
Johansen, B.; & Euchner, J. (2013) Navigating the VUCA World. *Research Technology Management*, 56(1), 10–15.
Lichtenstein, B.; Uhl-Bien, M.; Marion, R.; Marion, R.; Seers, A.; Orton, J.; & Schreiber, C. (2006) Complexity leadership theory: an interactive perspective on leading in complex adaptive systems. *Management Department Faculty Publications*. n. 8.
Lin, H-E; & McDonough III, F. (2011). Investigating the role of leadership and organizational culture in fostering innovation ambidexterity. IEEE Transactions on Engineering Management, v. 58, n. 3, p. 497-509.
Madhani, P. (2019) Building a customer-centric supply chain strategy: enhancing competitive advantages. *The IUP Journal of Business Strategy*, v. XVI, n. 2.

Mansoor, N.; Aslam, H. D.; Barbu, C. M.; Capusneanu, S.; & Lodhi, M. A. (2012) Organizational structure as determinant of organizational performance. *American Journal of Scientific Research*, v. 55 n. 14, p. 48-55. 2012
Meyer, A.; Gaba, V.; & Colwell, K. (2005) Organizing far from equilibrium: nonlinear change in organizational fields. *Organization Science*, n. 16, p. 456–473.
Owen, J. (2009) The death of modern management. London: Wiley.
O'Reilly III, C.; & Tushman, M. (2013) Organizational ambidexterity: past, present and future. *Academy of Management Perspectives* (in press)
Osborn, R. N.; Hunt, J. G.; & Jauch, L. R. (2002) Toward a contextual theory of leadership. *The Leadership Quarterly*, v. 13, n. 797-837.
Reeves, M.; & Deimler, M. (2011) Adaptability. *Harvard Business Review*. p. 135-141.
Sant'Anna, A. S. (2002) *Required individual competencies, organizational modernity and job satisfaction:* an analysis from the perspective of professionals in the area of administration. Dissertation (Doctorate in Administration) - Minas Gerais Federal University, Belo Horizonte.
Sine, W.; Mitsuhashi, H.; & Kirsch, D. (2006) Revisiting burns and stalker: formal structure and new venture performance in emerging economic sectors. *Academy of Management Journal*, v. 49, n. 1, p. 121-132.
Teece, D.; Raspin, P.; & Cox, D. (2020) Reboot your strategy. *MIT Sloan Management Review*, Fall.
Tushman, M. (2014) The ambidextrous leader: leadership tips for today to stay in the game tomorrow. *IESE Insight*, n. 23, p. 31-38.
Uhl-Bien., M. (2006) Relational leadership theory: exploring the social processes of leadership and organizing. *The 2006 Yearly Review of The Leadership Quarterly*.
Uhl-Bien., M.; Marion, R.; & McKelvey, B. (2007) Complexity leadership theory: shifting leadership from the industrial age to the knowledge era. *Leadership Institute Faculty Publications*. n. 18.
Uhl-Bien, M.; & Marion, R. (2009) Complexity leadership in bureaucratic forms of organizing: A meso model. *The Leadership Quarterly*, 20(4), 631–650.
Uhl-Bien, Mary; & Arena, M. (2017) Complexity leadership: Enabling people and organizations for adaptability. Organizational Dynamics, v. 46, n. 1, p. 9-20.
Uhl-Bien, M.; & Arena, M. (2018) Leadership for organizational adaptability: A theoretical synthesis and integrative framework. *The Leadership Quarterly*, n. 29, p. 89-104.
Schwab, K. (2017) *The fourth industrial revolution*. New York: Hardcover.
Weick, K. E. (1979). *The social psychology of organizing*. Reading, MA: Addison Wesley.
Weick, K. E.; Sutcliffe, K.; & Obstfeld, D. (2005) Organizing and the process of sensemaking. *Organization Science*, 16: 409-421.