The influence of leadership styles on learning capacity and budget use: a study in agro-industrial cooperatives

La influencia de los estilos de liderazgo en la capacidad de aprendizaje en la elaboración de presupuestos: un estudio en cooperativas agroindustriales

Influência dos estilos de liderança na capacidade de aprendizagem e no uso do orçamento: um estudo em cooperativas agroindustriais

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Abstract

Purpose: To investigate the influences of leadership styles on learning capacity and on the types of business budget use in agro-industrial cooperatives.

Methodology: It is a descriptive investigation, characterized as quantitative, and as a survey, with the application of the statistical technique of structural equations modeling with partial least squares estimation using SmartPLS software.

Results: It was possible to verify that (i) transactional leadership had a positive influence on the diagnostic use of the budget; (ii) organizational learning capacity as a mediator of transformational leadership in the interactive use of the budget presented the expected result; (iii) transformational leadership showed a positive meaning in organizational learning; (iv) organizational learning capacity had a positive meaning in the interactive use of the budget.

Contributions of the Study: This research contributed to show that the manager's role goes beyond elaborating, applying and accompanying the organization. It is necessary to channel efforts or demand time for the management process, since the collaborators perceive their importance and contribute effectively when engaged with the organization in which they work; it was possible to verify that the style of the leader has a significant influence on the use of the referred tool and that this can be a great ally if well developed.

Keywords: Leadership Styles. Learning Capacity. Use of Diagnostic Budgeting. Use of Interactive Budgeting.
demandar tiempo para el proceso de gestión, una vez que los colaboradores perciben su importancia y contribuyen de manera efectiva al comprometerse con la organización en la que se desempeñan, se pudo verificar que el estilo del líder influye significativamente en la uso de la referida herramienta y que esta puede ser una gran aliada se desarrollarán dos gestores.

**Palabras clave**: Estilos de liderazgo; Capacidad de aprendizaje; Uso del Presupuesto de Diagnóstico; Uso del presupuesto interactivo.

**Resumo**

**Objetivo**: Investigar as influências dos estilos de liderança na capacidade de aprendizado e nos tipos do uso do orçamento empresarial em cooperativas agroindustriais.

**Metodologia**: Trata-se de uma pesquisa descritiva, quanto aos objetivos, de levantamento de campo ou survey, no tocante aos procedimentos, é quantitativa com aplicação da técnica estatística modelagem de equações estruturais com estimação por mínimos quadrados parciais por meio do SmartPLS.

**Resultados**: Foi possível constatar que (i) a liderança transacional apresentou influência positiva com relação ao uso diagnóstico do orçamento; (ii) a capacidade de aprendizagem organizacional como mediadora da liderança transformacional no uso interactivo do orçamento apresentou o resultado esperado; (iii) a liderança transformacional apresentou significância positiva na aprendizagem organizacional; (iv) a capacidade de aprendizagem organizacional teve significância positiva no uso interactivo do orçamento.

**Contribuições do Estudo**: Esta pesquisa contribuiu para evidenciar que o papel do gestor vai além de elaborar, aplicar e acompanhar o orçamento; ele precisa canalizar esforços ou demandar tempo para o processo de gestão, uma vez que os colaboradores percebem a sua importância e contribuem de forma efetiva quando engajados com a organização em que trabalham, foi possível verificar que o estilo do líder tem influência significativa na utilização da referida ferramenta e que esta pode ser uma grande aliada dos gestores se bem desenvolvida.


**1 Introduction**

In the organizational context, the leader's style has the capacity to influence their employees, in addition to the possibility of motivating them and, being an agent of change, to transform existing practices and create new standards (Dal Mas & Barac, 2018). Thus, those who hold leadership positions are challenged, regardless of the type of organization in which they work, to define the most appropriate way to solve specific problems, seeking to maximize the performance of employees to achieve organizational goals (McColl-Kennedy & Anderson, 2002).

In this context, understanding the relevance of the organizational variables that determine the commitment and satisfaction of employees (Lok & Crawford, 2004), considering
that the learning capacity is presented as a competitive advantage, organizations that channel efforts towards this dynamic capacity are now seen as a place where employees expand their skills, generating results beyond expectations, with a new way of thinking (Padilha, Wojahn, Gomes & Machado, 2016).

Martins (2015) states that maintaining a management system that provides the necessary information for decisions in a timely manner is still a challenge for managers. In this perspective, among the artifacts of management accounting, the budget carries the significance of making the strategies of the organizations (Merchant, 1981). In the view of Brownell and Dunk (1991), the budget is a means of financially measuring the inputs and outputs of resources, and its complexity is directly related to the participation of those involved in the definition process. In this way, the budget is commonly loaded with influences that affect directly or indirectly according to the perception of those involved in its elaboration (Schiff & Lewin, 1970).

Given the context in which people are responsible for preparing and executing the budget, the leaders' decisions are based on their perceptions according to their personality (Schiff & Lewin, 1970), but the reflection of these actions can present adverse reactions in the organizations, precisely because they need humans to achieve their goals (Brumatti, 2019). And even though leadership can be classified into several styles, it is up to the leader to adopt the style that best suits their values, their perception, and their profile (Janssen, 2011). McColl-Kennedy and Anderson (2002) attribute to leadership a direct influence on the organization's performance and, indirectly, on the satisfaction and performance of employees as a result of the decisions taken (Bass, 1990).

In this context, a factor that has demanded the attention of organizations is knowledge management (Lane, Koka, & Pathak, 2006), cited as a highlight in the competitive scenario and important for organizations to obtain the advantage they need to continue acting (Bergh & Lim, 2008).

In this perspective, the opportunity for research in the behavioral area of accounting emerges, in the context of an integrated analysis according to the growing number of studies on leadership styles and budget, since they remain renewed and current (Parry, Mumford, Bower, & Watts, 2014; Luft & Shields, 2003). Contemporary studies argue that the leader's style is reflected in the organization, either directly or indirectly; however, this is not limited to these aspects, since they may still be related to organizational learning (Cherian & Farouq 2013; Wu, 2014; Sun & Anderson, 2012).

The contribution of the studies by Neitzke (2015) and Fogaça (2019), aimed to identify the influence of the leadership style on the use of the budget based on the contingency theory, and on its performance from the perspective of the social cognitive theory respectively; these focused on the reflection that the leadership style presents in the use of the budget, in its design and performance.

Thus, based on the proposed discussion, this study seeks to answer the following question: What are the influences of leadership styles on learning capacity and on the types of use of the business budget in agro-industrial cooperatives? Thus, the objective of this work is to investigate the influences of leadership styles on learning capacity and on the types of business budget use in agro-industrial cooperatives.

The justification for this research is associated with the importance of verifying the types of leadership (including transformational and transactional) and how the use of the budget in a diagnostic and/or interactive way, influence the learning capacity of employees, since this helps
not only to allow organizations to gain competitive advantage, but also because leadership can influence individuals to commit to institutions and, consequently, to the expected results.

Thus, the theme was chosen due to the relevance that the budget has within Management Accounting and, within its approaches, behavioral effects have received considerable attention. Therefore, the contribution of this study is to present evidence about a discussion in the context of management accounting, directed to the use of diagnostic and interactive budgeting, leadership styles, and learning capacity, and how these aspects interact with each other, providing opportunities for organizations to observe these aspects in order to develop their activities and achieve their goals.

2 Literature Review

2.1 Leadership Style

Leadership is characterized as the capacity that the individual has, not only to influence, but also to coordinate people to carry out activities towards what was planned and aimed by the leader (Egri & Herman, 2000). For Amabile, Schatzel, Moneta and Kramer (2004), the most significant influences that people suffer within corporations are related to the daily experiences they have with local leaders.

For several years, leadership was attributed to the individual as an inherent trait in his or her personality. However, this perception already finds other factors for its characterization, such as the attitude derived from a context and the individual's own social learning, as highlighted by Bento and Ribeiro (2013). At the beginning of the 20th century, leadership was analyzed in order to obtain information about the characteristics of leaders and the aspects that differentiated them from those who were not leaders (Northouse, 2018).

The styles were divided into transformational and transactional (Bass, 1990). The research did not consider the laissez faire style, since this type of leadership does not support subordinates and does not try to lead them, so they prefer not to deal with the needs and demands assigned to them, in addition to avoiding responsibilities (Oguz, 2010).

The term transformational leadership was presented in 1973 by Downton, but it was only in 1978, with the book entitled Leadership, by Burns, that the term gained credibility and worldwide recognition (McDowelle, 2009). Bass, in 1985, broadened the horizons of the subject of the theory of transformational leadership by arguing that the leader can inspire people to perform tasks to achieve goals beyond what is proposed and still identify the potential of their followers to optimize tasks. (Seltzer & Bass, 1990; Jogulu & Wood, 2006).

Transformational leadership thus emerges to lessen conflicts. It is one of the leadership styles that has been increasingly mentioned in studies and, regardless of the organizational level, and fostered by the interest in distinguishing itself from transactional leadership (Vizeu, 2011), for Dal Mas and Barac (2018) this style has a purpose to employees, asking them to transcend their own interests in favor of the whole. The transformational leadership style has been incorporated into the characteristics of charismatic leaders capable of influencing through articulations focused on aspects such as morality and the positive motivation of those led (Pizzi, 2017; Agostinho, 2014).

For better understanding, transformational leadership was divided into four components: Charisma, Inspirational Leadership, Intellectual Stimulation, and Individualized Consideration (Bass, 1990). Table 1 presents the explanation of each of the components of transformational leadership.
Table 1

Components of Transformational Leadership

<table>
<thead>
<tr>
<th>Components</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence (charisma)</td>
<td>The leader adopts behaviors (of respect and moral elevation) that activate strong emotions in the followers, increase their trust and identification with the leader, influence the followers’ ideals and &quot;larger than life&quot; aspects.</td>
</tr>
<tr>
<td>Inspirational leadership</td>
<td>The leader communicates a compelling vision, uses symbols to encourage the followers' efforts, acts as a role model.</td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>The leader encourages followers to become aware of problems, their thoughts and their imagination. The leader helps them to recognize their own beliefs and values. The leader fosters creative thinking.</td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>The leader attends to the development needs of the followers, supporting them, encouraging them, training them, trying to develop their potential, providing them with feedback, delegating responsibilities to them.</td>
</tr>
</tbody>
</table>


According to the characteristics mentioned in the table, leaders with a transformational profile are involved with the alignment of norms and values of organizations, with the aim of creating opportunities for the changes that are necessary for the development of the environment in which they are inserted (Couto-de-Souza & Toméi, 2008).

Transactional leadership, in turn, has distinct characteristics from transformational leadership (in which the leader inspires and motivates). In this other style of leadership, the accomplishment of tasks is rewarded through offers for fulfilling and achieving goals. In this context, the leader exercises power based on compliance with the rules or on the expectation of expected behavior so that the employee is rewarded (Bass, 1990; Agostinho, 2014; Yukl, 2012).

This type of leadership leads subordinates to present behavioral changes based on rewards, since the service is carried out with a focus on the proposed objective, achieving high levels of accuracy in opposition to their own interests (Almeida, 2012). The transactional leader seeks to present to the team the advantages that they can achieve if they carry out their responsibilities. It is possible to infer, therefore, that the result turns to the individual, fostering individualism instead of collectivity (Ardichvili & Gasparishvili, 2001; Eagly, Johannesen Schmidt, & Engen 2003; Jung & Avalio, 1999).

For Benevides (2010), the success of this type of leader is in the dependency relationship that the parties involved have. When one receives something of value, the other tends to receive it for being a hierarchical part of the process, leading those involved to carry out activities beyond the exercise of their position, demonstrating that one is effectively connected to the other (Bass, 1997). Table 2 contains a summary of the main characteristics of Transactional and Transformational leadership.
Table 2
Summary of Leadership Characteristics

<table>
<thead>
<tr>
<th>Transactional</th>
<th>Transformational</th>
</tr>
</thead>
<tbody>
<tr>
<td>The leader acts like a boss;</td>
<td>The leader acts like a real leader;</td>
</tr>
<tr>
<td>The leader is only concerned with fulfilling tasks and goals:</td>
<td>The leader cares about the well-being of his team and wants them to be satisfied in their roles;</td>
</tr>
<tr>
<td>The leader does not establish a relationship with their team:</td>
<td>The leader insists on having a relationship with their team, knowing what motivates and inspires them;</td>
</tr>
<tr>
<td>The leader does not have an open channel of communication with employees</td>
<td>The leader makes a point of listening and giving constant feedback, focusing on their and their team's growth. The communication channel is always open</td>
</tr>
</tbody>
</table>

Source: Survey data (2022).

Transactional leadership, therefore, is concerned with standardizing and prioritizing work using goals and rewards. In contrast, transformational leadership seeks to base its actions on human relationships, with a focus on people, taking into account their needs (Guerra, Tartarotti, & Camargo, 2018).

2.2 Dynamic Capacity

According to the literature, knowledge management and dynamic capacities are related to their importance for acquisition, absorption, creation, and other procedures related to knowledge of the competitive advantage process (Cyfert et al. 2021). Therefore, the organizational knowledge developed from the learning process evolves the ways of carrying out the corporate organizational activities and routines and are not simply replicas (Hermawati & Gunawan, 2021).

The topic of organizational learning has been the subject of debates since the 19th century, when theorists already discussed whether learning was the combination of what individuals learn within organizations or whether there were other perceptions about it (Easterby-Smith, Crossan, & Nicoijni 2000).

To understand organizational learning, theorists have sought dynamic ways to establish their analyses (Crossan, Lane, & White 1999), in the direction of understanding and establishing the importance of the human role within the learning process, given that it is often ignored because more emphasis is placed on artifacts of organizations (Easterby-Smith, Crossan, & Nicoijni 2000).

Knowledge, in addition to being an intangible resource, is seen as a sustainable element for building and developing a competitive advantage. For knowledge to be transformed into a competitive advantage, it needs to be shared among individuals; in other words, organizational knowledge tends to develop subsidized by the effective transfer of knowledge (Von Krogh, Nonaka, & Aben, 2001; Grant, 1996).

In the individual context, learning capacity is a differential for a professional to become successful in the current competitive market, given that this capacity is closely related to the capacity to respond to day-to-day demands (Heinzmann, 2004). The main resource an organization can have is knowledge; however, the individual is the main actor within organizations, in addition to being responsible for the creation and application of knowledge (Panizzon, 2016).
Learning capacity provides organizations with timely responses regarding internal and external circumstances, given that its applicability is seen as the basis of existing capabilities' competencies. Socialization and interaction in routines, therefore, are efficiently established, optimizing the learning of other skills (Sok, O’Cass, & Sok, 2013).

2.3 Business budget

The budget can be seen as a plan to implement the company's strategies in a given year (Frezzati, Relvas, Nascimento, Junqueira, & Bido, 2010). In addition, most aspects of management accounting permeate the budget, since it can be used for various purposes, from allocating resources to even expressing compliance with social norms (Covaleski et al, 2007).

It is, therefore, a tool that serves to manage the organization, serving as a subsidy for making good decisions (Covaleski & Dirsmith, 1986; Hansen & Van der Stede, 2004). The budget is important for different reasons within organizations, such as: operational planning and short-term performance evaluation; the strategic aspect, comprising the strategic formation and the communication of long-term goals (Hansen & Van der Stede, 2004), or other purposes, for example, planning, coordinating activities, allocating resources, motivating employees etc. (Covaleski et al., 2007).

The budget is one of the management control systems used by managers to coordinate and communicate strategic priorities and induce their commitment to the organization (Abernethy & Brownell, 1999). Simons (1995) proposes a model that foresees interactive control and diagnostic systems. These two control modalities are discussed with different effects in the approach to budget use, as can be seen in the studies by Abernethy and Brownell (1999), Bisbe and Otley (2004), Hofmann, Wald and Gleich (2012), Shen and Perera (2013), Chong and Mahama (2013), Neitzke (2015) and Laitinen, Lansiluoto and Salonen (2016). In Table 3, the main characteristics of the UDO and UIO are presented in relation to their function as well as their objective.

<table>
<thead>
<tr>
<th>Use of the Diagnosis Budget</th>
<th>Use of the Interactive Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function:</strong> It is used for monitoring organizational results and promoting the correction of predefined organizational deviations.</td>
<td><strong>Function:</strong> Used by managers for regular and personal involvement of subordinates in decision-making activities.</td>
</tr>
<tr>
<td><strong>Objective:</strong> Provision of information to assist in tracking targets and managing exceptions.</td>
<td><strong>Objective:</strong> To focus organizational attention on strategic uncertainties, providing opportunities for dialogue between those involved.</td>
</tr>
</tbody>
</table>

*Source: Adapted from Simons (1994).*

The diagnostic budget system focuses on monitoring results and correcting deviations that were previously defined to track performance (Simons, 1994). Oliveira and Beuren (2022) infer that, in this system, goals are communicated and present clear definitions. Thus, this budget seeks to comply with the traditional way of evaluating performance, attributing responsibility for the results (Abernethy & Brownell, 1999). For the interactive budget, in turn, it encompasses managers and subordinates, with the perspective of involving them and providing opportunities for dialogue and learning in the company (Simons, 1994). It is characterized by the reciprocal exchange of information from top management and other levels.
of managers, including operational levels in the budget preparation phase and constant dialogue between members (Abernethy & Brownell, 1999), that is, this type of budget associates the performance and innovation of companies in the exploration phase, in an organic and constructive approach (Brüggemann, Monteiro, & Lunkes, 2022). In this way, both the interactive system and the diagnosis contribute to the formation and implementation of intended strategies (Kaveski et al. 2021).

2.4 Research Hypothesis

Transformational leadership has been identified as one of the engines of intellectual stimulation, since the leader inspires reflections and debates (Bass, 2008), which are indispensable for dealing with strategic uncertainties. In addition, inspirational motivation allows the transformational leader's subordinates to feel attracted to the challenges that are presented by the organization.

The interactive control system stimulates the search for new opportunities (emerging strategies) and promotes organizational learning (Simons, 1994). Empirical evidence has proven the association between transformational leadership and organizational learning (García-Morales, Jiménez-Barrionuevo, Magdalena, & Gutiérrez-Gutiérrez, 2012).

In this way, the team exhibits a kind of personal approval (sympathy) regarding the organizational objectives, which makes them feel more comfortable and motivated to dialogue about the perceived needs and to articulate the strategic renewal proposed by the interactive control system (Cruz, Frezatti, & Bido, 2015). Thus, the following hypothesis is made:

**HP1: Transformational leadership positively influences the interactive use of the budget.**

In turn, transactional leadership is configured as an exchange process based on the fulfillment of contractual obligations, anchored in a utilitarian logic of financial reward (Antonakis et al., 2003). The transactional leader acts in a more static context, presents clear proposals in terms of expectations and rewards and is aligned with the diagnostic control system that provides feedback and measures based on programmed processes and management by exception (Malagueño & Bisbe, 2010), just as the diagnostic control system is used to focus research and the organization's attention, to limit the chances of deviating results, to monitor and reward compliance with pre-established goals through critical performance variables (Cruz, Frezatti, & Bido, 2015), converging on Hypothesis 2.

**HP2: Transactional leadership positively influences the diagnostic use of budget.**

Leadership styles that focus on transactions with their employees, in which they are rewarded on account of their completed tasks, are characterized as transactional leadership (Bass & Avolio, 1994). The study by Cummings, Tate, Lee, Wong, Paananen, Micaroni and Chatterjee (2018) showed, even if in a reduced way, positive results regarding the focus on tasks and the importance of managing results. With this, human beings come into the world motivated to learn, to explore, even though in the vast majority of organizations they are more inclined to be controlled than to learn, as this is how they are rewarded (Heinzmann, 2004). Thus, there is the following hypothesis:

**HP3: Transactional leadership positively influences learning capacity**
Considering that individuals are responsible for learning, organizations can enable the creation of environments that allow this, since this is the way in which individuals can exercise their capacity and competence to do something through learning (Heinzmann, 2004). In this direction, leaders who focus their actions on relationships and people, maximizing the potential of their employees by encouraging innovation and intellectual development (Cummings et al. 2010), find a space in the interactive budget, as their focus is on the proactive way that learning is stimulated and that problems are solved before they actually occur (Simons, 1994). This leads to the following hypothesis:

**HP4: Organizational Learning Capacity mediates the effects of transformational leadership on interactive budget use**

In the context of leadership styles, transformational leadership has a focus on human beings within its characteristics. In the study by Cummings et al. (2010), in the item relating to health and well-being, this leadership style stood out, as it was found that it promoted the reduction of employee exhaustion, an important factor for them to develop new thinking patterns, learn continuously and collaborate with their colleagues, bringing practical benefits to the organization (Heinzmann, 2004). Thus, the following assumption is made:

**HP5: Transformational leadership positively affects organizational learning**

When considering that human beings tend to develop new capacities, they automatically create perceptions and sensitivities (Heinzmann, 2004) that positively affect the interactive use of the budget, which is focused on the involvement of managers relating subordinates' activities with the intention that dialogue be the result of this action (Simons, 1994). As a result, the following assumption is made:

**HP6: Organizational Learning Capacity positively affects the interactive use of the budget**

Given the hypotheses listed, Figure 1 presents the theoretical model:
As for the objectives, this study presents itself as descriptive; as for the procedures, it is a field survey; as an instrument for collecting information, a questionnaire was used. Regarding the approach to the problem, the research is classified as quantitative. The population of this study is composed of managers of agro-industrial cooperatives, who directly or indirectly participate in the budgeting and who have employees under their management, and the so-called intermediate managers who evaluate and are evaluated by the corporate budget. The choice for this population is related to the research subjects of other studies focused on the theme of leadership style, budget use, and learning capacity (Heinzmann, 2004; Neitzke, 2015; Fogaça, 2019 and Brumatti, 2019).

In the context of this research, the sample is characterized as non-probabilistic, developed by accessibility without restriction on the number of participants per company. The sample was calculated using G*Power software, considering a 5% margin of error, with a 95% confidence level and three predictive variables (UDO, OIO and CAO), as recommended by Hair, Hult, Ringle and Sarstedt (2021). Based on the proposed model, for the results to have the desired confidence, it was found that 89 responses would be necessary.

In this study, the construct and variables are described in Table 4 and include: leadership styles, learning capacity, and budget use. In addition, there are the variables that make up each one of them, and finally the references.

Table 4

<table>
<thead>
<tr>
<th>Construct</th>
<th>Variables</th>
<th>Organization of elements</th>
<th>Questions</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Styles</td>
<td>Transactional</td>
<td>Trading relationships; Level of control over individual actions; and Level of interference in group behavior</td>
<td>a, b, c</td>
<td>Bass (1990, 1997) and Eagly Johannesen-</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>Charisma as a determinant of the Leader’s actions; Actions based on motivation; Intellectual Stimulus; Perception of Individual needs; and group conscience</td>
<td>d, e, f, g, h</td>
<td>Schmidt (2003); Neitzke (2015)</td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Learning Capacity</td>
<td>Source of Knowledge, Content-Process Focus, Knowledge Reserve, Dissemination Mode, Learning Scope, Value Chain Focus, Learning Focus</td>
<td>a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r</td>
<td>Heinzmann (2004).</td>
<td></td>
</tr>
<tr>
<td>Use of the Budget</td>
<td>Diagnosis Use</td>
<td>Form of control; Performance evaluation; Operational planning; Communication of goals; and Strategy formation.</td>
<td>a, b, c, d, e</td>
<td>Hansen and Van der Stede (2004); Neitzke (2015).</td>
</tr>
<tr>
<td>Interactive Use</td>
<td>A means of questioning the actions of managers; Means of debate between work team members; Means of discussion in meetings.</td>
<td>f, g, h</td>
<td>Abernethy and Brownell (1999); Neitzke (2015).</td>
<td></td>
</tr>
<tr>
<td>Qualification of Respondents</td>
<td>Characterize the profile of the respondent by position, age, length of experience, academic training, gender and relationship with budget</td>
<td>1, 2, 3, 4, 5, 6, 7, 8</td>
<td>Neitzke (2015); Brumatti (2019); Fogaça (2019)</td>
<td></td>
</tr>
<tr>
<td>Qualification of the Organization</td>
<td>Characterize the organization through the budget model used, the frequency of budget revisions, federative unit, annual billing and number of employees.</td>
<td>1, 2, 3, 4, 5</td>
<td>Neitzke (2015); Brumatti (2019); Fogaça (2019)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Data (2022).

Data collection occurred through a questionnaire. The research project was approved and authorized by the Committee for Ethics in Research (Comitê de Ética em Pesquisa - CEP) with Human Beings of the State University of Western Paraná.

The data collection instrument was a virtual questionnaire containing 34 multiple-choice questions with a five-point Likert-type measurement scale, plus questions about the qualification of respondents and organizations, designed with the aim of identifying the leadership style, the learning capacity, and budget utilization.

The questionnaire was adapted from already validated instruments containing questions separated by blocks. The questionnaire was tested by two professionals and two researchers, to improve the assertiveness of the questions, as well as to look for possible weaknesses; with the professionals and researchers in agreement, the research instrument was transformed into a virtual questionnaire.

The analysis was performed using descriptive statistics, then exploratory factor analysis (EFA, hereinafter) and Structural Equation Modeling (SEM). To carry out the treatments of the collected data, G*Power and SmartPLS (v.3.3.9) software were used. The G*Power software was used to test the sample necessary for the development of the research, while SmartPLS was used to assist in the tests and provide an analysis of the theoretical model of this dissertation.
4 Results and Analysis

4.1 Descriptive Analysis of the Respondents

The survey had the participation of 89 managers of agro-industrial cooperatives. To characterize the respondents that make up the sample, data were collected on: (i) gender; (ii) age; (iii) academic background; (iv) position/function; (v) time with the company; (vi) the field of knowledge of their most advanced degree; (vii) years of experience; and (viii) role in relation to the budget, as detailed in Table 5.

Table 5
Respondent Profile

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Frequency</th>
<th>Frequency Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>70</td>
<td>78.65%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>19</td>
<td>21.35%</td>
</tr>
<tr>
<td></td>
<td>Did not answer</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Age</td>
<td>Up to 30 years</td>
<td>8</td>
<td>8.99%</td>
</tr>
<tr>
<td></td>
<td>Between 31 and 40 years old</td>
<td>39</td>
<td>43.82%</td>
</tr>
<tr>
<td></td>
<td>Between 41 and 50 years old</td>
<td>28</td>
<td>31.46%</td>
</tr>
<tr>
<td></td>
<td>Over 50 years</td>
<td>14</td>
<td>15.73%</td>
</tr>
<tr>
<td>Academic Education</td>
<td>Incomplete higher education</td>
<td>2</td>
<td>2.25%</td>
</tr>
<tr>
<td></td>
<td>Complete higher education</td>
<td>12</td>
<td>13.48%</td>
</tr>
<tr>
<td></td>
<td>Lato sensu (Specialization/MBA) incomplete</td>
<td>30</td>
<td>33.71%</td>
</tr>
<tr>
<td></td>
<td>Lato sensu (Specialization/MBA) completed</td>
<td>20</td>
<td>22.47%</td>
</tr>
<tr>
<td></td>
<td>Stricto Sensu (master's/doctorate) incomplete</td>
<td>7</td>
<td>7.87%</td>
</tr>
<tr>
<td></td>
<td>Stricto Sensu (master's/doctorate) completed</td>
<td>18</td>
<td>20.22%</td>
</tr>
<tr>
<td>Position Function</td>
<td>In charge</td>
<td>20</td>
<td>22.47%</td>
</tr>
<tr>
<td></td>
<td>Supervisor</td>
<td>32</td>
<td>35.96%</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>37</td>
<td>41.57%</td>
</tr>
<tr>
<td>Time in the Company</td>
<td>Up to 5 years</td>
<td>39</td>
<td>43.82%</td>
</tr>
<tr>
<td></td>
<td>Between 6 and 10 years</td>
<td>15</td>
<td>16.85%</td>
</tr>
<tr>
<td></td>
<td>Between 11 and 15 years</td>
<td>12</td>
<td>13.48%</td>
</tr>
<tr>
<td></td>
<td>Over 16 years</td>
<td>23</td>
<td>25.84%</td>
</tr>
<tr>
<td>Experience in the Area</td>
<td>Up to 5 years</td>
<td>15</td>
<td>16.85%</td>
</tr>
<tr>
<td></td>
<td>Between 6 and 10 years</td>
<td>22</td>
<td>24.72%</td>
</tr>
<tr>
<td></td>
<td>Between 11 and 15 years</td>
<td>15</td>
<td>16.85%</td>
</tr>
<tr>
<td></td>
<td>Over 16 years</td>
<td>37</td>
<td>41.57%</td>
</tr>
<tr>
<td>The role in relation to the budget</td>
<td>I am responsible for managing the budget</td>
<td>60</td>
<td>65.96%</td>
</tr>
<tr>
<td></td>
<td>I participate in the elaboration</td>
<td>13</td>
<td>14.61%</td>
</tr>
<tr>
<td></td>
<td>I follow the budget execution</td>
<td>14</td>
<td>15.73%</td>
</tr>
<tr>
<td></td>
<td>I exercise budgetary control</td>
<td>2</td>
<td>2.25%</td>
</tr>
</tbody>
</table>

Source: Research Data (2022).
Of the participants, 37 respondents occupy the position of manager in the organizations in which they carry out their activities. With regard to their academic training, 97.75% have completed higher education and 33.71% have incomplete latu sensu specialization. Regarding the time of work in the company, thirty-nine respondents have up to five years and 41.57% of the participants have more than 16 years of experience in the area. Regarding the role of these respondents in relation to the budget, 65.96% of those who responded to the survey are responsible for managing the budget.

The respondents of this research were qualified to participate, since they carried out their work activities in agro-industrial cooperatives, being responsible for the budget and having collaborators under their responsibility. It is inferred that there is a reasonable number of managers who are responsible for managing the budget, who have more than 10 years of experience in the area. With regard to the greater participation of males, Silva, Rodrigues and Queiroz (2017) also point out that despite the proven competence of women, their investment in training and professionalization, they still occupy a relatively small space in leadership positions in the formal Brazilian labor market.

In the education category, most participants attended higher education. In this sense, Sohn, Vieira, Casarotto Filho, and Souza (2013) attribute to professionals the development of activities related to knowledge management. However, for this, it is necessary that they have a consolidated academic background, so that they can perform their activities in an increasingly demanding and competitive market.

4.1 Descriptive Analysis of Organizations

In Table 6, the organizations that make up the sample of this research were characterized, identifying data on: (i) the budget model adopted; (ii) the existence of the budget review; (iii) the location of the cooperative – Federative Unit; (iv) annual revenues in reais (R$); and (viii) the number of employees. The questionnaire did not include questions that would identify or characterize the name of the cooperatives, since this was not the proposed objective. In addition, the data and information obtained were worked on and analyzed in a way that preserved secrecy.

Table 6

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Frequency</th>
<th>Frequency Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The budget model adopted by the company (implemented or being implemented) is closer to which technique(s):</td>
<td>Continuous, revised budget.</td>
<td>7</td>
<td>7.87%</td>
</tr>
<tr>
<td></td>
<td>Zero-based budgeting, disregarding historical data.</td>
<td>6</td>
<td>6.74%</td>
</tr>
<tr>
<td></td>
<td>Flexible budget, prepared in at least 3 different scenarios.</td>
<td>5</td>
<td>5.62%</td>
</tr>
<tr>
<td></td>
<td>Matrix budget, considering the various business units.</td>
<td>18</td>
<td>20.22%</td>
</tr>
<tr>
<td></td>
<td>Traditional budget, carried out annually.</td>
<td>53</td>
<td>59.55%</td>
</tr>
</tbody>
</table>
According to the answers obtained, 53 participants reported that they use the traditional annual budget. Among the types of budget, the traditional budget is that which is the most likely to be overrun, as it is static in relation to the proposed objectives and rewards, in addition to having an annual periodicity (Frezzati, 2005). However, Mucci and Frezatti (2017) argue that the criticisms, when carrying out their study, were more focused on the nature of people who are risk averse and the practice of management than in relation to the tool itself.

Of the total number of respondents, 51.69 % carry out revisions whenever a need arises imposed by the economic situation. Regarding the location of the cooperative, 88.76 % are from Paraná, corroborating the study by Silva and Nunes (2023), who attest that the Center-South of the country had the greatest expansion of cooperativism due to the colonization processes with immigrant participants who already knew this style of enterprise.

The organizations that are the object of the study have annual revenues above R$3 billion, placing them among the largest companies in agribusiness. According to the Forbes Agro 100 classification, which gathered in its 2020 yearbook, the companies that had at least R$1 billion in revenue. In this survey, 67 respondents reported that they perform their activities in organizations with revenues equal to or greater than R$1 billion. In addition, it was observed that 26.97 % of the questionnaire respondents work in cooperatives that employ over 10,000 employees.
4.3 Measurement Model

In order to achieve the objectives of this research, the data were treated using a structural equation modelling (SEM) approach with the support of the SmartPLS version 3.3.9 ® program. The structural equation modelling must start by evaluating the respective measurement model; the model's reliability indicators were tested. Thus, the results of the factor analysis for the respective survey are detailed, and Table 7 presents the analysis of Reliability and Validity of the construct with the aid of the average variance extracted (AVE). In the second row of the table, the minimum results expected according to the literature are found.

### Table 7
Reliability Analysis and Construct Validity

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Cronbach’s Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAO</td>
<td>0.851</td>
<td>0.873</td>
<td>0.884</td>
<td>0.523</td>
</tr>
<tr>
<td>ELTf</td>
<td>0.636</td>
<td>0.641</td>
<td>0.804</td>
<td>0.578</td>
</tr>
<tr>
<td>ELTs</td>
<td>0.359</td>
<td>0.362</td>
<td>0.757</td>
<td>0.609</td>
</tr>
<tr>
<td>UDO</td>
<td>0.875</td>
<td>0.888</td>
<td>0.923</td>
<td>0.800</td>
</tr>
<tr>
<td>UIO</td>
<td>0.908</td>
<td>0.931</td>
<td>0.956</td>
<td>0.915</td>
</tr>
</tbody>
</table>

**Source:** Research Data (2022).

The Cronbach’s alpha criterion is the indicator that estimates the reliability of the construct based on the correlations between the observable variables (Hair Jr. et al., 2021). As previously mentioned, the desired standard is for numbers above the 0.70 factor. However, Freitas and Rodrigues (2005) infer that it is possible to consider questionnaires that comprise values above 0.60 as satisfactory. Below this number, the reliability goes from medium to low. The items CAO, UDO and UIO, in turn, met the criteria satisfactorily, since they were above 0.70. The ELTf and ELTs variables showed values below the generally accepted minimum.

Although Cronbach's Alpha did not show the expected significance, its composite reliability was previously observed, and the analysis followed, since some critics such as Green and Yang (2009), present alternative approaches to reliability, which eliminate the problems related to the use of Alpha. Such approaches significantly contemplate the interpretive use in current research.

Pinto and Chavez (2012) show that a sample of respondents with similar profiles may result in a questionnaire with low reliability according to the Chronbach’s alpha, although it is not possible to vehemently attest to this.

In the view of Valentini and Damásio (2016), composite reliability has been shown to be a more robust and accurate indicator when compared to Cronbach's Alpha, since composite reliability presents weights and factorial loads that are subject to variation, unlike Alpha, in which the charges are fixed in order to be equal, due to the assumption of tau equivalence. Since the composite reliability of this variable met the expected parameters of composite reliability, it was not removed from the study and was analyzed.

Dillon-Goldstein's RHO, in turn, reflects, *a priori*, the variables according to the reliability. Thus, the purpose of said analysis is to verify the sample without considering possible interferences, giving reliability to the findings (Ringle, Silva, & Bido, 2014). With regard to AVE, all variables showed values higher than the minimum expected (0.50). Finally,
CC also had satisfactory results for the research, in line with the metrics reported in Table 8, based on studies by Ringle, Silva and Bido (2014).

To contribute to the analysis of discriminant validity, the Fornell – Larcker criterion was used, which compares the existence of correlations between the constructs with the square root of the AVE of each variable. In Table 8, the findings of the respective criterion are in bold.

**Table 8**

*Discriminant validity - result of the Fornell-Larcker criterion*

<table>
<thead>
<tr>
<th></th>
<th>CAO</th>
<th>ELTf</th>
<th>ELTs</th>
<th>UDO</th>
<th>UIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAO</td>
<td>0.723</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELTf</td>
<td>0.484</td>
<td>0.760</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELTs</td>
<td>-0.020</td>
<td>-0.150</td>
<td>0.780</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UDO</td>
<td>0.172</td>
<td>-0.003</td>
<td>0.432</td>
<td>0.895</td>
<td></td>
</tr>
<tr>
<td>UIO</td>
<td>0.392</td>
<td>0.067</td>
<td>0.096</td>
<td>0.729</td>
<td>0.957</td>
</tr>
</tbody>
</table>

*Source: Research Data (2022).*

Discriminant validity can be treated as an estimate between the correlation of two latent variables (Hair Jr. et al., 2021). This indicator is significant to the extent that the factor loadings present in the indicators are greater in their respective constructs than in others (Chin, 1998). Therefore, the correlation between them needs to be greater than the others of the construct. Thus, the respective criterion was achieved, considering that, according to Table 8, the square roots are larger than the others in relation to the others that are present in the construct.

### 4.4 Discussion of the results

To interpret the coefficients, it is necessary to check the beta regression (Ringle et al., 2014). In line with the structural coefficient, the p-value must be evaluated together to verify whether the existing relationship is really significant. To avoid an erroneous rejection of a true null hypothesis, when a significance of 5 % is considered, the p-value must be below 0.05, showing that the relationship has the desired significance (Bortoloto, 2019). Table 9 demonstrates the relationships between the constructs listed in the research.

**Table 9**

*Factor Analysis - Structural Coefficients*

<table>
<thead>
<tr>
<th>Relation</th>
<th>Coef β</th>
<th>T-value</th>
<th>P-value</th>
<th>Hypothesis</th>
<th>Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTf→UIO</td>
<td>-0.161</td>
<td>1.310</td>
<td>0.191</td>
<td>H1 (+)</td>
<td>Rejected</td>
</tr>
<tr>
<td>ELTs→UDO</td>
<td>0.432</td>
<td>5.524</td>
<td>0.000</td>
<td>H2 (+)</td>
<td>Accepted</td>
</tr>
<tr>
<td>ELTs→CAO</td>
<td>0.054</td>
<td>0.447</td>
<td>0.655</td>
<td>H3 (+)</td>
<td>Rejected</td>
</tr>
<tr>
<td>ELTf→CAO→UIO</td>
<td>0.232</td>
<td>3.942</td>
<td>0.000</td>
<td>H4 (+)</td>
<td>Accepted</td>
</tr>
<tr>
<td>ELTf→CAO</td>
<td>0.492</td>
<td>6.695</td>
<td>0.000</td>
<td>H5 (+)</td>
<td>Accepted</td>
</tr>
<tr>
<td>CAO→UIO</td>
<td>0.470</td>
<td>4.277</td>
<td>0.000</td>
<td>H6 (+)</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

*Source: Research Data (2022).*
The first hypothesis proposed a positive relationship between the transformational leadership style and the interactive use of the budget. Given the data found, this hypothesis cannot be accepted, and it is inferred, therefore, that the transformational style is not significant in this type of budget use, although in the literature it is identified that the leader with transformational characteristics tends to perform better than those who focus on daily activities (McColl-Kennedy & Anderson, 2002). In the present study, it was not possible to prove this hypothesis, even so, it is not possible to assume that the transactional would have significance since, according to Bass (1990), the transactional style, over time, may not present satisfactory results because external factors are present and can influence the will and decisions of leaders.

The second hypothesis was directed at the relationship between the transactional leadership style and the diagnostic use of the budget. The results that were found allowed its validation, since the values were within the significance level. This dialogues with the study by Malagueño and Bisbe (2010), who studied the diagnostic system, the traditional way used to monitor and observe the achievement of goals, which are previously established. For Albernethy and Brownell (1999), the use of this type of budget tends to reduce the team's commitment, since it is only used as a tool for measuring the team’s results, that is, both the leadership style and the type of budget are complementary among their characteristics, as they channel their efforts into relationships in which the focus is on rewards in return for good performance and their way of working (Bass, 1990).

The third hypothesis, in which the relationship between transactional leadership style and learning capacity was observed, did not show results that supported it, so it was rejected. Bass (1990) attributes to this leadership style a perspective more focused on the relationship of rewards and punishments for deviations. Thus, in this sense, the aim is not to encourage processes that develop the employee in the work environment, but to follow the stipulated goals, focusing on efficiency rather than innovation (Malagueño & Bisbe 2010). Due to the fact that it encourages more compliance with the proposed goals, this leadership style does not aim for employees to develop knowledge, it only aims for them to have and maintain what is necessary for the performance of their functions. It converges with the theoretical aspects of the literature and with the findings in this present research.

Regarding the fourth hypothesis, in which learning capacity mediates the relationship between the transformational leadership style and the interactive use of the budget, this showed significance and was validated. The capacity for organizational learning happens with the help of managerial and organizational characteristics. In this way, the organization tends to achieve learning or even to facilitate its learning process with the help of managers who exercise a leadership role within organizations (Chiva, Alegre & Lapiedra, 2007). This possibility of learning is observed as a social construction in which common development is achieved through social relationships, with everyday interactions. In this direction, teamwork contributes to the development of the individual and the team (Senge, 1990).

The fifth hypothesis, which probed whether the transformational leadership style had a positive relationship with organizational learning capacity, was confirmed in this research given the significance of the results. The transformational leader encourages organizational learning, as it promotes and encourages intellectual development, inspiring the members of the organization, as a kind of catalyst for the process (García-Morales et al., 2012). This leadership style seeks to motivate and inspire followers, presenting them with challenges with a view to the future, using transparent communication, with goals that can be achieved and mediated through incentives for innovation, creativity, imagination, and curiosity (Lopes, Rocha & Silva, 2021).
Finally, the sixth hypothesis demonstrated that the learning capacity is significant in relation to the interactive use of the budget, in the context in which the interactive use promotes a greater engagement of the collaborators in relation to the learning capacity and its use. For Silva, Beuren, Monteiro and Lavarda (2022), this type of system provides active dialogue relating the members of the organization with the aim of improving strategic positioning and fostering organizational learning with the desire to find opportunities.

5 Final Considerations

It is possible to conclude that the findings and results served as a basis for stating that the research objectives were achieved. It is concluded that the leadership style, be it transformational or transactional, affects the learning capacity in cooperatives and the use of the budget. Another relevant consideration is that the transformational style, in this research, did not influence the interactive use of the budget, contrary to other studies in the area. This situation may be related to the field of activity of the researched organizations or even to the culture of the cooperatives. However, the hypothesis that the transactional leadership style positively influences the learning capacity was rejected. However, this leadership style has significance in the diagnostic use of the budget, in addition to having a positive influence on the learning capacity and the interactive use of the budget.

Thus, this research contributed to the literature by relating the leadership style with the learning capacity and the use of the budget, where the learning capacity is the result of how the leader's actions can mediate and provide opportunities for cooperative employees to find a healthy environment to develop learning capacity, which reflects this social interaction on the use of the budget, whether diagnostic or interactive.

It was noted that although the transformational leadership style does not influence the interactive use of the budget, it is not possible to infer that the transactional is better for the cooperatives, since this leadership style according to the verified hypotheses does not encourage the learning capacity, and this should be a point of attention on the part of managers, because when learning capacity was observed as a mediator of the transformational style and the interactive use of the budget, the existing positive relationship was identified.

In this way, progress was made by relating the influence of the leadership style on the learning capacity and that the reflections of this construction tend to contribute to the use of the budget. This demonstrates the timelessness of the subject and its relevance in the theoretical field, since it gives managers the opportunity to reflect on how to play their role within the cooperative.

The practical implications of this theme for cooperatives are that, based on the results found, the leadership style influences the learning capacity and, respectively, the budget, and these are points that deserve attention and care, given that they affect the role of the manager. This action can engage employees and not be treated as a mere formality to be carried out during the year.

As for the social implications, there was the opportunity to show, together with the agro-industrial cooperatives, the effects that the leader's style has on daily activities, including budget management, providing subsidies for understanding and establishing plans for qualification and training, enhancing managerial performance in organizations.
5.1 Limitations and Future Possibilities

The research involved managers from three different areas - administrative, commercial, and production -, a fact that can be considered a limitation, since the perceptions of managers from other sectors - information technology, finance, human resources -, for example, may be different. Furthermore, the data analysis technique is another limiting factor. The fact of working with a sample prevents the questionnaire from being applied to all cooperative professionals who are related to the budget.

As a suggestion for future research, it is recommended to investigate the subject in other types of cooperatives, including those in other federal units, with proposals aimed at providing services and/or commerce, with the aim of increasing the number of respondents, providing opportunities for understanding of the aspirations that each demographic considers relevant for leadership styles, for the budget, for dynamic capabilities, combining learning capacity with absorptive capacity.
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