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## Corporate Governance

## Governance in agribusiness organizations: challenges in the management of rural family firms

*Governança em organizações do agronegócio: desafios para a gestão de empresas rurais familiares**Gobernancia en las organizaciones agroindustriales: retos en la gestión de las empresas familiares rurales*Cláudio Pinheiro Machado Filho<sup>a,b,\*</sup>, Silvia Morales de Queiroz Caleman<sup>c</sup>,  
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**Abstract**

The rural production in Brazil has experienced a significant competitive impact with the stabilization of the economy promoted by the Real Plan in 1994. Indeed, the Brazilian agriculture has achieved efficiency gains in terms of technology, economies of scale and general modernization of the activity in the field. In this context, the professional management of rural production evolved. However, the governance process does not evolve in the same dimension, and the “governance risk” is still poorly addressed in the rural environment, which often limits the potential of operations. In this study, we sought to deepen the understanding of the factors that impact the implementation of governance practices in rural properties in Brazil. Based on a convenience and non-probability sample, this study seeks to understand the evolution of the governance process on farms and its correlation with the management practices. This study found a correlation between the existence of some formal management processes (for example, strategic planning and more robust accounting systems) and advances in the governance mechanisms and processes, such as the establishment of a board of directors, clearer rules regarding the separation between corporate and family assets and more transparency in income statements. This study also found a lack of clarity in the separation of return on capital (dividend) and compensation for work (compensation for services provided) for partners, heirs and other family members. In summary, we concluded that there is the adoption of some governance mechanisms in the rural sector, but they are still poorly developed among rural producers, hence the need to stimulate them.

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**Keywords:** Governance; Family firms; Rural producers

**Resumo**

A produção rural no Brasil passou por um importante choque de competitividade a partir da estabilização da economia promovida pelo Plano Real em 1994. Com efeito, ganhos de eficiência foram alcançados pela agricultura brasileira, em termos de utilização de tecnologia, economias de

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escala e modernização geral da atividade no campo. Neste contexto, evoluiu a profissionalização da gestão da atividade. No entanto, o processo de governança não evolui na mesma dimensão com o “risco de governança” ainda pouco tratado no meio rural, o que muitas vezes limita a potencialidade das operações. Nesta pesquisa buscou-se aprofundar o entendimento acerca de quais os fatores que impactam a implementação de processos de “Governança” em propriedades rurais no Brasil. A partir de uma amostra por conveniência e não probabilística busca-se entender a evolução do processo de governança nas propriedades rurais e sua relação com práticas de gestão. Constatou-se uma correlação entre a existência de alguns processos formais de gestão (por exemplo, planejamento estratégico e sistemas de contabilidade mais robustos) e avanços em mecanismos e processos de governança, tais como o estabelecimento de conselho de administração, regras claras de separação entre ativos da família e da empresa e maior transparência nas demonstrações financeiras. Nota-se, ainda, pouca clareza na separação do que vem a ser a remuneração do capital (dividendo) e do trabalho (pró labore), por parte de sócios, herdeiros e outros membros familiares. Em síntese, conclui-se que existe a adoção de alguns mecanismos de governança no meio rural, mas que esses ainda são poucos desenvolvidos entre os produtores agrícolas, sendo necessário o seu incentivo.

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*Palavras-chave:* Governança; Empresas Familiares; Produtores Rurais

## Resumen

La producción rural en Brasil ha experimentado un impacto competitivo significativo desde la estabilización de la economía impulsada por el Plan Real de 1994. Efectivamente, la agricultura brasileña ha logrado una mayor eficiencia con relación al uso de tecnología, economías de escala y modernización general de las actividades en el campo. En este contexto, se ha desarrollado la gestión profesional de la actividad. Sin embargo, el proceso de gobernanza no se ha desarrollado en consonancia con el “riesgo de gobernanza”, dimensión todavía poco tratada en el medio rural, lo que a menudo limita el potencial de las operaciones. En este estudio se intenta profundizar la comprensión de los factores que influyen en la implementación de procesos de “gobernanza” en propiedades rurales en Brasil. A partir de una muestra por conveniencia y no probabilística se analiza la evolución del proceso de gobernanza en propiedades rurales y su relación con las prácticas de gestión. Se ha encontrado una correlación entre la existencia de algunos procesos formales de gestión (como, por ejemplo, la planificación estratégica y los sistemas más robustos de contabilidad) y los avances en mecanismos y procesos de gobernanza, tales como la creación de un consejo administrativo, reglas claras de separación entre los activos de la familia y los de la empresa, y una mayor transparencia en las demostraciones financieras. Se nota, además, poca precisión en la distinción de lo que constituye la remuneración del capital (dividendos) y la remuneración del trabajo, por parte de los socios, herederos y otros miembros de la familia. En resumen, se concluye que existe la adopción de algunos mecanismos de gobernanza en el medio rural, no obstante, dichos mecanismos no están suficientemente desarrollados entre los agricultores, por eso la necesidad de su incentivo.

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*Palabras clave:* Gobernanza; Empresas familiares; Productores rurales

## Introduction

The agribusiness sector in Brazil represents approximately 22.5% of Brazil's GDP – based on data of 2013, generating approximately US\$ 81 billion of trade surplus in 2014 (ABAG, 2015). Its supply chains are formed by a wide variety of organizations, from large multinational corporations in the agrochemical, food processing and distribution, energy and fiber industries, to companies related to rural production, formed by cooperative organizations and family businesses of different sizes.

The term agribusiness was introduced in the literature by Harvard University professors John Davis and Ray Goldberg, in 1957. The broad definition of the term implies a systemic view that expands the dimension of rural production itself (Davis & Goldberg, 1957):

A commodity system encompasses all the participants involved in production, processing and marketing of a product. This system includes the market of agricultural supplies, agricultural production, storage operations, processing, wholesale and retail, delimiting a flow that ranges from inputs to the final consumer. The concept encompasses all the institutions which affect the coordination of the successive

stages of a commodity flow, such as the government, futures markets and trade associations (Davis and Goldberg, 1957, p. 2).

Zylbersztajn (2000) developed the concept of agro-industrial systems (AGS) as the unit of analysis based on products of rural origin. This analytical model highlights the transactions between the economic agents – industry of agricultural inputs, agricultural and livestock production; manufacturing and processing industry, distribution (wholesale and retail) and consumers – permeated by the institutional environment (laws, rules, regulations) and the organizational environment (support agencies, research, banks, professional organizations, etc.).

In the jargon of agribusiness agents, the systemic delimitation considers the following segments: (1) “farm supplies”, which supplies farm inputs (fertilizers, pesticides, seeds), machinery and equipment used in rural activities; (2) “farm production”, representing the rural production activities in the field, which make up the products of agricultural origin, forestry and animal husbandry; (3) “processing and distribution”, which represents the food, fiber and energy processing/industrialization activities, in addition to the distribution segments (wholesale and retail), to the final consumer (Tejon & Xavier, 2009).

The focus of this study is the “*farm production*” sector, addressing the rural production activities. Rural production, specifically, has experienced a significant competitive impact with the stabilization of the economy promoted by the Real Plan in 1994 (Machado Filho, 2009). Indeed, the Brazilian agriculture achieved efficiency gains in terms of technology, economies of scale and overall modernization of the activity in the field. The evolution of the production of grains and planted area illustrates the evolution of the sector: Based on data released by Conab (2015), between 1990 and 2015, grain production in Brazil increased from approximately 58 million tons to 206.34 million tons (estimates of 2014/15 crop), that is, it increased 255.75% in this 26-year period, accounting for an average annual production growth of 4.64%. In the same period, the planted area increased from approximately 39 million hectares to an estimated 57.52 million hectares in the 2014/15 crop, that is, it increased only 47.48%, indicating an average annual growth in planted area of 1.50%. Therefore, it can be seen that it represented a huge yield gain in land use in the period surveyed, from 1.49 tons of grain per hectare in 1990 to 3.59 tons in 2015, that is, an increase of 140.93%, with an average yield of 3.44% per year.

In this context, the professionalization of management has evolved, with increasingly professional structures ahead of the farms, whose nature of activity requires skills in terms of production, sales and finance. Essentially, it involves the adoption of more rational management practices rather than intuitive and personalist methods (Lodi, 1993). The management of market risks and production inherent in the agricultural activity, is one of the key success factors of the activity in the field. As a result, the process of professionalization of management involves the implementation of formal processes of strategic planning and budgeting, cost control tools, management information systems, among others.

However, the governance process does not evolve as the increasing professionalization process of the agricultural activity requires. The “governance risk” is still poorly addressed in the rural environment, which often limits the potential of operations. The governance problem explored in this study addresses the alignment of interests between various stakeholders in the family organization. As the generations succeed one another in the division of assets and in the control of the rural property, conflicts of interest are enhanced. Divergences in relation to the vision of the future of the business, expectations regarding the allocation of profits, expansion of investments, exposure to debt, appointment of family members to management positions, among others, indicate the potential for conflicts (Alcântara & Machado Filho, 2014). This study starts with the premise that the mitigation of these risk factors is associated with the implementation of governance processes, involving the structuring of pre-defined decision-making bodies, levels of authority, rules and agreements in the management and ownership of the business.

Based on the foregoing, the purpose of this study is to understand which factors impact the formalization of governance processes in rural properties in Brazil. This study seeks to analyze the rural activity, also referred to as commercial agriculture.

The relevance of the research problem presented consists of understanding the restrictive factors for the adoption of governance practices in the rural firm and their relationship with the management practices of the firm, once they are essential for the consolidation of the professionalization of agribusiness in the rural property.

Based on that, the overall purpose of this research is to analyze the relationship between the governance and management practices adopted in rural properties, specifically seeking to:

- (a) Evaluate the relationship between the adoption of formal planning and decision-making processes and the existence of the board of directors.
- (b) Analyze the existence of members’ agreements in rural properties.
- (c) Examine the legal nature of rural properties (individual and corporate).
- (d) Check the existence of board of directors in rural properties.
- (e) Check the existence of compensation for management services and the profit sharing mechanism in rural properties.
- (f) Study the relationship between the age of managers and the adoption of financial control tools in rural properties.
- (g) Find out the types of financial control and accounting practices adopted in rural properties.

### Theoretical reflections

The theoretical framework proposed in this research involves the subject of “Governance” within the context of firms controlled by families. An overall review on the subject of Governance will be presented and we will particularly address the family firms. We will also consider the specificities of rural properties.

#### *The evolution of governance*

In any situation where the decision-making power is transferred or shared, an information asymmetry arises to a greater or lesser extent. Whether in a private or public company, club, associations, cooperatives, universities, there will always be a greater or lesser degree of conflict of interest, resulting from the delegation of some kind of power. In other words, “someone” governs on behalf of “someone” who has delegated rights to exercise the power. Minimizing asymmetries and conflicts of interest inherent in the delegation of power is the central challenge of governance practices in any organization (Becht, Bolton, & Roell, 2012).

From the seminal studies of Spence and Zeckhauser (1971) and Ross (1974), the researchers of the science of organizations began to pay attention to the Agency theory, later developed by Jensen and Meckling (1976) and Fama and Jensen (1983). The agency problem is an essential element in the contractual vision of the firm, brought by Coase (1937). The relationship between principal-agent is always confrontational when an individual (agent) acts on behalf of another (principal) and their objectives do not fully coincide. In essence, governance deals

with the minimization of asymmetries and conflicts of interest inherent in the delegation of power (Shleifer & Vishny, 1997).

The issue regarding the separation between ownership and control in modern organizations was highlighted in a classic study conducted by the authors Berle and Mean (1932), analyzing the growth of US companies in the 20s, with the dissemination of the capital of organizations and the dispersed control. This study holds a prominent position in the development of organizational theory, which was later deepened with the development of the agency theory, which deals with conflicts of separation of ownership and control (Demsetz & Lehn, 1985; Jensen & Meckling, 1976).

According to Jensen and Meckling (1976), a greater alignment in agency relationships occurs when certain premises are achieved:

- agents have no hidden information (absence of information asymmetry), thus the principal is aware of what constitutes an efficient action and the expected product;
- the principal has complete information with regard to the actions and results;
- agents act at low risk (they are aware of what they will receive with their conduct in line with the interest of the principal).

Organizations create governance mechanisms to deal with the delegation of power (Machado Filho, 2006). In a simplified manner, the genesis of an organization that is established and grows in the market involves a few steps: The “owner” establishes the company – the company grows – the owner no longer operates alone, the company goes through successive processes of delegation. The “owner” is forced to implement incentive and monitoring mechanisms so that the agents, to whom the owner delegated powers, are aligned with its expectations. In another step, new generations succeed the control of the organization, and the new owners start sharing the decision-making power.

#### *The challenges of governance in family-controlled organizations*

Over the generations that succeed in the control of an organization, the dispersion of capital is intrinsic, unless the organization perishes. The governance problem becomes more complex as the dispersion of capital occurs, which is a typical problem of collective action among investors for equating the decision rights and the rights on profits generated by the enterprise (Machado Filho, 2006). That is, as the generations succeed one another, new family members (siblings, cousins, relatives) start sharing the power. Over the generations, the new members “inherit” not only the equity interest in the business, but also “inherit” the members of the company.” Usually with visions completely different in relation to how to manage the business, predisposition to assume risks, distribution of dividends, reinvestments, level of indebtedness, etc.

In summary, “governance” has to do with the delegation of power: *how power is shared and how the interests can be aligned*. In family firms, in which the members may play the role of

owners and managers (principal and agent), the amplification of the governance problem occurs as the power of the owners is disseminated among the members of different generations in the family business.

Definitions for family business are presented in the literature and are based on both tangible and intangible criteria to determine it. In this paper, we adopt the following definition for family business: an organization in which the effective control of the business (whether by owning the majority of capital or by members’ agreements) is under the power of the family (as quotas, shares or as individuals, as it is most common in properties rural) (Alcântara & Machado Filho, 2014).

The theoretical approach to deal with family firms involves legal, financial, economic, tax and behavioral aspects. Sharma (2004) emphasizes that the literature addresses four levels of analysis in family firms: individual, interpersonal, organizational and social. At the individual level, the studies highlight four categories of internal stakeholders: founders, heirs, women and non-family employees. The theoretical background of these dimensions, derived from psychological and sociological theories, approach characteristics of the different profiles of stakeholders, with emphasis on the categories of founders and heirs. The “emotional capital” of individuals in family firms accounts for a significant portion of success or failure of the family business over the generations.

Exploratory studies point out the variables “commitment to the business” and “integrity” as the most desired attributes of the founders in relation to the characteristics of the heirs (Chrisman, Chua, & Sharma, 1998). Other attributes mentioned by the same authors are: (i) the ability to gain respect of non-family members of the company; (ii) skills in decision-making; (iii) interpersonal skills; (iv) experience; (v) intelligence and (vi) confidence.

At the interpersonal level, the nature and type of contractual arrangements are the focus of analysis of the agency theory (Jensen & Meckling, 1976). On the one hand, the alignment between owners and managers would be less costly, due to the presence of the relationship of “trust” and altruism among family members. On the other hand, studies report the predominant motivation of self-interest between family members (Shleifer & Vishny, 1997).

An alternative approach is offered by Stewardship Theory (Davis, Schoorman, & Donaldson, 1997). This theory is based on humanist and benign assumptions of human nature, in contrast to the self-interested and opportunistic view of the agency theory. Steier (2001) proposes the existence of a continuum, whereas altruism and opportunism act as opposite poles. In this sense, the implementation of governance mechanisms is suggested to mitigate the negative effects that may arise in the relationships within the family group, especially as the generations succeed one another, with the natural affective and cultural distancing.

The models of analysis of the relationships between the different variables present in family firms are still pre-paradigmatic, reflecting the incipient stage of development of a robust theoretical framework. Some basic questions are imposed: Are family firms really different from other organizational models? Why do family firms deserve special attention from a specific research field? (Sharma, 2004).



As other organizations, family firms are dynamic entities. As they evolve over time, they experience successive stages of development. The first conceptual model proposed for the study of family firms emerged in the 60s and addressed two dimensions to help the understanding of the operation of family firms, family and business. Later, in the 90s, Gersick, Davis, Hampton and Lansberg (1997) proposed a new model based on three dimensions: (i) management; (ii) property and (iii) family. This model considers the time dimension through the representation of these dimensions in development axes in which there is a sequence of stages to be followed over the development of the family business.

In addition to these challenges, an issue also addressed in the family business is related to agency problems and their coordination costs in the relationship between agent – principal, which in this case is when the manager, who is part of the family, can act in self-interest, even if it implies loss to the other owners members of the same family (Alcântara & Machado Filho, 2014; Chua, Chrisman, & Sharma, 2003; Miller & Le Breton-Miller, 2006).

In family firms, an aspect that stands out is in relation to the trust existing between the agents. This trust can be used as a governance mechanism. Trust fulfills the need of more formal contractual arrangements. However, as transactions become recurrent among the agents, there is an erosion of that trust, giving rise to opportunistic behaviors. When generations succeed one another, individuals distance themselves from their common origin and the cooperation among the agents, previously stimulated by the close interaction, may be weakened in this process (Steier, 2001). It is suggested, therefore, that the challenges inherent in agency problems are crucial to the establishment of governance mechanisms over the generations that follow.

#### *Rural property: organizational and institutional specificities*

Traditionally, in Brazil, due to the legal institutional environment, rural properties (farms) are “individual entities”, although, with the amendment of the Brazilian Civil Code in 2002, there is already higher flexibility to convert individual entity into legal entity. However, a series of cultural aspects, especially tax aspects, still condition the predominance of individual entity in the rural activity. This is an important risk factor for the longevity of the activities. “Splitting the production unit” among heirs is very common, which often implies loss of scale and efficiency in the production (Machado Filho, 2009).

As the rural company evolves over time, the perspective of continuity of the business reduces over the generations of the same family. Data released by the 2006 Agricultural and Livestock Census (Censo Agropecuário 2006) (IBGE, 2010) indicate that, in terms of longevity, 57% of the Brazilian rural companies have less than 10 years of existence, 23% between 10 and 21 years, 13% between 20 and 31 years, 5% between 30 and 41 years and only 2% of the rural companies have more than 41 years of existence.

In a study conducted by Alcântara and Machado Filho (2014) with a group of farmers, it was found that, in part, the motivations for the continuation of the rural enterprise by the heirs combine: (i) the affective relationship between the family members and

the family business; (ii) the fact that the assets of this company constitute a capital reserve for the family; (iii) a professional alternative for the family, and (iv) a business opportunity. Among the challenges identified, the study highlighted the implications of the dispersion of the property for the adoption of growth strategies and the motivation of the younger generation to continue the family business. In addition, it points out governance structures that emerge in the development of the rural company. It highlights the transition from an informal structure based on trust to more formal governance structures, such as shareholders’ meetings and boards of directors.

The board of directors stands out among the formal governance mechanisms and practices in family organizations. Traditionally, the board of directors is responsible for the monitoring, control, strategic guidance and institutional support to the organizations (Bailey and Peck, 2013; Becht et al., 2012; Ees, Gabrielsson, & Huse, 2009; Guerra, Fischmann, & Machado Filho, 2009; Tirole, 2006). In family organizations, an additional role can be incorporated into the duties of the board of directors: the search for balance between the rational and emotional dimensions involved in the decision-making process (Alcântara & Machado Filho, 2014; Bailey and Peck, 2013; Bammens, Voordeckers, & Van Gils, 2011). In this sense, it can be said that the adoption of the decision-making body, represented by the board of directors, represents an evolution in the process of professionalization in family firms.

In addition, an instrument used in the search for balance in corporate relations is the members’ agreement. Ideally, the agreement is a contractual mechanism to manage tensions between members and the organization (León, 2006). Especially in a family organization, in which the successors have not “chosen each other as members,” it can be suggested that the members’ agreement is an important stabilization element in the relations between family members.

As the premise of this study, we consider that the implementation of the board of directors and the adoption of corporate agreements are inserted in the evolutionary process of governance practices and professionalization of family organizations.

#### **Methodology**

This study is based on the analysis of the perception of respondents in relation to the governance practices adopted. This research is exploratory, with applications of quantitative research techniques, involving a survey of secondary and primary data. Secondary data were collected from the bibliographic and documentary research and sought to provide the theoretical basis to address the research problem, as well as identify variables of analysis to integrate the questionnaire that was applied to a sample of farmers from Mato Grosso do Sul and Mato Grosso. This is a convenience and non-probability sample, since it has no randomness in its composition and we do not intend to make statistical inferences based on the results (Marconi & Lakatos, 2011).

The collection of primary data was performed through the application of semi-structured questionnaires (Malhotra, 2001) with families managing rural companies participating in the

Table 1  
Profile of rural enterprise and entrepreneur.

Activities developed			Tradition in the rural activity		
	Qty	%		Qty	%
Grains	26	74%	1st generation	5	14%
Cotton	3	9%	2nd generation	11	31%
Cattle raising	26	74%	3rd generation	7	20%
Tourism	0	0%	>3rd generation	12	34%
Others	4	11%	Total	35	100%
Grains and cattle raising	17	49%			
Time in the rural activity			Average turnover (R\$)		
	Qty	%		Qty	%
Up to 25 years	9	26%	Up to R\$500,000/year	3	9%
From 25 to 50 years	23	68%	R\$500,000 to R\$1 million/year	1	3%
>50 years	2	6%	R\$1 to R\$5 million/year	15	44%
Total	34	100%	>R\$5,000,000/year	15	44%
			Total	34	100%
Respondent's age			Parents' education		
	Qty	%			
Up to 25 years	0	0%	Elementary and middle school	7	21%
From 25 to 50 years	5	15%	High school	8	24%
>50 years	28	85%	Undergraduate school	12	35%
Total	33	100%	Graduate school	7	21%
			Total	34	100%
Children's education					
Elementary and middle school			0		0%
High school			1		3%
Undergraduate school			13		45%
Graduate school			15		52%
Total			29		100%

Source: Research Data.

“Training program for owners and heirs of agribusiness companies: Transforming heirs into partners.” This training program was offered by the National Rural Education Service (SENAR) of Mato Grosso do Sul (MS) and Mato Grosso (MT), which confers the convenience nature to the sample.

There were four (4) classes in Mato Grosso do Sul and one (1) in Mato Grosso. The program aimed at the development of heirs, partners and managers to deal with the challenges of the longevity of family-controlled companies, with emphasis on governance and succession processes in the rural properties, structured into sixty four (64) hours, distributed in six (6) modules: (i) business family – challenges of succession; (ii) governance of the family business: challenges of the corporate structure and business management; (iii) challenges of financial management in family firms; (iv) strategy in family firms; (v) corporate law in rural family firms, and (vi) tax and accounting management: challenges of rural family business.

Each questionnaire was answered by only one person from each family group, and who has a leadership profile in the group. Therefore, out of a total of 120 participants, our final sample included 35 valid questionnaires, which is higher than the amount required, which is 30 respondents, and sufficient for a quantitative analysis of the data collected according to

the central limit theorem (Hair, Anderson, Tatham, & Black, 2008; Malhotra, 2001). The questionnaire was structured in four (4) topics: (i) profile of rural enterprise and entrepreneur; (ii) governance; (iii) management processes; and (iv) strategy and governance.

The data analysis was performed in two steps: (i) descriptive analysis and (ii) multivariate analysis (chi-square test and multiple correspondence analysis of significant variables). For the descriptive analysis, we assessed the frequency of answers, which is shown in percentages. The multivariate analysis seeks to identify clusters that characterize the set of producers interviewed. For that, a set of hypotheses was initially identified, whose relationship of dependence among the proposed variables was observed by applying a Chi-square test. The hypotheses and their evaluation (rejected or not) are shown in Table 1. Subsequently, a multiple correspondence analysis of significant variables was made seeking to identify clusters among the producers interviewed (Hair et al., 2008).

### Data analysis and presentation

The research data are presented and analyzed in two steps. In the first step, we make a description of the results based on

Table 2  
Governance.

Importance of the subject “Governance”			Members’ agreement?		
	Qty	%		Qty	%
Extremely important	27	79%	Yes	5	14%
Important	6	18%	No	30	86%
Relatively important	1	3%	Total	35	100%
Less important	0	0%			
Irrelevant	0	0%			
Total	34	100%			
Intention to enter into a members’ agreement?			Is the family members’ role clear?		
	Qty	%		Qty	%
Yes	17	59%	Yes	19	56%
No	2	7%	No	15	44%
Maybe	10	34%	Total	34	100%
Total	29	100%			
Separation of accounts?			Compensation for services provided?		
	Qty	%		Qty	%
Yes	23	66%	Yes	23	68%
No	12	34%	No	11	32%
Total	35	100%	Total	34	100%
Profit sharing?			Board of directors?		
	Qty	%		Qty	%
Yes	13	37%	Yes	6	17%
No	22	63%	No	29	83%
Total	35	100%	Total	35	100%

Source: Research Data.

the frequency of answers. In the second step, we try to create typologies of rural entrepreneurs considering the adoption of governance practices and the profile of the respondents.

### Description of results

The description of results is developed based on four main topics: (i) profile of rural enterprise and entrepreneur; (ii) governance; (iii) management; and (iv) strategy and governance.

Based on Table 1, we have the characterization of the rural entrepreneur. It was found that 49% of respondents develop joint agriculture and livestock activities, are producers with tradition in rural activity (54% above 2nd generation), and out of the total 74% have more than 25 years of activity in the sector. Most respondents (85%) are aged 50+ and in relation to their parents’ education level, 35% informed that they attended higher education and 45% attended middle school and high school. The education level of their children is mostly (97%) undergraduates/graduates, and 52% of respondents answered that their children are graduates. The average turnover of enterprises is above R\$ 1 million (88%), and 44% above R\$ 5 million.

Table 2 shows a summary of data relating to questions about governance. Note that 79% deems the governance issue extremely important. In addition, 86% reported that they do not have a members’ agreement.

The relevance of the subject and the intention to advance in this new frontier of management of rural companies are confirmed when 59% intends to enter into a members’ agreement. In general, for 56% of the producers, the role of family members in the governance process of the rural business is clear, and 83% reported that there is no advisory board that supports the management/governance of the rural enterprise. Regarding the separation between the managers’ corporate bank accounts and personal bank accounts, 66% answered that there is no separation between them. Out of the total respondents, 68% answered that their compensation is based on their services provided, and 63% reports that there is no profit sharing in the end of the company’s fiscal year. Part of respondents believes that profit sharing is not a common practice and that if they have profits, they should be reinvested in the company.

Based on Table 3, it can be seen that the vast majority of businesses is not a corporate legal entity, and 89% is structured as an individual entity (IE). Almost half of respondents (47%) answered that they have tax accounting only, which is performed by a specialized firm (65%). In terms of management control, 74% answered that they calculate production costs, 71% prepare cash flows and 37% have balance sheets (BS) and income statements for the fiscal year (ISFY). Therefore, this study verifies the incipient economic and financial management of enterprises, with low adherence to traditional tools and practices for an adequate corporate management, despite the complexity of the rural



Table 3  
Management of enterprises.

Legal nature			How is the accounting done?		
	Qty	%		Qty	%
Individual entity (IE)	31	89%	No accounting	1	3%
Legal entity (LE)	2	6%	Tax accounting only	16	47%
IE and LE	2	6%	Management and tax accounting	17	50%
Total	35	100%	Total	34	100%
Where is the accounting done?			What are the existing formal controls?		
	Qty	%		Qty	%
Specialized firm	22	65%	Production costs	26	74%
At the company, with an employed accountant.	2	6%	Cash flows	25	71%
At the company, with an outsourced accountant.	10	29%	Balance sheet and income statement	13	37%
Total	34	100%	No formal controls	5	14%
Separation between treasury and controllership?					
	Qty	%			
Yes	3	9%			
No	31	91%			
Total	34	100%			

Source: Research Data.

business and the large volume of funds transacted. Additionally, 91% of the respondents answered that they do not separate treasury activities from controllership activities.

In general, 74% of the respondents answered that they do not have a structured strategic planning, and that the decision-making process is under the responsibility of the managing members (62%). However, the large majority (94%) considers strategic planning extremely important/important to the governance of the enterprise. Given the absence of an advisory board for 80% of the respondents (Table 4), the approval of strategic decisions by an advisory board is made by only 20% of the respondents. As in the economic and financial management, it is understood that, also for strategic management, entrepreneurs

have challenges to overcome in order to achieve good governance practices.

#### *Typologies of producers: governance*

#### *Hypothesis testing*

In order to test the hypotheses proposed in Table 5, two types of analysis and/or tests were made: (i) a Chi-square test for hypotheses containing discrete variables (H1, H2, H3 and H5); and (ii) an average comparison test (*t* test) with the hypothesis 4 (H4), as it contains a continuous variable (the age of the main manager of the enterprise) (Hair et al., 2008).

Table 4  
Strategy and governance.

Structured strategic planning?			Who participates in the decision-making process?		
	Qty	%		Qty	%
Yes	9	26%	Managing members	21	62%
No	25	74%	Managing and non-managing members	7	21%
Total	34	100%	Managing members and selected employees	4	12%
			Managing and non-managing members and employees	2	6%
			Total	34	100%
Are the decisions approved by the board?			Importance of strategic planning		
	Qty	%		Qty	%
Yes	6	20%	Extremely important	14	41%
No, because there is no Board	24	80%	Important	18	53%
No, despite the existence of a Board	0	0%	Relatively important	1	3%
Total	30	100%	Less important	1	3%
			Irrelevant	0	0%
			Total	34	100%

Source: Research Data.

Table 5  
Summary of the hypotheses testes and results.

Hypothesis	Description	Status
H1	There is a relationship between the organization having an advisory board and its strategic decisions being approved by this board, thus showing a better organization of the rural company and a more structured and better refined strategic decision-making process.	Not rejected***
H2	There is a relationship between the practice of profit-sharing among the members and this sharing for all family members, as this profit results from a family firm, which is an asset of all family members and not only of its managers belonging to the family.	Not rejected***
H3	The higher the number of business units the rural company has the higher the probability of its accounting being done externally, as the volume of financial and management information to be collected and interpreted is higher and more complex.	Not rejected**
H4	The younger the main manager of the enterprise (decision maker) the higher the probability of having production cost control, as this manager may have more access to modern cost and cost management techniques.	Not rejected**
H5	The higher the company's income, the greater the likelihood of this rural company to use balance sheets and income statements, as this shows a larger accounting and management organization, which is necessary and expected in a larger rural enterprise	

\* Significance at 10% level.

\*\* Significance at 5% level.

\*\*\* Significance at 1% level.

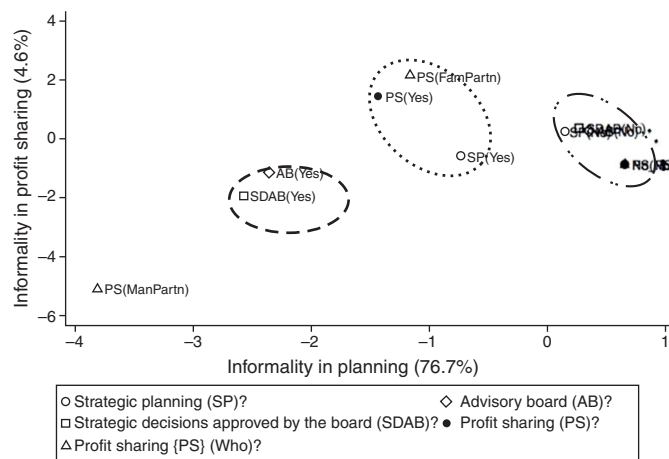


Fig. 1. Multiple correspondence analysis of the variables analyzed in the first two hypotheses proposed and tested in this research (H1 and H2).

Source: Research data.

As it can be seen in Table 5, the five hypotheses proposed were not rejected, and two of these hypotheses (H3 and H4) were not rejected with a level of significance of 5% and three of these hypotheses (H1, H2 and H5) had their no rejection at the level of 1%.

#### Multiple correspondence analysis

For didactic purposes and for a better understanding of these relationships, examined and analyzed in the hypotheses above, we developed a multiple correspondence analysis in the variables analyzed in the first two hypotheses (H1 and H2) (Fig. 1) and also in the variables of two other hypotheses (H3 and H5) (Fig. 2). For being the only hypothesis proposed here and tested containing a continuous variable, hypothesis 4 (H4) was analyzed through the normal distribution of its data (age of the main manager of the enterprise) compared to the fact of whether or not the management control of production costs is used (Fig. 3) (Hair et al., 2008).

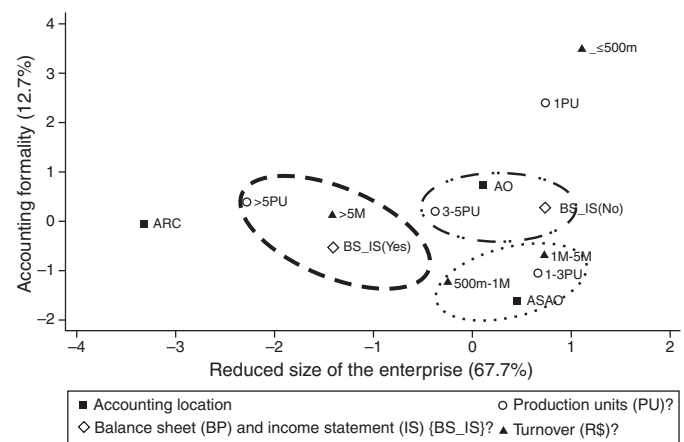


Fig. 2. Multiple correspondence analysis of the variables analyzed in the two hypotheses proposed and tested in this research (H3 and H5).

Source: Research data.

In Fig. 1, it can be seen that the clusters/groups can be identified with these variables in two dimensions. The first dimension, with the explanatory power of 76.70% of variance of these questions, was named as *planning informality*, mainly due to the fact that all options of non-adoption of the practices studied here Strategic Planning {SP (No)}; advisory board {CO (Não)}; strategic decision approved by Board {SDAB (No)}; and profit sharing {PS(No)} are located on the positive side of this scale, thus indicating that the greater this scale is the greater the strategic informality presented in these rural enterprises.

The second dimension, with an explanatory power of 4.60% of variance of the questions, corresponds to *profit sharing informality* as the main factor to categorize this dimension was “who are the beneficiaries of the profit sharing,” whether “only the managing members of the enterprise” Profit sharing {PS (ManPartn)}, negative value on this scale – as it shows greater managerial formality and motivation to these managers for the profit sharing obtained in this rural company – or a positive value on this scale – as it will award all members belonging to the

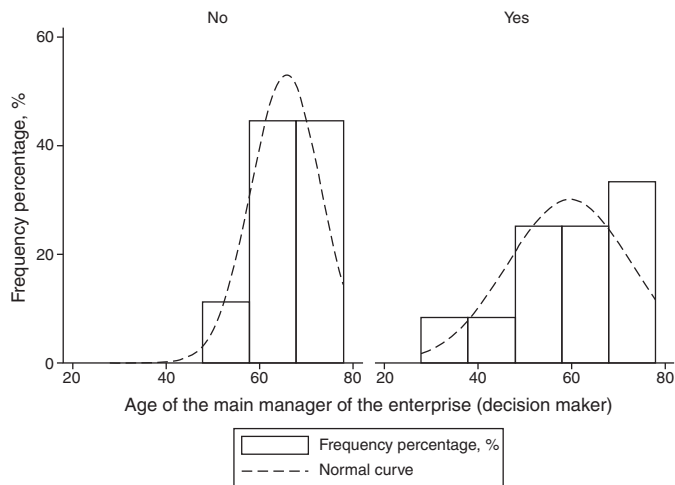


Fig. 3. Regular distribution of the manager's age and adoption of production cost control (H4).

Source: Research data.

family, the company {Profit sharing (PS) [FamPartn]}, regardless of the fact that this member is or is not part of the company's management – demonstrating greater managerial informality in the distribution of the financial surplus obtained.

Based on these variables, it is possible to identify a few clusters:

- There is a relationship between the non-adoption of governance practices and management processes (dashed and dotted circle {---} far right of Fig. 1).
- There is a relationship between the adoption of “strategic planning practices {SP (Yes)}”, the decision to implement profit sharing {PS (Yes)} and this profit sharing benefit all family members {PS (FamPartn)} (dotted circle {...}, in the middle of Fig. 1).
- There is a close relationship between the existence of advisory board {AB (Yes)} and strategic decisions approved by the Board {SDAB (Yes)} (dashed circle {—}, far left of Fig. 1).
- It can be seen that despite not being inserted in any circle of proximity, the option “profit sharing only among managing partners” {PS(ManPartn)} has a greater proximity to the dashed circle (—), that is, with the options relating to the existence of advisory board {AB (Yes)} and strategic decisions approved by the board {SDAB (Yes)}.

In Fig. 2, it can be seen that the clusters/groups can be identified with these variables in two dimensions under analysis. The first dimension, with explanatory power of 67.70% of variance of these questions, was named as *reduced size of the enterprise*, mainly due to the fact that, according to the statistical analyzes, the variables that most contributed to the creation of this dimension were: (a) the number of production units (PU); (b) the company's revenues (R\$). Note that the smaller the size of the rural enterprise under analysis the higher the values in this scale, as it can be seen in the case of a company with only one production unit (1 PU) and with turnover up to R\$ 500,000 per

year ( $\leq 500m$ ) in a positive end of this scale and on the negative end, those with more than five (5) production units ( $>5$  PU) and a turnover exceeding R\$5 million per year ( $>5M$ ).

The second dimension, with explanatory power of 12.70% of variances of the questions, corresponds to the *formality of drafting the accounting of the rural enterprise*. The main factor that assisted in this categorization, through statistical analysis, was the place where the accounting of the rural enterprises was held. This dimension can be represented by its extremes: (a) upper end – accounting office (AO), positive values; accounting conducted in the rural company (ARC) value virtually zero on this scale; (b) lower end – accounting conducted with support from an outsourced accounting firm, here represented by negative values (AOS).

Based on these variables, it is possible to identify a few clusters:

- There is a relationship between the “Non-adoption of balance sheet and income statements” {BS-IS (No)}, “size of the rural company between 03 and 05 production units” (3-5 PU) and “accounting conducted at an accounting firm” (AF) (dashed and dotted circle {---}, in the upper side of Fig. 2).
- There is a greater relationship (greater proximity to its points) between “use of balance sheet and income statement” {BP-DRE(S)} and “larger rural enterprises” {with more than 5 production units ( $>5UN$ ) and with revenues greater than R\$ 5 million ( $>5M$ )} (dashed circle {---}, far left of Fig. 2).
- There is a relationship between “the accounting of the rural enterprise is conducted, but with the support of an accounting firm” (AF), and rural properties with turnover between R\$ 500,000 and R\$ 1 million (500m–1M). Companies with turnover between R\$ 1 million and R\$ 5 million (1M–5M) and companies between 01 and 03 production units (1–3 PU), that is, considered as “middle sized” do not hire an accountant to do the company's accounting (AC) (next to the dashed circle) and also do not hire the services of an accounting firm (AF) (dashed and dotted circle {---}). That is, middle-sized companies tend to do the accounting at the farm's office with the assistance of an accounting firm (ContTerceiri) {only dotted circle (...)}.

Fig. 3 shows that, besides the fact that the average age among those who adopt the management control of production costs and those who do not are different (as already attested by the non-rejection of hypothesis H4), there is an asymmetry in the distribution of the percentage of frequency of respondents who do not perform this management control, especially concentrating in the older age groups.

## Final considerations

The governance process should be understood within a broader context in rural organizations. On the one hand, the adoption of governance mechanisms involving the adequacy to the principles of transparency and compliance has been increasingly required by the own forces of the market. Investors,

creditors and business partners have increased their requirements for rural properties to advance in governance processes as a critical factor for the sustainability of the rural activity in the long term.

On the other hand, the adoption of governance mechanisms that regulate the relations of power and the alignment of interests is still poorly developed in the rural producers' environment. This governance risk becomes more severe as family generations succeed in the control of the property and share power.

As seen in this study, there is a correlation between the existence of some formal management processes (such as more robust strategic planning and accounting systems) and advances in the governance mechanisms and processes, such as the establishment of a board of directors, clearer rules of separation of corporate and family assets and more transparency in financial statements. There is also little transparency with regard to the separation of what is return on capital (dividend) and compensation for work (compensation for services provided) for members, heirs and other family members.

Therefore, it can be seen that this study empirically contributed to demonstrate, through the models and analysis proposed and performed herein, that there may be various relationships among the most different business decisions, from those that were often perceived as independent, such as the development of strategic planning {SP (Yes)}, the decision to perform profit sharing {PS (Yes)} and the profit sharing benefits all family members {PS (FamPartn)}; to the confirmation of dependence on some relationship previously expected by the literature review, such as the strategic decisions approved by a board {SDAB (Yes)} and having an advisory board (AB), both connections exposed in more detail in Fig. 1.

Likewise, it can be seen that the relationships of dependence and independence between the company size and accounting formality were empirically demonstrated (Fig. 2), from the most expected, according to the literature, such as the connection between the companies with more than 05 -production units (>5PU), companies with turnover exceeding R\$5 million (>5M) and the lack of use of balance sheet (BS) and income statements {BS-IS(No)}.

Finally, we believe that this research has contributed to future studies in this research field by observing that all five hypotheses proposed here (H1–H5) were not rejected, which may guide new inquiries and/or questions for future studies on topics related to the one presented in this paper.

It is also noted that, although the research sample was intentional, consisting of participants of the training programs of SENAR MS and SENAR MT, presuming that they already had some predisposition to address the topics related to "Governance," the fact that 97% consider this topic important or extremely important is still very significant.

The results encourage the debate about the relevance of the theme. There may be speculation on the lack of dissemination of knowledge and studies involving rural producers regarding the relationship between governance and sustainability of rural enterprises.

It is understood that this study has important limitations. The intentional nature, the type and size of the sample do not allow

extrapolations, therefore, the analysis of the hypothesis testing should be understood in this context. Also, the methodology of the study was essentially exploratory and quantitative, without a qualitative basis that could capture in depth a series of elements on the variables in question and their relationship with the scope of research (rural producers). Favorably, it is argued that this study, despite these limitations, advances by proposing a better understanding of the profile of producers, establishing typologies that can be deepened in future studies.

In terms of methodology, it gives the opportunity to both qualitative studies (especially case studies), which can explore a series of variables in depth, and quantitative studies, seeking to understand the regularities in larger populations. Therefore, we suggest understanding the regularities in relation to the segment of operation in the rural activity, geographic presence, size and complexity of the rural activity, background of the families of producers (cultural and ethnical background), among other examples.

Specifically, we highlight the following for future studies: (a) analyzing the existence and forms of composition and performance of boards (board of directors, advisory board) in rural properties; (b) examining the compensation mechanisms of the governing boards in rural properties; (c) studying the mechanisms to equate the process of succession in rural properties; (d) evaluating the perspectives of the different generations involved in the succession process in rural properties; (e) evaluating the main legal and corporate barriers that affect the succession process in rural properties.

In summary, we propose a broad research agenda involving governance and succession in family-controlled organizations, especially the segment of rural producers. The gap of studies in relation to these subjects opens up opportunities for researchers from different areas of knowledge.

## Conflicts of interest

The authors declare no conflicts of interest.

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