ARTICLES

SUCCESSFUL SUCCESSION: THE ROLE OF THE ENVIRONMENT AND THE SUCCESSION PLAN

Sucessão exitosa: O contexto do entorno e o plano de sucessão

Sucesión exitosa: El rol del entorno y el plan de sucesión

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ABSTRACT

Succession literature remains non-cumulative and disjointed, and studies are only just appearing that offer an overall view of the factors that make the succession process a success. Our study was based on a sample of 230 agribusiness entrepreneurs from the state of Paraná (Brazil). We used a time-lagged design to test the extent to which the succession plan, the family environment, the organizational environment and the economic environment are able to predict succession success. Our results showed that the variable that contributed most to the success of the succession process is one that the firm has the least control over: the economic environment. The findings suggest that in order to guarantee survival family-run enterprises must plan for succession and foster the development of a family and organizational context that encourages new leaders to want to take over the management of the family business.

KEYWORDS | Family SMEs, successful succession, environment, succession plan, family harmony.

RESUMO

A literatura sobre sucessão continua desarticulada, de modo que apenas existem estudos que ofereçem uma visão global dos fatores que contribuem para que o processo de sucessão seja exitoso. Baseado em uma amostra de 230 empreendedores do agronegócio do Estado do Paraná, utilizou-se um gráfico de diferença de cinco pontos de coleta de dados para comprovar até que ponto o plano de sucessão, o entorno familiar, o entorno organizacional e o entorno econômico podem prever o êxito da sucessão. Os resultados mostraram que a variável que mais contribuiu para o êxito do processo de sucessão foi aquela sobre a qual a empresa tem menos controle: o entorno econômico. Os resultados sugerem que, para garantir sua sobrevivência, as empresas familiares devem planejar a sucessão e fomentar o desenvolvimento de contextos familiares e organizacionais que incentivem os novos líderes a querer assumir a gestão da empresa familiar.

PALAVRAS-CHAVE | *PME familiares, sucessão exitosa, entorno, plano de sucessão, harmonia familiar.*

RESUMEN

La literatura sobre sucesión sigue desarticulada y apenas hay estudios que ofrezcan una visión global de los factores que ayudan a que el proceso de sucesión sea un éxito. Nuestro estudio se basó en una muestra de 230 emprendedores del agronegocio del estado de Paraná (Brasil). Usamos un diseño de tiempo retardado para comprobar hasta qué punto el plan de sucesión, el entorno familiar, el entorno organizacional y el entorno económico pueden predecir el éxito de la sucesión. Los resultados mostraron que la variable que más contribuyó al éxito del proceso de sucesión fue aquella sobre la que la empresa tiene menos control: el entorno económico. Los hallazgos sugieren que, para garantizar su supervivencia, las empresas familiares deben planificar la sucesión y fomentar el desarrollo de contextos familiares y organizacionales que alienten a los nuevos líderes a desear asumir la gestión de la empresa familiar.

PALABRAS CLAVE | *Pymes familiares, sucesión exitosa, entorno, plan de sucesión, armonía familiar*

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INTRODUCTION

There is an enormous amount of literature indicating the important role played by small and medium-sized enterprises (SMEs) in economic growth, employment and exports from developing countries (Nikolić, Jovanović, Nikolić, Mihajlović, & Schulte, 2018). SMEs are by far and away the most commonly found type of business in any of the world's economies, especially in developing economies (Pessotto, Costa, Schwinghamer, Colle, & Corte, 2019). On the other hand, it is estimated that between 90% and 98% of the SMEs in developed or developing economies are run by families (Inter American Development Bank, United Nations, & Organization of American States, 2011). The role of the family SME is, therefore, essential to the economic and social prospects of developed and developing nations, since most of the wealth in both national economies and in the global economy overall is produced by this type of organization. One developing economy for which family SMEs are most important is Brazil. According to Organisation for Economic Co-operation and Development data (OECD, 2018), Brazilian SMEs in 2017 accounted for 98.5% of the total number of companies in the country, provided work for 41% of the working population, and generated 27% of the GDP.

One of the most important challenges facing family SMEs involves the CEO succession process. In Brazil, this process is particularly important for small and medium-sized family farms, for two closely-related reasons. First of all, it is estimated that 70% of small and medium-sized family farms will not outlast the initial founding generation, and that only 5% will last for three generations (Schumacher, 2015). Secondly, failed succession processes may be one of the causes of the significant levels of migration from the countryside to the city. This migration has led to a drastic decrease in the rural population over the last 30 years, and may be putting the survival of small and medium-sized family farms at risk (Foguesatto, Mores, Kruger, & Costa, 2020).

Many factors are used to explain the lack of successors in small and medium-sized Brazilian family farms (Foguesatto et al., 2020; Morais, Borges, & Erlaine, 2017; Pessotto et al., 2019), such as: personal preferences, farm profitability, farm type and location, the land tenure system, inheritance rights, formal education levels, gender, practical skills and knowledge, intergenerational relationships, technology, etc. These factors are similar to those that have been linked to succession success or failure in small and medium-sized farms in developed countries (May, Arancibia, Behrendt, & Adams, 2019). According to the United Nations' Food and Agriculture Organization (FAO) (Garner & Campos, 2014), however, the importance of each of these factors may vary depending on the context of the country in question. Therefore in developing countries, such as Brazil, the influence of these or other factors on the success of the succession process may differ due to the greater difficulty that small and medium-sized family farms in these countries have in accessing social protection systems, sources of financing, training, the use of new technologies, etc. (Garner & Campos, 2014). Furthermore, according to Minichilli, Nordqvist, Corbetta, and Amore (2014), in addition to the country context (macro context), the circumstances surrounding the successor, such as their family or the family farm business (micro context), are also significant in the success of the succession process. This significance mainly lies in the fact that the micro environment is key in the socialization process of potential successors, and can affect both family harmony and the successors' behaviors and wishes to direct the family farm business.

Most of the work carried out in Brazil on succession in small and medium-sized family farms has followed the "factor-based" approach, an approach in which successful succession is the result of a combination of discrete (quantifiable and directly observable) factors that have a positive or negative influence (Pessotto et al., 2019). As

far as we are aware, however there are no studies that include the latent factors (directly unobservable variables) that have a long-term influence on the socialization of the successor in their definition of a successful succession, and that relate to both the macro (economic environment) and micro (family, organization and succession plan) contexts.

Most of the previous studies measured the success of the succession process by using objective and subjective measures that almost always focused on financial variables (Ayala-Calvo, Manzano-García, & Schumacher, 2019). Their main drawback, however, is that they disregarded what happens to family harmony by the end of the succession process. Prior research suggested that the success and survival of the firm are related to non-financial aspects of the business (Sharma, 2004). Our model, therefore, will be based on the idea that the success of the succession process is a construct that must take both financial aspects and family harmony into account, such as: the need for belonging, affection or trust, the spirit of helpfulness, and/or awareness of the well-being of others (Kavikondala et al., 2016).

Based on the previous comments, the main objective of our work is to propose a model that provides a better understanding of the main variables that condition the successful succession of the leader (CEO) in small and medium-sized family farms, and the relative importance of each variable. We look specifically into how the economic context, the organizational context, the family context, and the succession plan can help us understand the degree of success in the succession process.

Identifying the variables that have an influence on the succession success of small and medium-sized family farms, and understanding how they behave, could be of interest to both owner-managers and their families, as well as to policy-makers, since business survival may depend on this. This is due to the fact that if the succession process weakens, or destroys family harmony, it also weakens or destroys trust between family members and emotional engagement with the organization, which are fundamental requirements for prosperity and, long-term, for the survival of family SMEs (Memili, Zellweger, & Fang, 2013) and the maintenance of millions of jobs.

This study focuses on analyzing the successful succession process based on a sample of 230 CEOs of small and medium-sized Brazilian family farms. As far as we know, this is the first piece of research that uses family harmony and measures of a financial kind to explain the successful succession processes of small and medium-sized family farms. With this work we are trying to add to and improve on existing literature on the successful succession of small and medium-sized family farms in several ways. On the one hand, we broaden the knowledge on successful succession by investigating the different factors that make up this construct. On the other, this study extends the line of research, and proposes a model that has been benchmarked using structural equations and a time-lagged design with five data collection points, thus giving us a better understanding of the succession processes in small and medium-sized family farms. Based on previous literature, we have also proposed and validated instruments for measuring the constructs of our hypothesized model.

THEORETICAL FRAMEWORK AND HYPOTHESES

The successful succession process

According to Santos, Ayala-Calvo, and Rodríguez (2019), there are three characteristics to bear in mind when identifying a family-run SME: family involvement in ownership and control; family involvement in management;

and the wish for the business to be passed on to the next generation. Relational contracts in these organizations are usually based on emotions and feelings, which means that the mutual expectations of the different agents--family members or otherwise--prevail over purely contractual financial relationships. It would seem logical in this context for the owners of a family SME to be worried that the succession process might destroy the family harmony that has been built up over the years. For family SMEs, protecting their identity, their reputation and their way of doing business, and avoiding the disruption of the family dynasty is an asset worth protecting above and beyond any purely economic or financial reasons. Therefore, the viewpoint of preserving family harmony is a suitable framework for explaining the successful succession of the CEO in small and medium-sized family farms.

There is no agreement on what constitutes successful succession, and scholars differ on how to measure it. According to Minichilli et al. (2014), we measure the success of succession by means of a construct that incorporates measures that are both financial (growth) and non-financial (family harmony). The latter represents the affinity of the family members with the company's principles and values, the spirit of mutual aid and awareness of other members' wellbeing, which shows the level of organization and union between family members. In family firms, family harmony is based on mutual trust, which is built up through healthy coexistence between people, through the history of the family business, and through shared time and the feeling of community among its members (Memili et al., 2013). Falkiner, Steen, Hicks, and Keogh (2017) concluded that the deterioration or destruction of family harmony during the succession process could, on the one hand, diminish family members' satisfaction with the process and, on the other, put the company's survival at risk.

In most previous works the success of SMEs has been measured by their profitability, rate of growth, or stock market performance. In recent years, however, the most widely used variable has been growth, which has been frequently seen as the result of the entrepreneurial orientation of the owner-manager (Shan, Song, & Ju, 2016). Therefore, we shall use growth as an economic component to explain the successful succession of the CEO in family-run SMEs.

The environment and the success of the succession process

The successor's "affective commitment" is a key factor in the success of the succession process, in maintaining family harmony and in ensuring the development and survival of the firm (Cabrera-Suárez & Martín-Santana, 2010). Committed successors assume the leadership role in the hope of contributing to achieving the goals of the subsystems involved in the family firm (i.e., the business and the family), and they make greater efforts than their duty strictly calls for. The extent of the new leader's identification and involvement with the goals of the family and the firm will largely depend on the family environment, the organizational environment, and the economic environment surrounding the family and the firm (Gedajlovic, Carney, Chrisman, & Kellermanns, 2012); in other words, the success of the succession process is conditioned by the successor's socialization process, a long-term process that could explain the desire of potential new CEOs to take charge of the family firm, and the attitudes that that challenge entails (Fischer & Burton, 2014).

Family environment

The family environment and the relationship between the successor and the family members are keys to a successful succession (Breitenbach & Corazza, 2017). If communication between family members is open and sincere, there are mechanisms for avoiding misunderstandings, and conflicts are handled openly and constructively. The members of the new generation also gain a better understanding of the advantages of belonging to the firm, the importance of preserving family harmony, and the sense of self-sacrifice needed for achieving the prosperity of the family firm in the long term (Falkiner et al., 2017). This, in turn, may influence the degree of the successor's commitment to the family firm and their interest in running it. The reason for this is that the family environment contributes to the successor's learning process for using the family's social network, for becoming more self-sufficient, for seizing business opportunities, and for understanding and accepting their role, etc. A suitable family environment also encourages the socialization of new generations, and the transmission and understanding of the family culture, which is defined as a system of shared values. It also encourages the successor to want to stay in the business. Foguesatto et al. (2020) showed that when parents pass on their love for the family farm business to their children and motivate them to stay in it, the chances of the heir wanting to take over the business greatly increase.

Based on the above arguments, we hypothesize that (Fig. 1):

H1: A suitable family environment has a positive influence on the success of the succession process.

Organizational environment

Literature so far has suggested that successful succession may depend more on the successor's commitment than on their technical abilities (Long & Chrisman, 2014). This means that a major factor to successful succession is how closely the successor identifies with the family firm, how involved they are is in it, how firmly they believe in it and how high their expectations of its objectives are. Someone who thinks that their professional aspirations and need for achievement can be satisfied in the context of the family firm will feel more committed to it and will demonstrate a desire to run it (Fischer & Burton, 2014).

An optimal organizational environment encourages the process of organizational socialization so that the successor can acquire all the attitudes, behavioral patterns and know-how they will need to work in the firm. A successor's commitment to the company, however, depends less on their knowledge of the routines, and on how to handle and predict the responses of other members of the company, than it does on how well the organizational environment entices the successor to want to lead the company. Organizations that have clear objectives and widely accepted evaluation and recognition procedures, in which the family's values have been integrated into management, there is a spirit of teamwork, and conflict is handled by way of a win-win strategy, are more appealing to CEOs than organizations whose objectives are unclear, whose system of remuneration and compensation is subjective, whose work environment is hostile, etc. (Ayala-Calvo et al., 2019). As Morais et al. (2017) or Pessotto et al. (2019) showed, the desire of potential successors to stay in the family farm business is related to the learning process that enables them to know and love the business environment, and to find out how to manage and administer it.

Based on the above arguments, we hypothesize that (Fig. 1):

H2: A suitable organizational environment has a positive influence on the success of the succession process.

Economic environment

The economic environment, or the external conditions, refers as much to macroeconomic variables as to the rules and regulations (taxation, easier access to financial sources, policies supporting investment, etc.) underpinning the development of the company.

The firm is an open system that influences and is influenced by what happens in the macroeconomic settings with which it interacts. Its strategies are closely influenced by the behavior of the market and the economic policies in the country. A favorable economic climate for small and medium-sized family farms is one in which there is a growing internal and external demand for the product, government policies support the development of the family farm's activities, there are policies in place to support mechanization and innovation, and provisions are made available for obtaining financial resources. Such a climate brings new opportunities or challenges that may encourage positive changes in the family farm's strategies and, therefore, heighten the successor's wish to remain in the family firm.

The expected relationship between the characteristics of the economic environment and the successor's wishes is linked to the idea that the perception of an unfavorable economic climate may hinder the growth of small and medium-sized family farms, and even jeopardize their survival (Falkiner et al., 2017). Alternatively, when the economic environment is seen as favorable, company growth is stimulated and the successor is more willing to commit himself/herself to heading up the family farm business by trying to balance the preservation of family harmony with its financial goals (May et al., 2019). In the case of Brazil, Matte and Machado (2017), Pessotto et al. (2019) and Foguesatto et al. (2020) have suggested that a favorable economic environment, which creates expectations in successors of obtaining sufficient financial income, could be a key variable in explaining their wish to become leaders of the family farm business.

Based on the above arguments, we hypothesize that (Fig. 1):

H3: A suitable economic environment has a positive influence on the success of the succession process.

## The succession plan and the success of the succession process

The succession plan can be defined as the collection of principles, actions and steps involved in one leader taking over from another. Many researchers have shown that the succession plan is the key element for ensuring the continuity and prosperity of the family firm (Alayo, Jainaga, Maseda, & Arzubiaga, 2016). The succession plan contributes to the success of the process in a number of ways. On the one hand, it lets potential candidates know what the stages and decision-making mechanisms are for choosing the new leader, and on the other, it helps prepare the organization for a successful transition (Oliveira & Bernardon, 2008). Succession plans also help increase cooperation between members of the family and members of the firm and contribute towards increasing their satisfaction with the process. Such plans also constitute a socialization process that lets the new leaders gain a deeper understanding of the family harmony norms and learn how to preserve them.

Although very few family farm businesses have ever designed a long-term succession plan, Cavicchioli, Bertoni, Tesser, and Frisio (2015), Conway, McDonagh, Farrell, and Kinsella (2016), Falkiner et al. (2017), Quadros, Stropasolas, and Rebollar (2013), Pessotto et al. (2019), and others, have argued that the succession plan is key to ensuring intergenerational transmission.

Based on the above arguments, we hypothesize that (Fig. 1):

H4: A succession plan has a positive influence on the success of the succession process.

Figure 1. **Research model**
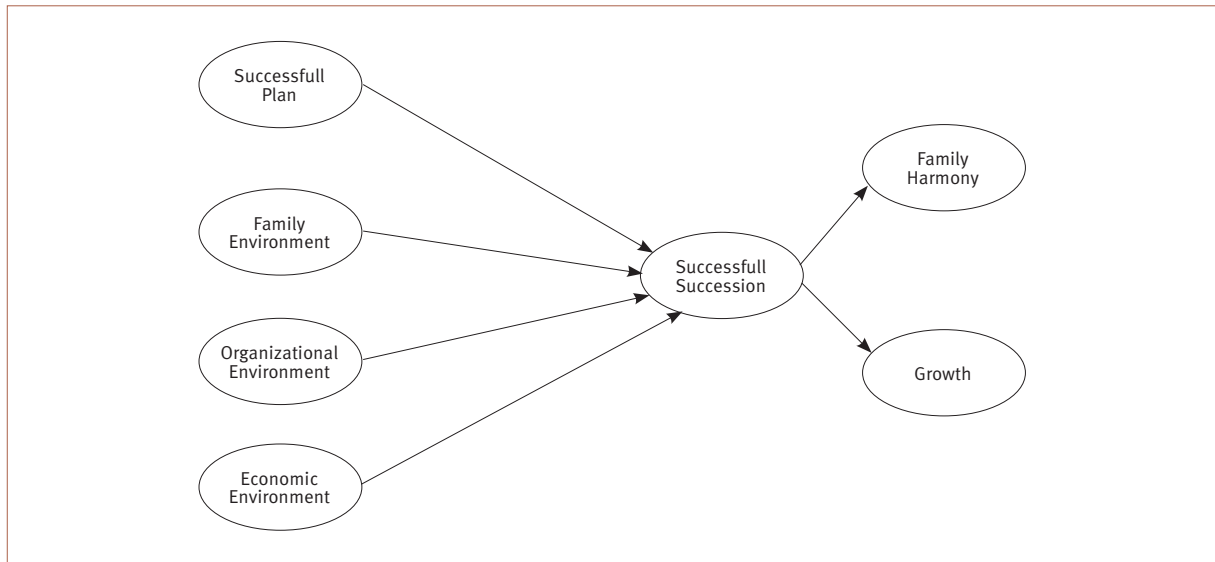
METHODOLOGY

Sample and data collection

The sample consists of 230 owner-CEOs of SMEs that operate in the agribusiness sector and are based in the state of Paraná (Brazil). There are three main reasons for choosing these companies: a) the importance of the farming business in Brazil; b) the importance of the farming business in the state of Paraná, and c) ease of access to the sample.

In 2018 family businesses in the agribusiness sector generated over 21.1% of the total GDP in Brazil (Confederação Nacional de Agricultura [CNA], 2019). Agribusiness is the driving force today in the Brazilian economy. In 2019 the sector generated $ 89,334 million in exports, a value that represents almost 40% of the country's total exports. Paraná is in third place in terms of the value of its gross production ($ 18,223 million), after Mato Grosso ($ 18,301 million) and São Paulo ($ 21,586 million) (Ministério do Desenvolvimento, Indústria e Comércio Exterior [MDIC], 2019).

To make up our sample group, we used the database from the Brazilian Institute of Planning and Taxation, which in 2015 contained a total of 2,855 active private companies founded before December 31, 1994. The reason for choosing this date is the idea that the transmission of family firms usually occurs at least 20 years after they were founded.

In order to identify family firms and obtain a suitably representative sample, we signed a collaboration agreement with the Federation of Business Associations in the state of Paraná (*FACIAP*). As a result of that agreement, the *FACIAP* analyzed the 2,855 companies and concluded that 2,013 fulfilled our requirements for consideration as family SMEs: a) more than 50% of the shares are held by the founder or members of his/her family; b) At least one member of the family has the power to establish the company's strategic lines. Finally, we identified the 360 companies that had undergone a succession process between January 1, 2014 and December 31, 2015. We define

small enterprises as those whose sales were between $ 67,924 and $ 905,660 and medium-sized enterprises as those whose sales were between $ 905,660 and $ 56,603,773 (Banco Nacional de Desenvolvimento Econômico e Social [BNDES], 2019).

Having identified our target companies, the *FACIAP* contacted the family farms by email, explained the purpose of our research, and asked them to participate and collaborate with our data collection. In January 2016 (1) we collected data on the economic environment, in February 2016 (T2) data on the family environment, in March 2016 (T3) data on the organizational environment, and in April 2016 (T4) data on succession plans. Six interviewers, who were aware of this study's objective, phoned the 360 potential responders. Of these potential responders, 320 agreed to take part in the study and 313 provided usable questionnaires (97.8%). In 2018 (T5), we contacted these 313 entrepreneurs again for their opinion on the success of the succession, of whom 230 correctly completed our questionnaire (73%) in T5. A two-year time lag was chosen, based mainly on the idea that a sufficient period of time (at least one year) is needed for the successor to distance themselves from the dynamic of the succession process, and to be able to evaluate it more sincerely and objectively (Ayala-Calvo et al., 2019). But significant changes in the succession plan or the family, organizational or economic context can occur in two years that may influence the success of the succession process. We used a questionnaire with eight items (e.g., "Has the support and aid that you receive from the government changed in the last two years?") to verify whether the context or the succession plan had changed substantially between 2016 and 2018. Two of the respondents indicated a positive response to at least one item and were excluded from the analysis. Using comparison of means analysis, we found that the 230 participants in the final sample had characteristics that were similar to those of the 83 participants who had not participated in 2018. Specifically, there were no statistically significant differences in the age of their companies, the number of owner families, the characteristics of the organizational, family and economic environment, or the characteristics of the succession plan. We can say, therefore, that there was no response bias.

The sample characteristics can be seen in Table 1.

Instrument design

The questionnaire we used was developed in three steps. First, we reviewed the literature in search of scales that had been previously used to measure the main constructs of our research. These previous studies, however, only captured aspects with regard to the succession plan, the motivation of the successor or the person succeeded, or the makeup of the board of directors. To capture the multi-dimensional aspects of our model more fully, we needed to develop our own scales based on previous questionnaires, and on our own interpretations of the literature. The draft questionnaire was peer-reviewed by two researchers with experience in succession at family firms. Next, we wrote a pretest in which 10 owner-managers took part. This pretest allowed us to check the internal consistency of the constructs and to find out whether all the items were understood correctly. The results of the pretest and a preliminary factor analysis suggested that some items be eliminated (items with factor loadings above 0.5) and others be re-worded. Based on the results of this analysis and after calculating Cronbach's alpha of each scale, we proceeded to adjust the questionnaire again to arrive at its final version. Most of the adapted items were developed in English. The final questionnaire was then translated into Portuguese. A standard back-translation procedure was used to ensure that the content of the items was correct.

Table 1. **Sample characteristics (N= 230)**

Company age (Mean = 37.55 years; Standard deviation = 3.94)	Number of family farms business
29-34 years old	50
35-39 years old	107
40-44 years old	61
45-49 years old	11
50-51 years old	1
Number of shareholder families in the company.	
1	188
2	36
3	5
4	1
Company generation	
Second generation	203
Third generation	27
Generational shift: years after being founded (Mean = 31.61 years; Standard deviation = 4.8)	
‹25	14
25-29	64
30-34	99
35-39	44
40-45	9
Size	
Small	83
Medium	147

Variables

The variables, the items used to measure them and the authors on which our definition of each variable was based can be seen in Exhibit 1. The respondents ranked their level of agreement or disagreement with each item on a 5-point Likert scale, where 1 means "I strongly disagree" and 5 means "I strongly agree". Cronbach's α reliabilities for all scales were greater than 0.70 (its critical value).

Exhibit 1. Description of the variables used in the analysis

Variables	Description	Source
Socio-demographics	1. Indicate the year in which your company started its activities. 2. Indicate the current number of shareholder families in the company. 3. Indicate which generations are currently working in your company: The founder and his/her children The founder´s children only The founder´s grandchildren and their parents The founder´s grandchildren only The founder's grandchildren´s descendants 4. Indicate the year in which generational replacement occurred.	
Succession plan	**The succession plan:** 1. Considers that the successor and the person succeeded will work together for some time. 2. Considers the knowledge and the abilities that should be evaluated in every possible candidate of the family as the company´s CEO. 3. Includes the family and business values that the possible new company´s CEO should possess. 4. Details how the incorporation of a possible CEO into the company´s decision-making process will be managed.	Motwani et al. (2006) and Venter et al., (2005).
Family environment	In my family: 1. When a conflict emerges, we deal with it openly. 2. Active communication between members is promoted. 3. Each member is valued for his/her capabilities and his/her abilities. 4. Before taking any decision that affects either the family or company, every possibility is evaluated. 5. The company members´ training is promoted considering their preferences. 6. We encourage members of the are new generation to work alongside members of the current generation. 7. The transmission values that made our company stronger are promoted.	All the items were self-developed or adapted from the studies of Cabrera-Suárez e Martín-Santana, (2010) and Duarte e Oliveira, (2010).
Organizational environment	**In our firm:** 1. The functions of each job position are clear. 2. The family´s values are taken into consideration in the decision-making process. 3. The company's goals are clear and known by all employees. 4. The job position performance evaluation and the promotion criteria are known by every employee. 5. When any conflict or problem rises, the company works hard to come up with solutions that, as far as possible, benefit every employee. 6. Teamwork is promoted between all employees. 7. Upward and downward communication is fast and timely.	
Economic environment	**On our family farm:** 1. The changes in the government's economic policy compromise its performance. 2. The company´s performance depends a lot on access to financing and its cost. 3. The government's investment support policies are crucial for the company´s development. 4. The government's tax policies have a big influence on our growth and development strategy. 5. The national GDP growth has an influence on our own growth.	
Successful succession	**Family harmony** 1. The people in my family are very compatible with each other. 2. The daily interaction between family members is cordial. 3. Family members support each other. 4. Family members act in in harmony. **Growth** 1. The growth in sales in the two years following the succession has been: 2. The cumulative growth of the business in the two years following succession, compared to other firms in the sector has been:	Kavikondala et al. (2016).

Data analysis

We used partial least squares structural equation modelling (PLS-SEM) to test the proposed research model. The reasons that justify its use in this work are (Chin, 2010): a) the sample does not exceed 250 individuals; b) Our model adds new variables and new ways of measuring them to other existing models; c) We want to assess to what extent the independent variables are able to predict the dependent variable.

To measure the "successful succession" variable we used the two-step approach proposed by Chin (2010). Acceptance or rejection of the hypotheses included in the proposed model, as usual in this type of analysis, was determined using three criteria: the R^2 of the dependent construct, standardized path coefficients (ß) and predictive relevance (Q^2). To generate standard errors, t values of the parameters and the bias corrected 95% bootstrap confidence intervals, we used bootstrapping (5000 samples). If the range between the lower and upper limit of an interval for a given relationship does not contain zero, we interpret this relationship as being statistically significant. The cut-off level of R^2 for the dependent variables is 10 per cent. The cut-off level for Q^2 statistics test, obtained by blindfolding, is zero. We used Smart PLS 3.0 software.

RESULTS

Table 2 shows the correlations, means, and standard deviations of the main variables of the study.

Table 2. **Descriptive statistics and correlations**

	Mean	SD	Correlations					
			1	2	3	4	5	6
1 Family Harmony	12.02	3.86	.88					
2 Growth	6.34	0.64	.32**	.73				
3 Family Environment	24.08	6.22	.33**	.30**	.91			
4 Organizational Environment	21.80	6.70	.15**	.16*	.39**	.92		
5 Economic Environment	17.52	3.15	.48**	.30	.41**	.42**	.85	
6 Succession Plan	11.27	4.19	.29**	.28**	.31*	.46*	.33**	.89

Note: Cronbach's α reliabilities for the scales are shown along the diagonal. ** Significant at p<.001, * significant at p<.05

Measurement model

Table 3 shows the individual reliability of the items as well as the compound reliability and convergent validity of the constructs.

Table 3. **Measurement model: loadings, construct reliability and convergent validity**

Construct/Dimension/Indicator	Loading	Composite reliability	AVE
Family Environment (FE)		0.93	0.65
FE1	0.71		
FE2	0.80		
FE3	0.74		
FE4	0.86		
FE5	0.84		
FE6	0.88		
FE7	0.79		
Economic Environment (EE)		0.89	0.62
EE1	0.81		
EE2	0.83		
EE3	0.86		
EE4	0.71		
EE5	0.71		
Organizational Environment (OE)		0.94	0.69
OE1	0.81		
OE2	0.75		
OE3	0.86		
OE4	0.88		
OE5	0.85		
OE6	0.85		
OE7	0.82		
Succession Plan (SP)		0.92	0.75
SP1	0.88		
SP2	0.89		
SP3	0.93		
SP4	0.76		
Successful Succession (SS)		0.82	0.69
Family Harmony (FH)		0.89	0.67
FH1	0.78		
FH2	0.76		
FH3	0.82		
FH4	0.81		
Growth (G)		0.77	0.63
G1	0.83		
G2	0.75		

Individual reliability was greater than 0.707 for all items, which is considered a minimum value, or cut-off level. Moreover, all the constructs had a composite reliability above 0.7, which is considered to be the cut-off level. Furthermore, all constructs had a higher average variance extracted (AVE) than what is considered to be

its minimum value (0.5), which shows the convergent validity of the constructs. These results showed that the measurement model is good.

Finally, as shown in Table 4, the square root of the AVE of a given construct is greater than the correlation between that construct and the rest of the constructs in the model. Therefore, it can be argued that the constructs differ from one another.

Table 4. **Measurement model: discriminant validity**

	FE	EE	OE	SP	SS
FE	(0.81)				
EE	0.41**	(0.79)			
OE	0.39**	0.42**	(0.83)		
SP	0.31*	0.33**	0.46*	(0.87)	
SS	0.40**	0.33**	0.16**	0.28**	(0.83)

Notes: FE (Family Environment), EE (Economic Environment), OE (Organizational Environment), SP (Succession Plan), SS (Successful Succession). Square root of Average Variance Extracted (AVE) are presented in parentheses along the diagonal. Off-diagonal elements are the correlations among constructs. * $p<.05$; ** $p<.01$.

Structural model

Table 5 shows that all four relationships hypothesized in our model were significant. R^2 for the dependent variable was also higher than 10 per cent, and Q^2 was higher than zero.

Table 5. **Structural model results**

R^2SS = .51; Q^2SS = .14			Bias corrected 95% bootstrap confidence intervals	
Relationships	Path coefficients	P valor	Lower	Upper
FE→SS	0.292	0.000	0.154	0.436
OE→SS	0.155	0.014	0.038	0.271
EE→SS	0.330	0.000	0.274	0.385
SP→SS	0.281	0.000	0.193	0.366

Notes: FE (Family Environment), EE (Economic Environment), OE (Organizational Environment), SP (Succession Plan), SS (Successful Succession)

DISCUSSION AND IMPLICATIONS

In a family-run SME, the succession of the CEO is usually a critical process and many researchers have endeavored to understand the factors that affect its success (Foguesatto et al., 2020; May et al., 2019; Pessotto et al., 2019). Rather than delving deeper into an analysis of any given factor, this study defends the need for a more integrative view. Our model starts from the idea that identification of a successful succession must use both non-financial and financial measures. Given the family's high level of involvement in the company, and its commitment to it and to its financial wealth, the succession process must also preserve family harmony. The results demonstrated that

the construct of "successful succession" (composite reliability = 0.82; AVE = 0.69) was correctly defined using variables that gather together the combination of motives and wishes (economic and emotional) that reflect the interests that family farm owners hope to protect. This result supports Minichilli et al. (2014), who noted that successful succession meant finding a balance between the search for financial and non-financial results.

Our research showed that both the succession plan and the family and organizational environments are valid ways for socializing and involving a new CEO in a family farm business. They are effective at ensuring that the chosen candidate understands and agrees with the time and effort they will need to strike a balance between financial (growth) and non-financial objectives (family harmony). These results support those found in previous literature that suggests that the succession context has a significant effect on the perception of the success of the succession (Breitenbach & Corazza, 2017; Foguesatto et al., 2020; Morais et al., 2017). Our findings also support those studies that asserted the dynamics of communication, collaboration and planning as key factors in the success of succession (Pessotto et al., 2019; Quadros et al., 2013)

The economic environment is the variable that has most influence on succession success, and the one that business owners have least control over. This would suggest that in unfavorable economic environments it is harder to find candidates who wish to commit to a company whose future is uncertain (Pessotto et al., 2019). However, we must take into consideration that family firms may use other variables in the model, the variables they have greater control over, to influence the successors' perception and interpretation of the economic environment. Thus, the socialization processes that take place in the family and/or organizational environment may be used to help new leaders see opportunities where others only see threats, to live with and deal with uncertainty, to bond emotionally with the family farm business, or to use the networks in the environment to benefit the company or the family (Ayala & Manzano, 2014). According to Fischer and Burton (2014), the more the socialization process increases the connection between the successor and the family farm business, the less influence the economic environment will have on the successor's decisions about whether or not to become the new CEO. From this point of view, in order for a family farm business to be successfully transferred between generations the emphasis should be placed on nurturing a possible successor's passion, pride and connection with the land. These feelings, which are transmitted during the socialization process, could be critical for the survival of family farm businesses and, therefore, for maintaining the population in rural areas (Foguesatto et al., 2020; Pessotto et al., 2019).

The considerable influence of the economic environment on successful succession in family-run agribusiness SMEs(β = .33), and therefore on their survival, suggests that there are significant implications for policymakers. These policymakers are those responsible for implementing policies that directly support SMEs; policies that help them compete in internal and external markets, improve their R&D, and not have to overcome too many obstacles to obtain financial resources at an affordable cost. In addition to policies aimed at improving the economic results of family farm businesses, other policies could also be implemented to stimulate succession, including: promoting early retirement plans that guarantee financial security for those retiring, training plans and support for developing successors' abilities, providing help for designing succession plans, etc. Policymakers could also implement policies to avoid abrupt breaks in successors' socialization cycles in the early stages of their lives. The increase in the number of years of compulsory schooling, the distance to schools, a growing concern for children's health, etc., make it increasingly difficult to maintain prolonged contact between the family, the child and the family farm business. For this reason, our results also have implications for the family farm business itself. For the succession of the CEO to be successful, succession must be planned for and the development of family and organizational contexts that foster trust, mutual support, shared values, a passion for the land, pride of belonging,

conflict resolution, and recognition of and respect for the rules should be encouraged. This can be accomplished by teaching potential successors to practice active communication; stimulating their progressive participation, depending on their age and acquired skills, in the work of the family farm business and in its decision-making bodies; or by teaching them the values of family culture, the pride involved in running a family farm business, and the good practices on which the reputation of the family farm business has been built.

As with all research, our study also has its limitations. First, the sample is based on family farms in Brazil, a developing country. Future research could check if our findings hold true in different economic and social contexts, such as in samples taken from other countries and other sectors. Second, all the input data were provided by the current CEO. For a deeper understanding of the succession process it would be worthwhile also obtaining different points of view from the successor, the outgoing leader, and other family members. Future research should come up with mechanisms for taking this fact into consideration. Thirdly, the organizational environment variable has not taken into account family farm business governance structures. In future research, it would be interesting to see if the relationships found in our research are maintained, regardless of the family farm business governance structures.

Despite these limitations, our work contributes to the literature on succession in family SMEs in several ways. First, previous studies have taken into account the organizational context (Minichilli et al., 2014) or family context (Cabrera-Suárez & Martín-Santana, 2010), but we found none that take the economic environment into account. Nor have we found any research that has integrated the effect of all three types of environment into a single model. Second, although some authors have suggested it (Delgado García & Fuente Sabaté, 2009), as far as we know this is the first study to include economic and non-economic factors for measuring the success of the succession process. Third, for most of the variables used in our research, measurement scales either did not exist, or were incomplete. All the scales developed for this study were shown to have high scale reliability (Cronbach a > 0.73, composite reliability > 0.77). When compared to cross-sectional designs, our study design also enables the hypotheses of the proposed model to be tested in a more rigorous way. Measuring the economic, family, and organizational environment and the succession plan at different moments in time allows the potential impact of common method variance to be minimized. This is because the time-lagged design creates a temporary, contextual and psychological separation (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Finally, this research has increased knowledge of the factors that affect successful succession in family-run agribusiness SMEs in Brazil, the world's ninth largest economy.

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AUTHORS' CONTRIBUTIONS

The authors declare that they participated in all stages of development of the manuscript. Guadalupe Manzano García, Juan-Carlos Ayala-Calvo and Alexandre José Schumacher worked on the conceptualization and theoretical-methodological approach. The theoretical review was conducted by Guadalupe Manzano García, Juan-Carlos Ayala-Calvo and Alexandre José Schumacher. Data collection was coordinated by Guadalupe Manzano García. Data analysis included Guadalupe Manzano García, Juan-Carlos Ayala-Calvo and Alexandre José Schumacher. All authors worked together in the writing and final revision of the manuscript.