



Succession and performance of family firms listed on the mexican stock exchange

Sucesión y desempeño de las empresas familiares listadas en la bolsa mexicana de valores

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Abstract

This paper analyzes the impact of Chief Executive Officers' (CEOs') turnovers on the profitability of family businesses listed on the Mexican Stock Exchange, during the period 2009-2016. A panel database is built, consisting of 69 non-financial family firms. It is found that financial performance falls once the transfer of command occurs, which is not fully recovered in the years following this change. This shows important weaknesses in the process of succession of family businesses. It investigates the moderating and aggravating effects on business profitability of certain characteristics of these new CEOs. Variables such as the family nature of the new CEO, his age, number of years working in the company, education and presence in business networks are studied. The findings indicate the convenience of hiring non-family CEOs, who have extensive business ties. The education and experience of CEOs have no impact on business profitability, from the moment the transfer of command takes place. This has important implications for succession plans, to increase the chances of success and survival over time of these companies.

JEL code: G3, M1, L2

Keywords: Succession; Chief executive officer; Family business; Business profitability; Mexico

Resumen

Este trabajo analiza el impacto de los reemplazos de los Directores Generales (CEOs) en la rentabilidad de las empresas familiares listadas en la Bolsa Mexicana de Valores, durante el período 2009-2016. Se construye una base de datos de panel, integrada por 69 firmas familiares no financieras. Se encuentra que el desempeño financiero cae significativamente una vez que se da el traspaso del mando, el cual no se recupera del todo en los años posteriores a este cambio. Esto deja de manifiesto debilidades importantes en el proceso de sucesión de las empresas familiares. Se indaga sobre los efectos moderadores y agravantes en la rentabilidad empresarial, de ciertas características de estos nuevos CEOs. Se estudian variables tales como la naturaleza familiar del nuevo CEO, su edad, número de años laborando en la empresa, educación y presencia en redes empresariales. Los hallazgos señalan la conveniencia de contratar CEOs externos a las familias empresarias, que cuenten con extensos vínculos empresariales. La educación y experiencia de los CEOs no tienen injerencia alguna sobre la

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rentabilidad empresarial, a partir del momento en que se da el traspaso del mando. Esto tiene implicaciones importantes para los planes de sucesión, para incrementar las posibilidades de éxito y sobrevivencia en el tiempo de estas empresas.

Código JEL: G3, M1, L2

Palabras clave: Sucesión; Director general; Empresa familiar; Desempeño financiero; México

Introduction

Succession is a priority issue for any family business. However, relatively few firms in Mexico have a succession plan or have carried out any replacement in senior management or control (Global Family Business Survey, Mexico chapter: Perspective and financing for growth, 2018). If family businesses listed on the Mexican Stock Exchange are considered, on average, these have been around for 37 years, which is why the vast majority are in their first generation or the transition to the second generation. Therefore, in these companies, only 41 replacements of CEOs have been presented (from 2009 to 2016), which constitutes 8% of all possible replacements. In 92% of the cases, there is no transfer of command.

As time goes by, family businesses become more complex. At the same time, the complexity of the family also grows. Today, families have fewer children, and therefore few possible successors who want to take over the family business. However, by moving from the first to the second generation (and then to older generations), the family business interacts with various branches of the family, and even with different families, putting profitability itself at risk (Miller *et al.*, 2007). In order for the family business to surpass the third generation, it must maintain the family unit and become professional. A good succession plan is fundamental for the above, which must exist since the foundation of the family firm. A succession calendar should be established, and current leaders should be prepared for retirement. The succession plan should define the guidelines for training and selecting successors, develop a vision and strategic planning for the business after the succession, and specify the role of the outgoing owner and the channels of communication regarding the succession with other key stakeholders of the firm. At the same time, a family business can last in time if it has order in its statutes, with consistency between the succession plan and the marriage settlements, wills, and donations.

Succession is a process; it is not merely replacing one person with another. Entrepreneurial families must prepare their members to perform various tasks in the company and design the positions they are going to occupy. Training includes knowledge and instilling love for the family business, as well as academic preparation to lead it. Along with the above, as the family business grows, it must be provided with governing bodies that allow for the separation between family issues and issues of management and business strategy. A family entrepreneur can occupy different roles in the firm: executive, member of the Board of Directors, or member of the Family Board. Irrespective of their functions within the family business, in the succession process, the responsibility of the successors for the ownership of the business must be encouraged from an early age. Furthermore, the succession plan must express the feeling of the business family regarding the hiring of top executives external to it. A succession plan must follow family values, needs, and requirements.

Every family business has business objectives (financial gain) and social-emotional goals. Social-emotional goals are those non-financial aspects that meet the affective needs of the family, such as family identity and union, influence, reputation and respect in the business community, and family succession (Gómez-Mejía *et al.*, 2007; Shepherd, 2016; Berrone *et al.*, 2012). Despite these similarities, however, there are generational differences in the problems faced by business families. In the first generation, the founder is the principal owner. The founder is concerned with the transfer of management and wealth, the economic security of their family, and entrepreneurship so that the firm can grow and survive over time. In the second generation, the children of the founder usually become important partners in the company. They

find themselves obliged to seek harmony and family unity, motivate teamwork, and worry about the strengthening of the succession plan. In the third generation, the complexity of the family business is greater, and the benefits of institutionalization and the succession plan are clearer. In this generation, there is less family unity, which can trigger power struggles and the end of the family business, which can be avoided with professionalization and good practices for succession (Gallo, 1998).

Although family businesses listed on the Mexican Stock Exchange have become professional, on average, their experience in the succession process is scant, as they are relatively young firms. Presently, there are few examples of family businesses in Mexico that have been able to surpass the third generation, which is the pattern at the international level (Banamex and ProfitConsulting: Long-lived Family Enterprises in Mexico, 2012). Succession planning in the family business is one of the key elements for its survival over time. Professionalization, along with clear succession plans, reduces the problems arising from the increased complexity of family firms as time goes by.

A high level of participation of family entrepreneurs characterizes Mexican corporations (Belausteguigoitia & Balaguer, 2013). A family business is one in which the group that controls the ownership or management of the firm is a family (Chua *et al.*, 1999). Seventy-eight percent of the companies listed on the Mexican Stock Exchange are family owned. Of the total of 89 non-financial firms listed during the 2009 to 2016 period, 69 are family businesses where, on average, the concentration of ownership is 60%. Moreover, 52% of the CEOs of these companies are members of business families. This article studies these large Mexican family corporations, to try to answer five questions: 1. When and why is the CEO replaced? 2. Is command customarily transferred to a member of the business family or an external person? 3. What is the relationship between the replacements of the CEO and the business performance before, during, and after this event? 4. Does the relationship between the replacement of the CEO and business performance vary according to whether the succession occurs within the business family or in favor of an external collaborator? 5. What other characteristics and conditions of the new CEOs favor the profitability of the firms? The answers to these questions allow a better understanding of the real implications of succession on business performance, as well as dictating business policy recommendations to improve the chances of survival of these companies as generations go by. The above is important because most studies focus on developed economies; the conclusions of these investigations may not reflect the Latin American context, where business culture, institutions, and market conditions are different.

The article is organized in the following manner. Section 2 reviews the literature and derives the hypotheses from the study. Section 3 deals with the design of quantitative research, describing the sample, the variables, and the econometric methods used. Section 4 contains the results of the empirical study and its implications. Section 5 follows, concluding with the limitations of the research.

Literature Review and Hypotheses

Succession in Family Businesses

Succession is a process, not an event. It ultimately involves a change in the power, direction, and management of family wealth, so the future must be anticipated. The generational change in the company occurs in a planned way or without any planning. When there is no planning, it is a source of many conflicts. Succession is not a simple process, as evidenced by the high mortality rate of family businesses (Hassan *et al.*, 2018; Soto-Maciel *et al.*, 2015).

Succession occurs for many reasons: death, illness, desire for retirement, and loss of power and control. The succession process begins with the creation of a family business. It starts by instilling love and a sense of belonging in the family and the company. In this way, family entrepreneurs must be trained to occupy different roles within the organization,

according to their interests and abilities. It is essential to generate commitment and responsibility on the part of family entrepreneurs, to give continuity to a joint project (Garza-Ramos *et al.*, 2011).

In the early days of the company, the founder is usually young. As time goes by, their children typically join the family business. There is a stage of joint work with some of them, where it is possible to transmit not only knowledge but also leadership and values. Finally, there is the generational transfer. In the first years, it is essential that the former CEO (as far as possible) and other advisors remain involved with the successors. Subsequently, the former CEO must be detached and autonomy given to the new leaders (Gallo, 1998).

Delaying succession is counterproductive for the company. It is unusual for a firm that is not in a stage of maturity (and therefore low sales) after 20-30 years in the market. This stage of maturity of the firm coincides with that of the leader of the family business, who has an increased need for status and economic stability, and therefore becomes more risk-averse. At the stage of maturity of the firm, leaders are required who are willing to make strategic changes (Fuentes-Lombardo *et al.*, 2007).

The family business may continue to the extent that successors exist and are formed. Successors must be competent and willing to take the reins of the organization. They must have an in-depth knowledge of and love for the company. Furthermore, a shared vision and mission is essential on the part of the business family. The characteristics of the management team explain much of the performance of the organization (Finkelstein & Hambrick, 1996). The one chosen to manage the firm (the CEO himself) may not be part of the business family. During the time that a capable family successor is found or prepared, it is normal that a non-family leader is temporarily (sometimes permanently) present (Cerdán & Luis, 2009).

Succession Plan

The succession plan establishes the retirement age of family entrepreneurs, both for the management and control of the company. Moreover, it also considers the criteria for the selection of successors, as well as those responsible for their choice. A succession plan must implement the times and processes regarding the formation and selection of possible successors (Sharma *et al.*, 2000).

For the former CEO, it is necessary for the succession plan to establish an estate plan and a retirement plan. It is also essential to have a post-retirement life plan. For successors, it is necessary to plan their participation in the ownership, control, and management of the company. There is often more than one successor, so it is important to define the rights and obligations of all parties, as well as to prepare development plans and positions (Lozano-Posso, 2000).

Potential successors should be trained in three ways: 1. Company 2. Family. 3. Ownership. The business dimension involves their academic training, as well as their work experience outside and inside the family business. It is essential to inculcate a culture of merit (objectives and achievements), evaluation, and compensation by non-family members. Potential successors must develop competencies for good corporate governance: communication, business ethics, conflict management, leadership, negotiation, teamwork, decision making, and strategic vision, among others. The family dimension refers to their integration as members of the business family, sharing feelings and values of a joint project. In this sense, dialogue is critical, as well as teaching by example. The dimension of ownership has to do with the sense of responsibility for managing the assets of the business family for its continuity over time. The three dimensions are fundamental in the formation of successors and the possibilities of survival of the family business (Ahrens *et al.*, 2018).

The second generation has the challenge of clearly defining the rules of the game of a family business run by siblings. It is essential to revitalize the business at this stage to bequeath a profitable business to the third generation (family business of cousins). The third generation has the challenge of unity (willingness to continue together) and commitment (willingness of intense dedication), for the continuation of the family business (Gallo, 1998). Succession planning in the

family business is, therefore, a continuous, dynamic task that must be adjusted both to the company and to the family (and its different generations).

The succession plan should not forget the non-family members of the family business, as well as the clients and suppliers, as they are also affected by the generational change. It is advisable not to make drastic changes once there has been a transfer of command, but to start with gradual changes that cause less disturbance (Dyck *et al.*, 2002).

Succession and Business Performance

The replacement of a CEO can occur as a result of previous mismanagement, which negatively impacts business performance (Fee & Hadlock, 2004). However, this is more likely when the business is not family-owned or if the CEO is external to the business family. The above also happens in conditions where there has already been a generational transfer; therefore, this top executive is further away from the founder (Brunello *et al.*, 2003). In the case of Mexico, previous studies suggest a negligible relationship between past profitability and the probability of replacing a Chairman of the Board of Directors (see Davila & Watkins, 2010). Given that the companies under study are family businesses, first or second generation, where there is a high concentration of ownership, and it is also common to have a family CEO, the following hypothesis is tested:

H1. The replacements of the CEOs are not related to the previous performance of the family businesses listed on the Mexican Stock Exchange.

Once the transfer of command occurs in the family business, both an improvement and a worsening in the financial indicators of the firm can occur. In this sense, the probability of success depends to a large extent on the rigor of the succession process and certain characteristics and conditions of the new CEO (Schepker *et al.*, 2017). As for the succession process, the lack of experience of the family firms contemplated in this investigation (which on average have only been in the market for 37 years), together with the complexity of this process and the evident high failure rate of family businesses at the international level (Miller *et al.*, 2003), may condition profitability during and after the replacement of the CEO. It is noteworthy that international statistics demonstrate that, on average, family businesses do not survive the fourth generation. Thirty percent of these firms surpass the first generation. This percentage falls to 10% for the third generation (European Family Businesses, 2012). Therefore, the following hypothesis is tested:

H2. In general, there is a negative relationship between the replacements of the CEOs and the performance of family businesses listed on the Mexican Stock Exchange.

One of the main features of the new CEO impacting on profitability relates to the family or external nature of this top executive. While a CEO who is a member of the business family may be more committed to the business (Stanley & McDowell, 2014), authors such as Huson *et al.* (2004) and Sitthipongpanich and Polsiri (2015) point out that appointments of CEOs outside the business family generate a higher average profitability. A family CEO could be appointed—even if he or she is not the ideal candidate in terms of ability, training, and experience to serve in the position—simply because they are a part of the business family (Pérez-González, 2006). Likewise, the family CEO can prioritize the achievement of family objectives, which are opposed to the financial ones (Lemmon & Lins, 2003; Bertrand *et al.*, 2008). For example, hiring and offering excessive compensation to family officials, or encouraging sub-optimal projects—with low risk and low expected return—given their greater aversion to risk (Claessens *et al.*, 2000). A recent study for companies listed on the Mexican Stock Exchange conducted by Watkins *et al.* (2019) determines that family CEOs perform less well financially than non-family CEOs. Accordingly, the following hypothesis is proposed:

H3. The appointment of family CEOs, compared to the hiring of external CEOs, has a negative impact on the profitability of family businesses listed on the Mexican Stock Exchange.

Other characteristics and conditions of the new CEO that may have an impact on the profitability of the family business are their age, work experience, education, and business networks.

Regarding the age of the CEO, some authors such as Peni (2014) point out that this is positively related to the profitability of firms, as it is a marker of experience and knowledge acquired over time. However, younger CEOs have greater physical and mental strength to adapt to a new position, be open to innovative ideas, and adopt new behaviors (Child, 1974). The more mature CEOs are more conservative and require more information and time in the decision-making process (Bertrand & Schoar, 2006), while the younger ones have more skills to assimilate information and make reliable decisions quickly. Furthermore, for older CEOs, their job security is fundamental, which leads them to avoid risks that could affect their stability (Carlsson & Karlsson, 1970). This aversion to risk could be negatively reflected in the financial performance as a result of the replacement, so the following hypothesis is put forward:

H4. The age of the new Family CEO has a negative impact on the financial performance of family businesses listed in Mexico.

In terms of work experience, Ryan and Wiggins (2001) and Hamori and Koyuncu (2015) mention that collaborators with more years of service within firms may be more likely to pursue their interests, which could harm the performance of companies if they are appointed CEOs. This argument is particularly valid in companies where ownership is dispersed, which gives more power to top executives and possibilities of making profits of their own. On the other hand, according to McCall (2004), the CEO competencies are generally acquired through their work experience within the firm. Baysinger and Hoskisson (1990), as well as McDonald *et al.* (2008), suggest that the years that the new CEO has worked in the firm generate a specific knowledge of the firm and a greater capacity to supervise and provide valuable resources, which could improve financial performance. Following this line, the following hypothesis is proposed:

H5. The number of years of experience of the new CEOs in family businesses listed on the Mexican Stock Exchange has a positive impact on their profitability.

The educational profile of the CEO is a determining and essential factor in their appointment. There is a positive trend in the recruitment of better-qualified CEOs, a dimension that has a positive impact on business performance (Smith *et al.*, 2006). Having a high-level academic background, such as a postgraduate degree, increases the value of the human capital of this top executive (Phan & Hoon, 1995). Education favors the development of cognitive skills, which provides greater capacities to learn and accept new ideas (Hitt & Tyler, 1991), collaborate in teams to make complex decisions (Bantel & Jackson, 1989), face risks, innovate, and establish sound business strategies (Christiansen *et al.*, 2008; Dalziel *et al.*, 2011). Slater and Dixon-Fowler (2010) demonstrate a significant and positive relationship between the value of companies and the presence of CEOs who have a postgraduate degree in business. Likewise, having university studies abroad favors the international perspective and visionary thinking of the new CEO, which has a favorable impact on business management (Jalbert *et al.*, 2002) and entrepreneurship (Roman & Maxim, 2017). Therefore, the following two hypotheses are derived:

H6. New CEOs with postgraduate studies in the area of business increase the financial performance of family businesses listed on the Mexican Stock Exchange.

H7. New CEOs who have graduated from a university abroad have a positive impact on the business performance of family firms listed on the Mexican Stock Exchange.

In the business world, corporate networks of CEOs are common and can encourage exchanges of information and productive resources, and thus promote better performance (Cabrera-Suarez *et al.*, 2015; Lee *et al.*, 2016). These interactions can take many forms, one of which is interlocks. Interlocks occur when a top executive or director of one company participates simultaneously as a member of the Board of Directors of another company or companies. Previous literature generally argues that interlocks provide valuable social capital for companies. They are mechanisms that allow

greater access to markets and technologies, increasing the chances of survival and stability of businesses (Pfeffer & Salancik, 1978). Although, in general, there is a positive effect of interlocks on the financial performance of companies (both family and non-family), there are arguments that these networks can overburden participants with tasks that would reduce their time and work effectiveness (Fich & Shivdasani, 2006). Furthermore, authors such as Sauerwald *et al.* (2016) argue that these interactions could lead to participating CEOs obtaining benefits for themselves rather than favoring the firms they represent. However, a new CEO will probably be more focused on the new position and willing to take advantage of the positive effects of their business networks to position themselves favorably in the company. Therefore, the following hypothesis is presented:

H8. The business networks (interlocks) in which the new CEOs participate have a positive impact on the profitability of family businesses listed on the Mexican Stock Exchange.

Data, Variables, and Methodology

Data

The analysis is founded on a balanced panel database of 89 non-financial companies listed on the Mexican Stock Exchange during the 2009-2016 period; the data include financial and corporate governance information. The information was taken manually from the annual reports of the companies, published on the website of the Mexican Stock Exchange.

The initial data excluded those referring to non-family businesses. Of the total of 89 firms, 69 (78% of the total) are family firms, representing a total of 552 observations. A family business was defined as one in which a person or family owns at least 30% of the shares. If a control trust, a private investment fund, or a limited joint-stock company is one of the top ten shareholders, its controller was identified to verify whether the firm is family-owned. In order to find the controllers of the companies, in some cases, it was necessary to resort to their web pages and news published on the Internet. This classification of family business is similar to that used by the European Union (2009), which defines a family business as when the family owns at least 25% of the voting rights.

Among the data recorded are the ten principal shareholders of the firm with their respective shareholding; the names of the CEOs, their ages, number of years working in the companies, education (if they have a postgraduate degree in business and if they have completed university studies abroad), and presence in business networks (interlocks); total assets; total liabilities; equity of stockholders and consolidated net income.

Variables

The variables used in this research are classified into three types: profitability variables (the dependent variables), variables related to the CEOs (explanatory variables), and control variables:

Profitability variables

a. Return on Assets (ROA): A measure of book value. It is calculated as consolidated net income among total assets. The average ROA for the family businesses considered is 3.9%.

b. Return on Equity (ROE): This is also an indicator of book value. However, this is equal to ROA only when the company has no debts. It is constructed as a consolidated net profit on shareholder equity. The average ROE for family businesses considered is 7.3%.

Variables related to CEOs

a. Replacement (RPZ): Refers to the change of the CEO of a firm in a particular year. This variable takes the value of 1 in the year in which the replacement occurs and 0 in all other cases. Forty-one replacements of the CEO are observed, constituting 8% of all replacements that could have taken place. It is noteworthy that in none of the cases was the replacement due to a change in the ownership of the firms.

b. Family link (FAL): A dummy variable is constructed, and it takes the value of 1 when the CEO of the company is a member of the proprietary family of the company (0 in the opposite case). The criterion used is the coincidence of surnames, which has been widely accepted in the literature (Anderson *et al.*, 2012). The CEO has the family tie in 52% of the cases.

c. Age (AGE): Age of the CEO. On average, they are 54 years old.

d. Work experience (WEX): The experience of the CEO within the company is measured according to the number of years working in the company. On average, CEOs have worked in the family firm for 21 years.

e. Education: Two measures (using dummy variables) of education of the CEO are considered:

I. If the CEO studied a postgraduate degree related to the business area (PBU), which is met by 41% of the CEOs.

II. If the CEO has university studies abroad (ABR), which is the case in 40% of cases.

f. Business Networks (INT): The interlocks variable is generated as a dummy variable, being 1 if in the same year the CEO of a firm is the owner member of the Board of Directors of another company (or companies), and 0 in the opposite case. On average, 29% of the CEOs considered participate in these business networks.

Control Variables

a. Leverage (LEV): Expressed as the ratio of total liabilities to shareholder equity.

b. Company Size (SIZ): Represented as the natural logarithm of total assets.

Methodology

Given the characteristics of the database, this study uses the panel data methodology. This methodology makes it possible to combine cross-sectional data with time series. A linear model is used for panel data, which is estimated using the ordinary least squares method. In this type of study, it is common to observe heteroscedasticity, so robust standard errors are used.

Equation 1 runs for the 69 non-financial family businesses listed on the Mexican Stock Exchange during the 2009-2016 period (552 observations):

$$FP_{it} = \partial_0 + \partial_1 RPZ_{it} + \partial_2 FAL_{it} + \partial_3 AGE_{it} + \partial_4 WEX_{it} + \partial_5 PBU_{it} + \partial_6 EXT_{it} + \partial_7 INT_{it} + \partial_8 RPZ_{it} * FAL_{it} + \partial_9 RPZ_{it} * AGE_{it} + \partial_{10} RPZ_{it} * WEX_{it} + \partial_{11} RPZ_{it} * PBU_{it} + \partial_{12} RPZ_{it} * ABR_{it} + \partial_{13} RPZ_{it} * INT_{it} + \sum_{s=14}^{15} \partial_s CV_{sit} + \mu_{it} \quad (1)$$

Where:

FP refers to financial performance, according to ROA and ROE. Since they are two dependent variables, the equation is run for each of them individually;

∂_0 is the constant;

RPZ refers to the replacement of the CEO;

FAL refers to the presence of the family link with the figure of the CEO;

AGE indicates the age of the CEO;

WEX indicates the number of years that the CEO has worked in the company;
PBU indicates if the CEO of the company has postgraduate studies in business;
ABR indicates whether the CEO has university studies abroad;
INT indicates whether the CEO is also a member of the Board of Directors of another company (s);
RPZ*FAL is the interaction between RPZ and FAL. It represents the replacements in favor of CEOs who are members of the families that own the companies;
RPZ*AGE is the interaction between RPZ and AGE. It refers to the age of the new CEO;
RPZ*WEX is the interaction between RPZ and WEX. It refers to the years of experience in the company of the new CEO;
RPZ*PBU is the interaction between RPZ and PBU. It refers to replacement CEOs who have a postgraduate degree in business;
RPZ*ABR is the interaction between RPZ and ABR. It indicates replacements in favor of CEOs who have studied at universities abroad;
RPZ*INT is the interaction between RPZ and INT. It represents the replacement CEOs who participate in interlocks.
CV refers to control variables that can also influence performance: firm size (SIZ) and leverage (LEV);
 μ is the term for random error;
i refers to companies;
t is the time

Results and Implications

Descriptive Analysis

From 2009 to 2016, in the family (non-financial) companies listed on the Mexican Stock Exchange, there were only 41 changes of CEO, representing 8% of all viable replacements. In 92% of cases, there was no transfer of command. In 24% of cases, a new CEO was elected as a member of the business family. The average ROE previous (one year before) to the replacements of the CEOs in the companies involved was 9.9%, with the average ROE (for the 2009-2016 period) being 7.1% in those family firms where there was no replacement. Regarding the ROA, its average value (for family companies where CEOs changed) one year before replacements was 5.0%, against an average value (for the 2009-2016 period) of 3.4% in firms where these changes did not occur in senior management. Therefore, the decision to make the change in command is not related to poor past performance, which is in line with the first hypothesis raised: Replacements of CEOs do not relate to the past performance of family businesses listed on the Mexican Stock Exchange.

On average, outgoing CEOs are relatively young—55 years old, the youngest being 38 years old, and the oldest being 80 years old. These data suggest that, in general, the recruitment of the new CEO does not occur because of the retirement or death of the predecessor. The change of this top executive may be due to a personal decision to leave the post, or to the expectation that with a new CEO, future profitability will rise.

However, during the years when CEOs are replaced, both the average ROE and ROA of the firms involved fall (4.3% and 2.7%) and are even lower compared to the average values of the companies that did not go through these events (7.1% and 3.4%). There is no substantial improvement over time in the average profitability of the firms where the transfer of command took place, which gives evidence in favor of the second hypothesis of the study. Subsequently, the average ROA of the family businesses involved stands at 4.8% (versus 5.0% before replacements), and the average ROE of the firms involved reaches 8.7% (against 9.9% the year before replacements). The above suggests that the succession process of family businesses listed on the Mexican Stock Exchange has not been successful so far.

Econometric Results

The repercussions of the replacements of the CEOs on the financial performance of family businesses listed on the Mexican Stock Exchange during 2009-2016 are obtained through the econometric approach of equation 1. Table 1 presents the results. Following the above, the moderating (and aggravating) effects of the characteristics and conditions of the new CEO on the profitability of these firms are studied.

Table 1
 CEO Replacements and Financial Performance

Explanatory Variable	Return on Equity (ROE)	Return on Assets (ROA)
Constant	-0.01 (-0.08)	-0.16** (-1.97)
RPZ	-2.56*** (-2.58)	-0.89** (-2.09)
FAL	-0.07* (-1.68)	-0.01 (-0.32)
AGE	0.00** (-2.16)	0.00 (-0.20)
WEX	0.00 (1.25)	0.00 (0.01)
PBU	0.01 (0.46)	0.00 (0.00)
ABR	-0.02 (-0.98)	0.02 (1.09)
INT	0.06* (1.78)	-0.01 (-0.71)
RPZ*FAL	-0.72*** (-3.51)	-0.30*** (-2.72)
RPZ*AGE	0.05*** (2.62)	0.02** (2.14)
RPZ*WEX	-0.01** (-1.91)	0.00 (-1.03)
RPZ*PBU	0.04 (0.23)	-0.02 (-0.40)
RPZ*ABR	-0.21 (-1.10)	-0.16 (-1.49)
RPZ*INT	1.08*** (3.18)	0.45** (2.33)
SIZ	0.03*** (3.80)	0.02** (2.22)
LEV	-0.04*** (-7.32)	0.00* (-2.90)
R ²	0.55	0.33
Statistical F	10.86	4.55

*** Significant at 1%

** Significant at 5%

* Significant at 10%

The t-statistic is shown between parentheses.

Source: own elaboration

In Table 1, the coefficient for RPZ (∂_1) captures the hypothetical linear relationship between financial performance and the replacement of the CEO, given the presence of other explanatory variables in the regression. The second hypothesis of the study (H2), that replacements are inversely related to the financial performance of the company, is corroborated (at 1% and 5% significance) for both the ROE and the ROA.

While there is evidence that the replacement of CEOs and financial performance are inversely related, the expectation is that specific characteristics and conditions of new CEOs will moderate—and others, in contrast, worsen—the negative impact on business performance.

Wald tests validate the expected moderating and aggravating effects of the characteristics and conditions of the new CEO on the profitability of these firms. In this respect, the hypotheses of the study set out in Table 2 below are tested:

Table 2
Hypothesis

Hypothesis	Wald test
Belonging to the business family increases the inverse relationship between the new CEO and financial performance (H3).	$\partial_1 + \partial_8 = 0$
The age of the new CEO exacerbates the inverse relationship between replacement and financial performance (H4).	$\partial_1 + \partial_9 = 0$
Years in the company mitigate the inverse relationship between the new CEO and financial performance (H5).	$\partial_1 + \partial_{10} = 0$
Having postgraduate studies in the business area mitigates the inverse relationship between the new CEO and financial performance (H6).	$\partial_1 + \partial_{11} = 0$
Studying abroad mitigates the inverse relationship between the new CEO and financial performance (H7).	$\partial_1 + \partial_{12} = 0$
Business networks of new CEOs mitigate the inverse relationship between the replacement and financial performance (H8)	$\partial_1 + \partial_{13} = 0$

Table 3 presents the results of the mitigating and detrimental effects of the characteristics and conditions of the new CEO on financial performance. There is strong evidence in favor of hypotheses 3 and 8.

H3- The appointment of family CEOs, compared to the hiring of external CEOs, has a negative impact on the profitability of family businesses listed on the Mexican Stock Exchange.

H8- The business networks (interlocks) in which the new CEOs participate have a positive impact on the profitability of family businesses listed on the Mexican Stock Exchange.

CEOs who are members of business families are interested in both financial and social-emotional wealth, which are often at odds with each other. Moreover, they do not compete on equal terms in the labor market, which tends to be counterproductive for business performance. A family CEO is generally more averse to risk than an external one, which leads to suboptimal financial decisions (San Martín-Reyna & Durán-Encalada, 2016). Being a member of the business family increases the economic dependence of the family on the company for two reasons: the remuneration received by the family CEO, which would perhaps be less without family protection, and because a family CEO might have difficulty finding a similar job in other companies (Leitterstorf & Wachter, 2016). For these reasons, it is desirable for the profitability of the firm that the new CEO be outside the business family.

The new CEOs use their business networks to increase their information, reduce uncertainty, ensure greater stability for the company, and expand their knowledge for the job (Martin *et al.*, 2015). Interlocks increase the efficiency and profitability of the connected companies since these networks improve the communication, coordination, and trust between the different participants that form the Boards of Directors (Beckman *et al.*, 2004). The above mitigates the negative effect of replacement on business performance and is, therefore, a desirable condition for the new CEOs of family businesses listed on the Mexican Stock Exchange.

Table 3
 Moderating and Aggravating Effects of the Characteristics of New CEOs on the Profitability of Family Businesses

Wald Test	ROE	Moderating or Aggravating Effect	ROA	Moderating or Aggravating Effect
H3: $\partial_1 + \partial_8 = 0$	-3.28** (-2.85)	Aggravating	-1.19* (-2.36)	Aggravating
H4: $\partial_1 + \partial_9 = 0$	-2.51** (-2.58)	No	-0.87* (-2.09)	No
H5: $\partial_1 + \partial_{10} = 0$	-2.58** (-2.59)	Aggravating	-0.89* (-2.09)	No
H6: $\partial_1 + \partial_{11} = 0$	-2.53** (-2.71)	No	-0.91* (-2.24)	No
H7: $\partial_1 + \partial_{12} = 0$	-2.78** (-2.58)	No	-1.05* (-2.21)	No
H8: $\partial_1 + \partial_{13} = 0$	-1.48 (-1.71)	Moderating	-0.44 (-1.11)	Moderating

** The hypothesis is rejected at 1% significance.

* The hypothesis is rejected at 5% significance.

The t-statistic is shown between parentheses.

Concerning control variables, it is clear that the size of the company is directly related to its financial performance. There are several arguments for the size effect on corporate results. First, taking advantage of economies of scale achieved in larger firms favors business performance. Second, larger firms have better conditions in the financial market, both in their access to credit and in the cost of credit. Finally, larger firms have the resources to compete for the best CEOs (Harford & Li, 2007). The relationship between the level of leverage and business performance is inconclusive.

Conclusions

This research analyzes the impact of the replacements of CEOs on the financial performance of family businesses listed on the Mexican Stock Exchange during the period 2009 to 2016. It also investigates the moderating and aggravating effects on business profitability of certain characteristics and conditions of these new top executives. Variables such as the family nature of the new CEO, their age, number of years working in the company, education, and presence in business networks are studied.

The results indicate that replacements of CEOs usually occur due to factors other than the retirement age or death of the predecessor, or previous underperformance. They may occur for personal reasons, for family reasons, or for the expectation that profitability will increase after the change. Future research may investigate. The truth is that financial performance falls significantly once there is a transfer of control, which does not fully recover in the years following this change. This fall in performance reveals significant weaknesses in the succession process of the family businesses under study.

The companies considered in this study have been in business for an average of 37 years, which places them in the first generation or the transition to the second generation. Therefore, few have made a change in senior management, and their experience in succession issues is limited. In fact, in the period studied, only 41 changes of CEOs occurred, representing 8% of the possible replacements. They are family businesses, where the business family concentrates an average of 60% of the property. Likewise, more than half (52%) of all CEOs are members of the business families, and some of them are founders of these families.

The success of the family business depends mainly on the figure of the founder, the member of the business family who had the vision, and who held the reins of the corporation. When this person leaves the company to a successor, conflicts can arise because the successor (or successors) does not necessarily have the same skills, vision, or credibility. Succession is a complicated process; replacing the founder is a complex task, and family businesses face significant challenges in terms of management, control, and asset management.

As far as the management of this type of organization is concerned, this study determines that replacements in favor of family CEOs (24% of all cases) further reduce financial performance. This reduction may be due to factors such as increased risk aversion, the pursuit of personal or family objectives over financial ones, or reduced management capacity. Conversely, when new CEOs participate in business networks (particularly interlocks), they exert a positive moderating effect on the profitability of the family businesses involved. The support, guidance, communication, better access to markets, and trust generated by these business links are reflected in better corporate results.

The variables of education and experience of the CEO, considered in this study, do not have any influence on business profitability, from the moment in which the transfer of command takes place. This is an unusual result, but pertinent to the rethinking of succession plans, where it is common practice to prioritize the criteria of academic and labor training of possible successors. At least in the change of management, it is advantageous to hire external CEOs, who have extensive business links.

Successful succession cases in Mexican family businesses are rare. These cases represent both a limitation and an opportunity for research. Time will dictate more experiences and, therefore, better business policy recommendations to promote the continuation in time of this type of organization. The findings of this research suggest a transition to CEOs external to the business family, with extensive networks and experience within the Boards of Directors of other family firms. The above favors the profitability of family firms listed on the Mexican Stock Exchange.

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