

The effect of family ownership on accrual-based and real activities based earnings management: Evidence from the French context

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Abstract

Research Question: What is the effect of family ownership on accrual-based earnings management (ABEM) and on real earnings management (REM)?

Motivation: Despite the importance and the predominance of family companies among the worldwide listed firms, there is a few study having examined earnings management in family businesses when compared to non-families ones. Their particular characteristics distinguishing them from typical public companies, family firms could provide an interesting setting for the purpose of investigating their earnings quality. **Idea:** Using agency theory and socio-emotional wealth (SEW) theory, we suggested and explained the impact of family ownership on earnings management. **Data:** We analyze a sample of French firms listed in CAC All-Tradable index in the period ranging from 2014 to 2016. **Tools:** We adopts the Generalized Least Squared (GLS) technique correcting heteroskedasticity and serial correlation problems related to panel data. **Findings:** We document that family ownership has no significant effects on ABEM, but it has a positive and significant influence on REM. In fact, this study conducted on French family firms shows that they are more involved in upward earnings management than non-family firms. Our results supports the hypothesis that family firms suffer from type II agency problems, and it can be explained by the desire to ensure the control and

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influence among the firm. **Contributions:** This study is expected to increase the understanding of the family firms' behavior in terms of their earnings management practices building on the both agency and SEW theory.

Keywords: family ownership, accrual-earnings management, real earnings management, agency problem, socio-emotional wealth.

JEL code: M41

1. Introduction

Financial scandals (Enron and Worldcom in the USA, Vivendi in France etc.) have created problems related to the quality of the financial statements, especially that of the earnings indicator. Due to these financial scandals, the attention of researchers and legislators has been given to earnings management, and to its impact on the quality of accounting and financial information. The earnings management practice leads to the fraudulent presentation of financial statements, and consequently to misleading investors (DeFond & Park, 1997; Labelle, 1990).

A great deal of research is dedicated to study the earnings management in public firms. However, there is a little study having examined earnings management in family businesses when compared to non-family ones (Salvato & Moores, 2010). Because of their importance and predominance among the worldwide listed firms (80% of companies¹) and their particular characteristics distinguishing them from typical public companies, family firms could provide an interesting setting for the purpose of investigating their earnings quality.

Even previous studies have produced mixed results. On the one hand, some researches based on US firms have concluded that family firms have a better financial quality disclosure (Ali *et al.*, 2007; Jiraporn & DaDalt, 2009; Martin *et al.*, 2016; Tong, 2007; Wang, 2006). Similar findings have been found out in German and Italian family firms (Achleitner *et al.*, 2014; Cascino *et al.*, 2010; Prencipe *et al.*, 2008). These studies have noted that family companies have less serious Type I agency problem, justifying the lower level of earnings management in family firms. On the other hand, for other countries, there are conclusions indicating that family firms are more engaged in earnings management than non-family ones (Chi *et al.*, 2015; Ding *et al.*, 2011; Razzaque *et al.*, 2016). These researches have given proof that family firms suffer from Type II agency conflicts. As a result of ownership concentration, the agency problem shifts from a manager-shareholder(s) conflict to that of majority-minority shareholders, given that there is a great potential of family owners' expropriating actions. Hence, family firms

engage more in earnings management. Therefore, the two types of agency conflicts can determine the level of earnings management in family firms.

Despite these different outcomes, most prior studies have looked into financial information quality provided by family firms, focusing on accrual-earnings management (hereafter ABEM) (Ali *et al.*, 2007; Martin *et al.*, 2016; Prencipe *et al.*, 2014; Stockmans *et al.*, 2010). To the best of our knowledge, there is little research on real earnings management (hereafter REM) in family business (Achleitner *et al.*, 2014; Chen *et al.*, 2015; Razzaque *et al.*, 2016). However, doing research on REM in family firms is substantial. Indeed, owner family members are often the managers of the firms (Anderson & Reeb, 2003), bringing about an alignment of interest between family owners and managers. This collusion favors the manipulation of real activities in order to appropriate benefits to the detriment of other shareholders, which may be denied by the concern for the potential negative effect of REM (Cohen & Zarowin, 2010; Graham *et al.*, 2005; Roychowdhury, 2006). What is more, family shareholders are less likely to adopt actions having a negative influence on the firm's future value because of their long-term orientations (Stein, 1989). Therefore, REMs in family firms remains a topic for further research.

Moreover, most previous studies have been based only on agency theory to account for the link between family firms and earnings management. In our study, we propose another explanation, aiming to predict this relationship. This explanation consists in the socio-emotional wealth (SEW) theory which has been developed within the field of family business research (Cennamo *et al.*, 2012; Prencipe *et al.*, 2014). The advanced idea of this theory is that the main objective of family firms is the preservation of their "non-financial-affected related value" (Prencipe *et al.*, 2014: 366).

Our research works towards exploring the effect of family ownership on ABEM and REM. Thus, we adopt both agency theory and SEW as a theoretical framework. As matter of fact, agency theory posits that in family firms, the traditional owner-manager agency conflict (Jensen & Meckling, 1976) is mitigated owing to their reduced separation of ownership and management. However, this alignment of interest between managers and owners brings about another type of agency conflicts: the problems between minority and majority shareholders (Fama & Jensen, 1983). Hence, this agency conflict results in incentives for earnings management to expropriate minority shareholders (Ding *et al.*, 2011). SEW theory states that family owners are not only motivated by economic aspects of business, but they are also concerned with non-financial objectives (Berrone *et al.*, 2012). They use SEW conservation as the key basis for assessment, drawing on the SEW preservation model which points out that earnings management is a gamble (Gómez-Mejía *et al.*, 2007). According (Berrone *et al.*, 2012), the SEW concept is multidimensional. It encompasses five dimensions labelled "FIBER": "Family

control and influence, Identification of family members with the firm, Binding social ties, Emotional attachment, and Renewal of family bonds to the firm through dynastic succession” (Berrone *et al.*, 2012: 259). These SEW dimensions are the leading features that give family firms exceptional qualities, and run their policy decisions (Berrone *et al.*, 2012; Gómez-Mejía *et al.*, 2010). However, a number of researches imply that these SEW dimensions could influence differently, in accordance with the family owners’ inclination (Berrone *et al.*, 2012; Cennamo *et al.*, 2012). Hence, Gómez-Mejía *et al.* (2014: 388) note that “the result of the gambling processes would be different among family owners, depending on their most salient SEW reference point”. Given that some authors (Gómez-Mejía *et al.*, 2007; Strike *et al.*, 2015) have reported that the two most important SEW dimensions are “Family control and influence” and “the Renewal of family bonds to the firm through dynastic succession”; we focus attention in this research on these two dimensions for the sake of foreseeing and accounting for the relation between family firms and earnings management. Indeed, the ‘Family control and influence’ dimension refers to a strong will on the part of family members to perpetuate family control and influence within its business (Berrone *et al.*, 2012), which can be an inducement for engaging in earnings management regardless of financial gains. However, when the trans-generational sustainability is more prominent, family members are more likely to avoid earnings management practices having a negative effect on the future performance and future earnings of the firm (Achleitner *et al.*, 2014; Gunny, 2005; Rodriguez-Ariza *et al.*, 2016).

Accordingly, we establish two alternative hypotheses. Firstly, since family firms are characterized by a less serious type I agency problem, and in order to ensure the trans-generational sustainability, family owners are less likely to engage in income-increasing earnings management practices having a negative impact on the future performance and value of the firm. Secondly, we argue that so as to seek private gains at the expense of other minority shareholders (Type II agency problem), and for maintaining control and influence among the business, managers in family firms are more likely to engage in earnings management than those in non-family firms.

These arguments are tested in French companies listed in the CAC All-Tradable over the period between 2014 and 2016. The French equity market represents an ideal setting for investigating the influence of family ownership on earnings management for the following reasons: (a) there is a huge number of listed family firms (between 60 and 70% according to various studies: PWC, KPMG, INSEE); (b) there is a high degree of ownership concentration across all listed firms (La Porta *et al.*, 1999); (c) it represents a particular institutional environment characterized by a low investor protection. The investor protection is a leading factor affecting firms’ ability to engage in earnings management (La Porta *et al.*, 2006; Leuz *et al.*, 2003); and (d) to the best of our knowledge, there are few studies dealing with this issue in the French context (Mard & Marsat, 2012). Mard and

Marsat (2012) examined the practice of earnings management in French companies, taking into account the different types of ownership (managerial, family, institutional, financial, and State). They used discretionary accruals so that they could measure earnings management. Thus, it is important to consider the impact of family ownership on earnings management practices (ABEM and REM) in the French context.

Our results show that family ownership has no effect on ABEM, so there is no significant difference between ABEM in family firms and in non-family ones. However, family ownership has a positive and significant impact on REM. Hence, our study provides two main conclusions. To start with, we provide evidence that family companies in France are more engaged in earnings management practices (via REM) than non-family ones. Second, we evince that family firms use real activities to manipulate earnings. These results are consistent with Chen *et al.* (2015) and Razzaque *et al.* (2016). We could explain our findings as follows. To begin with, family firms have more serious agency problems between the controlling family and the minority shareholders (type II agency problem). Second, given that we have relied on the two main dimensions of the SEW theory to predict the effect of family ownership on earnings management, it is worth saying that French family firms are more likely to prevail the control and influence aspect of SEW theory than the trans-generational sustainability. Thus, aiming for ascertaining the control and the influence among the firm, family owners engage in earnings management. Hence, longing for maintaining control and influence among firms deepens the agency problems between family owners (majority shareholders) and other shareholders (minority shareholders). Third, family firms give an interesting framework for the REM practices. The position of family members established and implanted allows them to have a direct access to real activities. Fourth, while the manipulation of accruals often takes place at the end of the fiscal year, REM may occur at any time of the year. Finally, ABEM can be easily detected by auditors, regulators, and independent directors (Klein, 2002; Zang, 2011) whereas it is difficult for REM to detect and distinguish other economic transactions of the company.

This paper contributes to the family business and earnings management literature in many ways. First of all, our findings add to the studies on the quality of financial information in family business. In fact, unlike the prior studies having only focused on ABEM (Ali *et al.*, 2007; Prencipe *et al.*, 2014; Stockmans *et al.*, 2010), our research explores the two methods of earnings management: ABEM and REM. Second, most previous studies have been based on the agency theory to explain the relation between family firms and earnings management. The current study also uses the SEW theory offering a clearer framework to investigate this relationship. Thus, the pursuit of financial objective can be secondary to the SEW preservation. Indeed, a set of empirical studies shows how SEW foresees different strategic choices (Berrone *et al.*, 2010; Gómez-Mejía *et al.*, 2011; Gómez-Mejía *et al.*,

2010). Therefore, it is of great importance to consider this non-economic goal to predict and account for the earnings management in family firms. Third, this research reveals that family owners seeking to preserve control and influence among firms make accounting choices that increase income at the expense of other objectives such as future performance. Finally, our results add to the literature through presenting the experimental proof of earnings management in family corporations in an advanced economy, and these outcomes could be more common in contexts identical to France regarding the impotent institutional patronage.

The remainder of this paper is organized as follows. In the next section, we will depict the theoretical framework we use to develop the hypothesis. In the subsequent section, we present the methodology of study: the data, and the empirical model. Finally, we will discuss our results, and conclude.

2. Theoretical framework and research hypothesis

2.1 Theoretical framework

We have used two main theoretical frameworks in this study: agency theory and SEW theory. According to the agency theory, the firm is defined as “a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision making authority to the agent.” (Jensen and Meckling, 1976: 308). One of the features of widely-held firms is the separation between ownership and control, leading to agency conflicts between the manager and the owner (Jensen & Meckling, 1976). Hence, family firms are characterized by a concentrated ownership, and they are run by multiple family members (Paiva *et al.*, 2016), which reduces the traditional owner–manager conflicts (Type I agency problem). Some studies have shown that the concentration of ownership makes managers be subjected to effective close scrutiny. The better control of management can mitigate the managerial opportunistic behavior, so it can reduce earnings management practices (Achleitner *et al.*, 2014; Pazzaglia *et al.*, 2013; Prencipe & Bar-Yosef, 2011).

Majority and minority shareholders are two distinct groups of shareholders resulting from the family ownership concentration nonetheless. Accordingly, this can create a new agency problem consisting in a conflict between the controlling family and the minority shareholders (Type II agency problem). A controlling family has an opportunity to maximize its private benefits through expropriating minority shareholders. Hence, the majority shareholders (family) involved in the firm management handle the results so that they could have private interests to the detriment of the minority shareholders (Anderson *et al.*, 2009; Chrisman *et al.*, 2004; Salvato & Moores, 2010). This entrenchment effect brought about by owners

and managers may lead to a higher level of earnings management. Therefore, these two types of agency problem might determine the extent of earnings management in family firms.

The Socio-emotional wealth theory (SEW theory) theory asserts that the protection and the improvement of the utility gained from the non-economic aspects of the business is one of the leading objectives of the family owners when making decisions (Gómez-Mejía *et al.*, 2011; Gómez-Mejía *et al.*, 2007). These non-economic aspects -such as maintaining family control and influence, financial independence of the firm, identification of family members with the firm, and the transfer of the firm to the next generation- are defined as the socio-emotional wealth of the family member (Gómez-Mejía *et al.*, 2007). In other words, SEW generally refers to the “non-financial affect-related value” that a family acquires from its position of control and influence in order to pass it on to the next generation (Berrone *et al.*, 2012). Indeed, this conjecture is found in Chua *et al.* (1999) and Schulze *et al.* (2003a) who consider that one main characteristic distinguishing family firms is that family members exercise control over strategic decisions. The ‘Family control and influence’ constitute an influential dimension of SEW, and it refers to a strong desire by family members to maintain influence and control over the business (Berrone *et al.*, 2012).

Families can directly exercise control through occupying posts of chief executive officer (CEO) or chairman of the board, or more via appointing the top management team (TMT) members (Gómez-Mejía *et al.*, 2011). As a consequence, the strategic decisions of family companies using "control and influence" as the main important dimension of SEW will generally be guided by the desire to keep family control over the business regardless of the economic considerations (Gómez-Mejía *et al.*, 2007). Hence, so as to ensure and perpetuate the control and influence among the business, can be a spur for engaging in earnings management. Indeed, family owners emphasizing the control aspects of SEW are interested in avoiding the presence of any sources of financing which may affect their control position (Gómez-Mejía *et al.*, 2010). As a consequence, for keeping their control position and influence over the firm, family owners will be more likely to engage in earnings management to avoid violation of the restrictive clauses of debt contracts (Prencipe *et al.*, 2008). Similarly, family owners who emphasize the control and influence dimension of SEW are under increasing pressure to reach or exceed the specified result threshold. Several studies have shown that the publication of a negative result has harmful effects on the perception of the financial market, the stock market price and the cost of debt (Brown & Caylor, 2005). This could lead investors to question the family’s dominant position in the business, undermining the perpetuation of its control and influence. Accordingly, they will opt for earnings management to reach the earnings benchmark.

For other family owners, however, the “Renewal of family bonds to the firm through dynastic succession” dimension of SEW is considered as highly salient. This dimension refers to the intention of transmitting the business to future generations (Berrone *et al.*, 2012). As a matter of the fact, some studies have shown that maintaining the business for the next generation is commonly considered as a main objective for family owners (Miller & Le Breton-Miller, 2006). When the trans-generational sustainability is more substantial, family members will be more likely to avoid any strategic decision having a negative effect on the future performance and future earnings of the firm (Achleitner *et al.*, 2014). Regarding the relation between family ownership and earnings management, this dimension of SEW would reveal that family owners are less likely to engage in earning-management actions because of their negative consequences on future-accounting decisions, earnings and performance (Graham *et al.*, 2005; Gunny, 2005; Jensen, 2005; McVay, 2006; Rodriguez-Ariza *et al.*, 2016).

In short, the effect of family ownership on earnings management varies in accordance with the preferences of family owners who either keep control and influence or bequeath the business for future generations. In the subsequent section, we will develop our argument about family ownership having an impact on earnings management. This effect is derived from two perspectives: agency theory and SEW preservation.

2.2 Earnings management in family firms: Research hypothesis

There is existing literature showing contradictory results with respect to financial information quality of family firms. One axis of research based on US firms affirms that family businesses have better quality of financial information, and they are less engaged in earnings management practices than non-family ones (Ali *et al.*, 2007; Jiraporn & DaDalt, 2009; Martin *et al.*, 2016; Wang, 2006). Similar findings have been found in studies based on German and Italian firms (Achleitner *et al.*, 2014; Cascino *et al.*, 2010; Prencipe & Bar-Yosef, 2011). These studies have put to the proof that family firms face less serious Type I agency problems arising between managers and shareowners than non-family firms as a family represents the majority shareholders, and since it takes part in the management of the firm. These facts justify a better quality of financial and accounting information.

The SEW theory evinces that in family firms, the major concern of family owners is to safeguard the usefulness it gains from the business non-economic aspects (Gómez-Mejía *et al.*, 2007). These aspects include, among others, the identification of family members with the firm, the enhancement of the family’s ability to exercise control, and the preservation of the family dynasty to future generations (Berrone *et al.*, 2012; Gómez-Mejía *et al.*, 2010). Based on the trans-generational sustainability dimension of SEW theory, Achleitner *et al.* (2014) provided evidence

that in order to maintain and preserve the wealth over time, family firms in Germany have to avoid REM inhibiting the firm's long-term value, and to engage in downward accrual-earnings management helping families retain trans-generational control. In the same vein, using a sample of listed firms in Japan, Chen *et al.* (2015) showed that the magnitude of income decrease using accrual-based strategies is greater for family firms compared to non-family ones, and they found that REM is lower for family firms compared to non-family ones. These authors came up with the idea that a founding family cared about the reputation of its company for supporting SEW, and family firms have fewer type I agency problems.

As noted above, when the trans-generational sustainability of the business is the reference dimension of SEW theory, family owners are predicted to avoid actions having a negative impact on future accounting decisions, earnings and performance (Graham *et al.*, 2005; Gunny, 2005; Jensen, 2005; McVay, 2006; Rodriguez-Ariza *et al.*, 2016). Furthermore, family firms are characterized by a concentrated ownership, and they are managed by multiple family members (Paiva *et al.*, 2016), reducing the traditional owner–manager conflicts (Type I agency problem). These arguments lead family firms to be less likely to engage in income-increasing earnings management practices (ABEM and REM).

However, high levels of ownership concentration, and the collusion between ownership and management increase the opportunity for controlling family shareholders to expropriate minorities in family firms. Thus, the agency problem shifts from the traditional owner–manager conflicts (Type I agency problem) to one of majority-minority shareholders (Type II agency problem) (Faccio *et al.*, 2001; La Porta *et al.*, 2000). In this case, more recent studies have found a higher level of earnings management in family firms when compared with non-family ones. Chi *et al.* (2015) examine the relation between family ownership and earnings management in Taiwan. They remark that there is a higher level of discretionary accruals in family firms when compared to non-family ones. In the same context, Tai (2017) confirms the result found by Chi *et al.* (2015).

In a comparative study, Eng *et al.* (2019) looked into the difference in REM between US family firms and Chinese family ones. They substantiated that there is greater REM in family firms than in non-family ones in both countries. Moreover, they measured the dissimilarity of REM between Chinese and U.S. family corporations following the 2008 financial crisis, and showed that REM is greater in the US post-financial crisis, but it's lower in Chinese family firms in the post-financial crisis. Hence, they noted that family firms face more serious type II agency conflict, and that the level of REM may be affected by the institutional context. Thus, controlling shareholders can easily expropriate wealth from minority investors in less developed institutions where investor protection laws are poor.

Although the ‘Family control and influence’ is an important dimension of SEW (Berrone *et al.*, 2012), the strategic decisions of family owners will be based on the desire to maintain family control regardless of the economic considerations (Gómez-Mejía *et al.*, 2007). Thus, keeping and perpetuating the control and influence can be a motivation to engage in earnings management (Gómez-Mejía *et al.*, 2014).

While the ownership structure of family firms enables controlling shareholders to manipulate earnings for personal benefits (Fan & Wong, 2002; Leuz *et al.*, 2003; Shleifer & Vishny, 1997), and taking into account the family control and influence dimension of SEW, we expect that family owners have greater incentives to engage in upward earnings management.

Resting on the reasoning mentioned above, we establish two alternative hypotheses. Considering the less serious Type I agency problems in family firms because of the close relationship between management and owners and due to the desire to bequeath the business to the future generation (as a key dimension of SEW), we propose that family owners have more incentives to avoid upward earnings management decreasing the firm’s value. As an alternative hypothesis, we expect that family firms to be more likely to better manage their results. Therefore, our hypothesis is:

Family ownership has a negative and significant effect on upward earnings management.

If the alternative hypothesis is supported, the cause may be the entrenchment effect by owners and manager, so this collusion can lead to another type of agency conflict that occurs between majority and minority shareholders (type II agency problem) (Faccio *et al.*, 2001; La Porta *et al.*, 2000). On this account, for same family owners, “Family control and influence” dimension of SEW is perceived as highly important, so it could be a stimulus for involving in earnings management (Gómez-Mejía *et al.*, 2014; Prencipe *et al.*, 2008).

3 Methodology

3.1 Sample

In order to test our hypothesis, our sample includes French companies listed on the CAC All-Tradable over the fiscal years through the 2014 to 2016 sample period. Our initial sample includes 306 listed companies on CAC All-Tradable. We reject financial activities (banks, and insurance companies) since they are governed by specific regulations, and because they have unique operating characteristics, so they are not comparable to non-financial firms. For these reasons, we exclude listed firms whose reference documents are not available online during the data collection period. Furthermore, the methodology for the estimation of earnings

management proxies requires at least 15 observations for each 2-digit SIC grouping per year (Cohen & Zarowin, 2010; Roychowdhury, 2006), which further reduces the sample. As a result of some missing values for the control variables, the final sample consists of 729 firm-year observations.

Financial data are collected from DataStream database. Due to lack of an electronic database of ownership information, the data are hand-collected from annual reports and reference documents. Aiming to identify family firms, we have referred to the criteria defined by Astrachan and Kolenko (1994), and used thereafter by Ali *et al.* (2007) and Beldi *et al.* (2014), i.e. companies whose capital held by the same family is more than 50% for unlisted companies, and 10% for listed companies, or one or more members of the family is present in the management or those have transmitted the business to future generations.

Based on these criteria, we have defined family firms as companies in which aggregate ownership held by family members is at least 10% of total shares, and one or more directors on the board are from the same family (Beldi *et al.*, 2014). Counting on this definition, we generate a sample of 254 family firms' observations and 475 non-family firms' ones (see table 1).

Table 1. Distribution of family firms and non-family firms

Year	Number of firms (family firms and non-family ones)	Family firms		Non-family firms	
		Number	Percentage	Number	Percentage
2014	237	84	35.44%	153	64.55%
2015	247	85	34.41%	162	65.58%
2016	245	85	34.69%	160	65.30%
Total	729	254	34.84%	475	65.15%

3.2 Variables

3.2.1 Dependent variables

In this study, we have adopted two measures of earnings management: discretionary accruals and real earnings management.

Measurement of accrual-based earnings management (ABEM): We use the abnormal discretionary accruals as a proxy for the extent of (upward) accrual-earnings management. Several methods are adopted to estimate discretionary accruals. According to Bartov *et al.* (2000), the modified Jones model provides the best estimates of discretionary accruals.

Thus, “ABEM” is estimated, using the modified Jones model on a cross-sectional basis as in Dechow *et al.* (1995). The estimation model of abnormal accruals is described as follows:

$$\begin{aligned} \text{TAC}_{i,t} / \text{AT}_{i,t-1} = & \alpha_0 + \alpha_1 \left(\frac{1}{\text{AT}_{i,t-1}} \right) + \alpha_2 \left(\frac{(\Delta \text{Rev}_{i,t} - \Delta \text{Rec}_{i,t})}{\text{AT}_{i,t-1}} \right) \\ & + \alpha_3 \left(\frac{\text{PPE}_{i,t}}{\text{AT}_{i,t-1}} \right) + \varepsilon_{i,t} \end{aligned}$$

where $\text{TAC}_{i,t}$: Total accruals of firm i in year t , $\text{AT}_{i,t-1}$: Total assets of firm i at the beginning of year $t-1$, $\Delta \text{Rev}_{i,t}$: Change in revenues of firm i in year t , $\Delta \text{Rec}_{i,t}$: Change in receivable accounts of firm i in year t , $\text{PPE}_{i,t}$: Gross property, plant and equipment of firm i in year t . Discretionary accruals are obtained by the difference between total accruals and non-discretionary accruals.

Since we predict that family ownership has a negative impact on upward earnings management, the earnings management is directional. Thus, our research design should focus attention on the raw value of discretionary accruals (Larcker & Richardson, 2004).

Measurement of real earnings management (REM): Following Roychowdhury (2006), we consider three proxies: the abnormal cash flows from operations (AbCfo), the abnormal discretionary expenses (AbDisc), and the abnormal production costs (AbProd). These measures have been used by other researchers (Cohen *et al.*, 2008; Cohen & Zarowin, 2010).

Abnormal cash flows from operations “AbCfo”: Managers can accelerate sales from the following year to the current year, by offering price reductions or more flexible credit terms. This, therefore, increases the profits for the current financial year while it may result in lower cash-flows from operation for the same level of sales. Indeed, managers are ready to sacrifice future profits to make additional sales in the current period (Roychowdhury, 2006). Hence, cash flows from operations (CFO) which are abnormally lower than the normal level is interpreted as evidence of earnings-increasing REM. To estimate the normal level of CFO, we use the following model:

$$\begin{aligned} \text{CFO}_{i,t} / \text{AT}_{i,t-1} = & \alpha_0 + \alpha_1 \left(\frac{1}{\text{AT}_{i,t-1}} \right) + \alpha_2 \left(\frac{\text{Sales}_{i,t}}{\text{AT}_{i,t-1}} \right) \\ & + \alpha_3 \left(\frac{\Delta \text{Sales}_{i,t}}{\text{AT}_{i,t-1}} \right) + \varepsilon_{i,t} \end{aligned}$$

where $CFO_{i,t}$: Cash-flows from operations of firm i in year t ; $AT_{i,t-1}$: Total assets of firm i at the beginning of year $t-1$; $Sales_{i,t}$: Net Sales of firm i in year t ; $\Delta Sales_{i,t}$: Change in Sales of firm i in year t .

Abnormal cash flows are obtained by the difference between the total cash flows from operations and the normal level of cash flows (non-discretionary).

Abnormal discretionary expenses "AbDisc": Managers can increase profits for the current fiscal year by reducing expenses related to investing activities such as research and development expenses (R&D), general and administrative expenses and advertising expenses (SG&A). Negative values of abnormal discretionary expenses "AbDisc" are interpreted as evidence of earnings-increasing REM. As a result, the normal level of discretionary expenses will be estimated, using the Roychowdhury (2006) following model:

$$DISDEP_{i,t}/AT_{i,t-1} = \alpha_0 + \alpha_1 \left(1/AT_{i,t-1}\right) + \alpha_2 \left(\frac{Sales_{i,t-1}}{AT_{i,t-1}}\right) + \epsilon_{i,t}$$

where $DISDEP_{i,t}$: discretionary expenses of firm i in the period t ; ; $AT_{i,t-1}$: Total assets of firm i at the beginning of year $t-1$; $Sales_{i,t-1}$: Net Sales of firm i in year $t-1$. The AbDisc is set equal to actual discretionary expenses minus normal level of discretionary expenses.

Abnormal production costs "AbProd": Manager can overproduce to reduce the costs of products sold (COGS). As a result, they spread fixed costs over a larger number of production units. Thus, the cost of production per unit decreases, resulting in increase in earnings. Therefore, an abnormal increase in production costs is interpreted as an upward earnings management. Production costs are defined as the sum of costs of goods sold (COGS) at time t and the change in inventories (ΔINV). The normal level of PROD is estimated with the following model (Roychowdhury, 2006):

$$\begin{aligned} PROD_{i,t}/AT_{i,t-1} &= \alpha_0 + \alpha_1 \left(1/AT_{i,t-1}\right) + \alpha_2 \left(\frac{Sales_{i,t}}{AT_{i,t-1}}\right) \\ &+ \alpha_3 \left(\frac{\Delta Sales_{i,t}}{AT_{i,t-1}}\right) + \alpha_4 \left(\frac{\Delta Sales_{i,t-1}}{AT_{i,t-1}}\right) + \epsilon_{i,t} \end{aligned}$$

where $PROD_{i,t}$: production costs of firm i at time t ; and all other variables are as previously defined. The AbProd is the difference between actual PROD and the expected normal level.

Following foregoing researches (Cohen *et al.*, 2008; Roychowdhury, 2006), we construct an overall summary measure of REM (REM_AGG), using the sum of the three standardized REM metrics ($- AbCfo - AbDisc + AbProd$), so that greater values of REM_AGG imply higher levels of REM.

3.2.2 Independent and control variables

We investigate earnings management in the French family firms, and hence our independent variable is family ownership. A firm is classified as a family firm (FF) if the aggregate ownership held by family members is at least 10% of total shares, and one or more directors on the board are from the same family (Ali *et al.*, 2007, Beldi *et al.*, 2014). Thus, “**FF**” is a binary variable which is set equal to one if a firm is classified as a family firm, and zero, otherwise. We use this variable because it is adopted by a large number of studies on the family business (Beldi *et al.*, 2014; Cascino *et al.*, 2010; Chen & Jaggi, 2000), and it allows us to take into account not only the percentage of shares owned by family, but also the presence of the family members in a governing body.

In our regression analysis testing, we also control other factors possibly having an effect on the level of earnings management. Following preceding studies, we control firm size (**SIZE**) defined as the natural logarithm of total assets at the end of the period (Becker *et al.*, 1998; Cormier *et al.*, 1998). The political cost hypothesis evinces that the higher the political costs to the company (e.g., taxes or costs incurred by government or industry regulations) are, the more likely the management is to make income-decreasing accounting choices so as to reduce the size or the probability of wealth transfers politically imposed (Watts & Zimmerman, 1978).

Furthermore, leverage (**LEV**) is included. It is measured by the proportion of total debts to total assets. The debt covenant hypothesis states that after debt contracts have been negotiated, firms have incentives to make upward earnings management for the purpose of avoiding the violation of covenants in their debt agreements (Beneish & Press, 1993).

We also include the profitability (return on assets ratio (ROA)) in our models so that we can control the impact of firm-operating performance on earnings management. Hence, “**ROA**” is measured by the ratio of operating income to total assets (Aslam *et al.*, 2016; Chavali & Rosario, 2018). Several studies find evidence consistent with earnings management being positively associated with the manager’s expectation of future performance (DeFond & Park, 1997; Jennifer *et al.*, 2005; Subramanyam, 1996).

In addition, we control the firm-specific risk of bankruptcy (Burgstahler & Dichev, 1997, Degeorge *et al.*, 1999). Thus, “**LOSS**” is a dummy variable taking the value one if net income is less than zero, and zero, otherwise (Achleitner *et al.*, 2014; Embong & Hosseini, 2018; Razzaque *et al.*, 2016).

Moreover, some previous studies have reported that high levels of growth opportunities may encourage managers to engage in earnings management practices (Becker *et al.*, 1998; Roychowdhury, 2006). We then include “**Growth**” measured by the sales growth rate for the current period (Chi *et al.*, 2015; Malik & Ahmad, 2017).

Lastly, we control the age of the firm. Various researches give proof that old firms might improve their reputation and image (Akhtaruddin, 2005), and enhance their financial reporting practices over time (Alsaeed, 2006). Old firms might also have a sounder governance mechanism, and so a low agency costs (Chu, 2009). Therefore, the older the firms are, the less likely they are to engage in earnings management practices. “**FirmAge**” has been measured as natural logarithm of total years since the firms were founded (Bassiouny *et al.*, 2016; Jara-Bertin & Sepulveda, 2016).

Table 2. Description and measurement variables

Variables	Definition	Measure
<i>Dependent variables</i>		
ABEM	Abnormal discretionary Accruals	the modified Jones model (Dechow <i>et al.</i> , 1995)
REM-AGG	Aggregate REM measures	Following Roychowdhury (2006), REM_AGG is the sum of three standardized REM metrics
<i>Independent variables</i>		
FF	Family Firm	Binary variable which equals one if a firm is classified as family firm, and zero, otherwise (Ali <i>et al.</i> , 2007; Beldi <i>et al.</i> , 2014)
SIZE	Firm size	The natural logarithm of total assets at the end of the period (Becker <i>et al.</i> , 1998; Cormier <i>et al.</i> , 1998).
LEV	Leverage of the firm	The proportion of total debts to total assets (Achleitner <i>et al.</i> , 2014).
ROA	Firm operating performance	The ratio of operating income to total assets (Aslam <i>et al.</i> , 2016; Chavali & Rosario, 2018).
LOSS	Financial distress	Dummy variable, coded one if net incomes is less than zero, and zero, otherwise (Achleitner <i>et al.</i> , 2014; Embong & Hosseini, 2018; Razzaque <i>et al.</i> , 2016).
Growth	The growth opportunities	The sales growth rate for the current period (Chi <i>et al.</i> , 2015; Malik & Ahmad, 2017).
FirmAge	The age of the firm	The natural logarithm of total years since the firm is founded (Bassiouny <i>et al.</i> , 2016; Jara-Bertin & Sepulveda, 2016).

3.2.3 The Regression Models

In the current paper, we explore both accrual-based earnings management (ABEM) and real activity-based earnings management (REM). Thus, intending to test our hypothesis, our models are as follows:

$$\text{Model 1 } \text{ABEM}_{it} = \alpha_0 + \alpha_1 \text{FF}_{it} + \alpha_2 \text{SIZE}_{it} + \alpha_3 \text{LEV}_{it} + \alpha_4 \text{ROA}_{it} + \alpha_5 \text{LOSS}_{it} + \alpha_6 \text{Grwoth}_{it} + \alpha_7 \text{FirmAge}_{it} + \epsilon_{it},$$

where ABEM_{it} : abnormal discretionary accruals; FF_{it} : dummy variable coded one if a firm is a family one, and zero, otherwise; SIZE_{it} : the natural logarithm of total assets at the end of the period; LEV_{it} : the proportion of long-term debts to total assets; ROA_{it} : the ratio of operating income to total assets; LOSS_{it} : dummy variable coded one if net income is less than zero, and zero, otherwise; Grwoth_{it} : the sales growth rate for the current period; FirmAge_{it} : the natural logarithm of total years since the firm is founded.

$$\text{Model 2 } \text{REM_AGG}_{it} = \alpha_0 + \alpha_1 \text{FF}_{it} + \alpha_2 \text{SIZE}_{it} + \alpha_3 \text{LEV}_{it} + \alpha_4 \text{ROA}_{it} + \alpha_5 \text{LOSS}_{it} + \alpha_6 \text{Grwoth}_{it} + \alpha_7 \text{FirmAge}_{it} + \epsilon_{it},$$

where REM_AGG_{it} : real earnings management measured by the aggregate REM measure; and all other variables are as previously defined.

4 Results

4.1 Descriptive Statistics

Table 3 exhibits the descriptive statistics of the quantitative variables in the overall sample, and table 4 displays the number and the percentage of dummy variables in the pooled sample. For table 5, it presents the descriptive statistics of the dependent variables in the two sub-samples (Family Firm and Non-Family Firm).

The mean of the discretionary accruals is negative, which means that most companies manipulate the discretionary accruals downward with the aim of reducing earnings. Moreover, table 5 shows that discretionary accruals are more important (in terms of absolute value) for family firms than for non-family ones ($|-0.007| > |0.012|$). Additionally, table 5 points out a positive mean of REM_AGG in family firms (0.016) and a negative one of REM_AGG in non-family firms (-0.009). This indicates that, on average, the REM_AGG is more important for family companies than for non-family ones ($|0.016| > |-0.009|$). This result is consistent with (Razzaque *et al.*, 2016).

The result of Mann–Whitney test about mean comparisons of variables between the two groups of firms displayed in Table 5 confirms the significance difference of means between the two groups of two variables: ABEM and REM_AGG. The level of ABEM is different at 10% level between family and non-family firms, and the level of REM_AGG is significant at 5% level. These results provide initial proof that the amount of earnings management (ABEM and REM) in family firms is greater than that of earnings management in non-family ones.

Table 3. Descriptive Statistics for pooled sample (N=729)

Variables	Mean	Std.Dev.	Min	Max
ABEM	-0.0004	0.1566	-2.2721	1.1588
REM_AGG	-0.0005	0.3994	-2.7921	3.1707
SIZE	13.4111	2.4682	7.9582	19.4503
LEV	0.2213	0.2259	0	3.8125
ROA	-0.0049	0.1986	-1.8738	0.6724
Growth	0.6378	4.9644	-17.8309	82.2631
FirmAge	3.5282	0.8688	0	5.7462

Table 4. Descriptive Statistics of dummy variable

Variables	Modality	Number			Percentage		
		2014	2015	2016	2014	2015	2016
LOSS	1	64	70	68	27.00%	28.34%	27.75%
	0	173	177	177	93.00%	71.66%	72.25%
Total		237	247	245	100%	100%	100%

Table 5. Descriptive Statistics of dependent variables for two subsamples (Family Firm and Non-Family Firm)

Variables	Non-Family firms (n=475)				Family firms (n=254)				Difference mean z-test
	Mean	Std.Dev	Min	Max	Mean	Std.Dev	Min	Max	
ABEM	-0.0073	0.1551	-2.2721	0.4262	0.0124	0.1588	-1.9933	1.1588	-1.742* (0.0816)
REM_AGG	-0.0096	0.4250	-2.7921	3.1707	0.0163	0.3467	-1.2292	0.7536	-1.973** (0.0485)

* Significant at 10%, ** significant at 5%, *** significant at 1%

4.2 Correlation matrix

Table 6 reports the Pearson correlation matrix between independent variables. The matrix should not exceed 0,8 to evince that multicollinearity does not constitute a major concern (Gujarati, 2003). As shown in table 6, we have realized that there is no serious correlation problem between variables.

Table 6. Pearson correlation between independent variables

	FF	SIZE	LEV	ROA	LOSS	Growth	FirmAge
FF	1.000						
SIZE	0.026	1.000					
LEV	-0.063	0.146	1.000				
ROA	0.212	0.412	0.034	1.000			
LOSS	-0.253	-0.392	0.006	-0.604	1.000		
Growth	-0.103	-0.162	-0.034	-0.359	0.237	1.000	
FirmAge	0.270	0.318	0.082	0.345	-0.330	-0.162	1.000

4.3 Regression Results

In this section, we present and discuss the results of the regression attempting to analyze the effect of family ownership on earnings management. In order to decide on the homogeneity or heterogeneity of the panel data, we run a specification panel test. Then, we address the tests for the heteroscedasticity and the serial correlation of error terms. We adopt the Generalized Least Squared (GLS) technique correcting heteroskedasticity and serial correlation problems related to panel data (Ouellet *et al.*, 2005). The results are displayed in Table 7. The Wald Chi2 tests are significant at 1% level for two models.

As shown in Table 7, the results drawn from regression (model 1) suggest that the variable "FF" has no significant effect on ABEM, so our hypothesis is not supported. Unlike our results from the test for comparing means, evidence in this table reports that the family ownership has no significant effect on the ABEM. This result contradicts those found by a number of authors like Achleitner *et al.* (2014), Cascino *et al.* (2010), and Chi *et al.* (2015).

The result in table 7 points that the coefficient estimates on "FF" is positive and significant at 1% level in model 2 (coefficient= 0.053; p-value= 0.000). Overall, we find that family firms in France engage more in REM than non-family ones. Our alternative hypothesis is accepted. This result reinforces those of Eng *et al.* (2019) for US and Chinese family firms, and Razzaque *et al.* (2016) for Bangladeshi family firms. This provides three proofs (1) family firms face more serious type II agency problems arising from the conflict between the majority and the minority shareholders (Ali *et al.*, 2007, Anderson *et al.*, 2009). Controlling

shareholders (family owners) have incentives to expropriate minority shareholders in order to appropriate their private benefits; (2) despite the fact that REM may have a negative consequence on the firm's future value (Gunny, 2005), family owners emphasizing the control aspects of SEW engage more in REM to keep control and influence over the business regardless of economic outcomes; and (3) the desire to maintain control among firms can deepen the agency problems between family owners (majority shareholders) and other shareholders. As a consequence, family firms are more engaged in earnings management practices than non-family ones.

To summarize, we can draw two main conclusions. Firstly, family firms in France are more engaged in earnings management practices. This result provides evidence that family firms suffer from the type II agency problem. What is more, it gives proof that for family owners –taking into account the ‘Family control and influence’ dimension of SEW as more substantial reference point than the ‘trans-generational sustainability’ dimension- manage their earnings regardless of the impacts that could be created. Accordingly, the desire to maintain control and influence among firms deepens the agency problems between family owners (majority shareholders) and other shareholders (minority shareholders). Secondly, family owners use real activities to manipulate earnings. This can be explained as follows: to begin with, as accrual manipulations are often held at the end of the fiscal year, REM may occur at any time of the year. Besides, from a managerial perspective, REM activities are more flexible and easier for family firms because family owners are often an executive directors in the firms (Anderson *et al.*, 2003), so they may enjoy greater latitude in altering real activities. Finally, ABEM can be easily detected by auditors, regulators and independent directors (Klein, 2002; Zang, 2011) whereas REM is less likely to be detected and distinguished for other economic transactions of the company.

Touching the control variables, the table below indicates that “SIZE” has a negative and significant impact on ABEM, but it has a positive and significant effect on REM_AGG. Managers in large companies are more likely to limit upward accrual-earnings management (Watts & Zimmerman, 1978), but they opt for the REM. Hence, large firms have more incentives to engage in earnings management. They do it via real activities because it is difficult to detect. Table 7 indicates that “LEV” has a negative and significant effect on ABEM. This confirms the results found by Fung and Goodwin (2013) and Jelinek (2007). They noted that creditors might make more monitoring costs to assess the quality of accounting information. Thus, indebtedness is a control mechanism limiting the opportunistic behavior of managers (Jensen, 1986).

Our results show that the profitability has a significant effect on earnings management. Table 7 displays a significant positive and negative coefficient of the ROA variable on discretionary accruals and actual management, respectively. This

result is found by Achleitner *et al.* (2014). Performing companies have a high level of discretionary accruals, and they are less likely to manipulate real activities. Moreover, the significant effect of “LOSS” variable suggests that financial distress constitutes a motivation to manipulate earnings. Although accrual-earnings management can be easily detected by the regulators and auditors to avoid loss, firms engage more in REM than in ABEM. Firm age is found to have a positive relationship with both ABEM and REM. This result suggests that mature firms are more likely to use earnings management than immature ones (Debnath, 2017; Wu & Huang, 2011).

Table 7. Regression Results

Variables	Predicted sign	Model 1 : ABEM		Modele2 : REM_AGG	
		coefficients	P> Z	coefficients	P> Z
FF	+/-	-0.0027	0.224	0.0531	0.000***
SIZE	-	-0.0040	0.000***	0.0041	0.018**
LEV	+	-0.0652	0.000***	-0.0198	0.449
ROA	+	0.0383	0.002***	-0.4837	0.000***
LOSS	+	-0.0419	0.000***	0.0359	0.014**
Growth	+/-	-0.0008	0.151	0.0002	0.934
FirmAge	-	0.0031	0.003***	0.0318	0.000***
Constant	+/-	0.0737	0.000***	-0.1841	0.000***
R² en %		13.14		7.26	
Wald chi2(7)		306.94		234.84	
Prob > chi2		0.0000		0.0000	
No of observations		729		729	

* Significant at 10%, ** significant at 5%, *** significant at 1%

5. Discussion and contribution

This paper aims to examine the impact of family ownership on two types of earnings management: ABEM and REM. To account for this relation, this research builds on two theories: agency theory and SEW theory. In an agency setting, family firms are characterized by the fact that classic agency problems are limited. However, concentrated ownership results in two distinct groups of shareholders, i.e., majority and minority shareholders. Consequently, it could bring about a new agency problem consisting in a conflict between the controlling family and minority shareholders (Type II agency problem). Controlling family has an opportunity to maximize their private benefits by expropriating minority shareholders.

Furthermore, SEW theory states that the primary objective of family owners is to preserve and protect the utility arising from non-economic aspects of the firm (Gómez-Mejía *et al.*, 2011; Gómez-Mejía *et al.*, 2007). These non-economic aspects cover various forms such as enhancing the family's ability to exercise control and influence over the business, identity of family members, and family succession. Given the multi-dimensional nature of SEW (Berrone *et al.*, 2012; Cennamo *et al.*, 2012), Gómez-Mejía *et al.* (2014) argue that the accounting choices would be different among family firms, depending on their most important SEW dimensions. In this study, we focus on "Family control and influence" and the "the Renewal of family bonds to the firm through dynastic succession" dimensions that have been, for some recent studies, considered as the most prominent reference point (Gómez-Mejía *et al.*, 2007, Strike *et al.*, 2015). These two dimensions can differently explain the link between the family ownership and earnings management. For family firms using the 'Family Control and Influence' dimension of SEW as a main objective, maintaining control and influence over the business motivates them to engage in earnings management (Prencipe *et al.*, 2008). However, for other family firms, "the trans-generational sustainability" is considered as a very important dimension of SEW (Berrone *et al.*, 2012). Therefore, the manager in family firms is less likely to engage in activities having a negative effect on the future firm's value than the manager in non-family firms. Prior studies have proved that earnings management has a negative consequence on future accounting decisions, earnings and performance (Graham *et al.*, 2005; Gunny, 2005; Jensen, 2005; McVay, 2006; Rodriguez-Ariza *et al.*, 2016).

For family firms, earnings management can be explained by agency problems and the desire to preserve SEW endowment. SEW theory states that maintaining control and influence over the business and the intention for trans-generational sustainability are two important goals of family firms. Besides, we put emphasis on two alternative hypotheses. On the one hand, we predict that -as family firms are facing a less severe Type I agency problem, and family owners may give more importance to the trans-generational sustainability of their business- family firms are less likely to manage their results than non-family ones. On the other hand, we expect that -as the agency problem shifts from a manager-shareholder conflict to that of majority-minority shareholders, and for some family owners, the family control and influence is perceived as highly protruding (Berrone *et al.*, 2012)- family firms are more likely to engage in earnings management practices than non-family ones.

Using a sample of French firms listed in CAC All-Tradable index from 2014 to 2016, we first document, unlike our predictions, that family ownership has no significant effect on ABEM. Second, we provide evidence that family ownership has a positive and significant impact on REM_AGG. This result is consistent with Razzaque *et al.* (2016). Hence, in France, family firms are more engaged in REM than non-family ones. These findings confirm that family firms suffer from a new

agency conflict between the minority shareholders and controlling owners (type II agency problem). Even though previous studies have indicated that REM has a negative impact on future cash flows and may reduce the firm's value as managers are willing to sacrifice future cash flows for higher current incomes (Gunny, 2005; Roychowdhury, 2006), family firms in France are more engaged in REM than non-family ones. This result gives proof that in French family firms, the control aspect of SEW theory is predominant regardless of financial considerations. Hence, the desire to maintain control and influence among firms reinforces the opportunistic behavior of family owners, and therefore, it worsens the agency problems between family owners (majority shareholders) and other shareholders (minority shareholders).

Moreover, we explain our findings as follows: REM can occur at any time of the year while accruals manipulations are usually carried out at the end of the fiscal year. Accordingly, REM are considered to be easier in family firms since family members participate in firms management (Anderson & Reeb, 2003), and, therefore, they might have more leeway to change recurring operational and investment decisions. Furthermore, ABEM is more likely to be detected by stakeholders such as auditors, regulators and independent directors (Klein, 2002; Zang, 2011) than REM that is difficult to be distinguished from other economic transactions of the company.

Our study contributes to the debate on earnings quality in family firms in several ways. First, the issue of REM in family firms is not the subject of much research (Achleitner *et al.*, 2014; Eng *et al.*, 2019; Razzaque *et al.*, 2016). Our study demonstrates two methods of earnings management: ABEM and REM_AGG. Second, most previous studies have been based on the agency theory to explain the relation between the family firm and earnings management. The current study also uses the SEW theory offering a more comprehensive framework to explain this relationship. SEW constitutes the major characteristic giving family firms their unique qualities, and driving their strategic decisions (Berrone *et al.*, 2012; Gómez-Mejía *et al.*, 2010). Several empirical studies indicate how SEW foresees different strategic choices (Berrone *et al.*, 2012; Gómez-Mejía *et al.*, 2011; Gómez-Mejía *et al.*, 2010). Therefore, it is prominent to consider this non-economic goal to foresee and account for the earnings management in family firms. Third, this research gives evidence that for family firms, to preserve control and influence over the firm, they make income-increasing accounting choices at the expense of other objectives such as future performance. Eventually, the findings of our study add to the literature through providing empirical evidence that family owners are more engaged in REM than non-family ones of an institutional context characterized by poor investor protection.

This study suffers from some limitations which have to be pointed out. To start with, we have focused attention on listed firms, limiting the generalizability of our

findings, especially with respect to private companies. In privately-held organizations, using REM might be exaggerated. Second, we have not investigated under what incentive structure family firms manipulate their earnings. Building on this research, future studies could investigate these factors over a long period of time. Finally, in this study, we have considered family firms as a homogeneous group, so it is worth addressing the heterogeneity among family firms (e.g. with regard to generational stage, CEO position), which is a scope for future research.

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