



Do Management Training Grounds Reduce Internal Auditor Objectivity and External Auditor Reliance? The Influence of Family Firms

Ikseon Suh¹ · Adi Masli² · John T. Sweeney²

Received: 24 October 2018 / Accepted: 9 April 2020 / Published online: 18 May 2020
© Springer Nature B.V. 2020

Abstract

We test competing theoretical perspectives of family firm governance in two separate studies by investigating whether family firm control moderates the detrimental effect of a management training ground (MTG) on internal auditor objectivity and on the external auditor's decision to rely on the internal audit function (IAF). In Study 1, we assess the objectivity of internal auditors working under an IAF that serves as a MTG or non-MTG and located in a family or non-family firm. A key result of Study 1 is the mitigating role of family firm control, as we find that the objectivity of internal auditors is reduced when the IAF serves as a MTG but only in non-family firms. When the IAF is located in a family-controlled firm, the objectivity of internal auditors is unaffected by the opportunity to be promoted into management positions outside of the IAF. In Study 2, we utilize a controlled laboratory experiment with experienced Big 4 auditors as participants and examine their decision to rely on an IAF when it serves as a MTG. Our analyses indicate that external auditors reduce their reliance on non-family firm IAFs that are also MTGs and their decision is fully mediated by the perceived objectivity of non-family firm internal auditors. In contrast, external auditors' reliance on family firm IAFs and their perceptions of internal auditor objectivity are unaffected under a MTG regime. The results of Studies 1 and 2 provide support for the alignment perspective of family firms.

Keywords Family firms · Management training ground · Internal auditor objectivity · External auditor reliance · Corporate governance

Introduction

In structuring the roles and responsibilities of the internal audit function (IAF), corporate governance actors, including management and the audit committee, will decide whether to utilize the IAF as a training ground for future organizational managers, accelerating their acquisition of valuable company knowledge through exposure to operating units at-large and to financial and operational details integral to the role of an internal auditor.¹ While utilization of the

IAF as a management training ground (MTG) is a common practice providing informational benefits to future managers (Carcello et al. 2018),² critics contend that it poses a threat to the ethical conduct of internal auditors, preventing them from accomplishing their oversight responsibilities objectively (Hoos et al. 2018; Messier et al. 2011; Rose et al. 2013).³ This ethical conflict occurs because a MTG provides firm management with a mechanism for rewarding internal auditor acquiescence. When internal auditors operate under an expectation of being moved or promoted into non-IAF (managerial) positions, they “may endeavor to

✉ Ikseon Suh
ikseon.suh@unlv.edu

Adi Masli
a059m271@ku.edu

John T. Sweeney
jtsweeney@ku.edu

¹ Department of Accounting, University of Nevada – Las Vegas, Las Vegas, NV, USA

² Department of Accounting, University of Kansas, Lawrence, KS, USA

¹ The internal audit function typically performs financial and operational audits, and may also conduct performance, environmental and information technology audits (<https://www.accountingedu.org/internal-auditing.html>).

² Carcello et al. (2018, p. 121) note that “33% of global companies (both public and private) and 64% of Fortune 500 companies reportedly use their IAF as a MTG.”

³ Objectivity is one of the four principles of code of ethics that governs the behavior of individuals and organizations in the conduct of internal auditing (<https://na.theiia.org/standards-guidance/mandatory-guidance/Pages/Code-of-Ethics.aspx>).

ingratiate themselves to management” (Abbott et al. 2016, p. 6) or unconsciously shift their judgment to improve future employment prospects. (Chadwick 1995; Goodwin and Yeo 2001; Rose et al. 2013; Stewart and Subramaniam 2010). External auditors, in turn, may perceive the MTG practice to diminish internal auditor objectivity (Messier et al. 2011) and respond by reducing their reliance on the work of the IAF.

We conduct and report the results of two separate but related studies that holistically examine the effects of a MTG on (1) internal auditor objectivity and (2) external auditor reliance on the IAF. Importantly, both studies extend the extant knowledge base by investigating whether family firm control moderates the effect of a MTG on internal auditor objectivity and on the external auditor’s decision to rely on the IAF. When members of the founding family work as key executives and hold directorship positions, family beliefs and ethical values exert strong influence on management (Anderson and Reeb 2003), who in turn set the overall tone for corporate governance and the IAF (Cohen et al. 2002; Gramling et al. 2004). A question that this research addresses is whether, in the context of a MTG, family control promotes the self-interest of its clan or reflects a broader stewardship of company resources.⁴

Research on family firms has primarily been motivated by two competing theories of family governance: *entrenchment* and *alignment*. Under entrenchment theory, the concentrated ownership structure of a family firm is portrayed as creating an environment where internal auditors may be pressed to protect family interests at the expense of non-family stakeholders (Bardhan et al. 2015). Under this perspective, management may utilize a MTG context to reward internal auditors for compliant behavior consistent with family preferences. Alternatively, alignment theory views family business owners and managers as prioritizing long-term social and organizational goals collectively benefiting all stakeholders (Arrègle et al. 2007; Le Breton-Miller and Miller 2009), thereby mitigating the likelihood that management would utilize a MTG to entice less objective internal auditor behavior. We test these competing perspectives of family firms by investigating, within the context of MTGs, the dynamic between internal auditor objectivity and external auditors’ decision to rely on the IAF.

In Study 1, we examine the influence of a MTG and family firm control on internal auditor objectivity by utilizing participants who actually work in an IAF that (1) is either a MTG or a non-MTG, and (2) operates within a family

firm or a non-family firm. Our sample consists of 146 internal auditors employed across 26 Mexican companies, with 73 (50%) functioning in an IAF that serves a MTG and 91 (62%) working at a family firm. We take advantage of naturally occurring differences in employment contexts rather than imposing experimental manipulations in assessing the objectivity of internal auditors actually working under a MTG/non-MTG regime and employed by a family/non-family firm. The results of Study 1 reveal that utilization of the IAF as a MTG impairs internal auditors’ objectivity, but only in non-family firms. In contrast to their counterparts in non-family firms, we find that internal auditor objectivity in family firms is unaffected when the IAF serves as a MTG. These results suggest that the adverse influence on internal auditors’ objectivity that may result from the IAF serving as a MTG is mitigated within the family firm context.

Our attention turns to external auditors in Study 2, who are responsible for evaluating the objectivity of internal auditors in their decision to rely on the IAF (ISA No. 610 [IAASB 2013]; SAS 128 [AICPA 2014]). We investigate the influence of (1) a MTG vs. a non-MTG, and (2) a family vs. a non-family firm on external auditors’ decision to rely on the IAF and on their perceptions of internal auditor objectivity, competence and due professional care. Utilizing a sample of 76 Big 4 external auditors, we execute a 2x2 between-subjects controlled experiment and manipulate whether (1) it is or is not the practice of the company to promote internal auditors into outside management positions, and (2) the focal company is controlled or not controlled by the founding family. We find that external auditors rely less on the IAF when it serves as a MTG but, consistent with the findings of Study 1, only in non-family firms. In the context of family firms, external auditors’ reliance on the IAF is unaffected by its service as a MTG.

The results of Study 2 also reveal that in non-family firms, the negative influence of a MTG on external auditors’ reliance occurs through a perceived reduction of internal auditor objectivity. This result suggests that in non-family firms, external auditors perceive internal auditors working under a MTG regime to be less objective, but not less competent or having less due care, than their peers not working under a MTG regime. When the reliance decision involves a family firm IAF, however, family ownership structure mitigates the potential negative impact of a MTG on the external auditors’ reliance decision.

The findings of Study 1 and Study 2 contribute to the internal and external audit literatures investigating the consequences of an IAF serving as a MTG (Christ et al. 2015; Messier et al. 2011; Rose et al. 2013) and answer the calls of Vazquez (2018) for research into the ethical behavior of corporate governance actors in family firms and Prencipe et al. (2014) for experimental research investigating the effects of family firm control on auditing. Both research studies

⁴ This is not a trivial inquiry, as family-controlled firms represent a dominant component of international economies (Le Breton-Miller and Miller 2009; Hope et al. 2012), constituting over 66% of firms located in East Asia, 44% of big companies in Western Europe and 33% and 46% of S&P 500 and 1500 index corporations, respectively (Cheng 2014).

provide support for the alignment perspective of family firm governance, viewing family firm management as acting in a manner consistent with the interests of a broad set of stakeholders (Arrègle et al. 2007; Le Breton-Miller and Miller 2009). The results of Study 1 and Study 2 also suggest that the extant research on MTGs must be interpreted with caution, as prior studies did not differentiate between IAFs located in family versus non-family firms, an important distinction given the prominence of family-controlled firms across the global economy (Campopiano and De Massis 2015; Cheng 2014).

Study 1: MTGs, Family Firms, and the Objectivity of Internal Auditors

The IAF serves as a critical resource to boards of directors, management, external auditors and others responsible for conducting effective oversight of firm management and financial performance (Gramling et al. 2004; IPPF 2017).⁵ As one of the four cornerstones of corporate governance, the IAF is uniquely positioned to monitor the organization's internal controls, risk management and financial reporting processes (IIA 2016; Lin et al. 2011; Prawitt et al. 2009). To effectively execute its oversight role, the IAF must have organizational independence and internal auditors operating under its umbrella must be competent and exercise professional care while maintaining objectivity in performing their work and reporting (Abbott et al. 2016; Gramling et al. 2004; IIA 2016).⁶

In establishing the responsibilities of the IAF, corporate governance actors, including management and the audit committee, will decide whether it will also serve an ancillary role as a training ground for future managers, a common practice in organizations (Carcello et al. 2018; Messier et al. 2011). In some companies, employees are first hired into the IAF where they are then exposed to various operating units and organizational practices before subsequently rotating out to a higher position. In other settings, seasoned employees deemed management worthy are brought into the IAF to acquire a more comprehensive understanding of company activities. It is not uncommon under a MTG regime for senior internal auditors, including the chief audit executive, to be promoted into executive positions (Abbott et al. 2016; Chadwick 1995; Stewart and Subramaniam 2010;

Burton et al. 2015; Christ et al. 2015). Advocates of the MTG practice claim that firms accelerate the development and augment the organizational knowledge of future managers because as internal auditors, they are exposed to enterprise-wide processes, risks, internal controls and operations (Chadwick 1995; Barrier 2001; Ridley 2001; Prawitt 2003). Support for this proposition is provided by Carcello et al. (2018), who find that corporate managers tend to rely more on internal auditors in MTGs because experienced managers perceive MTG internal auditors to have more natural ability and knowledge of the company compared to non-MTG internal auditors.

The IAF's proximity with management has historically raised alarms regarding its possible negative influence on internal auditor objectivity (Norman et al. 2011) and researchers have expressed concern that this threat is likely exacerbated when the IAF also functions as a MTG (Hoos et al. 2018; Messier et al. 2011; Rose et al. 2013).⁷ A conflict of interest arises under a MTG context because internal auditors serve with an expectation of being promoted by management into positions outside of the IAF, creating economic incentives and social pressures for internal auditors to lessen their objectivity that are not present in a non-MTG context (Stewart and Subramaniam 2010; Messier et al. 2011).⁸ Opponents of the practice argue that because company management decides who will rotate out of the IAF, as well as when and where, internal auditors may be enticed to adopt positions consistent with the interests and preferences of management in order to attain advancement and other job-related advantages (Chadwick 1995; Rose et al. 2013).⁹

Both archival and experimental studies suggest that internal auditors' judgments may be compromised when the IAF serves as a MTG. Abbott et al. (2016) find evidence suggesting that IAF's serving as MTGs have a lower likelihood of reporting inappropriate income-decreasing abnormal accruals. Christ et al. (2015) examine archival data and find that the systematic rotation of internal auditors to management positions produces superior operational performance but also weakens the IAF's effective monitoring of financial reporting quality, resulting in significantly higher accounting risk. Messier et al. (2011) find that external auditors charge significantly higher fees when the auditee's IAF is employed as a MTG. The authors speculate that this outcome stems

⁵ The International Professional Practices Framework (IPPF) represents the conceptual framework organizing mandatory and recommended authoritative guidance communicated by the Institute of Internal Auditors (IIA).

⁶ Abbott et al. (2016, p. 8) note that: "...independence is often framed as objectivity or as the means to protect against bias or undue influence of others..."

⁷ Objectivity "requires that internal auditors do not subordinate their judgment on audit matters to others" (IIA 2016, Sec. 1100) and "avoid any conflict of interest" (IIA 2016, Sec 1120).

⁸ The IIA (2016, Sec. 1120) defines a conflict of interest as "a situation in which an internal auditor, who is in a position of trust, has a competing professional or personal interest."

⁹ The findings of Ahlawat and Lowe (2004, p. 156) suggest that "maintaining a truly objective view" may be impossible when internal auditors face economic pressure.

from external auditors attributing a greater motivation to please management on the part of internal auditors who work under a MTG context, resulting in a lower level of objectivity. In experimental studies, internal auditors under a MTG condition were significantly more likely to favor aggressive revenue recognition policies proposed by management (Rose et al. 2013) and to exhibit stronger preferences for the investment option aligned with management's choice (Hoos et al. 2018) than internal auditors under a non-MTG condition.¹⁰

Family Firms and MTGs

The studies referred to above support the proposition that an organization's utilization of the IAF as MTG may have a detrimental effect on the objectivity of its internal auditors. The impact of a MTG on internal auditor objectivity, however, may be moderated when the IAF is located within a family-controlled firm, a factor not considered in prior studies of MTGs. An entity is a family firm when the founding family owns a significant amount of equity/voting rights and/or the family members hold key executive and director positions (e.g., Anderson and Reeb 2003; Anderson et al. 2003; Chen et al. 2008; Chen et al. 2010; Prencipe et al. 2014). Understanding the influence of a family firm context on the relationship between MTGs and internal auditor objectivity is important because family firms provides employments to 60% of the global labor pool (Neckebrouck et al. 2018) and represent a large segment of international economies (Campopiano and De Massis 2015; Prencipe et al. 2014), including approximately 55% of gross domestic product in the United States (Boone 2015).

Over the past two decades, research across business disciplines has advanced our understanding of family firms (e.g., Madison et al. 2016; Xi et al. 2015; Vazquez 2018), typically motivated by either of two competing theoretical perspectives, entrenchment and alignment (James et al. 2017; Madison et al. 2016; Prencipe et al. 2014). Entrenchment theory focuses on agency conflicts, portraying family owners and managers as self-serving and opportunistic (Krishnan and Peytcheva 2019; Schulze et al. 2001). This Type II or principal vs. principal agency problem (Morck et al. 2005) is theorized to affect firm decisions as an asymmetry of information between founding families and other shareholders induces opportunistic family managers to expropriate wealth from non-family shareholders (Krishnan and Peytcheva 2019; Salvato and Moores 2010; Wang 2006). Under the

entrenchment perspective, the concentrated ownership structure in a family firm creates a state of affairs where internal auditors are pressed to protect family interests at the expense of nonfamily shareholders (Bardhan et al. 2015), suggesting that management could utilize a MTG to reward internal auditors for behavior congruent with family preferences.

Consistent with predictions motivated by entrenchment theory, some studies have identified family firms with lower earnings quality more often than non-family firms (Firth et al. 2007). Leuz et al. (2003) find that in countries where the legal protection of dispersed shareholders is weak, managers with ties to the founding family have greater incentives to misrepresent financial performance, intending to conceal their private control benefits from dispersed shareholders. Compared to non-family firms, family firms are less likely to provide voluntary disclosures on corporate governance practices in their filings (Ali et al. 2007). The results of Jaggi et al. (2009) suggest that family control, through ownership concentration or appointment of family members to the board, weakens the monitoring effectiveness of independent non-executive directors.

Alignment theory presents a more altruistic vision of family control, positing that family business owners and managers are more likely to pursue long-term organizational goals for the collective interest of stakeholders (Arrègle et al. 2007; Le Breton-Miller and Miller 2009). Under an alignment perspective the controlling family acts as a steward of company resources, resulting in a reduction of owner-manager conflicts or Type I agency problems (Morck et al. 2005) and diminished pressure to manage earnings, thereby minimizing the prospect that managers would leverage a MTG context to entice less objective internal auditor behavior.

In support of the alignment perspective, Wang (2006) provides evidence that firms with family managerial control (family members on the board of directors or in the executive positions) report higher quality of earnings. Tong (2008) finds that family firms have lower absolute discretionary accruals, report fewer small positive earnings surprises, and have less earnings restatements relative to non-family firms. Family-controlled firms, in particular those that are strongly governed, are more likely to choose auditors with industry developed expertise to signal their financial reporting quality (Kang 2014) and make more informative disclosures when performance is poor (Chen et al. 2008).

Entrenchment and alignment theories generate conflicting predictions on the relationship between MTGs and internal auditor objectivity in family firms compared to non-family firms. Under the entrenchment perspective, management's emphasis on meeting short-term earnings goals will create pressure on family firm internal auditors to acquiesce. Within this context, an IAF that also serves as a MTG will likely magnify the pressure and/or incentives for internal

¹⁰ A potential limitation of the Rose et al. (2013) and Hoos et al. (2018) experimental studies is that the internal auditor participants were not identified as actually working under an IAF serving as a MTG.

auditors to compromise their objectivity. In contrast, the alignment perspective maintains that a family firm context will mitigate the adverse effect of a MTG on objectivity because internal auditors face less pressure from management to meet earnings goals. As a result, management will be less likely to utilize a MTG to induce internal auditor acquiescence. The objective of Study 1 is to test the competing entrenchment and alignment perspectives regarding the moderating influence of family firm control on the relationship between MTGs and internal auditor objectivity:

H1a (entrenchment perspective): The adverse influence of a MTG practice on internal auditors' objectivity will be greater in family firms than in non-family firms.

H1b (alignment perspective): The adverse influence of a MTG practice on internal auditors' objectivity will be greater in non-family firms than in family firms.

Research Method

Participants

Ideally, the first step in evaluating the objectivity of internal auditors is to select a large, randomly chosen sample drawn from the population of IAFs representing family/non-family firms and MTGs/non-MTGs. In reality, IAFs reside in private entities whose management are often unwilling to grant access, allow obtrusive data collection methods or tolerate interruptions of work. Because of these access limitations our sample of internal auditors was not randomly selected. Rather, we contacted and obtained permission from the management of 26 Mexican companies, with IAFs serving as MTGs or non-MTGs and representing family or non-family firms. Mexico is a favorable setting to conduct family firm research because it has the third largest level of family ownership concentration in the world (Chong et al. 2009), with widespread family management of large firms (Aguilo and Aguilo 2012; Castañeda 1999; Rivas 2012).¹¹

Participating companies were solicited through author contacts with the Mexican Institute of Internal Auditors and from chief executives and board members attending a corporate governance program at a Mexican university.¹²

¹¹ In 2004, *The Economist* (2004) estimated that family firms owned up to 95% of Mexican firms and 43% of the value of firms listed on the Mexican exchange market were controlled by just one family. Our focus on Mexico also contributes to filling an extant gap in the literature as very few academic studies refer to Mexican family firms, perhaps because of the difficulty in gaining access to information about their ownership and control structures (Aguilo and Aguilo 2012).

¹² Mexican internal auditors follow *International Standards on Auditing* (IAS) and *International Standards for the Professional*

Each of the 26 participating companies employed a 'Big 4' public accounting firm as its external auditor. The participating firms report, on average, an annual revenue of 2.1 billion U.S. dollars. The IAFs of the participating companies provided a pool of 155 internal auditors but we excluded nine because they did not complete the assigned task, resulting in a final sample of 146 participants.¹³ On average, the participants have 5.9 years of internal audit experience, 4.9 years of firm experience, 3.1 years of external audit experience, and reported 58 hours of annual training. All of the internal auditor participants indicated spending at least some of their time working on financial statement audits of operating units, averaging 32% of annual work time across the sample. Of the sample of internal auditors, 53% (77) work at listed firms and 64% (94) previously worked as an external auditor. Most (93) of the 146 internal auditor participants reported assisting the external auditor in completing its annual audit of company financial statements, 32% (47) have experience working in business areas outside of internal auditing, and 51% (75) are female.

Experimental Design

Unlike traditional experiments utilizing a case vignette with manipulated independent variables, we instead exploit differences in the participants' employment contexts in Study 1 to assess the influence of MTGs on internal auditors' objectivity in family and non-family firms. By investigating whether internal auditors *actually* working in MTGs and family firms respond differently to the same earnings management scenario than their counterparts in non-MTGs and non-family firms, we move closer to the goal of assessing objectivity *in fact* (Messier et al. 2011). The methodology of Study 1 also answers the call of Rose et al. (2013, p. 17) that "studies should investigate alternative, more effective methods for [examining] the objectivity of internal auditors when the internal audit function is a management training ground." We utilize a field setting because it enables internal auditor participants to freely respond from their own perspective in their own work environment (Harrison and List 2004), without manipulation or economic incentive, potentially bringing forth organically occurring differences in the judgment of internal auditors actually working under these contexts while minimizing the possibility of demand effects impacting participant responses.

Footnote 12 (continued)

Practice of Internal Auditing (IPPF) per discussions with CAEs from participating firms.

¹³ On average, participants spent 20–25 min to complete the task.

Experimental Task

Research materials were written and data collection sessions were conducted in Spanish, the native language of the participants. All participants received an identical vignette and were instructed to analyze the case as she/he would normally do during the course of an internal audit engagement. The revenue recognition task was based on an earnings management case developed by Sack (2002) and modified for this study. The case was translated into Spanish by one of the authors, a Mexican citizen, and pilot-tested with internal auditors provided by the Mexican Institute of Internal Audit.¹⁴ We utilize a hypothetical revenue recognition scenario as opposed to case specifically tailored to the setting of the participants' company and job responsibilities because the large number of firms (26) in the sample preclude the design of an instrument specific to the context of each participant. Employing a generic case also eliminates the potential for a company-specific scenario to trigger a guarded or sensitized reaction on the part of participants and may therefore be more likely to elicit unfiltered responses reflecting innate differences in objectivity.

All participants completed the experimental task in the presence of one of the authors in a controlled setting at their workplace. Our objective in instructing participants to respond from their own perspective, rather than manipulating conditions, was to capture organically occurring differences in objectivity among auditors from family and non-family firms working in IAFs that either serve or do not serve as MTGs. The internal auditor participants were informed of the hypothetical company's background information and directed by the audit committee to analyze a revenue recognition issue occurring in the last month of the fiscal year with two alternative solutions. Solution 1 allowed top management to meet earnings forecasts and receive a bonus but was based upon a questionable interpretation of financial reporting rules. Solution 2 represented a more conservative and rule-consistent accounting treatment, causing management to miss the earnings forecast and its annual bonus while triggering some key shareholders to be upset. After reviewing the year-end revenue recognition issue, participants read additional information regarding the potential impact of the alternative solutions on key numbers in the income statement and balance sheet. Following this section, participants were instructed to indicate their support of either Solution 1 or Solution 2 (*Proposed Solution*).

¹⁴ A total of 81 internal auditors participated in a pilot test of the case material. The pilot test was conducted at a plenary session held by the Mexican Institute of Internal Audit. Feedback from the pilot test was used in modifying the final case material to minimize any ambiguous and/or unclear information. We verified that the pilot test participants were excluded from the final sample.

Participants responded to demographic questions and a number of debriefing items upon completing the revenue recognition task.

Dependent Variable

We utilize participants' *Proposed Solution* for the revenue recognition case as the dependent variable. A 7-point bipolar scale is employed to measure this variable rather than a dichotomous scale because the revenue recognition task involves an earnings management case where it is uncertain as to when the company's performance obligation is fulfilled and revenue can be recognized (Sack 2002). We measure the direction of internal auditors' reporting choice from the neutral point of the scale and the degree or extremeness of the reporting choice from the neutral point (e.g., Peabody 1962).¹⁵ The *Proposed Solution* variable serves as our proxy for internal auditor objectivity, with relatively higher scores indicating greater objectivity (stronger support for the solution that was more conservative and rule consistent, but resulting in management missing its earnings forecast and bonus).

Independent Variables

The two factors of interest for this study are whether the internal auditor participants work in an IAF serving as a MTG (MTG or non-MTG) and whether they work in a Family Firm (FF or non-FF). For the 146 participating internal auditors, their respective chief audit executives (CAEs) confirmed that 73 (50%) worked in a MTG context and 91 (62%) worked at a family firm. The criteria used in prior literature to identify or define the existence of MTG include: (1) the practice of the company is to rotate internal auditors out of the IAF into line management positions; (2) internal auditors are trained for line management positions in business units outside of internal audit; and/or (3) internal auditors have been recently promoted into line management positions (e.g., Chadwick 1995; Goodwin and Yeo 2001; Stewart and Subramaniam 2010; Messier et al. 2011; Rose et al. 2013). All of the CAEs who affirmed that their internal auditors operated under a MTG context indicated the existence of the first criteria and also the second and/or third criteria as descriptive of their firms' IAF.

Prior research classifies a company as a family firm if family members' concentrated ownership is sufficient to

¹⁵ After collecting data, we coded participants' *Proposed Solution* on the bipolar scale of: - 3 (Strongly propose Solution 1), - 2 (Moderately propose Solution 1), - 1 (Slightly propose for Solution 1), 0 (Indifferent), + 1 (Slightly propose Solution 2), + 2 (Moderately propose Solution 2), and + 3 (Strongly propose Solution 2). A similar approach was used by Peters et al. (2006) and Weller et al. (2013).

Table 1 Study 1: Descriptive Information

Panel A: Demographic Information					
	Non-Family Firm and non-MTG	Non-Family Firm and MTG	Family Firm and non-MTG	Family Firm and MTG	Total
n ^a	21	34	52	39	146
Years of Internal Audit Experience ^b	6.55 {6.15}	4.36 {3.27}	6.71 {6.08}	5.65 {3.86}	5.85 {5.04}
Years of Firm Experience ^b	2.43 {2.12}	5.59 {5.45}	4.61 {4.74}	6.06 {4.31}	4.91 {4.64}
Years of External audit Experience ^b	4.39 {4.28}	1.38 {2.10}	3.46 {2.74}	3.23 {3.79}	3.05 {3.31}
Experience in Business Units ^c	6 (28.6%)	19 (55.9%)	15 (28.8%)	7 (20.5%)	47 (32.9%)
Interaction with External Auditors ^c	16 (76.0%)	16 (48.0%)	31 (59.0%)	30 (78.0%)	93 (64.0%)
Financial Statement Audit (%) ^b	27.55 {23.06}	24.58 {17.95}	29.73 {25.98}	42.18 {27.62}	31.78 {25.18}
Female Internal Audit Participants (%) ^c	52.00	51.00	52.00	54.00	51.70

Panel B: Proposed Solution across Four Different Contexts
Mean (standard deviation) {sample size}

	Family Firm		Main Effect: MTG
	Family Firm	Non-Family Firm	
MTG			
The IAF serves as a MTG	1.26 (2.04) {39}	0.32 (2.51) {34}	0.82 (2.29) {73}
Non-MTG	1.21 (2.24) {52}	1.95 (1.66) {21}	1.42 (2.11) {73}
Main Effect: Family Firm	1.23 (2.15) {91}	0.95 (2.35) {55}	1.12 (2.22) {146}

^aSample size per organizational context

^bMean {standard deviation}

^cThe percentage figures pertain to each treatment condition or the 'column' sample

N = 146

MTG = 1 if the internal audit function (IAF) serves as Management Training Ground (MTG), 0 if the IAF serves as a Non-Training Ground (Non-MTG)

Family firm = 1 if Family firm, 0 if non-family firm

Proposed Solution = Internal auditors' proposed solution on revenue recognition: - 3 (Strongly propose Solution 1), - 2 (Moderately propose Solution 1), - 1 (Slightly propose for Solution 1), 0 (Indifferent), + 1 (Slightly propose Solution 2), + 2 (Moderately propose Solution 2), and + 3 (Strongly propose Solution 2)

Years of Internal Audit Experience = Years of experience in internal auditing

Years of Firm Experience = Years of working experience at the firm

Years of External Audit Experience = Years of experience in external auditing

Experience in Business Units = Experience working outside of internal auditing within the current company (1 = Yes, 0 = No)

Interaction with External Auditors = Experience in Interacting with the Company's External Auditors (1 = Yes, 0 = No)

Financial Statement Audit = Percentage of Annual Work Time Spent on Financial Statement Audit (%)

Gender = 1 if Male, 0 if Female

control company decisions and/or if the CEO is the founder or related to the founding family (by either blood or marriage) and family members hold key positions within the

firm, are represented on the board of directors, and/or are blockholders (Anderson and Reeb, 2003; Anderson et al. 2003; Chen et al. 2008; Chen et al. 2010; Prencipe et al.

Table 2 Study 1: Correlation Matrix

	Management Training Ground (MTG)	Family Firm	Proposed Solution
MTG	1		
Family Firm	- 0.184*	1	
Proposed Solution	- 0.136	0.063	1
Years of Internal Audit Experience	- 0.161	0.103	0.075
Years of Firm Experience	0.203*	0.090	- 0.136
Years of External Audit Experience	- 0.022	0.067	0.150
Experience in Business Units (%)	0.084	- 0.221**	- 0.079
Interaction with External Auditors (%)	0.004	0.079	- 0.027
Financial Statement Audit (%)	0.106	0.184*	0.011
Gender (1 = male, 0 = female)	0.071	0.119	- 0.003

**Correlation is significant at the 0.05 level (2-tailed)

*Correlation is significant at the 0.01 level (2-tailed)

N = 146

MTG = 1 if the internal audit function (IAF) serves as Management Training Ground (MTG), 0 if the IAF serves as a Non-Training Ground (Non-MTG)

Family Firm = 1 if Family Firm, 0 if Non-Family Firm

Proposed Solution = Internal auditors' proposed solution on revenue recognition: - 3 (Strongly propose Solution 1), - 2 (Moderately propose Solution 1), - 1 (Slightly propose for Solution 1), 0 (Indifferent), + 1 (Slightly propose Solution 2), + 2 (Moderately propose Solution 2), and + 3 (Strongly propose Solution 2)

Years of Internal Audit Experience = Years of experience in internal auditing

Years of Firm Experience = Years of working experience at the firm

Years of External Audit Experience = Years of experience in external auditing

Experience in Business Units = Experience working outside of internal auditing within the current company (1 = Yes, 0 = No)

Interaction with External Auditors = Experience in Interacting with the Company's External Auditors (1 = Yes, 0 = No)

Financial Statement Audit = Percentage of Annual Work Time Spent on Financial Statement Audit

Gender = 1 if Male, 0 if Female

2014). The CAEs who confirmed that their internal auditor participants worked at a family firm described their company's concentrated ownership in terms of the founding family and also confirmed that family members served as top management and/or members of the board of directors. CAEs indicated that the founder and/or the founding family members had concentrated ownership, on average, of 62% of the company.

Analysis and Results

Preliminary Analysis and Descriptive Statistics

As shown in Table 1, most of internal auditor participants chose *Solution 2*, with a mean indicative of a relatively moderate level of objectivity (mean = 1.12, s.d. = 2.22). The highest mean objectivity was achieved by internal auditors in non-FF/non-MTG environments and the lowest mean objectivity occurred in the non-FF/MTG. The objectivity

of family firm internal auditors was nearly identical between MTG and non-MTG regimes.

Results of correlation analysis revealed in Table 2 indicate that the experience variables (*internal audit experience* and *firm experience*) are not significantly correlated with the *Proposed Solution* dependent variable. The negative correlation between the *Family Firm* and *MTG* variables suggests that, on average, participants who work for family firms are less likely to work in an IAF serving as a MTG. A positive correlation exists between the *Firm Experience* and *MTG* variables. This correlation may be attributable to MTG firms moving experienced personnel into the IAF before their promotion to management. A negative correlation between *Experience in Business Units* and *Family Firm* indicates that participants are less likely to have working experience outside of internal auditing when they work for family firms. A positive correlation between *Financial Statement Audit*

Table 3 Study 1: Regression Analysis

$$DV_i = \alpha_i + (\beta_{1i} \times \text{Family Firm}_i) + (\beta_{2i} \times \text{MTG}_i) + (\beta_{3i} \times \text{Interaction Term}_i) + (\beta_{4i} \times \text{Years of Internal Audit Experience}_i) + (\beta_{5i} \times \text{Years of Firm Experience}_i) + (\beta_{6i} \times \text{Years of External Audit Experience}_i) + (\beta_{7i} \times \text{Experience in Business Units}_i) + (\beta_{8i} \times \text{Interaction with External Auditors}_i) + (\beta_{9i} \times \text{Financial Statement Audit}_i) + (\beta_{10i} \times \text{Gender}_i) + \epsilon_i$$

	All participants (N=146)	
Constant	$a_1 = 2.293,$	$s.e = 0.775$ ($p=0.004$)
MTG	$b_1 = -1.490,$	$s.e = 0.729$ ($p=0.043$)
Family Firm	$b_2 = -0.535,$	$s.e = 0.620$ ($p=0.390$)
Interaction Term	$b_3 = 1.862,$	$s.e = 0.877$ ($p=0.036$)
Years of Internal Audit Experience	$b_4 = 0.070,$	$s.e = 0.046$ ($p=0.127$)
Years of Firm Experience	$b_5 = -0.096,$	$s.e = 0.050$ ($p=0.059$)
Years of External Audit Experience	$b_6 = -0.328,$	$s.e = 0.475$ ($p=0.492$)
Experience in Business Units	$b_7 = 0.0135,$	$s.e = 0.468$ ($p=0.774$)
Interaction with External Auditors	$b_8 = -0.585,$	$s.e = 0.430$ ($p=0.176$)
Financial Statement Audit	$b_9 = -0.001,$	$s.e = 0.008$ ($p=0.903$)
Gender	$b_{10} = -0.060,$	$s.e = 0.433$ ($p=0.889$)
R^2	0.084	
Adjusted R^2	0.009	

(All p values are two-tailed)

MTG=1 if the internal audit function (IAF) serves as Management Training Ground (MTG), 0 if the IAF serves as a Non-training ground (non-MTG)

Family Firm = 1 if family firm, 0 if non-family firm

Proposed Solution = Internal auditors' proposed solution on revenue recognition: - 3 (Strongly propose Solution 1), - 2 (Moderately propose Solution 1), - 1 (Slightly propose for Solution 1), 0 (Indifferent), + 1 (Slightly propose Solution 2), + 2 (Moderately propose Solution 2), and + 3 (Strongly propose Solution 2)

Years of Internal Audit Experience = Years of experience in internal auditing

Years of Firm Experience = Years of working experience at the firm

Years of External Audit Experience = Years of experience in external auditing

Experience in Business Units = Experience working outside of internal auditing within the current company (1 = Yes, 0 = No)

Interaction with External Auditors = Experience in Interacting with the Company's External Auditors (1 = Yes, 0 = No)

Financial Statement Audit = Percentage of Annual Work Time Spent on Financial Statement Audit

Gender = 1 if Male, 0 = Female

and *Family Firm* indicates that internal auditors at family firms spend a larger percentage of their time on the corporate financial statement audit compared to internal auditors at non-family firms.

Tests of Hypotheses

The competing hypotheses of Study 1 predict that the adverse effect of a MTG practice on internal auditors' objectivity will be greater in family firms (H1a: entrenchment perspective) versus greater in non-family firms (H1b: alignment perspective). To test the hypotheses, we use the final sample of 146 internal auditors and regress *Proposed Solution* on *Family Firm*, *MTG*, the interaction term (*Family Firm X MTG*) and the control variables (*Years of Internal Audit Experience*, *Years of Firm Experience*, *Years of External Audit Experience*, *Years of Experience in Business Units*, *Experience in Interacting with External Auditors*, *% of Time Spent on Financial Statement Audit* and *Gender*). As indicated in Table 3, we find a significant negative effects of *MTG* on the participating internal auditors' *Proposed Solution* ($p=0.043$) and a significant interaction term ($MTG \times FF$) after controlling for demographic variables ($p=0.036$).¹⁶ The significance of the *MTG* variable indicates that internal auditors working under a MTG context, on average, favored a solution that was different (i.e., less objective) than the solution proposed by the internal auditors not working under a MTG context. These results, however, must be interpreted in light of the significant interaction between the *MTG* and *Family Firm* variables. This interaction is shown in Figure 1.

The interaction between the *MTG* and *Family Firm* variables suggests that the impact of a MTG context on the objectivity of internal auditors is conditioned upon firm ownership structure. In non-family firms, the *Proposed Solution* of internal auditors working under a MTG context ($\bar{X} = .32$) is significantly ($p=0.008$) less objective than that of internal auditors not working under a MTG ($\bar{X} = 1.95$). In family firms, however, the *Proposed Solution* does not differ significantly between internal auditors working under a MTG ($\bar{X} = 1.26$) versus internal auditors not working under a MTG ($\bar{X} = 1.21$). These results provide support for H1b.

To test the sensitivity of our results, we dichotomized the *Proposed Solution* dependent variable as participants' choice of either Solution 1 or Solution 2. A tabulation of participants' solution choices by *MTG* and *Family Firm* is presented in Panel A of Table 4. We conduct a logistic

¹⁶ In the absence of the demographic variables, a regression of *Proposed Solution* on *Family Firm*, *MTG*, and the interaction term ($MTG \times FF$) produces similar results to those presented in Table 3. The participating internal auditors' *Proposed Solution* is influenced by the *MTG* variable ($p=0.008$) and significantly affected by the interaction term ($p=0.030$).



Fig. 1 The Impact of MTGs and Family Firms on Internal Auditors' Proposed Solution

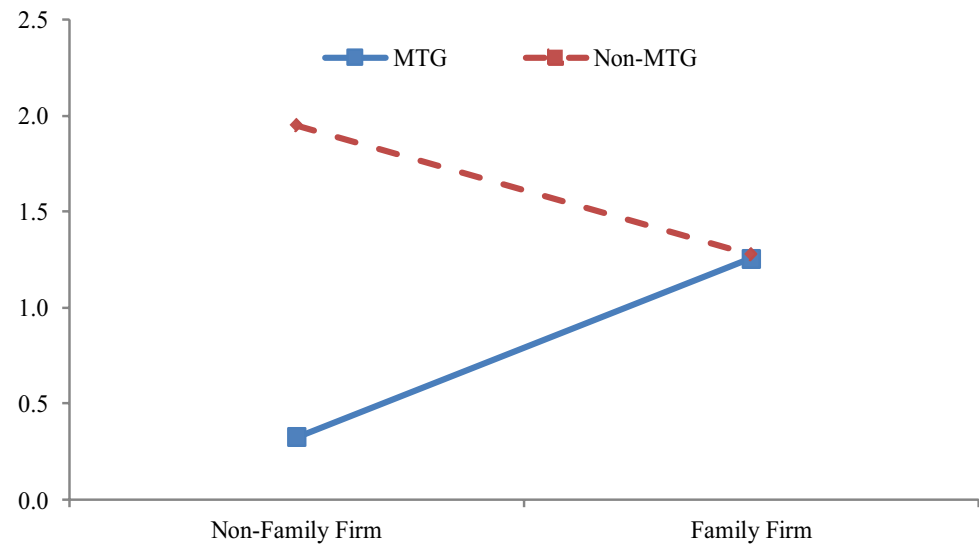


Table 4 Study 1: Logistic Regression Analysis of Internal Auditor Objectivity
DV = 0 (if Solution 1) or 1 (if Solution 2)

Panel A: Classification Table

Observed	Predicted		Percentage correct
	Solution 1	Solution 2	
Proposed Solution			
Solution 1	6	37	14.0
Solution 2	3	99	97.1
Overall Percentage			72.4
a. Constant is included in the model			
b. The cut value is .500			

Panel B: Logistic Regression

	B	S.E.	Wald	df	Sig.	Exp (B)
Step 1**						
MTG	- 1.498	0.724	4.285	1	0.038	0.223
Family Firm	- 0.686	0.707	0.942	1	0.332	0.504
Interaction (MTG × Family Firm)	1.673	0.866	3.733	1	0.053	5.330
Years of Firm Experience	- 0.057	0.040	2.075	1	0.150	0.945
Constant	1.935	0.633	9.356	1	0.002	6.925

**Variable(s) entered on step 1: MTG, family firm, MTG × family firm, years of firm experience

regression, where the dependent variable, the choice of *Solution 1* or *Solution 2*, is regressed on the *MTG* and *Family Firm* independent variables with *Years of Firm Experience* included as a control variable.¹⁷ Results of the logistic

regression presented in Panel B of Table 4 resemble those revealed in Table 3, with a marginally significant main effect for *MTG* ($p = 0.038$) and a significant interaction between *MTG* and *Family Firm* ($p = 0.053$).¹⁸

¹⁷ We include the *Years of Firm Experience* variable as a control variable in the logistic regression analysis because it is the only demographic variable that is significantly associated with the *Proposed Solution* variable (Table 3).

¹⁸ A *Chi-square* test (un-tabulated) indicates that the internal auditors' choice of *Solution 1* versus *Solution 2* differs significantly ($p = .056$) across the four *MTG* and *Family Firm* contexts.

Collectively, the statistical analyses are in agreement regarding the influence of MTGs and family firms on internal auditor objectivity and are supportive of the alignment perspective of family-controlled firms. A key finding of Study 1 is that working in an IAF serving as a MTG may reduce internal auditor objectivity, but only in non-family firms. The objectivity of internal auditors in family firms appears unaffected by the opportunity to be promoted into management positions outside of the IAF. The potential for MTGs to differentially affect the objectivity of internal auditors in non-family firms compared to family firms is of critical importance given the economic significance of family firms and a discrepancy that external auditors should be cognizant of in their decision to rely on the work of an IAF that serves as a MTG.

Study 2: MTG's, Family Firms and External Auditor Reliance

Although they represent distinct and complimentary dimensions of corporate governance, the roles of internal and external auditors can overlap in their examinations of financial accounting information and controls. The potential redundancy of audit procedures creates the opportunity for company management to reduce the cost of oversight by substituting the work of the IAF for that of the external auditor in its audit of company financial statements (Bame-Aldred et al. 2013). Reliance on the work of the IAF is also beneficial to the external auditor because it can contribute to a more efficient and timelier audit (Abbott et al. 2012; Prawitt et al. 2011). Before it can rely on the work performed or direct assistance of the client's IAF, however, the external auditor is required by standards to confirm that the client's internal auditors perform their work objectively while demonstrating competence and due professional care (ISA No. 610 [IAASB 2013]; SAS 128 [AICPA 2014]).¹⁹

MTG's, Family Firms and External Auditor Reliance

Guidance provided under ISA 610 frames internal auditor objectivity as the ability "to perform tasks without allowing bias, conflict of interest or undue influence of others to override professional judgments" (IAASB 2013, p. 10).²⁰ In its reliance decision, ISA 610 requires the external auditor to

¹⁹ ISA 610 requires the external auditor to evaluate the objectivity and competence of the IAF and whether it "applies a systematic and disciplined approach." To reduce the potential for cross-national differences in interpretation of "systematic and disciplined" (O'Donnell and Prather-Kinsey 2010), we employ the more general term "due professional care" to capture the audit work approach of the IAF.

²⁰ SAS 128 was developed using ISA 610 as its base and converges with the language and requirements of ISA 610 (AICPA 2014), result-

consider organizational policies and procedures that affect the objectivity of its internal auditors, including "whether those charged with governance oversee employment decisions related to the internal auditor function" (IAASB 2013, p. 10). External auditors should be aware that a MTG increases the economic incentives and social pressures for internal auditors to lessen their objectivity because management typically promotes internal auditors to positions outside of the IAF (Carcello et al. 2018; Messier et al. 2011; Stewart and Subramaniam 2010).

Despite the ubiquity of corporate MTGs and their potential threat to internal auditor objectivity, we are unaware of research investigating the influence of MTGs on external auditor reliance. Initial evidence regarding external auditors' perception of MTGs is provided by Messier et al. (2011) in a follow-up experiment to their archival main study. Messier et al. (2011) enlist 43 Norwegian external auditors as participants and their results suggest that external auditors perceive internal auditors working under a MTG context to be less objective, but not less competent or with less due professional care, than internal auditors not working under a MTG context. The perception of diminished objectivity on the part of internal auditors working under a MTG context should motivate external auditors to place less reliance on an IAF serving as a MTG.

Prior research supports the notion that client organizational factors, such as governance structure, can influence the IAF's quality and, in turn, the external auditors' reliance decision (see Bame-Aldred et al. [2013] for a review). At the organizational level, management sets the 'tone at the top' for corporate governance (Cohen et al. 2002) and enacts policies affecting the IAF's independence, functions and responsibilities within the company (McHugh and Raghunandan 1994; Sarens and De Beelde 2006a, b). Family beliefs and ethics are likely to influence the collective values, goals and strategies of the organization (Le Breton-Miller and Miller 2009), and therefore the attitudes and behavior of management toward the IAF. Management, in turn, bears more scrutiny from members of the controlling family than from minority shareholders (Anderson et al. 2003). As family members can exert considerable influence in setting the overall tone for corporate governance (Anderson and Reeb 2003), it is incumbent upon the external auditor during its evaluation of the IAF to properly assess the potential impact of a family business environment on internal auditor objectivity.

The limited research on family firms involving the external audit has produced mixed results as to whether external auditors perceive the influence of the controlling family as

Footnote 20 (continued)

ing in substantively similar standards. We cite the language of ISA 610 because Mexican external auditors follow IAASB regulations.

congruent with the entrenchment perspective or the alignment perspective (Krishnan and Peytcheva 2019). Research supporting an entrenchment perspective includes that of Hope et al. (2012), who find higher audit fees in family firms when the CEO is a member of the founding family. Their results suggest that external auditors view this type of family relationship skeptically, with the potential to affect earnings quality and increase audit risk. In an experimental study, Krishnan and Peytcheva (2019) find that, compared to non-family firms, external auditors perceive family firm with higher fraud risk and are less likely to accept family firm as a client, especially in the presence of a weak audit committee. Consistent with the entrenchment perspective, Krishnan and Peytcheva conclude that external auditors expect greater agency conflicts in family firms than in non-family firms

Alternatively, some research finds that external auditors may associate family firm control with lower agency costs and reduced audit risk, consistent with alignment theory. Niemi (2005) reports that audit hours and audit fees are negatively associated with the level of concentrated ownership by the founding family, suggesting that external auditors may connect higher levels of family ownership with lower audit risk. Ghosh and Tang (2015) find that family firms are charged significantly less for the external audit than are non-family firms because their superior financial reporting lowers audit risk. Srinidhi et al. (2014) also provide evidence that family firms pay lower audit fees compared to non-family firms. The results of these studies suggest that external auditors may perceive family firm control as affirmative and consistent with an alignment perspective because management is less concerned with earnings manipulation and more concerned with long-term performance (Martin et al. 2016).

The alternative characterizations of family-controlled firms under the perspectives of entrenchment and alignment render competing hypotheses regarding the influence of family firms in moderating the potential impact of MTGs on the external auditor's reliance decision. Under the entrenchment perspective, corporate governance actors will prioritize family interests over those of other stakeholders. Therefore, external auditors will likely assess higher audit risk when they observe owner-managers' exerting significant control over a family firm's operating and investment decisions, perceiving family interests to take precedence over financial reporting quality (Bertrand and Schoar 2006; Le Breton-Miller and Miller 2009; Leuz et al. 2003). The more adversarial organizational context of the entrenchment perspective should lead external auditors to perceive family firm internal auditors as less objective than non-family firm auditors and to face even greater pressure to reduce their objectivity when the IAF serves as a MTG. Under the entrenchment perspective, external auditors will likely place lower reliance on a family firm IAF compared to a non-family firm IAF, and place the least reliance on a family firm IAF that serves as

a MTG compared to a non-MTG family firm IAF or to a non-family firm IAF with a MTG. That is, the difference in external auditor reliance between MTG and non-MTG contexts will be greater for a family firm IAF than for a non-family firm IAF.

Under an alignment perspective, family firms prioritize meeting broad stakeholder goals rather than the more narrow interests of family members, suggesting that in family firms, management will require higher levels of objectivity from internal auditors than in non-family firms. Researchers across business disciplines have found that family firms differ considerably from non-family firms in their ethical focus (e.g., loyalty and connection amongst members of organization), social performance (e.g., positive involvement with the community, employees and social initiatives) and informal practices to promote an ethical environment (e.g., Adams et al. 1996; Bingham et al. 2011; Blodgett et al. 2011; Duh et al. 2010; Dyer and Whetten 2006; He et al. 2012; Mullin and Schoar 2016; O'Boyle et al. 2010; Sorenson et al. 2009). Under the more affirmative organizational context framed by the alignment perspective, the threat to internal auditor objectivity posed by a MTG practice and its corresponding potential negative impact on the external auditors' reliance decision is attenuated when internal auditors work in an IAF located in a family firm. Under this viewpoint, external auditors would place less reliance on a non-family firm IAF that serves as a MTG compared to a non-family firm IAF not serving as a MTG. In family firms, however, the reliance decision of external auditors would be unaffected by the presence of a MTG. Under the alignment perspective, the difference in external auditor reliance between MTG and non-MTG contexts will be greater for a non-family firm IAF than for a family firm IAF.

In light of the competing theoretical propositions regarding the moderating influence of family firms on the external auditor's decision to rely on an IAF serving as a MTG, we offer hypotheses reflecting both entrenchment and alignment perspectives:

H2a (entrenchment perspective): The effect of a MTG practice on the external auditor's decision to rely on the IAF will be greater in family firms than in non-family firms.

H2b (alignment perspective): The effect of a MTG practice on the external auditor's decision to rely on the IAF will be greater in non-family firms than in family firms.

Prior research finds that relative influence of internal auditor competence, due professional care and objectivity on the external auditor's decision to rely on the work of the IAF is dependent upon context. Maletta and Kida (1993) report that competence, objectivity and work performance are all significantly related to the reliance decisions of their external

auditor participants. The results of Maletta (1993), however, indicate that work performance has a significant influence on external auditors' reliance decisions when internal auditor objectivity is high but not when objectivity is low. Bame-Aldred et al. (2013) posit that internal auditor objectivity, rather than differences in competence, appears to drive the results of Glover et al. (2008) and those of Desai et al. (2011), in that both studies find external auditors rely more on an outsourced IAF than an in-house IAF when risk is at least moderate. Results of path analyses presented by Glover et al. (2008) and Desai et al. (2008) reveal that internal auditor objectivity partially mediates the effects of internal audit sourcing arrangements (e.g., in-house, co-sourcing and outsourcing) on external auditors' reliance decisions. Building from these studies and the MTG literature, we predict that external auditor perceptions of internal auditor objectivity, rather than internal auditor competence or due care, will account for the relationship between a MTG and the reliance of external auditors on the IAF. This discussion leads to the following hypothesis:

H3: Internal auditor objectivity will mediate the effect of a MTG on the external auditors' decision to rely on the IAF.

Research Method

Participants

In Study 2, we employ a controlled laboratory experiment to (1) examine the impact of a MTG and family firm control on the external auditor's decision to rely on the work of the IAF, and to (2) investigate whether perceptions of internal auditor objectivity, competence and due professional care mediate the effect of a MTG on external auditor reliance. Two of the Big 4 international public accounting firms located in Mexico agreed to provide experienced external auditors as participants for Study 2.²¹

Interacting and/or coordinating with a client's IAF is required of external auditors (ISA No. 610 [IAASB 2013]; SAS 128 [AICPA 2014]) and partners from both participating firms assured us that working with a client's IAF is a common practice for their firm's auditors. The initial pool of external auditor participants consisted of 101 audit juniors, seniors and managers. Four individuals attending the firms' training sessions indicated no experience interacting with a

client's IAF and were excluded from participation. Of the 97 participants, twenty-one auditors were excluded from the study because nine failed to respond correctly to a manipulation check question (9.2%) and twelve did not complete the task (12.4%). The final sample contains 76 external auditors, including 24 (31%) audit juniors, 50 (66%) audit seniors and 2 (3%) audit managers, with female representation at 35% (27). Collectively, the external auditors in the sample pool had, on average, 4.3 years of audit experience and 3.4 years of firm experience.

Research Design and Experimental Task

A 2 × 2 experimental design was used to test the hypotheses of Study 2. Data were collected at training sessions held independently by the two participating firms. During the training sessions, one of the authors administered the experiment and de-briefed the participants. All research materials were written and all data collection sessions were conducted in Spanish. The experiment took place under controlled laboratory conditions. The task required the external auditor participants to read a revenue recognition scenario based on the case utilized in Study 1 and modified for this study. Participants were instructed to assume the role of an external auditor working on a third-year engagement of a hypothetical company and to analyze the audit case as she or he normally would during the course of an audit engagement. The case included company background information and described the pressures and incentives for top management to increase earnings. Also provided in the case was information regarding the IAF, the general qualifications of its internal audit staff and the reporting lines.²² The external auditor participants were informed that the internal audit department spent 33% of its time performing audits of financial and accounting information with the remaining time dedicated to operational audits.²³ Participants were then directed in the case by a hypothetical audit partner to analyze a revenue recognition issue and its two alternative solutions, which were identical to the earnings management scenario, including Solutions 1 and 2, of Study 1.²⁴

²² The head of the IAF administratively reports to management and functionally reports to the audit committee.

²³ The percentage of time allocated between financial and operational audits represents the average time reported by participants from Study 1 and the pilot test. Prior research also finds that internal auditors, on average, spend between 27 and 33% of time on financial audits (Goodwin 2004; Prawitt et al. 2009).

²⁴ A total of 60 external auditors from one of the Big 4 firms, averaging approximately 5.19 years of auditing experience, participated in a pilot test of the experimental materials. Based on the pilot test results, we concluded that the experimental manipulations were effective. We also used feedback from the pilot test to modify the final case instrument. Firm management verified that the pilot test participants were excluded from the final sample.

²¹ Discussions with partners from participating Big 4 offices indicated that Mexican external auditors follow substantially the same audit practices as their U.S. counterparts, receive training identical to Big 4 auditors in the U.S., and often conduct audits conjointly with American auditors. Furthermore, audits in Mexico are subject to The International Forum of Independent Audit Regulators as well as Public Company Accounting Oversight Board inspections for clients whose securities are registered on exchanges in the United States.

Independent Variables

The first independent (*MTG*) variable in the experimental case involves the manipulation of the IAF as a *MTG* or a non-*MTG*, as follows:

(*MTG* condition) It is a practice for the company to promote or rotate internal auditors from internal audit to management positions of business areas outside of internal auditing. Senior management such as the CEO, CFO or other top executives decide who in the internal audit department to promote or rotate into management positions outside of internal auditing.

(Non-*MTG* condition) *It is not the company's practice to promote or rotate internal auditors into line management positions at other business areas outside of internal audit. In other words, it is a practice for internal auditors to remain within the internal audit department throughout their careers.*

The second independent variable involves the manipulation of the *Family Firm* condition:

(Family Firm condition) The founding family maintains a 60 percent concentrated ownership of the company. Mr. Alberto Sánchez is the founder of the company and holds the title of CEO and Chairman of the board. Three of Mr. Sanchez's younger brothers currently hold three other top management positions, which include chief financial officer (CFO), chief operating officer (COO), and Marketing VP (these three positions are the highest positions after CEO).²⁵

(non-Family Firm condition) *The original founding family maintains less than 1 percent concentrated ownership of the company. In addition, the founding family members do not have any active involvement in the firms' management. All of the top five executives, including the CEO and CFO, are individuals that have no relations with the founding family. Therefore, top management only consists of a team of professional managers.*

This manipulation represents characteristics of family-firm structure where the founder(s) and/or the founding family member(s) work as top-tier managers or directors (Anderson and Reeb 2003) and the effective control of voting shares is maintained by a family (Prencipe et al. 2014). The family

²⁵ Chong et al. (2009) report that the average ownership concentration in Mexican family firms is 64%. We set the percentage in the case to be consistent with this level. In Study 1, we find that the level of ownership concentration for family firms in our sample is, on average, 62%.

managerial control and ownership concentration criteria are consistent with the definition of family firms used in prior research (Ghosh and Tang 2015; Krishnan and Peytcheva 2019; Srinidhi et al. 2014).

Dependent Variables

After reviewing and considering the facts surrounding the revenue recognition case, the external auditor participants were instructed to choose one of the two proposed solutions.²⁶ Subsequent to making their choice, participants indicated the level of reliance they would place on the work of the internal audit department on a 7-point Likert scale, from (1) = "No Reliance" to (7) = "Strong Reliance." The participants then rated separately (1 = "Low" and 7 = "High,") the objectivity, 2) competence and 3) due professional care of the internal audit department. The participants' reliance decision (*Reliance*) and ratings of the internal audit departments' objectivity (*Objectivity*), competence (*Competence*) and due professional care (*Due Care*) served as variables for testing the hypotheses of Study 2. After evaluating the internal audit department, the participants responded to demographic and manipulation check items.²⁷

Analysis and Results

Preliminary Analysis and Descriptive Statistics

The distribution of participants' responses for the *Reliance*, *Objectivity*, *Competence* and *Due Care* variables is presented in Panel A of Table 5. A matrix presenting correlations among the manipulated independent variables, participant response variables and relevant demographic variables is shown in Panel B. The existence of a *MTG* is significantly and negatively associated with participants' perceptions of internal auditor *Objectivity* and *Due Care*, as well as their *Reliance* on the IAF. Perceptions of internal auditor *Objectivity*, *Competence* and *Due Care* are significantly and

²⁶ Of the 76 external auditor participants, 62 (82%) chose Solution 2, with a mean of 2.74 ($S_x = .51$). In Study 1, 70% of the internal auditor participants chose Solution 2, with a mean of 2.52 ($S_x = .59$). The *Proposed Solution* mean for the external auditor participants ($\bar{X} = 1.83$, $S_x = 2.00$) is significantly higher or more conservative ($t = 2.32$, $p = 0.021$) than the mean for the internal auditor participants ($\bar{X} = 1.12$, $S_x = 2.22$).

²⁷ To test for randomization of the experimental treatments, we evaluated the distribution of the *MTG* and *Family Firm* treatment conditions across firm, rank, and external auditor experience. *Chi-square* analyses and one-way ANOVA tests were performed on the 76 usable observations. The results indicate that the reported demographic variables do not differ significantly across manipulated conditions (all $p > .05$), suggesting successful randomization of treatments among participants.

Table 5 Study 2: External Auditor Participant Data and Correlation Matrix

Panel A: External Auditor Participant Data

	Non-Family Firm and Non-MTG	Non-Family MTG	Family Firm and Non-MTG	Family Firm and MTG	Total
n ^a	17	17	16	26	76
Reliance ^b	4.88 {1.32}	3.59 {1.33}	4.56 {1.67}	3.92 {1.74}	4.20 {1.60}
Objectivity ^b	4.82 {1.29}	3.94 {1.52}	4.44 {1.68}	3.50 {1.75}	4.09 {1.64}
Competence ^b	4.47 {1.38}	4.29 {1.86}	4.56 {1.41}	3.81 {1.94}	4.22 {1.70}
Due Care ^b	4.65 {1.46}	4.00 {1.80}	5.06 {1.29}	3.58 {1.94}	4.22 {1.76}
Years of External Audit Experience ^b	4.65 {2.77}	4.26 {2.29}	4.25 {1.99}	4.14 {2.45}	4.31 {2.36}
Years of Firm Experience ^b	4.03 {2.11}	3.35 {1.55}	3.13 {1.98}	3.21 {2.15}	3.41 {1.98}
Interaction with IA ^c	17 (100%)	17 (100%)	16 (100%)	26 (100%)	76 (100%)

Panel B: Correlation Matrix

	MTG	Family Firm	Reliance	Objectivity	Competence	Due Care
MTG	1					
Family Firm	0.119	1				
Reliance	-0.292*	-0.021	1			
Objectivity	-0.294*	-0.160	0.805**	1		
Competence	-0.151	-0.084	0.684**	0.703**	1	
Due Care	-0.314**	-0.052	0.705**	0.732**	0.844**	1
External Audit Experience	-0.187	0.049	-0.008	0.018	-0.030	0.015
Firm Experience	-0.055	-0.057	0.068	-0.095	-0.022	-0.057
Interaction with IA	-0.083	-0.131	0.048	-0.093	-0.031	-0.093

^aSample size per organizational context

^bMean {standard deviation}

^cPercentage figures pertain to each treatment condition or the 'column' sample

**Correlation is significant at the 0.05 level (2-tail)

*Correlation is significant at the 0.01 level (2-tail)

N=76

MTG = 1 if the internal audit function (IAF) serves as management training ground (MTG), 0 if the IAF serves as a non-training ground (non-MTG)

Family firm = 1 if Family firm (FF), 0 if non-family firm (non-FF)

Reliance = Perceived reliance on the work of internal audit function (1 = No reliance, 7 = Strong reliance)

Objectivity = Perceived objectivity of the internal audit function (1 = Low, 7 = High)

Competence = Perceived competence of the internal audit function (1 = Low, 7 = High)

Due Care = Perceived due professional care of the internal function (1 = Low, 7 = High)

External Audit Experience = Years of experience in external auditing

Firm Experience = Years of working experience at the firm

Interaction with IA = 1 if have experience interacting with a client's internal audit function (IAF) in prior audit engagements, 0 if no experience interacting with a client's IAF

positively associated with higher external auditor *Reliance* on the IAF. The *Family Firm* independent variable and the demographic variables are uncorrelated with any of the other variables presented.

Hypotheses Tests

We predict in hypotheses H2a and H2b that the pattern of external auditor reliance across the four experimental conditions (family/non-family & MTG/non-MTG) will be non-symmetrical as a result of the family business environment



Table 6 Study 2: ANOVA Results of the Impact of MTG and Family Firm on the External Auditors' Reliance Decision

Panel A: Mean (standard deviation) {sample size} across treatment conditions

	Firm		Main Effect: MTG
	Non-Family Firm (Non-FF)	Family Firm (FF)	
MTG			
Non-MTG	Cell A	Cell B	
	4.88 (1.32) {17}	4.56 (1.67) {16}	4.73 (1.48) {33}
MTG	Cell C	Cell D	
	3.59 (1.33) {17}	3.92 (1.74) {26}	3.79 (1.58) {43}
Main Effect: Family Firm	4.24 (1.46) {34}	4.17 (1.74) {42}	4.20 (1.60) {76}

Panel B: ANOVA Results (DV = Reliance)

Source	Type III Sum of Square	d.f.	Mean Square	F-ratio	p-value
MTG	17.102	1	17.102	7.090	0.010
Family Firm	0.001	1	0.001	0.000	0.984
Interaction (MTG × Family Firm)	1.961	1	1.961	0.813	0.370
Error	173.666	72	2.412		

Panel C: Planned Contrasts used for H2a and H2b (DV = Reliance)

	Contrast			Residual between-cells variance	
	Contrast	$F_{1,72}$	p-value	$F_{1,72}$	p-value
Contrast test under the entrenchment perspective (cell A = 2, cell B = 1, cell C = 1, cell D = -4)	1	2.108	0.151	1.836	0.180
Contrast test under the alignment perspective (cell A = 1, cell B = 2, cell C = -4, cell D = 1)	2	4.117	0.046	1.167	0.284

(All *p* values are two-tailed)

moderating the effects of a MTG practice. Because of this situation, we use planned contrasts to test H2a and H2b (ordinal interaction), following Hirst et al. (2007), Kadous et al. (2003), Krishnan and Peytcheva (2019) and Lambert and Agoglia (2011). In Table 6 (Panel A), we label the average *Reliance* in the non-family firm and non-MTG condition as “cell A,” the family firm and non-MTG condition as “cell B,” the non-family firm and MTG condition as “cell C,” and the family firm and MTG condition as “cell D.”

We expect that in both family and non-family firms, external auditors will rely more on the work the IAF when it does not serve as a MTG than when it does serve as a MTG: [cell A > cell C] and [cell B > cell D]. Under the entrenchment perspective hypothesized in H2a, we anticipate that the MTG effect on auditor reliance decision will be *greater* in the family firm (FF) context than in the non-family firm

context: i.e., [cell B – cell D] > [cell A – cell C]. This ordinal interaction predicts that the external auditor reliance reflected in cell D (FF, MGT) will be the lowest and suggests that cell A reliance (non-FF, non-MTG) will be the highest. Following this pattern, we assigned contrast weights of 2, 1, 1 and -4 to cell A, cell B, cell C and cell D, respectively.

The alignment perspective reflected in hypothesis H2b predicts that the MTG effect will be *greater* within the non-family firm context than under the family firm context: i.e., [cell A – cell C] > [cell B – cell D]. This ordinal interaction posits that the external auditor reliance reflected in cell C (Non-FF, MTG) will be the lowest and suggests that cell B (FF, non-MTG) will be the highest. Following this pattern, we assigned contrast weights of 1, 2, -4 and 1 to cell A, cell B, cell C and cell D, respectively.

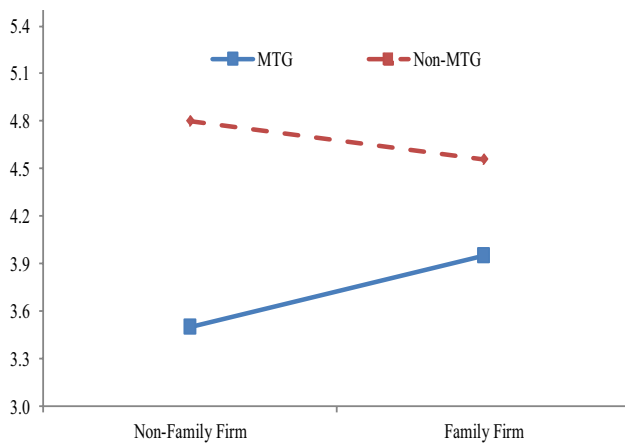


Fig. 2 The Impact of MTGs and Family Firms on External Auditors' Reliance Decision

The results of our ANOVA model testing hypotheses H2a and H2b are presented in Panel B of Table 6, with *Reliance* as the dependent variable and *MTG* and *Family Firm* as the independent variables.²⁸ We predict ordinal interactions in H2a and H2b. However, the conventional 2×2 ANOVA is designed to test symmetrical patterns of cell means (disordinal interactions) and it does not have a sufficient power to test nonsymmetrical patterns of cell means (ordinal interactions) when no main effects are hypothesized (Buckless and Ravenscroft 1990; Guggenmos et al. 2018).

Because of this limitation, it is appropriate to use planned contrasts for testing H2a and H2b. Buckless and Ravenscroft (1990) and Guggenmos et al. (2018) contend that planned contrasts testing ordinal interactions must be conducted with a test for insignificance of the residual between-cells variance to determine whether the pattern of cell means (*Reliance*) matches with the pattern of cell means predicted by H2a or H2b.²⁹

As shown in Panel A of Table 6 and Figure 2, the external auditor participants place the lowest reliance on the IAF in the non-family firm/MTG context (cell C) and the highest reliance in the non-family firm/non-MTG context (cell A). That external auditors placed the lowest reliance on the IAF in the non-family firm/MTG context is consistent with the alignment perspective. However, the highest reliance

occurred in the non-family firm/non-MTG condition but the mean *Reliance* is not significantly different between cell A (non-FF/non-MTG) and Cell B (FF/non-MTG).

Panel C of Table 6 presents data indicating that the planned contrast testing the entrenchment perspective of H2a is not significant despite the insignificance of the residual between-cell variance. The planned contrast testing the alignment perspective is significant ($p=0.046$), while the residual between-cell variance is not significant. Both the significance of the planned contrasts and the insignificance of the residual between-cell variances demonstrate that the data fit the specific pattern of ordinal interaction proposed in H2b (Abelson and Prentice 1997; Buckless and Ravenscroft 1990; Guggenmos et al. 2018) and provide support for the alignment perspective of family firms.³⁰

Hypothesis H3 asserts that the external auditor's perception of internal auditor objectivity will mediate the effect of a MTG on the IAF reliance decision more than the perception of internal auditor competence or due professional care. To test hypothesis H3, we perform a moderated-mediation analysis (Hayes 2013; Preacher et al. 2007; Preacher and Hayes 2008) with *Reliance* as the dependent variable, *MTG* as the independent variable, *Family Firm* as the moderator and *Objectivity*, *Competence* and *Due Care* as mediators.³¹ This moderated-mediation analysis is consistent with the ordinal interaction effect hypotheses of H2a and H2b. It also enables us to assess whether the direct and indirect effects of *MTG* on *Reliance* are contingent upon the *non-Family Firm* condition or the *Family Firm* condition, and to examine the mediating role of *Objectivity*, *Competence* and/or *Due Care* in accounting for the effect of *MTG* on *Reliance*. The multiple mediator model conceptually fits the conditions of professional standards requiring that external auditors consider the objectivity, competence and due professional care of the IAF before making their reliance decision (SAS128 [AICPA 2014]; ISA No. 610 [IAASB 2013]). In addition, perceived *Objectivity*, *Competence* and *Due Care* are significantly correlated with each other ($p < 0.05$), providing support for the notion that external auditors consider these factors when making their reliance decision, as required by professional standards (SAS128 [AICPA 2014]; ISA No. 610 [IAASB 2013]).

²⁸ We also perform ANCOVA using *Reliance* as the dependent variable, *MTG* and *Family Firm* as the independent variables and *External Audit Experience* and *Firm Experience* as covariates. The results of ANCOVA are essentially identical to those reported in Panel B of Table 6. We find a significant main effect for *MTG* ($p=.011$), an insignificant main effect of *Family Firm* ($p=.994$) and an insignificant interaction effect ($p=.371$).

²⁹ Results of hypotheses testing using a subsample of 52 audit seniors and managers are identical to those of the final sample of 76 audit juniors, seniors and managers.

³⁰ For robustness, we also perform tests with the orthogonal contrast weights for *Reliance* based on the entrenchment (cell A = 1, cell B = 1, cell C = 1, cell D = -3) and alignment (cell A = 1, cell B = 1, cell C = -3, cell D = 1) perspectives and find similar results to those reported in Panel C of Table 6. Contrast tests for the alignment perspective are significant ($F_{1,72}=4.077$, $p=.047$) while the residual between-cell variance is not significant. Results of contrast tests for the entrenchment perspective are not significant.

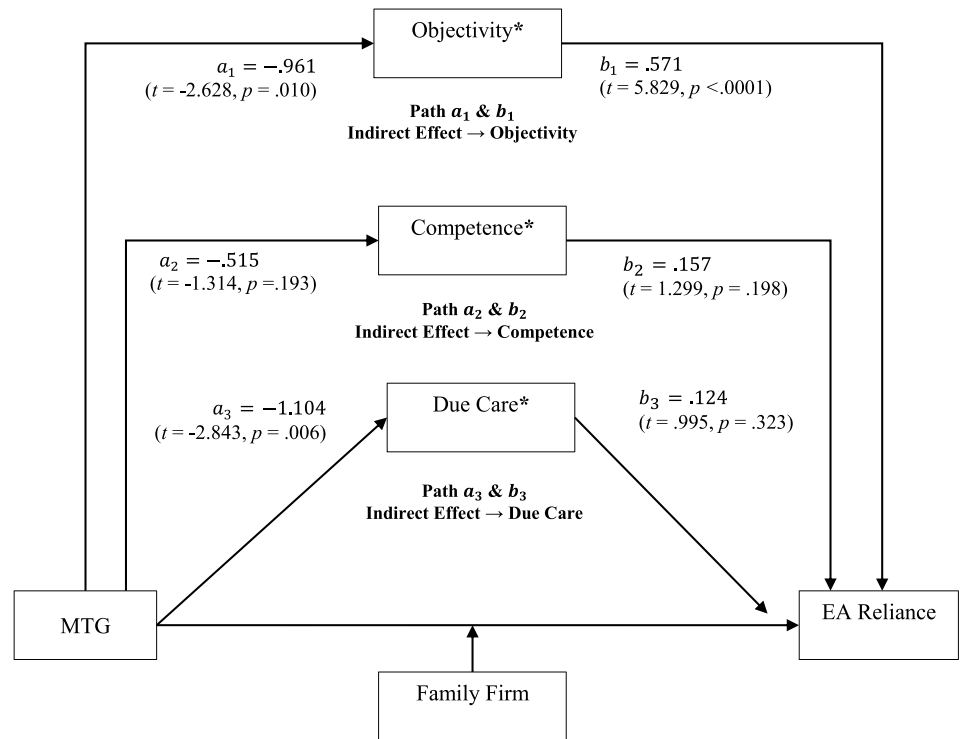
³¹ For more information on moderated-mediation analysis and multiple mediator models, see Preacher et al. (2007) and Preacher and Hayes (2008). For the moderated mediation analysis, we used Model 5 (Hayes 2013).

Table 7 Study 2: Moderated-Mediation Analysis of External Auditor Reliance

Panel A: Direct Effect(s) of Management Training Ground (MTG) on Reliance—Contingent upon Family Firm or Non-Family Firm						
Family Firm (Moderator)	Effect	SE	<i>t</i>	<i>p</i> -value	LLCI (Lower Limit CI)	LLCI (Upper Limit CI)
Non-Family Firm	− 0.683	0.318	− 2.149	0.035	− 1.316	− 0.049
Family Firm	0.199	0.307	0.650	0.518	− 0.411	0.808

Panel B: Indirect Effect of MTG on Reliance				
	Effect	Bootstrapping SE	Bootstrapping LLCI	Bootstrapping ULCI
Total	− 0.767	0.287	− 1.366	− 0.238
Objectivity	− 0.549	0.236	− 1.123	− 0.185
Competence	− 0.081	0.126	− 0.487	0.059
Due Care	− 0.137	0.193	− 0.593	0.177

Fig. 3 Conditional Direct Effect of MTG on External Auditor (EA) Reliance: The Influence of Internal Auditor Objectivity, Competence and Due Professional Care



Conditional Direct Effect: *
 If Family Firm, $c' = -.199$ ($t = .650, p = .518$)
 If Non-Family Firm, $c' = -.683$ ($t = -2.149, p = .035$)

* (All *p* values are two-tailed)

For the moderated-mediation analysis, we use a bootstrapping or a nonparametric resampling procedure that does not require the assumption of normality for the sampling distribution. Through the bootstrapping procedure, we can construct confidence intervals (Cis) for the conditional

direct and indirect effects of *MTG* on *Reliance* at different levels of the *Family Firm* variable resulting from an empirical approximation of the sampling distribution, and derive the statistical significance of the specific indirect effect of each mediator while controlling for the Type I error rate

(Hayes 2013; Preacher and Hayes 2008).³² The results, presented in Table 7 and graphically depicted in Figure 3, show that the indirect effect (IE) of *MTG* on *Reliance* is dependent on firm ownership structure. For an IAF residing in a non-family firm, the results in Panels A and B reveal that the direct effect of *MTG* on *Reliance* is significant, with *Objectivity* as the only significant mediator. *Objectivity* fully accounts for the relationship between *MTG* and *Reliance* as its bias-corrected confidence interval (*Ci*), unlike the *Ci*'s for *Competence* and *Due Care*, does not contain zero.³³ The indirect effect of *MTG* on *Reliance* is -0.549 for *Objectivity* ($a_1 \times b_1 = -0.961 \times 0.571$) under the non-family firm context. In other words, when the IAF operates within a non-family firm, the negative influence of a *MTG* on the external auditors' reliance decision results from their perception of reduced internal auditor objectivity and is unaffected by perceptions of internal auditor competence or due care.

When the IAF is located within a family firm, however, the direct and indirect effects of *MTG* on *Reliance* are not significant, indicating that external auditors do not perceive a *MTG* to adversely affect internal auditor objectivity in family firms. These results indicate that the *Family Firm* variable attenuates the adverse effect of *MTG* on *Reliance*, as participants' reliance decision for a family firm IAF, in contrast to a non-family firm IAF, does not differ significantly between the *MTG* condition and the non-*MTG* condition. This result is consistent with the perspective of alignment theory, which proposes that the stewardship orientation of family firms mitigates the potential detrimental influence of a *MTG* on internal auditor objectivity. The results of our moderated-mediation analysis provide support for H3, but only in the non-family firm context.

Discussion and Conclusions

We respond to calls for research on family firm governance (Vazquez 2018) and its influence on auditors' judgments (Trotman and Trotman 2010) by conducting two separate but related studies investigating the effects of *MTGs* and

family firm control on the objectivity of internal auditors and on the decision by their external auditor counterparts to rely on the IAF. The use of two studies enables us to holistically address the influence of *MTGs* and family firms on auditor judgment, recognizing that factors affecting internal auditors' objectivity should, in turn, influence the external auditors' decision to rely on the work of the IAF. In both studies, we test competing hypotheses motivated by the entrenchment and alignment theories and examine whether family ownership and managerial control, as a form of corporate governance (Connelly et al. 2010), magnifies or mitigates ethical conflicts associated with internal auditors operating in a *MTG* setting (Study 1) and the willingness of external auditors to coordinate their oversight responsibilities with the IAF.

In Study 1, we investigate the objectivity of 146 practicing internal auditors from 26 Mexican companies who actually work in an internal audit department that (1) either serves as a *MTG* or a non-*MTG*, and (2) is located within a family firm or a non-family firm. The absence of manipulated variables in Study 1 allows our internal auditor participants to respond freely from their own perspective while in their work environment (Harrison and List 2004). The results of Study 1 reveal that the use of an IAF as a *MTG* may impair internal auditors' objectivity, but only when they work in a non-family firm IAF. In non-family firms, internal auditors working under a *MTG* regime are significantly less objective than internal auditors working under a non-*MTG* regime. However, in family firms the objectivity of internal auditors' working in a *MTG* does not differ from that of internal auditors not working in a *MTG*. These results suggest that family firm control mitigates concerns regarding the ethical conflict posed by a *MTG* regime.

In Study 2, we examine the moderating influence of family firm control on the external auditor's decision to rely on an IAF that serves as a *MTG* by conducting a controlled laboratory experiment with 76 Big 4 auditors, all having experience interacting with client IAFs. Our hypotheses tests indicate that in a non-family firm context, external auditors reduce their reliance on an IAF when it serves as a *MTG*. However, when the IAF exists within a family firm, the external auditors' reliance is unaffected by a *MTG*. Our analyses indicate that in non-family firms, the effect of a *MTG* on the external auditor's decision to rely on the IAF is through its perceived negative influence on internal auditor objectivity. External auditor perceptions of competence and due care are unaffected by a *MTG*; however, our experimental design may not allow for an assessment of competence and due professional care in a context that either or both of these constructs should matter.

The correspondence between the results of Study 1 with the reliance decisions of the external auditors in Study 2 indicates that the external auditor participants demonstrated

³² Our sample size of 76 may not be large enough for the sampling distribution of the indirect effect to be normal. The Sobel test assumes that the sampling distribution of the indirect effect or the product-of-coefficients is normal. This assumption is relaxed when the sample size is not large enough (Preacher and Hayes 2008).

³³ A bias-corrected confidence interval is preferred to an ordinary confidence interval as the latter can be asymmetrical or skewed relative to a normal distribution, causing the distance between the upper confidence limit and the point estimate be different from the distance between the lower confidence limit and the point estimate. The bias-corrected confidence interval corrects this problem. For more information, see Efron and Tibshirani (1998) as well as Hogg and Tanis (2001).

nuance and expertise in assessing the influence of a family firm context in mitigating the potential for a MTG to impair internal auditor objectivity. The discrepancy between family firms and non-family firms regarding the impact of MTGs on the objectivity or ethical conduct of internal auditors and on the reliance decision of external auditors is important in light of the global economic prominence of family firms. This is a critical distinction that has not been made in prior studies of MTGs and represents a central contribution of this research.

The results of Study 1 and Study 2 suggest that family firm control reduces agency conflicts in the context of MTGs, consistent with expectations formed under alignment theory but in contrast to the findings of some researchers supporting an entrenchment perspective (i.e. Hope et al. 2012; Krishnan and Peytcheva 2019). An explanation for the conflicting theoretical perspectives and research findings on family firm governance is that family firms, like all companies, face a portfolio of ethical issues across various contexts. It may be naïve to frame family firm management as responding monolithically in developing governance policies and making decisions, consistent with only a single theoretical perspective. Rather, management positions and decisions may favor family interests in some contexts and reflect the welfare of a broader set of stakeholders in other settings.

The methodology of Study 1 is absent of manipulated variables because it enables us to elicit the unencumbered responses of internal auditors. This approach is intended to capture differences in relative objectivity attributable to actually working under a MTG context and in a family firm context. Therefore, we did not manipulate contexts in Study 1, impose roles, or provide economic incentives that could potentially introduce demand effects. In an organizational context, however, a MTG creates the potential for diminished objectivity because of future economic benefits, such as a coveted position outside of the IAF, which may accrue to the internal auditor by appeasing management. Our results must be interpreted with caution because the economic incentives inherent in a MTG context are likely to exacerbate the threat to internal auditor objectivity.

In Study 2, external auditor participants were provided with a general description of the focal IAF, including its reporting responsibilities, qualifications of the internal audit staff, and allocation of effort between financial and operational audits. Our intent in providing a limited overview of the IAF is to draw on the perspectives of our seasoned participants forged from their experience interacting with client IAFs. This approach is similar to that of some prior research on external auditor reliance (Desai et al. 2011, Munro and Stewart 2010, 2011; Schneider 1985). We did not provide extensive detail regarding the focal IAF or hypothetical workpapers prepared by its internal auditors because we

wanted our participants' reliance judgments to reflect their field experience interacting with internal audit departments, rather than taking cues from a more detailed description of a hypothetical IAF or a sample of its work output. In other words, we provided sufficient background information so that the participants could form a limited understanding of the role and capabilities of the IAF, allowing them to bring their experiences to bear in assessing the impact of MTGs and family firms on internal auditor objectivity and the amount of reliance to place on the IAF.

The methodological question of how much descriptive information to disclose regarding the hypothetical IAF depends upon the nature of the study. It is our perspective that the more detail provided regarding the quality of the IAF, the more likely it is that our external auditors' reliance judgments will be influenced by specific informational cues from the case, creating unwanted noise, as opposed to their professional experience interacting with IAFs, MTGs and family firms. Furthermore, we chose to limit the background description of the IAF over the more contextually detailed approach used in some other studies (Brandon 2010; Dezoort et al. 2001; Glover et al. 2008; Maletta 1993; Maletta and Kida 1993) because Study 2 focuses on the macro-level reliance decision to rely on an IAF operating as a MTG within a family firm setting, rather than a more micro-level judgment associated with reliance on specific work performed by the internal audit staff. A potential limitation of our approach, however, is that the description of the hypothetical IAF lacks the contextual richness and nuance typically encountered by external auditors when making their decision to rely on the client's IAF.

A further limitation to our studies is that their data do not conform to a balanced design. The unbalanced cell sizes of Study 2 appear to result from the particular manipulations, causing external auditor participants to drop out of the non-family firm conditions, either the MTG or the non-MTG condition, more than the family firm/non-MTG condition. It is difficult to determine who dropped out and why they dropped out of non-family firm condition more than the family firm condition, but this situation, in part, seems to drive the results of Study 2. We recommend that readers take this situation into account while interpreting our results.

Acknowledgment We would like to express our appreciation to the seminar participants at the University of Central Florida, University of Nevada-Las Vegas, Marquette University and Instituto Tecnológico Autónomo de México. We appreciate the insightful comments of Vicky Arnold, Erin Hamilton, William Messier, Mark Peecher, Elizabeth Pozniemski, Robin Roberts, Sherron Roberts, Aaron Saiewitz, Jason Smith, Greg Trompeter, Ken Trotman, and the research assistance of Ken Dalton. We would also like to thank the Mexican Institute of Internal Auditors and the Instituto Tecnológico Autónomo de México, in particular Jose Luis Rivas and Sylvia Meljem, for their assistance and support.

Compliance with Ethical Standards

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants included in the study.

References

- Abbott, L., Daugherty, B., Parker, S., & Peters, G. F. (2016). Internal audit quality and financial reporting quality: The joint importance of independence and competence. *Journal of Accounting Research*, 54(1), 3–40.
- Abbott, L. J., Parker, S., & Peters, G. F. (2012). Internal audit assistance and external audit timeliness. *Auditing A Journal of Practice & Theory*, 34(4), 3–20.
- Adams, J. A., Taschian, A., & Shore, T. H. (1996). Ethics in family and non-family owned firms: An exploratory study. *Family Business Review*, 9(2), 157–170.
- Aguilo, T. I., & Aguilo, N. F. (2012). Family business performance: Evidence from Mexico. *Cuadernos de Administracion*, 25(44), 39–61.
- Abelson, R., & Prentice, D. (1997). Contrast tests of interaction hypotheses. *Psychological Methods*, 2(4), 315–328.
- Ahlawat, S. S., & Lowe, D. J. (2004). An examination of internal auditor objectivity: In-house versus outsourcing. *Auditing A Journal of Practice & Theory*, 23(2), 147–158.
- Ali, A., Chen, T. Y., & Radhakrishnan, S. (2007). Corporate disclosures by family firms. *Journal of Accounting and Economics*, 44, 238–286.
- American Institute of Certified Public Accountants (AICPA). (2014). *AICPA professional standards*. New York: AICPA.
- Anderson, R., & Reeb, D. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58, 1301–1328.
- Anderson, R., Mansi, S., & Reeb, D. (2003). Founding family ownership and the agency cost of debt. *Journal of Financial Economics*, 68, 263–285.
- Arrègle, J.-L., Hitt, M., Sirmon, D., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies*, 44(1), 73–95.
- Bame-Aldred, C., Brandon, D. M., Messier, W. F., Jr., Rittenberg, L. E., & Stefaniak, C. M. (2013). A summary of research on external auditor reliance on the internal audit function. *Auditing A Journal of Practice & Theory*, 32(Supplement 1), 251–286.
- Bardhan, I., Lin, S., & Wu, S.-L. (2015). The quality of internal control over financial reporting in family firms. *Accounting Horizons*, 29(1), 41–60.
- Barrier, M. (2001). Turnover the ebb and flow. *Internal Auditor*, 58(5), 33–37.
- Bertrand, M., & Schoar, A. (2006). The role of family in family firms. *The Journal of Economic Perspectives*, 20(2), 73–96.
- Bartholomeusz, S., & Tanewski, G. A. (2006). The relationship between family firms and corporate governance. *Journal of small business management*, 44(2), 245–267.
- Bingham, J. B., Dyer, W. G., Jr., Smith, I., & Adams, G. L. (2011). A stakeholder identity orientation approach to corporate social performance in family firms. *Journal of Business Ethics*, 99(4), 565–585.
- Blodgett, M. S., Dumas, C., & Zanzi, A. (2011). Emerging trends in global ethics: A comparative study of US and international family business values. *Journal of Business Ethics*, 99(1), 29–38.
- Boone, D. (2015). All in the family. *Ingram's March*, 16–31.
- Brandon, D. M. (2010). External auditor evaluations of outsourced internal auditors. *Auditing A Journal of Practice & Theory*, 29(2), 159–173.
- Buckless, F. A., & Ravenscroft, S. P. (1990). Contrast coding: A refinement of ANOVA in behavioral analysis. *The Accounting Review*, 65(4), 933–945.
- Burton, F. G., Starliper, M. W., Summers, S. L., & Wood, D. A. (2015). The effects of using the internal audit function as a management training ground or as a consulting services provider in enhancing the recruitment of internal auditors. *Accounting Horizons*, 29(1), 115–140.
- Campopiano, G., & De Massis, A. (2015). Corporate social responsibility reporting: A content analysis in family and non-family firms. *Journal of Business Ethics*, 129(3), 1–24.
- Carcello, J. V., Eulerich, M., Masli, A., & Wood, D. A. (2018). The value to management of using the internal audit function as a management training ground. *Accounting Horizons*, 32(2), 121–140.
- Castañeda, G. (1999). Governance of large corporations in Mexico and productivity implications. *Revista ABANTE*, 3(1), 57–89.
- Chadwick, W. (1995). Tough questions, tougher answers. *The Internal Auditor*, 52(6), 63–68.
- Chen, S., Chen, X., & Cheng, Q. (2008). Do family firms provide more or less voluntary disclosure? *Journal of Accounting Research*, 46(3), 499–536.
- Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics*, 91(1), 41–61.
- Cheng, Q. (2014). Family firm research—A review. *China Journal of Accounting Research*, 7, 149–163.
- Chong, A., Guillen, J., & Lopez-de-Silanes, F. (2009). Corporate governance reform and firm value in Mexico: An empirical assessment. *Journal of Economic Policy Reform*, 12(3), 163–188.
- Christ, M. H., Masli, A., Sharp, H. Y., & Wood, D. A. (2015). Rotational internal audit programs and financial reporting quality: Do compensating controls help? *Accounting, Organizations and Society*, 44, 37–59.
- Cohen, J., Krishnamoorthy, G., & Wright, A. M. (2002). Corporate governance and the audit process. *Contemporary Accounting Research*, 573–594.
- Connelly, B. L., Hoskisson, R., Tihanyi, L., & Certo, S. T. (2010). Ownership as a form of corporate governance. *Journal of Management Studies*, 47(8), 1561–1589.
- Desai, N. K., Gerard, G. J., & Tripathy, A. (2011). Internal audit sourcing arrangements and reliance by external auditors. *Auditing*, 30(1), 149–171.
- DeZoort, F. T., Houston, R. W., & Peters, M. F. (2001). The impact of internal auditor compensation and role on external auditors' planning judgments and decisions. *Contemporary Accounting Research*, 18(2), 257–281.
- Duh, M., Belak, J., & Milfelner, B. (2010). Core values, culture and ethical climate as constitutional elements of ethical behaviour: Exploring differences between family and non-family enterprises. *Journal of Business Ethics*, 97(3), 473–489.
- Dyer, W. G., & Whetten, D. A. (2006). Family firms and social responsibility: Preliminary evidence from the S&P 500. *Entrepreneurship Theory and Practice*, 30(6), 785–802.

- Efron, B., & Tibshirani, R. J. (1998). *An introduction to the bootstrap*. Monographs on statistics and applied probability 57, Boca Raton, FL: Chapman and Hall/CRC.
- Firth, M., Fung, P. M. Y., & Rui, O. M. (2007). Ownership, two-tier board structure, and the informativeness of earnings—Evidence from China. *Journal of Accounting and Public Policy*, 26, 463–496.
- Ghosh, A., & Tang, C. Y. (2015). Assessing financial reporting quality of family firms: The auditors' perspective. *Journal of Accounting & Economics*, 60, 95–116.
- Glover, S. M., Prawitt, D. F., & Wood, D. A. (2008). Internal audit sourcing arrangement and the external auditor's reliance decision. *Contemporary Accounting Research*, 25(1), 193–213.
- Goodwin, J., & Yeo, T. Y. (2001). Two factors affecting internal audit independence and objectivity: Evidence from Singapore. *International Journal of Auditing*, 5, 107–125.
- Goodwin, J. (2004). A comparison of internal audit in the private and public sectors. *Managerial Auditing Journal*, 19(5), 640–650.
- Gramling, A. A., Maletta, M. J., Schneider, A., & Church, B. K. (2004). The role of the internal audit function in corporate governance. *Journal of Accounting Literature*, 23, 194–244.
- Guggenmos, R. G., Piercey, M. D. & Agoglia, C. P. (2018). Custom contrast testing: Current trends and a new approach. *The Accounting Review* (In-Press)
- Harrison, G. W., & List, J. A. (2004). Field experiments. *Journal of Economic Literature*, 42(4), 1009–1055.
- Hayes, A. F. (2013). *An introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.
- He, T. T., Li, W. X., & Tang, G. Y. (2012). Dividends behavior in state-versus family-controlled firms: Evidence from Hong Kong. *Journal of Business Ethics*, 110(1), 97–112.
- Hirst, D. E., Koonce, L., & Venkataraman, S. (2007). How disaggregation enhances the credibility of management earnings forecasts. *Journal of Accounting Research*, 45(4), 811–837.
- Hogg, R. V., & Tanis, E. A. (2001). *Probability and statistical inference* (6th ed.). Prentice Hall: New Jersey.
- Hoos, F., Messier, W. F., Jr., Smith, J., & Tandy, P. (2018). An experimental investigation of the interaction effect of management training ground and reporting lines on internal auditors' objectivity. *International Journal of Auditing*, 22, 150–163.
- Hope, O.-K., Langli, J. C., & Thomas, W. B. (2012). Agency conflicts and auditing in private firms. *Accounting, Organizations and Society*, 37, 500–517.
- Institute of Internal Auditors (IIA). (2016). International standards for the professional practice of internal auditing.
- Internal Standards for the Professional Practice of Internal Auditing (Standards). (2017). <https://www.na.theiia.org/standards-guidance/Public%20Documents/IPPF-Standards-2017>.
- International Auditing and Assurance Standards Board. (2013). International Standards on Auditing (ISA) No. 610 (Revised 2013): Using the work of internal auditors and related conforming amendments.
- Jaggi, B., Siney, L., & Ferdinand, G. (2009). Family control, board independence and earnings management: Evidence based on Hong Kong firms. *Journal of Accounting and Public Policy*, 28(4), 281–300.
- James, A. E., Jennings, J. E., & Jennings, P. D. (2017). Is it better to govern managers via agency or stewardship? Examining asymmetries by family versus nonfamily affiliation. *Family Business Review*, 30(3), 262–283.
- Kadous, K., Kennedy, S. J., & Peecher, M. E. (2003). The effect of quality assessment and directional goal commitment on auditors' acceptance of client-preferred accounting methods. *The Accounting Review*, 78(3), 759–778.
- Kang, F. (2014). Founding family ownership and the selection of industry specialist auditors. *Accounting Horizons*, 28(2), 261–276.
- Krishnan, G., & Peytcheva, M. (2019). The risk of fraud in family firms: Assessments of external auditors. *Journal of Business Ethics*, 157(1), 261–278.
- Lambert, T. A., & Agoglia, C. P. (2011). Closing the loop: Review process factors affecting audit staff follow-through. *Journal of Accounting Research*, 49(5), 1275–1306.
- Le Breton-Miller, I., & Miller, D. (2009). Agency vs. stewardship in public family firms: A social embeddedness reconciliation. *Entrepreneurship Theory and Practice*, 33(6), 1169–1191.
- Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earning management and investor protection: An international comparison. *Journal of Financial Economics*, 69, 505–527.
- Lin, S., Pizzini, M., Vargus, M., & Bardhan, I. R. (2011). The role of the internal audit function in the disclosure of material weaknesses. *The Accounting Review*, 86(1), 287–323.
- Madison, K., Holt, D. T., Keermans, F. W., & Ranft, A. (2016). Viewing family firm behavior and governance through the lens of agency and stewardship theories. *Family Business Review*, 29(1), 65–93.
- Maletta, M. J. (1993). An examination of auditors' decisions to use internal auditors as assistants: The effect of inherent risk. *Contemporary Accounting Research*, 9(2), 508–525.
- Maletta, M. J., & Kida, T. (1993). The effect of risk factors on auditors' configural information processing. *The Accounting Review*, 68(3), 681–691.
- Martin, G., Campbell, J. T., & Gomez-Mejia, L. (2016). Family control, socioemotional wealth, and earnings management in publicly traded firms. *Journal of Business Ethics*, 133(3), 453–469.
- McHugh, J., & Raghunandan, K. (1994). Hiring and firing the chief internal auditor. *The Internal Auditor*, 51(4), 34–39.
- Messier, W. F., Jr., Reynolds, J. K., Simon, C. A., & Wood, D. A. (2011). The effect of using the internal audit function as a management training ground on the external auditor's reliance decision. *The Accounting Review*, 86(6), 2131–2154.
- Morck, R. K., Wolfenzon, D., & Yeung, B. (2005). Corporate governance, economic entrenchment, and growth. *Journal of Economic Literature*, 43(3), 655–720.
- Mullin, W., & Schoar, A. (2016). How do CEOs see their roles? Management philosophies and styles in family and non-family firms. *Journal of Financial Economics*, 119, 24–43.
- Munro, L., & Stewart, J. (2010). External auditors' reliance on internal audit: The impact of sourcing arrangements and consulting activities. *Accounting and Finance*, 50, 371–387.
- Munro, L., & Stewart, J. (2011). External auditors' reliance on internal auditing: Further evidence. *Managerial Auditing Journal*, 26(6), 464–481.
- Neckebrouck, J., Schulze, W., & Zellweger, T. (2018). Are family firms good employers? *Academy of Management Journal*, 61(2), 553–585.
- Niemi, L. (2005). Audit effort and fees under concentrated client ownership: Evidence from four international audit firms. *The International Journal of Accounting*, 40, 303–323.
- Norman, C., Rose, J., & Suh, I. (2011). The effects of disclosure type and audit committee expertise on Chief Audit Executives' tolerance for financial misstatements. *Accounting, Organization and Society*, 36, 102–108.
- O'Boyle, E. H., Rutherford, M. W., & Pollack, J. M. (2010). Examining the relation between ethical focus and financial performance in family firms: An exploratory study. *Family Business Review*, 23(4), 310–326.
- O'Donnell, E., & Prather-Kinsey, (2010). Nationality and differences in auditor risk assessment: A research note with experimental evidence. *Accounting, Organization and Society*, 35, 558–564.

- Peabody, D. (1962). Two components in bipolar scales: Direction and extremeness. *Psychological Review*, *69*(2), 65–66.
- Peters, E., Västfjäll, D., Slovic, P., Mertz, C. K., Mazzocco, K., & Dickert, S. (2006). Numeracy and decision making. *Psychological Science*, *17*(5), 407–413.
- Prawitt, D. F. (2003). Managing the internal auditing function. In: *Research opportunities in internal auditing*. Altamonte Springs, FL: The Institute of Internal Auditors Research Foundation.
- Prawitt, D. F., Smith, J. L., & Wood, D. A. (2009). Internal audit quality and earnings management. *The accounting review*, *84*(4), 1255–1280.
- Prawitt, D. F., Sharp, N. Y., & Wood, D. A. (2011). Reconciling archival and experimental research: Does internal audit contribution affect the external audit fee? *Behavioral Research in Accounting*, *23*(2), 187–206.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, *42*, 185–227.
- Prencipe, A., Bar-Yosef, S., & Dekker, H. C. (2014). Accounting research in family firms: Theoretical and empirical challenges. *European Accounting Review*, *23*(3), 361–385.
- Ridley, A. J. (2001). The underutilized internal auditor. *IIA Issues and Answers*. Retrieved from http://www.theiia.org/ecm/guide-ia.cfm?doc_id=347.
- Rivas, J. L. (2012). Corporate governance and initial public offerings in Mexico. In A. Zattoni & W. Judge (Eds.), *Corporate governance and initial public offerings: An international perspective* (pp. 287–305). New York: Cambridge University Press.
- Rose, A., Rose, J., & Norman, C. (2013). Is the objectivity of internal audit compromised when the internal audit function is a management training ground? *Accounting and Finance*, *53*(4), 1001–1019.
- Sack, R. J. (2002). Interstate transport Inc: A case study in earnings management. *Issues in Accounting Education*, *17*(4), 369–388.
- Sarens, G., & De Beelde, I. (2006a). Internal auditors' perception about their role in risk management: Comparison between Belgian and US companies. *Managerial Auditing Journal*, *21*, 63–80.
- Sarens, G., & De Beelde, I. (2006b). The relationship between internal audit and senior management: An analysis of expectations and perceptions. *International Journal of Auditing*, *10*, 219–241.
- Salvato, C., & Moores, K. (2010). Research on accounting in family firms: Past accomplishments and future challenges. *Family Business Review*, *23*(3), 193–215.
- Schneider, A. (1985). The reliance of external auditors on the internal audit function. *Journal of Accounting Research*, *23*(2), 911–919.
- Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science*, *12*(2), 99–116.
- Sorenson, R. L., Goodpaster, K. E., Hedberg, P. R., & Yu, A. (2009). The family point of view, family social capital, and firm performance an exploratory test. *Family Business Review*, *22*(3), 239–253.
- Srinidhi, B., He, S., & Firth, M. (2014). The effect of governance on specialist auditor choice and audit fees in U.S. family firms. *The Accounting Review*, *89*(6), 2297–2329.
- Stewart, J., & Subramaniam, N. (2010). Internal audit independence and objectivity: Emerging research opportunities. *Managerial Auditing Journal*, *25*(4), 328–357.
- Tong, Y. (2008). Financial reporting practices of family firms. *Advances in Accounting*, *23*, 231–261.
- Trotman, A. J., & Trotman, K. T. (2010). The intersection of family business and audit research: Potential opportunities. *Family Business Review*, *23*(3), 216–229.
- The Economist*. (2004). Business in Mexico: Still keeping it in the family. Retrieved from <http://www.economist.com/node/2523586>
- Vazquez, P. (2018). Family business ethics: At the crossroads of business ethics and family business. *Journal of Business Ethics*, *150*(3), 691–709.
- Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research*, *44*, 619–656.
- Weller, J., Dieckmann, N. F., Tusler, M., Mertz, C. K., Burns, W. J., & Peters, E. (2013). Development and testing on an abbreviated numeracy scale: A Rasch analysis approach. *Journal of Behavioral Decision Making*, *26*, 198–212.
- Xi, J., Kraus, S., Filser, M., & Kellerman, F. W. (2015). Mapping the field of family business research: Past trends and future directions. *International Entrepreneurship and Management Journal*, *11*, 113–132.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.