



## Managerial Auditing Journal

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### Article information:

To cite this document:

Maarten Corten, Tensie Steijvers, Nadine Lybaert, (2018) "Auditor choice in private firms: a stakeholders perspective", Managerial Auditing Journal, <https://doi.org/10.1108/MAJ-03-2017-1535>

Permanent link to this document:

<https://doi.org/10.1108/MAJ-03-2017-1535>

Downloaded on: 27 February 2018, At: 21:00 (PT)

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# Auditor choice in private firms: a stakeholders perspective

Auditor choice  
in private  
firms

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## Abstract

**Purpose** – This paper aims to examine whether a private firm's demand for a Big4 auditor is influenced by the auditor choice of its main supplier, customer and competitor. The authors rely on institutional theory to explain this stakeholders' influence. The authors also examine whether the extent to which the firm's board of directors engages in networking moderates this influence.

**Design/methodology/approach** – Questionnaire data are combined with archival data of 210 Belgian private firms with a statutory audit requirement. Logistic regression analysis is applied to examine to what extent firms follow their main competitor, customer and supplier in hiring a Big4 auditor.

**Findings** – The results reveal a positive association between the firm's choice of a Big4 auditor and its main supplier being audited by a Big4 auditor, supporting the conformance effect (isomorphism) toward suppliers as hypothesized by institutional theory. The extent of board networking, however, seems to weaken this effect. Toward competitors, a divergence effect instead of a conformance effect is found, which indicates the existence of competitive differentiation regarding auditor choice.

**Research limitations/implications** – While prior studies mainly focus on the agency relationships between shareholders, debtholders and managers to explain auditor choice, this study also takes into account the firm's other main stakeholders by relying on institutional theory. Both the conformance effect toward suppliers as well as the divergence effect toward competitors provide interesting additional perspectives on why auditors are demanded, leading to interesting future research opportunities.

**Originality/value** – This paper fulfills an identified need to consider additional theories in explaining audit outcomes.

**Keywords** Stakeholders, Board of directors, Institutional theory, Auditor choice

**Paper type** Research paper

## 1. Introduction

A large amount of studies already focused on auditor choice, which includes both the choice to hire an auditor voluntary (Dedman *et al.*, 2014; Collis *et al.*, 2004) and the choice to hire a high-quality auditor for firms with a statutory audit requirement (Firth and Smith, 1992; Piot, 2001; Lennox, 2005; Matonti *et al.*, 2016). These studies mainly consider the shareholder–manager and shareholder–debtholder relationship to explain this choice. According to agency theory, auditing acts “[...] as a monitoring or bonding device dedicated to preventing and regulating conflicts of interests [...]” (Piot, 2005, p. 23) that can arise between the shareholders and managers and between the shareholders and debtholders of a company (Jensen and Meckling, 1976). Therefore, the higher the (potential) level of agency conflicts between shareholders and managers on the one hand and shareholders–debtholders on the other, the higher the demand for an (high quality) auditor.



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While the agency relationships between a firm's management and both its shareholders and debtholders proved valuable in explaining auditor choice, we argue that a firm's other stakeholders may affect this choice as well. In this study, we therefore examine the auditor choice effect of the firm's main supplier, customer and competitor. While the influence of these stakeholders on the firms' auditor choice could also partly be explained by agency theory (e.g. regarding suppliers, which are also debtholders), we argue that the inclusion of the institutional theory is able to provide us with an additional view about their influence on auditor choice. More specifically, while the agency theory considers auditor choice to be a direct reflection of the level of agency conflicts and therefore considers it to be a well-defined solution to a well-defined problem, the institutional theory mainly focuses on problems with ambiguous causes and unclear solutions (DiMaggio and Powell, 1983). More specifically, the institutional theory states that firms may become very similar to one another as a response to uncertainty, pressures from stakeholders, external expectations, etc. (DiMaggio and Powell, 1983), which is called institutional isomorphism. Therefore, high-quality auditors may also be hired as a response to one of their main stakeholders hiring a high-quality auditor, irrespective of the level of agency conflicts, because this seems the best thing to do in an uncertain environment as it is considered to be good practice and might therefore increase the firm's overall legitimacy.

Han (1994) already indicated the potential relevance of the institutional theory in explaining auditor choice in listed companies as he found that firms often hire the same auditor as the market leader within the industry. Despite this interesting finding, the institutional theory remained largely neglected in the audit literature. This is surprising, especially as the institutional theory proved valuable in explaining the demand for other governance mechanisms like CEO compensation plans, independent boards of directors, etc. (Westphal and Zajac, 1998; Lynall *et al.*, 2003; Zajac and Westphal, 1995). Cohen *et al.* (2008) therefore called for more studies which integrate this theory in the audit literature as well. By this study, we answer this call and also add to the study of Han (1994) by examining auditor choice from an institutional theory perspective in private firms. Moreover, while Han (1994) only focused on isomorphism toward competitors, DiMaggio and Powell (1983) argue that a position of dependence may also lead to isomorphic change. Therefore, we do not only focus on isomorphism toward competitors but also examine isomorphic behavior toward customers and suppliers, in this way providing a more complete view about how institutional theory may explain auditor choice.

More specifically, we examine this isomorphic behavior in private firms with a statutory audit requirement and argue that the choice of a Big4 auditor by the firm's main competitor, customer and/or supplier positively influences the choice of a Big4 auditor by the firm itself. Big4 auditors are generally considered to provide a higher level of audit quality than non-Big4 auditors as they have more reputational capital at risk in case of an audit failure and will be less financially dependent on one client (DeAngelo, 1981), which is also supported empirically by a majority of audit quality studies (Francis, 2004). In a private firm context, this support is less overwhelming as several studies examining this context did not find a significant difference in audit quality between Big4 and non-Big4 audit firms (Boone *et al.*, 2010; Lawrence *et al.*, 2011; Vander Bauwhede and Willekens, 2004). However, in the context of private firms with a statutory audit requirement, which is the focus of our study, several studies indicate that Big4 auditors are still perceived to provide a higher level of audit quality (Boone *et al.*, 2010; Karjalainen, 2011). Firms may therefore mimic their main competitor's choice of a Big4 auditor to seem equally legitimate. Firms may also follow their main supplier's and/or customer's choice of a Big4 auditor for legitimacy reasons. This isomorphic behavior may arise:

- due to actual pressures from these stakeholders (coercive isomorphism);
- because firms learn about the associated benefits and costs of hiring a Big4 auditor from these stakeholders (normative isomorphism); and/or
- as a result of uncertainty, in which firms just do what their main stakeholders do (mimetic isomorphism).

As boards of directors are considered to have a significant influence on auditor choice (Lennox, 2005; Dedman *et al.*, 2014; Beasley and Petroni, 2001), they may also affect the level of institutional isomorphism toward their stakeholders regarding this choice. Although the influence of the board on auditor choice is generally examined from an agency perspective as well, in which boards will demand a high-quality auditor to be better able to monitor management (Fama and Jensen, 1983; Eisenhardt, 1989; Zahra and Pearce, 1989), boards are expected to provide both “monitoring” and “service” tasks (Minichilli *et al.*, 2012). One of the main service tasks of the board consists of networking to secure the provision of resources and includes attaining legitimacy, communicating and lobbying (Huse, 2005; Daily *et al.*, 2003; Minichilli *et al.*, 2009). We hypothesize that the extent of board networking will weaken a firm’s isomorphic behavior regarding auditor choice. More specifically, firms of which the board engages in networking will already have attained legitimacy because of the strong relationships the board developed with the firm’s stakeholders. The extent of board networking may therefore decrease the probability that a firm will engage in isomorphic behavior to attain legitimacy.

Using questionnaire data combined with archival data of Belgian private firms, we found a positive association between the firm’s choice of a Big4 auditor and its main supplier being audited by a Big4 auditor, which supports the existence of isomorphic behavior regarding auditor choice. Our results also support our expectations regarding the moderating effect of board networking on isomorphism toward suppliers. More specifically, the results indicate that the selection of a Big4 auditor will be less influenced by the main supplier’s auditor choice if the firm’s board engages more in networking. Contrasting our hypotheses, we found a negative association between the firm’s choice of a Big4 auditor and the main competitor being audited by a Big4. However, this may still be considered to be a form of institutional isomorphism according to Beckert (2010), who argues that competition forces companies to specialize and to create niches for themselves, which he labels institutional divergence. Auditor choice might therefore be considered as part of a firm’s competitive differentiation strategy, although this needs further investigation.

By this study and thus by examining auditor choice in private firms from an institutional theory perspective, we provide an additional view regarding why Big4 auditors are hired. In this way, we fulfill an identified need to consider additional theories in explaining audit outcomes instead of relying on agency theory alone (Cohen *et al.*, 2008). By focusing on the network role of the board of directors, we also shed light on the importance of this role within the accounting literature. While several accounting studies already focused on the monitoring role of the board of directors and its influence on audit outcomes, which is again based on agency theory, our results indicate that the network role of the board may also affect auditor choice.

This study is organized as follows. In the next section, we develop our hypotheses. In Section 3, we elaborate on our methodology. Section 4 describes our results and conclusions follow in Section 5.

## 2. Theory and hypotheses

### 2.1 Agency theory

Auditor choice is generally explained by agency theory, which considers auditing as a device to reduce agency costs (Jensen and Meckling, 1976). As most managers of a company (the agents) are generally not or only small owners of the company they work in, they will not always act in the best interest of the shareholders (Jensen and Meckling, 1976). They may for example take too much risk, consume excessive perks, make suboptimal strategic choices, etc. The shareholders (the principals) will try to monitor managers or try to give them the right incentives through contracts (e.g. variable remuneration) to reduce this divergence of interest (i.e. agency conflicts). To monitor managers or contract with managers, however, shareholders generally have to rely on the financial statements, but these are often prepared by management itself and therefore cannot be considered as fully objective (Jensen and Meckling, 1976; Lennox, 2005). By verifying the validity of the financial statements, an auditor is considered to increase this objectivity and is therefore considered to increase the monitoring and contracting possibilities of the principals toward the agents (Lennox, 2005; Becker *et al.*, 1998). Accordingly, this will reduce the divergence of interests between these parties and therefore the related agency conflicts.

Similarly, agency conflicts may also arise between shareholders and debtholders as managers are generally considered to deem the interests of shareholders as more important than the interests of debtholders as shareholders hire and fire managers and determine their remuneration (Francis and Wilson, 1988; Smith and Warner, 1979). Managers may therefore have a strong incentive to invest in risky projects, as the shareholders will capture most of the gains if the investment turns out successful while the debtholders will bear most of the costs if the project turns out unsuccessful (Jensen and Meckling, 1976; Francis and Wilson, 1988). Therefore, debtholders (the principals) often include restrictive covenants in their loan agreements but these are generally based on the financial statements as well. Consequently, also in the shareholder–debtholder agency relationship an auditor is considered to be able to reduce agency costs (DeFond, 1992). As high-quality auditors are considered to be better able to reduce agency conflicts, a large amount of studies examined the relationship between the (potential) level of shareholder–manager or shareholder–debtholder agency conflicts and the demand for a high-quality auditor, both in a listed (Piot, 2001; Barton, 2005; Fan and Wong, 2005) and private firm context (Niskanen *et al.*, 2011; Lennox, 2005; Hope *et al.*, 2012).

While we do not contest the value of agency theory, we argue that taking into account the potential influence of stakeholders other than the shareholders and debtholders would give an additional perspective on auditor choice in private firms. In this study, we therefore examine the auditor choice effect of a private firm's main supplier, customer and competitor. As the agency theory would be too restricted in explaining the influence of these stakeholders (e.g. an agency relationship does not exist between competitors), we integrate an additional theory that may explain their influence, complementary to the agency theory, such as the institutional theory. As the institutional theory already proved to be a useful addition to the agency theory in explaining the demand for other agency cost reducing devices such as CEO compensation plans, long-term incentive plans and independent boards of directors (Westphal and Zajac, 1998; Lynall *et al.*, 2003; Zajac and Westphal, 1995), we argue that it may also add to our knowledge of auditor choice.

### 2.2 Institutional theory

The institutional theory argues that organizations in the same line of business are largely influenced by their main stakeholders (suppliers, customers, regulatory agencies, etc.), which will lead them to become more similar to one another (DiMaggio and Powell, 1983).

This process is generally referred to as isomorphism and can be described as “[...] a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions” (Hawley, 1968, in: DiMaggio and Powell, 1983, p. 149). Overall, one distinguishes among three types of institutional isomorphism, namely, *coercive* isomorphism, *normative* isomorphism and *mimetic* isomorphism (DiMaggio and Powell, 1983).

*2.2.1 Coercive isomorphism.* “Coercive isomorphism results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent” (DiMaggio and Powell, 1983, p. 150). Governmental regulations and procedures enforced by parent companies are potential sources of coercive isomorphism (DiMaggio and Powell, 1983).

Regarding auditor choice, the regulatory requirement for certain companies to have their financial statements audited can be considered as an example of coercive isomorphism. This type of isomorphism also occurs when the auditor choice is made on group level. While the individual firms may be able to influence this choice, they are required to hire the same auditor so this could be considered as an example of coercive isomorphism as well.

Coercive isomorphism may also stem from dominant suppliers and customers on which firms are dependent (DiMaggio and Powell, 1983; Teo *et al.*, 2003). Dependence on customers arises “[...] when organizations rely heavily on customers that account for much of their sales and customers that have alternative suppliers” and dependence on suppliers “[...] when organizations are unable to switch to alternative suppliers, thereby relying on existing suppliers that account for much of their purchases” (Teo *et al.*, 2003, p. 23). A dominant actor may demand its dependent organizations to comply with certain practices to secure their own survival (Pfeffer and Salancik, 1978, in: Teo *et al.*, 2003). For example, Ford Motor Company required from their suppliers to use electronic data interchange to retain their business (Webster, 1995, in: Teo *et al.*, 2003). Regarding audit demand, Ford Motor Company may hypothetically also require these suppliers to hire a high-quality auditor in order that their internal control environment is secure, their financial information is more credible and data confidentiality can be retained. Moreover, Ford Motor Company may also persuade its car dealers (i.e. its customers) to hire a high-quality auditor for similar reasons. While this would be an extreme example of coercive isomorphism, coercive pressures may also be more subtle and less direct and may therefore arise from every important supplier and/or customer.

*2.2.2 Normative isomorphism.* Normative isomorphism is considered to be a consequence of professionalization (DiMaggio and Powell, 1983). As universities and professional training institutions are considered as “[...] important centers for the development of organizational norms among professional managers and their staff”, organizations may often resemble each other because they hire managers that have similar educational backgrounds (DiMaggio and Powell, 1983, p. 152). Moreover, managers are often member of professional and trade associations and are often represented on the boards of other organizations, which may increase isomorphic behavior even further (DiMaggio and Powell, 1983). Overall:

[...] [f]or a particular industry, it is argued that a pool of almost interchangeable employees [and managers] is created through formal education and professional networks [...] [which] possess similar orientation and disposition that override the variations in traditions and control mechanisms otherwise shaping distinctive organizational behavior (Liang *et al.*, 2007, p. 62).

While auditor choice may therefore be highly dependent on the firm’s industry, which is already accounted for by most audit demand studies (Niskanen *et al.*, 2011; Lennox, 2005),

suppliers and customers may also induce this normative behavior as Burt (1982, in: [Teo et al., 2003](#), p. 24) posits that normative pressures also “[...] manifest themselves through dyadic interorganizational channels of firm-supplier and firm-customer”. More specifically, organizations with ties to other organizations are expected to learn about the associated benefits and costs of, in our case, the engagement of a high-quality auditor and are likely to be persuaded to behave similarly (Burt 1982, in: [Teo et al., 2003](#)).

*2.2.3 Mimetic isomorphism.* In addition to coercive and normative pressures, firms may also behave similar due to uncertainty, which is labeled mimetic isomorphism ([DiMaggio and Powell, 1983](#)). “Organizations tend to model themselves after similar organizations in their field that they perceive to be more legitimate or successful” ([DiMaggio and Powell, 1983](#), p. 152), in which similar organizations can both be companies from the same industry (i.e. competitors) or the same value chain (i.e. customers and suppliers). This kind of isomorphism is considered to have an important ritual aspect; they imitate other companies to enhance their own legitimacy ([DiMaggio and Powell, 1983](#)). As stakeholders (i.e. suppliers, customers, etc.) are considered to be bounded rational decision makers, they may also value such socially induced decisions ([Westphal and Zajac, 1998](#)). In this respect, it is important to note that “[...] the appearance rather than the fact of conformity is often presumed to be sufficient for the attainment of legitimacy” (Oliver, 1991, p. 155, in: [Westphal and Zajac, 1998](#), p. 131).

Regarding auditor choice, this suggests that stakeholders may value a firm’s imitation behavior of hiring a similar type of auditor, even though these stakeholders will be unaware of the actual delivered audit quality as well as the firm’s actual need for an (high quality) audit. Hiring a Big4 auditor by a small, non-complex firm could (agency) theoretically (i.e. based on the level of agency costs in comparison to the audit fee) be a suboptimal decision. However, uncertainty regarding the stakeholders’ reaction to hiring a different type of auditor due to their bounded rationality could make these firms imitate their stakeholders’ choice of a Big4 auditor.

[Han \(1994\)](#) already examined this specific type of isomorphism in an auditing context but only focused on mimicry toward competitors in listed firms. He found that firms often imitate the leader of an industry by choosing the same auditor to increase their own legitimacy. Besides imitating competitors, it may also be expected that the firm will imitate the stakeholder(s) to whom it wants to increase its legitimacy. Regarding audit demand, firms may therefore also imitate their main customer or main supplier to increase their legitimacy toward those stakeholders.

*2.2.4 Hypotheses.* While we referred in the previous section to the different forms of isomorphism and how each of them can influence auditor choice, [DiMaggio and Powell \(1983\)](#) note that the different forms of isomorphism are not always empirically distinct and should therefore be considered as an analytical typology. [Mizruchi and Fein \(1999\)](#) closely examined 26 articles in which researchers did attempt to operationalize various components of this typology and indeed found that measures used to capture one of the forms of isomorphism could be used as valid measures of another form as well. We therefore do not intend to analyze the influence of the different forms of isomorphism on auditor choice separately. More specifically, the main aim of this study is to examine the potential influence of stakeholders other than the firm’s shareholders and debtholders on auditor choice, in which we rely on the institutional theory, in addition to agency theory, to explain this potential influence.

In the previous section, we indicated that isomorphism may result from several stakeholders, such as the government, parent companies, competitors, customers and suppliers. However, in this study, we will not focus on isomorphism induced by the

government or the firm's group. First, with respect to influences from the government, our sample solely consists of firms that are already required by law to have their financial statements audited[1]. Second, although it was never referred to as isomorphism, prior studies already controlled for the influence of belonging to a group on auditor choice (Niskanen *et al.*, 2011; Knechel *et al.*, 2008; Niskanen *et al.*, 2010; Matonti *et al.*, 2016; Branson and Breesch, 2004). While we will also control for it in our empirical study, we do not focus on this effect as our main goal is to examine isomorphic behavior regarding auditor choice toward three (external) stakeholders, namely, competitors (*H1*), customers (*H2*) and suppliers (*H3*).

As Han (1994) already showed the relevance of imitation behavior toward competitors regarding auditor choice in a listed firm context, we also hypothesize that the auditor choice of a private firm's main competitor influences the auditor choice by the firm itself. More specifically, we hypothesize that the choice of a Big4 auditor by the firm's main competitor positively influences the choice of a Big4 auditor by the firm itself. As Big4 auditors are considered to provide a higher level of audit quality than non-Big4 auditors (Boone *et al.*, 2010; Karjalainen, 2011), firms may follow their main competitor's choice of a Big4 auditor to seem equally legitimate. Formally, we therefore posit:

*H1.* A private firm's choice of a Big4 auditor is positively associated with the company's main competitor being audited by a Big4 auditor.

However, we also want to add to the study of Han (1994) by focusing on isomorphic effects toward suppliers and customers while controlling for other institutional and agency effects to get a more complete view about auditor choice. Based on the previous section, we expect that firms may also follow their main supplier's and/or customer's choice of a Big4 auditor due to both coercive, normative and mimetic pressures from those stakeholders. More specifically, they may be required by those stakeholders to engage such a high-quality auditor as well (coercive isomorphism), they may do so because they learned about the advantages of hiring a Big4 auditor from those stakeholders (normative isomorphism) or they may just imitate those stakeholders' choice of a Big4 auditor out of uncertainty to increase the firm's legitimacy (mimetic isomorphism). Formally, we therefore posit:

*H2.* A private firm's choice of a Big4 auditor is positively associated with the company's main customer being audited by a Big4 auditor.

*H3.* A private firm's choice of a Big4 auditor is positively associated with the company's main supplier being audited by a Big4 auditor.

### 2.3 The network role of the board of directors

While we argue that institutional isomorphism toward competitors, customers and suppliers could lead to an additional auditor choice effect, its influence may depend on the board of directors. While prior audit studies already focused on the influence of the board of directors on auditor choice (Lennox, 2005; Dedman *et al.*, 2014), these studies focused on the monitoring role of the board of directors, originating from agency theory. However, the board of directors is generally expected to provide both "monitoring" and "service" tasks (Minichilli *et al.*, 2012).

The service tasks of the board of directors originate from several theories such as the resource dependence theory, the stakeholder theory and the stewardship theory and include both advising management and networking (Huse, 2005; Daily *et al.*, 2003;



Minichilli *et al.*, 2009; Hung, 1998). In contrast to the monitoring tasks of the board, which mainly focus on the internal environment of the firm, the service tasks and especially the network tasks of the board mainly relate to the external environment (Hung, 1998). From a resource dependence perspective, one of the board's main tasks regarding networking is to link the firm with its environment to provide access to resources from this environment, which involves attaining legitimacy, communicating and lobbying (Huse, 2005; Daily *et al.*, 2003). Moreover, the stakeholder approach expects the board to negotiate and compromise with all stakeholders of the firm (Hung, 1998) and the institutional perspective expects boards to analyze the external environment and respond to institutional pressure (Hung, 1998).

While isomorphic behavior toward stakeholders is generally considered to be a result of uncertainty, a board that fulfills its networking role may already have reduced this uncertainty. Such a board will have built strong relationships with the firm's stakeholders, therefore not requiring isomorphic behavior to attain legitimacy. We therefore hypothesize that the extent of board networking weakens the association between a firm's choice of a Big4 auditor and the main stakeholders' choice of a Big4 auditor. Formally, we posit:

- H4.* The extent of board networking negatively moderates the positive association between a private firm's choice of a Big4 auditor and the company's main stakeholders being audited by a Big4 auditor.

### 3. Data and methodology

#### 3.1 Data

To test our hypotheses, we identified a population from the Bel-First database of Bureau Van Dijk[2] of all active Belgian private firms that are legally required to be audited, have a board of directors and are not part of the financial services industry. To the firms within our population (except those with insufficient contact details), we sent a structured online questionnaire in February 2015 and asked the CEO to complete it ( $N = 8,662$ ). A total of 740 CEOs filled out the questionnaire, leading to a response rate of 8.5 per cent. We combined this data set with publicly available accounting data (of 2014) from the Bel-First database and Orbis (which is comparable to the Bel-First database but contains information about companies worldwide) and with data from the individual financial statements of our sample firms. We obtained a final sample of 210 firms after removing cases with incomplete data regarding the necessary items included in the questionnaire or the accounting data. As the explanatory variables and the moderating variable are collected from the questionnaire, while the dependent variable is collected from the individual financial statements of our sample firms, there is no common method bias threat. Moreover, *t*-tests between early and late respondents (cut-off points at 10 and 25 per cent) regarding our explanatory and control variables revealed no response bias. A dropout analysis by comparing the means regarding turnover and total assets of our sample firms with the population also revealed no significant differences. To alleviate potential outlier problems, all continuous variables were winsorized at the 1st and 99th percentiles.

#### 3.2 Variables

Table I provides an overview of all variables included in our regression analysis. It contains the definition of each variable as well as the data source used to collect the data of each variable.

*3.2.1 Dependent variable.* In line with several former auditor choice studies (Firth and Smith, 1992; Piot, 2001; Fan and Wong, 2005; Lennox, 2005; Niskanen *et al.*, 2011; Campa, 2013),

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Variable	Definition	Data source
<i>Dependent variable</i>		
BIG4	Whether the firm hired a Big4 auditor (1, 0)	Bel-First
<i>Explanatory variables</i>		
COMPETITOR_BIG4	Whether the firm's main competitor hired a Big4 auditor (1, 0)	Survey + Orbis
CUSTOMER_BIG4	Whether the firm's main customer hired a Big4 auditor (1, 0)	Survey + Orbis
SUPPLIER_BIG4	Whether the firm's main supplier hired a Big4 auditor (1, 0)	Survey + Orbis
<i>Moderating variable</i>		
NETWORKING	The extent of board networking as indicated by the following items (five-point Likert scale) The board provides linkages to important external stakeholders (banks, financial institutions, customers, public authorities. . .) The board provides the firm with external legitimacy and reputation	Survey
<i>Control variables</i>		
MONITORING	The extent of board monitoring as indicated by the following items (five-point Likert scale) The board is actively involved in monitoring that all internal behaviors are adequately controlled The board is actively involved in defining behavioral guidelines for divisional and functional managers The board is actively involved in supervising the CEO The board controls that the activities are well organized The board develops plan and budgets The board is kept informed on the financial position of the company	Survey
GROUPCHOICE	Whether the auditor choice was made on group level (if applicable) or not (1, 0)	Survey
MAN_OWN	The percentage of stock ownership by the management team	Survey
LEVERAGE	Total debt to total assets	Bel-First
ROA	Earnings before interests and taxes to total assets	Bel-First
SIZE	The natural logarithm of total assets	Bel-First
BIG4_CONC	The market share of the Big4 auditors in the firm's industry	Bel-First

**Table I.**  
Variable definitions

our dependent variable, BIG4, is a dummy variable coded 1 if the firm hired a Big4 auditor and 0 otherwise. Although several studies question whether Big4 audit firms do indeed provide a higher level of quality and several studies indeed did not find a significant difference in audit quality between BigN[3] and non-BigN audit firms (Boone *et al.*, 2010; Lawrence *et al.*, 2011), this has no influence on the usefulness of this proxy regarding our research question. More specifically, not the actual level of audit quality is important to examine auditor choice but rather the perceived level of audit quality. Boone *et al.* (2010) and Karjalainen (2011) indeed found that Big4 audit firms are still perceived to provide higher levels of audit quality, which also explains why they are able to charge a so called Big4 premium (Choi *et al.*, 2008). This also seems to apply for the context we study (Belgium). While Gaeremynck *et al.* (2008) and Vander Bauwhede and Willekens (2004) find no significant difference in audit quality between

BigN and non-BigN auditors, a recent study of [Hardies et al. \(2015\)](#) shows that Big4 auditors are still able to charge a higher fee. The BIG4 dummy therefore remains a valuable proxy to measure the choice for a high-quality auditor.

**3.2.2 Explanatory variables.** To test whether the auditor choice of the firm's main competitor (*H1*), the main customer (*H2*) or the main supplier (*H3*) may also influence the firm's auditor choice, we include the variables COMPETITOR\_BIG4, CUSTOMER\_BIG4 and SUPPLIER\_BIG4. COMPETITOR\_BIG4 is a dummy variable coded 1 if the main competitor of the firm hired a Big4 auditor and 0 otherwise. Similarly, CUSTOMER\_BIG4 is a dummy variable coded 1 if the main customer of the firm hired a Big4 auditor and 0 otherwise and SUPPLIER\_BIG4 is a dummy variable coded 1 if the main supplier of the firm hired a Big4 auditor and 0 otherwise. To obtain the data regarding these variables, our questionnaire asked the CEO to identify the main competitor, customer and supplier of the firm and to provide the city and the country in which these firms are located. Based on these data, we manually searched for these firms using the Orbis database and verified which auditor they engaged.

**3.2.3 Moderating variable.** Board activity (both regarding monitoring and networking) is generally proxied by compositional measures like board size, the percentage of outside directors, director shareholdings, CEO duality or the financial expertise of the board members ([Beasley and Petroni, 2001](#); [Ireland and Lennox, 2002](#); [Chen and Jian, 2007](#)). However, recent board literature ([Gabrielsson and Winlund, 2000](#); [Finkelstein and Mooney, 2003](#); [Zona and Zattoni, 2007](#); [Minichilli et al., 2009](#); [Minichilli et al., 2012](#)) argues that composition does not necessarily explain behavior such that these proxies do not adequately measure board effectiveness. In this study, we will therefore not rely on compositional measures to test *H4* but use a direct measurement of the extent to which a firm's board engages in networking. More specifically, we rely on the study of [Minichilli et al. \(2009\)](#) to measure this extent of board networking. We asked our respondents to evaluate both the extent of board networking and monitoring (for control purposes) on a five-point Likert scale. The two items regarding board networking are the following: "The board provides linkages to important external stakeholders (banks, financial institutions, customers, public authorities...)" and "The board provides the firm with external legitimacy and reputation" ([Minichilli et al., 2009](#), p. 71). The resulting variable NETWORKING is standardized before being included in the regression model to test *H4*. Moreover, to examine the moderating effect of board networking on institutional isomorphism, we include the interaction variables COMPETITOR\_BIG4 × NETWORKING, CUSTOMER\_BIG4 × NETWORKING and SUPPLIER\_BIG4 × NETWORKING.

**3.2.4 Control variables.** We control for isomorphism toward companies that belong to the same group by including the dummy variable GROUPCHOICE, coded 1 if the auditor choice was made on group level (if applicable) and 0 otherwise. These companies are more likely to hire a Big4 auditor, as small auditors may not be able to service a geographically dispersed group ([Branson and Breesch, 2004](#)).

We also control for the agency theory related drivers of auditor choice by MAN\_OWN and LEVERAGE. MAN\_OWN is defined as the percentage of stock ownership by the management team and is included to control for the influence of the level of shareholder–manager agency costs on auditor choice ([Francis and Wilson, 1988](#); [DeFond, 1992](#); [Reed et al., 2000](#)). To control for the level of shareholder–debtholder agency costs, we include LEVERAGE, defined as the ratio of total debt to total assets ([Reed et al., 2000](#); [Niskanen et al., 2011](#)).

In line with former auditor choice studies (Niskanen *et al.*, 2011; Lennox, 2005; Dedman *et al.*, 2014), we also control for SIZE, defined as the natural logarithm of total assets, as larger firms may demand more audit quality, as there is more wealth at risk (Abdel-Khalik, 1993). We also include ROA, defined as the ratio of earnings before interests and taxes to total assets, to control for profitability as profitable firms are generally less dependent on debt- and equity holders for additional funding and therefore require less audit quality (Lennox, 2005).

Auditor choice may also be influenced by the supply availability in each industry. Due to industry specialism, for example, firms from certain industries may only be able to hire a Big4 auditor. To control for this supply-side industry effect resulting from market concentration, we also include BIG4\_CONC[4], defined as the market share of the Big4 auditors in the firm's industry. In line with DeFond *et al.* (2000), this market share is calculated based on the audit fees.

Finally, when examining the moderating effect, we also control for its monitoring role by the following seven items:

- (1) "The board is actively involved in monitoring that all internal behaviors are adequately controlled";
- (2) "The board is actively involved in defining behavioral guidelines for divisional and functional managers";
- (3) "The board is actively involved in supervising the CEO";
- (4) "The board controls that the activities are well organized";
- (5) "The board develops plan and budgets";
- (6) "The board is kept informed on the financial position of the company"; and
- (7) "The board actively monitors and evaluates strategic decisions" (Minichilli *et al.*, 2009, p. 71).

The resulting variable MONITORING is standardized before being included in the regression models.

We conducted a confirmatory factor analysis to validate the monitoring and networking scale of Minichilli *et al.* (2009) within our sample. We allowed the error terms of the indicators to correlate but only if the terms belonged to the same construct and had a modification index score larger than the recommended level of 5 (Davis *et al.*, 2013). The results are found to be satisfactory for being used in our regression analysis (CFI = 0.981; SRMR = 0.035) (Hu and Bentler, 1999).

### 3.3 Model

To test our hypotheses, we use multivariate logit regression analyses, which is in line with prior auditor choice studies (Firth and Smith, 1992; Piot, 2001; Lennox, 2005; Niskanen *et al.*, 2010). While both logit and probit are used in the literature, we prefer logit as both methods are equally efficient but logit does not require normality of parameter distribution (Piot, 2001). More specifically, the model we use to test *H1*, *H2* and *H3* is specified as follows:

$$\begin{aligned} \text{BIG4} = & \beta_0 + \beta_1 \text{COMPETITOR\_BIG4} + \beta_2 \text{CUSTOMER\_BIG4} \\ & + \beta_3 \text{SUPPLIER\_BIG4} + \beta_4 \text{GROUPCHOICE} + \beta_5 \text{MAN\_OWN} \\ & + \beta_6 \text{LEVERAGE} + \beta_7 \text{SIZE} + \beta_8 \text{ROA} + \beta_9 \text{BIG4\_CONC} + \varepsilon \end{aligned}$$

To test  $H4$ , we specify the model as follows:

$$\begin{aligned}
 \text{BIG4} = & \beta_0 + \beta_1 \text{NETWORKING} + \beta_2 \text{COMPETITOR\_BIG4} \\
 & + \beta_3 \text{COMPETITOR\_BIG4} \times \text{NETWORKING} + \beta_4 \text{CUSTOMER\_BIG4} \\
 & + \beta_5 \text{CUSTOMER\_BIG4} \times \text{NETWORKING} + \beta_6 \text{SUPPLIER\_BIG4} \\
 & + \beta_7 \text{SUPPLIER\_BIG4} \times \text{NETWORKING} + \beta_8 \text{MONITORING} \\
 & + \beta_9 \text{GROUPCHOICE} + \beta_{10} \text{MAN\_OWN} + \beta_{11} \text{LEVERAGE} + \beta_{12} \text{SIZE} \\
 & + \beta_{13} \text{ROA} + \beta_{14} \text{BIG4\_CONC} + \varepsilon
 \end{aligned}$$

## 4. Results

### 4.1 Descriptive statistics and correlations

The descriptive statistics of our sample are presented in [Table II](#). Approximately 36 per cent of our sample firms, 46 per cent of the identified main competitors, 48 per cent of the identified main customers and 48 per cent of the identified main suppliers hired a Big4 auditor. Additional descriptives (not tabulated) show that 55 per cent of the firms within our sample hired the same type of auditor (Big4 vs non-Big4) as their main competitor. A total of 19 per cent of the firms of which the main competitor hired a Big4 auditor also engaged a Big4 auditor, while the remaining 36 per cent seems to have followed their main competitor in hiring a non-Big4 auditor. Similar descriptives apply regarding customers and suppliers. A total of 54 per cent hired the same auditor type as their main customer. In 19 per cent of the cases, the firm and the main customer both engaged a Big4 auditor, while the remaining 35 per cent relates to cases in which both the firm and its main customer hired a non-Big4 auditor. The choice for the same auditor type as the main supplier occurs in 57 per cent of the cases, of which 20 per cent relates to the choice for a Big4 auditor and 37 per cent to the choice for a non-Big4 auditor.

The Pearson (below the diagonal) and Spearman (above the diagonal) correlations are presented in [Table III](#). While `COMPETITOR_BIG4` and `CUSTOMER_BIG4` are not found to

Dichotomous variables	Sum	Prop	Continuous variables	Min	Max	Median	Mean	SD
<i>Dependent variable</i>			<i>Moderating variable</i>					
BIG4	76	0.36	NETWORKING*	0.00	4.00	1.50	1.59	1.19
<i>Explanatory variables</i>			<i>Control variables</i>					
COMPETITOR_BIG4	96	0.46	MONITORING*	0.00	4.00	2.00	1.84	0.93
CUSTOMER_BIG4	101	0.48	MAN_OWN	0.00	100.00	3.00	36.58	44.48
SUPPLIER_BIG4	100	0.48	LEVERAGE	0.06	1.06	0.66	0.62	0.22
			SIZE**	3.12	703.44	11.65	36.61	97.74
<i>Control variables</i>			ROA	-0.28	0.47	0.05	0.07	0.09
GROUPCHOICE	83	0.40	BIG4_CONC	0.14	0.96	0.65	0.66	0.13

**Notes:**  $n = 210$ ; this table presents the descriptive statistics (sum and proportions for the dichotomous variables; means, medians, minima, maxima and standard deviations for the continuous variables); \*this variable is standardized in our statistical analysis; \*\*the natural logarithm of this variable is used in our statistical analysis, the value in this table is the nominal value in millions. For variable definitions, please refer to [Table I](#)

**Table II.**  
Descriptive statistics

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. BIG4		0.08	0.07	0.14*	-0.07	0.00	0.63***	-0.53***	-0.14**	0.28***	0.00	0.09
2. COMPETITOR_BIG4	0.08		-0.10	-0.07	-0.08	0.07	0.26***	-0.22***	-0.01	0.10	0.00	0.10
3. CUSTOMER_BIG4	0.07	-0.10		-0.08	-0.07	0.02	0.10	-0.03	0.09	0.05	0.12*	0.06
4. SUPPLIER_BIG4	0.14*	-0.07	-0.08		0.00	0.13*	0.05	0.09	-0.06	0.04	-0.12*	-0.04
5. NETWORKING	-0.08	-0.09	-0.07	-0.01		0.40***	-0.16**	0.18***	0.04	-0.08	0.02	-0.07
6. MONITORING	0.00	0.06	0.02	0.12*	0.42***		0.00	0.17**	-0.01	-0.04	0.02	-0.03
7. GROUPCHOICE	0.63***	0.26***	0.10	0.05	-0.17**	-0.01		-0.57***	-0.07	0.21***	-0.05	0.05
8. MAN_OWN	-0.58***	-0.24***	-0.03	0.07	0.20***	0.13*	-0.56***	0.10	0.09	-0.27***	0.01	-0.04
9. LEVERAGE	-0.15**	-0.05	0.11	-0.06	0.02	-0.04	-0.07	0.10	-0.13*	-0.07	-0.25***	-0.09
10. SIZE	0.34***	0.08	0.06	0.08	-0.06	0.00	0.22***	-0.35***	-0.13*	-0.07	-0.04	0.04
11. ROA	-0.03	0.03	0.08	-0.13*	0.01	0.04	-0.08	0.00	-0.20***	-0.11	0.04	0.07
12. BIG4_CONC	0.15**	0.13*	0.04	0.05	-0.07	-0.06	0.11	-0.17**	-0.08	0.16**	-0.01	

Notes:  $n = 210$ ; \*, \*\*, and \*\*\* indicate significances at the 10, 5 and 1 % levels, respectively (two-tailed); the Pearson correlations are reported below the diagonal, the Spearman correlations above the diagonal. For variable definitions, please refer to [Table I](#)

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**Table III.**  
Correlations

be significantly correlated with hiring a Big4 auditor, the correlation coefficient between SUPPLIER\_BIG4 and BIG4 is found to be significantly positive, which is in line with *H3*. GROUPCHOICE is also found to be significantly and positively correlated with hiring a Big4 auditor, which indicates that within-group isomorphism leads to an overall higher demand for Big4 auditors. The correlation between MAN\_OWN and BIG4 is found to be strongly significant and negative, which is in line with the traditional hypothesis based on agency theory that the (potential) level of shareholder–manager agency conflicts positively affects the choice for a high-quality auditor. The correlation between LEVERAGE and BIG4 is found to be significantly negative as well, which contradicts the agency theory but is in line with the study of [Hope et al. \(2012\)](#) that also examined a private firm context. Regarding the other control variables, SIZE and BIG4\_CONC are found to be significantly positively correlated with hiring a Big4 auditor. In line with most prior auditor choice studies, larger firms seem therefore more likely to hire a Big4 auditor, while the presence of these Big4 auditors within the firm’s industry also seems to affect the individual demand.

The correlations between the explanatory and control variables and among the control variables never exceed the critical value of 0.8 (the highest value is 0.57) and therefore there seems not to be a multicollinearity threat. This is also supported by the variance inflation factors, which are all found to be lower than the critical value of 10 (the highest value is 4.50).

#### 4.2 Regression results

[Table IV](#) presents our logistic regression models. The table presents the beta coefficients of all explanatory and control variables, the robust standard errors, the Log likelihood statistic, the chi-square statistic and the McFadden  $R^2$ . All models are found to be significant ( $p < 0.0001$ ) and the  $R^2$  values range from 37 to 54 per cent.

Model 1 can be considered as benchmark model as it consists of the traditional auditor choice variables. In line with several other studies ([Firth and Smith, 1992](#); [Reed et al., 2000](#)), MAN\_OWN is found to be significantly negatively associated with hiring a Big4 auditor, supporting the traditional view of agency theory that shareholder–manager agency conflicts lead to the choice of a high-quality auditor. While the level of shareholder–debtholder agency conflicts is also considered as a driver of auditor choice ([Firth and Smith, 1992](#); [Reed et al., 2000](#); [Chow, 1982](#)), this is not supported by our results since the coefficient of LEVERAGE is not found to be significant. The coefficient of SIZE is found to be significantly positive, which is in line with most other auditor choice studies ([Reed et al., 2000](#); [Dedman et al., 2014](#)). Although our correlation table also indicated the presence of a supply-side effect, this is not further supported by this analysis as BIG4\_CONC is found to be insignificant. We do find a strongly significant and positive coefficient for GROUPCHOICE, which confirms the higher demand for Big4 auditors due to isomorphic behavior toward companies that belong to the same group.

In Model 2, we include the variables COMPETITOR\_BIG4, CUSTOMER\_BIG4 and SUPPLIER\_BIG4 to test *H1-H3*. In contrast to *H1*, we found COMPETITOR\_BIG4 to be significantly negatively associated with hiring a Big4 auditor. However, according to [Beckert \(2010\)](#), such divergence could also be considered as a form of institutional isomorphism. More specifically, he states that competition forces companies to specialize and to create niches for themselves and labels this institutional divergence. Auditor choice might therefore be considered part of a firm’s competitive differentiation strategy. More specifically, firms of which the main competitor hired a Big4 auditor may prefer a non-Big4 auditor as the engagement of a Big4 may be associated with labels such as big, impersonal and international focus, while the engagement of a non-Big4 may be associated with labels such as small, personal and local focus. Dependent on what a firm wants to communicate to

Model	1	2	3	4
<i>Explanatory variables</i>				
NETWORKING				1.0630** (0.4778)
COMPETITOR_BIG4				-1.1013** (0.5013)
COMPETITOR_BIG4 × NETWORKING		-1.0107** (0.4851)	-0.5047** (0.2422)	-0.4745 (0.4687)
CUSTOMER_BIG4		0.0619 (0.4773)	0.0310 (0.2391)	0.1720 (0.4887)
CUSTOMER_BIG4 × NETWORKING				-0.1682 (0.4767)
SUPPLIER_BIG4		1.1201** (0.4708)	0.5607** (0.2357)	1.0663** (0.4621)
SUPPLIER_BIG4 × NETWORKING				-0.9282** (0.4595)
<i>Control variables</i>				
MONITORING				0.0379 (0.2386)
GROUPCHOICE	2.1545*** (0.4303)	2.5168*** (0.4855)	1.2334*** (0.2379)	2.7179*** (0.5288)
MAN_OWN	-0.0405*** (0.0090)	-0.0450*** (0.0085)	-2.0031*** (0.3767)	-0.0470*** (0.0087)
LEVERAGE	-1.3288 (0.9304)	-1.3119 (0.9927)	-0.2931 (0.2218)	-1.5353 (1.0989)
SIZE	0.4114** (0.1832)	0.3967** (0.1926)	0.4381** (0.2127)	0.3827** (0.1893)
ROA	0.3207 (1.9059)	1.2279 (1.9364)	0.1141 (0.1799)	0.3015 (2.0608)
BIG4_CONC	1.3453 (1.5902)	1.8906 (1.6607)	0.2368 (0.2080)	2.0271 (1.5748)
Intercept	-4.9904** (2.2856)	-5.3985** (2.2601)	-1.6218*** (0.3315)	-5.2394** (2.3179)
Log likelihood	-72.8156	-66.7730	-66.7730	-63.4711
Chi-square	57.26***	70.90***	70.90***	64.95***
McFadden $R^2$	0.4702	0.5142	0.5142	0.5382

**Notes:**  $n = 210$ ; \*, \*\*, and \*\*\* indicate significances at the 10, 5 and 1% levels, respectively (two-tailed); this table presents our logistic (logit) regression results. Both the beta coefficients and the robust standard errors (between brackets) are reported per variable for each model. In this table, also the Log likelihood and the chi-square statistics are reported for each model, as well as the McFadden  $R^2$ . The dependent variable is BIG4. For variable definitions, please refer to [Table 1](#)

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**Table IV.**  
Logistic regression  
results



its main stakeholders and how it wants to differentiate itself from its competitors, both the choice of a Big4 and the choice of a non-Big4 can create legitimacy value. This argumentation also aligns with the results of Han (1994). While he found that firms often hire the same auditor as the industry leader, he also found that some firms try to differentiate themselves from their chief competitors by hiring a different auditor and this effect is in line with our results (we further examine this in Section 4.3).

*H2* is not supported by our results either as CUSTOMER\_BIG4 is not found to be significant. Our expectation that firms engage the same type of auditor as their main customer to increase their legitimacy is therefore not confirmed. The choice of a high-quality auditor does seem to be influenced by the main supplier's auditor choice as the coefficient of SUPPLIER\_BIG4 is found to be significant and positive, in this way supporting *H3*. Regarding the control variables, MAN\_OWN remains strongly significant and negative while SIZE and GROUPCHOICE remain significantly positive.

In Model 3, we report the standardized coefficients of Model 2 to examine to what extent taking into account the influence of stakeholders other than the shareholders and debtholders contributes in explaining auditor choice in private firms. MAN\_OWN is found to be the main predictor in this analysis and the level of (potential) agency conflicts between shareholders and managers therefore remains the dominant driver for the choice of a high-quality auditor. MAN\_OWN is immediately followed by GROUPCHOICE and SUPPLIER\_BIG4, indicating that coercive influences of groups and isomorphism toward suppliers is also an important driver for auditor choice. COMPETITOR\_BIG4 and SIZE are found to be the fourth and fifth main predictor of auditor choice within this analysis.

In Model 4, we include NETWORKING and the interaction variables COMPETITOR\_BIG4  $\times$  NETWORKING, CUSTOMER\_BIG4  $\times$  NETWORKING and SUPPLIER\_BIG4  $\times$  NETWORKING to test *H4*. Moreover, we also include MONITORING to control for the monitoring role of the board of directors. When including these variables, the coefficient of COMPETITOR\_BIG4 remains significantly negative, further indicating that firms differentiate themselves from their main competitors. In line with our results in Model 2 as well, SUPPLIER\_BIG4 is found to be significantly positive, further supporting *H3*, while CUSTOMER\_BIG4 remains insignificant. Our results do not support *H4* regarding competitors and customers but do support this hypothesis regarding suppliers as the coefficient of SUPPLIER\_BIG4  $\times$  NETWORKING is found to be significantly negative. This indicates that firms with networking boards will to a lesser extent engage in imitation behavior toward suppliers because these firms already attained legitimacy because their board was able to develop strong relationships with their main supplier. The results regarding the control variables are completely in line with the former models.

#### 4.3 Additional analyses

As it could be argued that a firm's isomorphic behavior will be dependent on its need for legitimacy, we ran an additional analysis (Model 1 of Table V) in which we include the variable SECTOR\_TOP. This continuous variable indicates the firm's position within the industry ranking based on total sales: the firm with the highest level of sales within its sector receives the value of 1, the firm with the second highest level of sales receives the value of 2, etc. We also include the moderating variables COMPETITOR\_BIG4  $\times$  SECTOR\_TOP, CUSTOMER\_BIG4  $\times$  SECTOR\_TOP and SUPPLIER\_BIG4  $\times$  SECTOR\_TOP. We argue that the firm's position within the industry ranking could be considered as a proxy for the need for legitimacy, as the leaders of an industry probably already attained a high level of legitimacy, while firms that close the industry ranking still need to develop this legitimacy. While the direct effect of SECTOR\_TOP is not found to be

Model	1	2	3	4	5	6
Dependent variable	BIG4	BIG4	BIG4	SAME_AUDITOR_COMP	SAME_AUDITOR_CUST	SAME_AUDITOR_SUPPL
<i>Explanatory variables</i>						
COMPETITOR_BIG4	-1.4874** (0.6333)	-0.9065* (0.5144)	-1.2855* (0.6693)	1.8948*** (0.7194)		
CUSTOMER_BIG4	0.2519 (0.5963)	0.0448 (0.4789)	-0.7378 (0.7104)		1.9925** (0.7806)	
SUPPLIER_BIG4	1.2933** (0.3977)	1.2676** (0.5060)	1.6259** (0.7548)			2.2964*** (0.7656)
CUSTOMER_SALES		0.0286*** (0.0110)			0.0077 (0.0116)	
SUPPLIER_PURCHASES		0.0063 (0.0080)		0.0065 (0.0068)		0.0158** (0.0074)
SECTOR_TOP	-0.0002 (0.0047)					
COMPETITOR_BIG4 ×	0.0121* (0.0068)					
SECTOR_TOP						
CUSTOMER_BIG4 ×	-0.0032 (0.0074)					
SECTOR_TOP						
SUPPLIER_BIG4 ×	-0.0055 (0.0067)					
SECTOR_TOP						
<i>Control variables</i>						
GROUPCHOICE	2.7121*** (0.5278)	2.7589*** (0.4985)	2.8289*** (0.7040)	0.0902 (0.7089)	0.6308 (0.5653)	0.4989 (0.6313)
MAN_OWNS	-0.0438*** (0.0085)	-0.0446*** (0.0084)	-0.0490*** (0.0114)	-0.0021 (0.0105)	0.0013 (0.0061)	-0.0218** (0.0105)
LEVERAGE	-1.2911 (1.0438)	-1.2376 (1.0378)	-0.7494 (1.4155)	0.4484 (1.1275)	-0.7507 (1.0962)	-0.8395 (0.8282)
SIZE	0.4601** (0.2194)	0.4858** (0.2071)	0.1441 (0.3061)	0.0951 (0.2903)	0.0477 (0.2072)	-0.1003 (0.1832)
ROA	1.4839 (1.9065)	1.1892 (2.2312)	1.8583 (4.2875)	0.3682 (2.3500)	0.9438 (2.2519)	1.2307 (1.9437)
BIG4_CONC	1.2998 (1.7853)	2.2892 (1.6903)	-0.5922 (2.3041)			
AUDITOR_CONC				8.1610** (3.2391)	7.8975*** (2.5903)	6.4254*** (2.4488)
Intercept	-5.7557** (2.5806)	-7.5099*** (2.4518)	-1.0131 (3.0296)	-6.1690* (3.4104)	-4.9753* (2.6289)	-3.0466 (2.1608)
Log likelihood	-65.3200	-63.0304	-33.8476	-44.6072	-53.0334	-53.6374
Chi-square	71.81***	65.12***	43.50***	13.84*	17.80**	18.39**
Mcfadden R <sup>2</sup>	0.5248	0.5414	0.5393	0.2114	0.2232	0.3495
n	210	210	106	210	210	210

**Notes:** \*, \*\* and \*\*\* indicate significances at the 10, 5 and 1% levels, respectively (two-tailed); this table presents our additional logistic (logit) regression results. Both the beta coefficients and the robust standard errors (between brackets) are reported per variable for each model, as well as the number of cases included in the analysis. In this table, also the Log likelihood and the chi-square statistics are reported for each model, as well as the McFadden R<sup>2</sup>. For variable definitions, please refer to [Table I](#)

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**Table V.**  
Additional logistic  
regression results

significant, we do find a significant positive moderating effect of  $\text{COMPETITOR\_BIG4} \times \text{SECTOR\_TOP}$ . Together with the coefficient of  $\text{COMPETITOR\_BIG4}$ , which is significantly negative like in our main results, this indicates that the divergence effect toward the main competitor does not apply for the weaker firms within an industry and even turns into a conformance effect. This further confirms the results of Han (1994), who found that “[...] the leaders in an industry seek to differentiate themselves from their chief competitors” while “[...] the firms of the middle stratum imitate the leaders in their industry extensively by choosing from the same set of auditors” (p. 637). We found no significant moderating effect for  $\text{SUPPLIER\_BIG4} \times \text{SECTOR\_TOP}$  or  $\text{CUSTOMER\_BIG4} \times \text{SECTOR\_TOP}$ .

A firm's need for legitimacy could also be a result of the dominance of its main supplier and/or customer. Therefore, we ran a regression in which we account for both supplier and customer dominance (Model 2 of Table V). More specifically, we included  $\text{CUSTOMER\_SALES}$ , defined as the level of sales to the main customer divided by total sales, and  $\text{SUPPLIER\_PURCHASES}$ , defined as the level of purchases from the main supplier divided by the total amount of purchases (these items were included in our questionnaire as well). When including these variables, both  $\text{COMPETITOR\_BIG4}$  and  $\text{SUPPLIER\_BIG4}$  remained significant. While  $\text{CUSTOMER\_BIG4}$  remained insignificant,  $\text{CUSTOMER\_SALES}$  was found to be significantly positive, indicating that a higher level of dependence on a customer leads to an overall higher demand for a Big4 auditor.  $\text{SUPPLIER\_PURCHASES}$  was not found to be significant.

To mitigate for potential self-selection bias, we also test our hypotheses using an industry-and-size matched sample, in which we match firms that engage Big4 auditors with firms that engage non-Big4 auditors. It was not always possible to find a proper match for every Big4 audited firm as firms audited by a Big4 are generally larger. We therefore only found a match for 53 firms with a Big4 auditor, reducing the sample size from 210 to 106. To test whether the matching was carried out correctly, we compared the means of  $\text{SIZE}$ ,  $\text{ROA}$  and  $\text{LEVERAGE}$  of the firms that hired a Big4 auditor and those that did not. Every difference in means was found to be insignificant, supporting that our sample is matched in an effective way. Even though the sample was significantly reduced, the results are still completely in line with our main results, although the coefficient of  $\text{SIZE}$  was evidently not found to be significant anymore (Model 3 of Table V). Due to the reduction in sample size, we were not able to execute the analysis regarding the moderating role of the board of directors with this sample, as this model contains too many variables in comparison to the sample size.

While our hypotheses relate to the demand for a Big4 auditor, we also examined to what extent firms hire exactly the same audit firm as their main stakeholders. A total of 7 per cent of the firms within our sample hired exactly the same audit firm as their main competitor, 10 per cent engaged the same audit firm as their main customer and 13 per cent of the firms had the same audit firm as their main supplier.

To examine to what extent the institutional theory is able to further explain this demand for exactly the same audit firm, we ran three additional analyses (Model 4, 5 and 6 of Table V). In Model 4, we included  $\text{SAME\_AUDITOR\_COMP}$  as dependent variable, which is coded 1 if the firm hired exactly the same audit firm as its main competitor.  $\text{COMPETITOR\_BIG4}$  and  $\text{SECTOR\_TOP}$  are included as explanatory variables in this analysis.  $\text{SECTOR\_TOP}$  is included as the need for legitimacy was found to influence isomorphism toward competitors.  $\text{COMPETITOR\_BIG4}$  is included as firms may be more likely to imitate their main competitor's auditor choice when that main competitor hires a Big4 auditor. The same control variables are used compared to our main analyses but

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BIG4\_CONC was replaced by AUDITOR\_CONC, defined as the market share the firm's auditor has in the industry the firm is part of. While SECTOR\_TOP was not found to be significant, COMPETITOR\_BIG4 was found to be significantly positive, indicating that firms are more likely to hire the same audit firm as their main competitor when this competitor hires a Big4 auditor.

We performed a similar analysis regarding customers (Model 5), in which we included SAME\_AUDITOR\_CUST, coded 1 if the firm hired exactly the same audit firm as its main customer, as dependent variable. Within this analysis, we replaced COMPETITOR\_BIG4 by CUSTOMER\_BIG4 and we also included CUSTOMER\_SALES to control for customer dominance because coercive pressures are more likely to arise in case of dominant stakeholders (Teo *et al.*, 2003). In line with the analysis regarding competitors, however, only CUSTOMER\_BIG4 was found to be significant, indicating that firms are more likely to imitate their main customer's auditor choice when this customer hired a Big4 auditor.

We also performed an analysis with the dependent variable SAME\_AUDITOR\_SUPPL (Model 6), coded 1 if the firm hired the same audit firm as its main supplier. We included SUPPLIER\_BIG4 instead of CUSTOMER\_BIG4 and included SUPPLIER\_PURCHASES to control for supplier dominance. In line with the previous analyses, firms seem more likely to hire the same audit firm as their main supplier when this supplier engaged a Big4 auditor. However, the demand for exactly the same audit firm also seems to be affected by the dominance of the supplier. More specifically, the significantly positive coefficient of SUPPLIER\_PURCHASES indicates that firms are more likely to hire the same audit firm as their main supplier if they are more dependent on this supplier. This result could therefore be considered as additional evidence for the existence of isomorphic behavior regarding auditor choice in private firms.

Finally, to examine the robustness of our main findings, we ran several analyses in which we added new or alternative control variables. More specifically, we included alternatives for the traditional agency conflict variables (e.g. the number of owners instead of management ownership) and included other potentially valuable control variables like the firm's age, whether the firm exports or not, the quick ratio, whether management obtains variable remuneration or not, etc. The results of these analyses (not tabulated but available on request) are found to be completely in line with our reported results.

## 5. Conclusions

In this study, we examined the influence of a firm's main competitor, customer and supplier on the choice for a Big4 auditor. While most auditor choice studies keep relying exclusively on the agency theory to explain this choice, we provide an additional perspective to the extant literature by examining auditor choice from an institutional theory view. The institutional theory states that firms may become very similar to one another as a response to uncertainty, pressures from stakeholders, external expectations, etc. (DiMaggio and Powell, 1983), which is called institutional isomorphism. Therefore, the choice of a Big4 auditor may be a response to one of their main stakeholders hiring a Big4 auditor, irrespective of the level of agency conflicts, because this is considered to be good practice and might therefore increase the firm's overall legitimacy.

Han (1994) already examined isomorphism toward competitors regarding auditor choice in a listed firm context and found that listed firms often imitate the leader of an industry by choosing the same auditor. We add to this study in two ways. In the first place, we examined whether isomorphism may also explain auditor choice in private firms. Second, while Han (1994) only focused on isomorphism toward competitors, we also examined isomorphic behavior toward suppliers and customers.

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We hypothesized that firms are likely to follow their main stakeholders' choice of a Big4 auditor, leading to a conformance effect regarding auditor choice. As Big4 auditors are considered to provide a higher level of audit quality than non-Big4 auditors (Boone *et al.*, 2010; Karjalainen, 2011), firms may be required to engage a Big4 auditor as well (coercive isomorphism). They may also follow their main stakeholders' choice of a Big4 auditor because they learned from the advantages of hiring a Big4 auditor from those stakeholders (normative isomorphism) or just out of uncertainty to increase the firm's legitimacy (mimetic isomorphism).

Our results supported this hypothesis regarding suppliers as we found a significant positive association between the firm's choice of a Big4 auditor and the firm's main supplier being audited by a Big4 auditor. We found no significant results regarding customers and even a divergence effect toward competitors. However, this effect toward competitors may still be considered to be a form of institutional isomorphism as Beekert (2010) indicates that competition forces companies to specialize and to create niches for themselves, which he labels institutional divergence. Han (1994) also found indications for such effect, as his findings showed that the leaders within an industry generally try to differentiate themselves from the others, while the middle stratum firms generally try to imitate the leaders. An additional analysis in which we take into account each firm's position within its industry confirms this behavior for private firms as well.

Moreover, we also examined to what extent institutional isomorphism toward customers, suppliers and competitors depends on the network role of the board of directors, which consists of communicating, attaining legitimacy, etc., to provide access to resources (Huse, 2005; Daily *et al.*, 2003). We hypothesized that the extent of board networking negatively moderates the isomorphic behavior of firms as firms with networking boards will to a lesser extent engage in imitation behavior because these boards will already have developed strong linkages with their main stakeholders, therefore not requiring this isomorphic behavior to attain legitimacy. This was also supported by our results.

This study contributes to the literature in several ways. First, we focus on the potential influence of stakeholders other than the firm's shareholders and debtholders and in this way provide an additional perspective on auditor choice in private firms. Moreover, we examined this influence by further integrating the institutional theory in the audit demand literature and in this way fulfilled the identified need of Cohen *et al.* (2008) to consider additional theories in explaining audit outcomes instead of relying on agency theory alone. By this study, we certainly do not contest the agency theory; our results even confirm that agency conflicts are the dominant driver of auditor choice. However, agency conflicts will not be the only driver, other influences may be at play as well. Based on the institutional theory, we tried to explain one of these other influences. As every theory and every perspective might contain a small portion of the overall explanation of auditor choice however, we endorse the call of Cohen *et al.* (2008) to continue integrating such additional perspectives and theories in the auditing literature.

Second, by focusing on the network role of the board of directors, we also shed light on the importance of this role within the accounting literature. While several accounting studies already focused on the monitoring role of the board of directors and its influence on audit outcomes, which is again based on agency theory, our results indicate that the network role of the board may also influence auditor choice. By actually measuring the extent of board networking using questionnaire data, we also answer the call of Cohen *et al.* (2004) to examine board characteristics other than independence only and to use other methods than

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archival research to be better able to take into account actual functioning of the board as suggested by [Carcello \*et al.\* \(2011\)](#).

Finally, by indicating that the choice of a Big4 auditor may also be influenced by the firm's main stakeholders' auditor choice as a result of uncertainty and legitimacy reasons, this study may raise questions about whether auditors will keep focusing on providing a high level of audit quality. Since firms that demand Big4 auditors for legitimacy reasons will only be interested in a clean opinion to obtain the reputation effect toward stakeholders, auditors would benefit most by optimizing their brand reputation while minimizing their actual audit effort. While brand reputation and audit quality could be considered to be highly related, this is not necessarily the case within the private firm context. Both the litigation risk and the probability that an audit failure is detected is considered to be much lower in a private firm context ([Lennox, 2005](#); [Van Tendeloo and Vanstraelen, 2008](#)). The actual existence of such behavior and the potential consequences for the level of audit quality, could therefore be considered as an interesting path for future research.

There are of course some limitations associated with this study that can be considered as other interesting possibilities for future research. First, our analysis remains restricted to whether firms also hired a Big4 auditor or the same audit firm while isomorphic behavior may also lead to the engagement of the same audit office and/or audit partner. Moreover, focusing on auditor switches and examining whether they are the result of an auditor switch at the main competitor, customer or supplier of the firm would even more clearly reveal isomorphic behavior. Second, we only examined the isomorphic influences of the firm's main competitor, supplier and customer on auditor choice while a firm's auditor choice may also be influenced by other stakeholders like its employees (e.g. by the works council, the internal auditor and the accounting department), inspection bodies, consultants, etc., and examining their influence could therefore also yield very interesting results. Focusing on a wider set of competitors, customers and suppliers instead of focusing on the most important competitor, customer and supplier only could also lead to interesting findings but we were not able to examine this due to the difficulty of obtaining such data. Third, we tested our hypotheses in the Belgian private firm context. While this could also be considered as a contribution since several researchers called for more studies that relate to the non Anglo-American context ([deZoort and Salterio, 2001](#); [Cohen \*et al.\*, 2004](#); [Carcello \*et al.\*, 2011](#)), this could also be considered as a limitation because one should be careful with generalizing these results to an Anglo-American context. Fourth, while we consider examining the board as a moderator to be a contribution, we only examined firms without audit committees due to the context we studied (audit committees are not required in Belgian private firms). As audit committees might lead to additional isomorphic auditor choice effects, we encourage researchers to take them into account when examining the topic of this study in a different context. Finally, while we consider the institutional theory to be an interesting addition to the agency theory to explain auditor choice, future research should examine to what extent both theories interrelate. The coercive pressures of a firm's parent company can be due to agency conflicts arising between the firm and its parent company for example. Coercive isomorphism toward suppliers can be the result of an agency relationship between the firm and its supplier, while normative and mimetic isomorphism are less likely resulting from agency conflicts. Qualitative studies might be highly valuable in examining these tensions and interrelations between the agency theory and institutional theory as such studies are better able to detect the different types of isomorphism.

1. At the moment of data collection, a Belgian firm was required to hire an auditor when the annual average workforce was higher than 100 full time equivalents or when at least two of the following thresholds were exceeded: annual average workforce of 50 fulltime equivalents, balance sheet total of 3,650,000 EUR and turnover of 7,300,000 EUR (article 15 of the Belgian Company Legislation).
2. The Bel-First database contains comprehensive information (financials, ownership data, legal information, etc.), of both listed and private Belgian firms.
3. Due to the disappearance of Arthur Andersen and due to mergers between audit firms, the audit quality measure gradually evolved from Big8 to Big4.
4. Auditors becoming industry specialists may also be the result of institutional isomorphism, in which firms hire the same auditor as their competitors (from the same industry). However, as we already directly measure institutional isomorphism toward competitors by the variable COMPETITOR\_BIG4, we include BIG4\_CONC to control for the existence of industry specialism only, regardless of how this specialism has been achieved.

### References

- Abdel-Khalik, A.R. (1993), "Why do private companies demand auditing? A case for organizational loss of control", *Journal of Accounting, Auditing & Finance*, Vol. 8 No. 1, pp. 31-52.
- Barton, J.A.N. (2005), "Who cares about auditor reputation?", *Contemporary Accounting Research*, Vol. 22 No. 3, pp. 549-586.
- Beasley, M.S. and Petroni, K.R. (2001), "Board independence and audit-firm type", *Auditing*, Vol. 20 No. 1, pp. 97-114.
- Becker, C.L., Defond, M.L., Jiambalvo, J. and Subramanyam, K.R. (1998), "The effect of audit quality on earnings management", *Contemporary Accounting Research*, Vol. 15 No. 1, pp. 1-24.
- Beckert, J. (2010), "Institutional isomorphism revisited: convergence and divergence in institutional change", *Sociological Theory*, Vol. 28 No. 2, pp. 150-166.
- Boone, J.P., Khurana, I.K. and Raman, K.K. (2010), "Do the big 4 and the second-tier firms provide audits of similar quality?", *Journal of Accounting & Public Policy*, Vol. 29 No. 4, pp. 330-352.
- Branson, J. and Breesch, D. (2004), "Referral as a determining factor for changing auditors in the Belgian auditing market: an empirical study", *The International Journal of Accounting*, Vol. 39 No. 3, pp. 307-326.
- Campa, D. (2013), "Big 4 fee premium" and audit quality: latest evidence from UK listed companies", *Managerial Auditing Journal*, Vol. 28 No. 8, pp. 680-707.
- Carcello, J.V., Hermanson, D.R. and Ye, Z. (2011), "Corporate governance research in accounting and auditing: insights, practice implications, and future research directions", *Auditing: A Journal of Practice & Theory*, Vol. 30 No. 3, pp. 1-31.
- Chen, K.Y. and Jian, Z. (2007), "Audit committee, board characteristics, and auditor switch decisions by Andersen's clients", *Contemporary Accounting Research*, Vol. 24 No. 4, pp. 1085-1117.
- Choi, J.H., Kim, J.B., Liu, X. and Simunic, D.A. (2008), "Audit pricing, legal liability regimes, and big 4 premiums: theory and cross-country evidence", *Contemporary Accounting Research*, Vol. 25 No. 1, pp. 55-99.
- Chow, C.W. (1982), "The demand for external auditing: size, debt and ownership influences", *The Accounting Review*, Vol. 57 No. 2, pp. 272-291.
- Cohen, J., Krishnamoorthy, G. and Wright, A. (2004), "The corporate governance mosaic and financial reporting quality", *Journal of Accounting Literature*, Vol. 23, pp. 87-152.

- Cohen, J.R., Krishnamoorthy, G. and Wright, A.M. (2008), "Form versus substance: the implications for auditing practice and research of alternative perspectives on corporate governance", *Auditing: A Journal of Practice & Theory*, Vol. 27 No. 2, pp. 181-198.
- Collis, J., Jarvis, R. and Skerratt, L. (2004), "The demand for the audit in small companies in the UK", *Accounting and Business Research*, Vol. 34 No. 2, pp. 87-100.
- Daily, C.M., Dalton, D.R. and Cannella, A.A. Jr. (2003), "Corporate governance: decades of dialogue and data", *Academy of Management Review*, Vol. 28 No. 3, pp. 371-382.
- Davis, W.D., Dibrell, C., Craig, J.B. and Green, J. (2013), "The effects of goal orientation and client feedback on the adaptive behaviors of family enterprise advisors", *Family Business Review*, Vol. 26 No. 3, pp. 215-234.
- Deangelo, L.E. (1981), "Auditor size and audit quality", *Journal of Accounting & Economics*, Vol. 3 No. 3, pp. 183-199.
- Dedman, E., Kausar, A. and Lennox, C. (2014), "The demand for audit in private firms: recent large-sample evidence from the UK", *The European Accounting Review*, Vol. 23 No. 1, pp. 1-23.
- Defond, M.L. (1992), "The association between changes in client firm agency costs and auditor switching", *Auditing: A Journal of Practice & Theory*, Vol. 11 No. 1, pp. 16-31.
- Defond, M.L., Francis, J.R. and Wong, T.J. (2000), "Auditor industry specialization and market segmentation: evidence from Hong Kong", *Auditing: A Journal of Practice & Theory*, Vol. 19 No. 1, pp. 49-66.
- Dezoort, F.T. and Salterio, S.E. (2001), "The effects of corporate governance experience and financial-reporting and audit knowledge on audit committee members' judgments", *Auditing: A Journal of Practice & Theory*, Vol. 20 No. 2, p. 2.
- Dimaggio, P.J. and Powell, W.W. (1983), "The iron cage revisited: institutional isomorphism and collective rationality in organizational fields", *American Sociological Review*, Vol. 48 No. 2, pp. 147-160.
- Eisenhardt, K.M. (1989), "Agency theory: an assessment and review", *Academy of Management Review*, Vol. 14 No. 1, pp. 57-74.
- Fama, E.F. and Jensen, M.C. (1983), "Separation of ownership and control", *Journal of Law & Economics*, Vol. 26 No. 2, pp. 301-326.
- Fan, J.P.H. and Wong, T.J. (2005), "Do external auditors perform a corporate governance role in emerging markets? Evidence from east Asia", *Journal of Accounting Research*, Vol. 43 No. 1, pp. 35-72.
- Finkelstein, S. and Mooney, A.C. (2003), "Not the usual suspects: how to use board process to make boards better", *Academy of Management Executive*, Vol. 17 No. 2, pp. 101-113.
- Firth, M. and Smith, A. (1992), "Selection of auditor firms by companies in the new issue market", *Applied Economics*, Vol. 24 No. 2, pp. 247-255.
- Francis, J.R. (2004), "What do we know about audit quality?", *The British Accounting Review*, Vol. 36 No. 4, pp. 345-368.
- Francis, J.R. and Wilson, E.R. (1988), "Auditor changes: a joint test of theory relating to agency costs and auditor differentiation", *The Accounting Review*, Vol. 63 No. 4, pp. 663-682.
- Gabrielsson, J. and Winlund, H. (2000), "Boards of directors in small and medium-sized industrial firms: examining the effects of the board's working style on board task performance", *Entrepreneurship & Regional Development*, Vol. 12 No. 4, pp. 311-330.
- Gaeremynck, A., Van Der Meulen, S. and Willekens, M. (2008), "Audit-firm portfolio characteristics and client financial reporting quality", *The European Accounting Review*, Vol. 17 No. 2, pp. 243-270.
- Han, S.-K. (1994), "Mimetic isomorphism and its effect on the audit services market", *Social Forces*, Vol. 73 No. 2, pp. 637-664.



- Hardies, K., Breesch, D. and Branson, J. (2015), "The female audit fee premium", *Auditing: A Journal of Practice & Theory*, Vol. 34 No. 4, pp. 171-195.
- Hope, O.-K., Langli, J.C. and Thomas, W.B. (2012), "Agency conflicts and auditing in private firms", *Accounting, Organizations and Society*, Vol. 37 No. 7, pp. 500-517.
- Hu, L.T. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives", *Structural Equation Modeling: a Multidisciplinary Journal*, Vol. 6 No. 1, pp. 1-55.
- Hung, H. (1998), "A typology of the theories of the roles of governing boards", *Corporate Governance: An International Review*, Vol. 6 No. 2, p. 101.
- Huse, M. (2005), "Accountability and creating accountability: a framework for exploring behavioural perspectives of corporate governance", *British Journal of Management*, Vol. 16, pp. 65-79.
- Ireland, J.C. and Lennox, C.S. (2002), "The large audit firm fee premium: a case of selectivity bias?", *Journal of Accounting, Auditing & Finance*, Vol. 17 No. 1, pp. 73-91.
- Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360.
- Karjalainen, J. (2011), "Audit quality and cost of debt Capital for private firms: evidence from Finland", *International Journal of Auditing*, Vol. 15 No. 1, pp. 88-108.
- Knechel, W.R., Niemi, L. and Sundgren, S. (2008), "Determinants of auditor choice: evidence from a small client market", *International Journal of Auditing*, Vol. 12 No. 1, pp. 65-88.
- Lawrence, A., Minutti-Meza, M. and Zhang, P. (2011), "Can big 4 versus non-big 4 differences in audit-quality proxies be attributed to client characteristics?", *The Accounting Review*, Vol. 86 No. 1, pp. 259-286.
- Lennox, C. (2005), "Management ownership and audit firm size", *Contemporary Accounting Research*, Vol. 22 No. 1, pp. 205-227.
- Liang, H., Saraf, N., Hu, Q. and Xue, Y. (2007), "Assimilation of enterprise systems: the effect of institutional pressures and the mediating role of top management", *MIS Quarterly*, Vol. 31 No. 1, pp. 59-87.
- Lynall, M.D., Golden, B.R. and Hillman, A.J. (2003), "Board composition from adolescence to maturity: a multitheoretic view", *Academy of Management Review*, Vol. 28 No. 3, pp. 416-431.
- Matonti, G., Tucker, J. and Tommasetti, A. (2016), "Auditor choice in Italian non-listed firms", *Managerial Auditing Journal*, Vol. 31 Nos 4/5, pp. 458-491.
- Minichilli, A., Zattoni, A. and Zona, F. (2009), "Making boards effective: an empirical examination of board task performance", *British Journal of Management*, Vol. 20 No. 1, pp. 55-74.
- Minichilli, A., Zattoni, A., Nielsen, S. and Huse, M. (2012), "Board task performance: an exploration of micro- and macro-level determinants of board effectiveness", *Journal of Organizational Behavior*, Vol. 33 No. 2, pp. 193-215.
- Mizruchi, M.S. and Fein, L.C. (1999), "The social construction of organizational knowledge: a study of the uses of coercive, mimetic, and normative isomorphism", *Administrative Science Quarterly*, Vol. 44 No. 4, pp. 653-683.
- Niskanen, M., Karjalainen, J. and Niskanen, J. (2010), "The role of auditing in small, private family firms: is it about quality and credibility?", *Family Business Review*, Vol. 23 No. 3, pp. 230-245.
- Niskanen, M., Karjalainen, J. and Niskanen, J. (2011), "Demand for audit quality in private firms: evidence on ownership effects", *International Journal of Auditing*, Vol. 15 No. 1, pp. 43-65.
- Pfeffer, J. and Salancik, G. (1978), *External Control of Organizations: A Resource Dependence Perspective*, Harper and Row, New York, NY.
- Piot, C. (2001), "Agency costs and audit quality: evidence from France", *European Accounting Review*, Vol. 10 No. 3, pp. 461-499.

- Piot, C. (2005), "Auditor reputation and model of governance: a comparison of France, Germany and Canada", *International Journal of Auditing*, Vol. 9 No. 1, pp. 21-44.
- Reed, B.J., Trombley, M.A. and Dhaliwal, D.S. (2000), "Demand for audit quality: the case of laventhol and Horwath's auditees", *Journal of Accounting, Auditing & Finance*, Vol. 15 No. 2, pp. 183-198.
- Smith, C.W. and Warner, J.B. (1979), "On financial contracting: an analysis of bond covenants", *Journal of Financial Economics*, Vol. 7 No. 2, pp. 117-161.
- Teo, H.H., Wei, K.K. and Benbasat, I. (2003), "Predicting intention to adopt interorganizational linkages: an institutional perspective", *MIS Quarterly*, Vol. 27 No. 1, pp. 19-49.
- Van Tendeloo, B. and Vanstraelen, A. (2008), "Earnings management and audit quality in Europe: evidence from the private client segment market", *European Accounting Review*, Vol. 17 No. 3, pp. 447-469.
- Vander Bauwhede, H. and Willekens, M. (2004), "Evidence on (the lack of) audit-quality differentiation in the private client segment of the Belgian audit market", *The European Accounting Review*, Vol. 13 No. 3, pp. 501-522.
- Westphal, J.D. and Zajac, E.J. (1998), "The symbolic management of stockholders: corporate governance reforms and shareholder reactions", *Administrative Science Quarterly*, Vol. 43 No. 1, pp. 127-153.
- Zahra, S.A. and Pearce, J.A. (1989), "Boards of directors and corporate financial performance: a review and integrative model", *Journal of Management*, Vol. 15 No. 2, pp. 291-334.
- Zajac, E.J. and Westphal, J.D. (1995), "Accounting for the explanations of CEO compensation: substance and symbolism", *Administrative Science Quarterly*, Vol. 40 No. 2, pp. 283-308.
- Zona, F. and Zattoni, A. (2007), "Beyond the black box of demography: board processes and task effectiveness within Italian firms", *Corporate Governance: An International Review*, Vol. 15 No. 5, pp. 852-864.

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