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Auditors' professional and organizational identities and commercialization in audit firms

Abstract

Purpose: This paper seeks to explain how auditors' professional and organizational identities are associated with commercialization in audit firms. Unlike previous studies exploring the consequences of commercialization in the firms, our study directs its attention toward the potential driver of commercialization, which we argue to be the identities of the auditors.

Design/methodology/approach: The paper is based on 374 responses to a survey distributed to 3588 members of FAR, the professional association of accountants, auditors and advisors in Sweden. The study used established measures of organizational and professional identity and introduced market, customer and firm process orientation as aspects of commercialization. The study explored the data through descriptive statistics, principle component analysis and correlation analysis and tested the hypotheses with multiple linear regression analysis.

Findings: The findings indicated that the organizational identity of auditors has a positive association with three aspects of commercialization: market orientation, customer orientation and firm process orientation. Contrary to the arguments based on prior literature, our study has found that the professional identity of auditors is also a positively associated with commercialization. This indicates a change of the role of professional identity vis-à-vis commercialization of audit firms. The positive association between professional identity and commercial orientation could indicate the development of "organizational professionalism." The study also found differences between the association between professional identity and commercialization in Big 4 and non-Big 4 firms. While in Big 4 firms, professional identity is positively associated only with the firm's process orientation, in non-Big 4 firms, professional identity has a positive association with all three aspects of commercialization.

Originality/value: The paper provides insight into how auditors' identities have influenced commercialization of audit firms and into the normalizing of commercialization within auditing. The study also developed a new instrument for measuring commercialization, one based on market, customer and firm process orientation concepts. This paper suggests that this instrument is an alternative to the observation through proxies.

Key words Auditor, Commercialization, Professional identity, Organizational identity, Sweden

Paper type Research paper

Introduction

Audit firms have recently adopted new descriptors, including "knowledge-intensive organizations," "multinational professional services networks," and "professional service firms" (Brock, 2006). These may not simply be new forms of branding but may indicate the changed nature of the firms and their services. The literature has to some extent captured this development, which it refers to as commercialization of the audit industry. Terms like "profitability," "efficiency," "market strategy," "customer driver," "fimalization," "business process," "financialization" and "marketization" (e.g., Sharma and Sidhu, 2001; Citron, 2003; Clow *et al.*, 2009; Sweeney and McGarry, 2011; Alvehus and Spicer, 2012; Broberg *et al.*,

2013; Broberg, 2013; Picard, 2016) are some of the labels used to describe audit firms' development of a commercial orientation. Most studies that discuss this change have explored the impact of this commercial orientation on a number of outcomes, such as financial gain orientation and the efficiency of auditors and audit firms (e. g., Chesser *et al.*, 1994; Sharma and Sidhu, 2001). Some studies have explored auditors' unethical behavior and loss of independence (Humphrey and Moizer, 1990; Citron, 2003; Suddaby *et al.*, 2009; Sori *et al.*, 2010) and its ultimate effects on audit quality. Few studies, to our knowledge, have sought to explore the drivers of commercialization in the audit industry and those that have were primarily explorative and/or theoretical in nature. They tended to vaguely refer to the contextual (e.g., Brock, 2006; Carrington *et al.*, 2011) and internal organizational (Broberg, 2013; Broberg *et al.*, 2013) forces driving commercialization. This paper tries to contribute to this nascent stream of research by suggesting that auditors' professional and organizational identities are driving commercialization in the audit industry (Settles, 2004; Johnson *et al.*, 2006). These identities represent the forces of the internal and external environment, given that these individuals' identities are constructed in interaction with, or even through the clash of, external and internal forces embodied by the profession and the organization (Pratt and Foreman, 2000; Lui *et al.*, 2001).

Professional identity refers to the extent to which a professional employee experiences a sense of oneness with the profession (Heckman *et al.*, 2009) and commitment to and acceptance of the requirements for the independence (Freidson, 2001) and ethical values (Brante, 2005) of the profession. Organizational identity refers to the extent to which an individual experiences a shared identity with an organization, where the individual experiences an organization's failures or successes as their own (Mael and Ashforth, 1992). In addition, it refers to the extent to which members of an organization make decisions automatically or instinctively based on the best interests of the organization (Ouchi and Price, 1993) and what the organization wants (Pierce and Sweeney, 2005; McGarry and Sweeney, 2007). More than a decade ago, Friedson (2001) suggested that while professional identity de-emphasizes the financial gain associated with focusing on the need of the stakeholders, organizational identity would be associated more with financial gains inherent in the assumption that organizations (audit firms, in particular) are driven by profitability. Based on this argument, it would be plausible to assume that the professional identity of the auditors might have negative association with commercialization while an organizational identity might have a positive association.

This study aimed to establish whether this assumption holds, by empirically exploring how the two identities of auditors are being associated with three distinct aspects of commercialization. These are market, customer and firm process orientation, concepts borrowed from marketing literature (e.g., Kohli and Jaworski, 1990; Sinkovics and Roath, 2004; Chen *et al.*, 2009) and developed for use in the audit context. We posited that understanding the relationship between auditors' identities and their perceptions of commercialization could shed light on the mechanism through which commercialization in the audit industry evolves. Understanding this is important, given the changing concept of professional and organizational identities of auditors (e.g., Humphrey *et al.*, 2004). This led to the question of whether the old notion of the profession (represented by dual identity) is still relevant and what that notion's interaction with new developments in the audit industry lookslike. As far as we know, this study is the first attempt to conceptualize commercialization in the context of audit firms. Instead of conceptualizing commercialization, past research has chosen to use number of proxies that were argued to represent the concept (i.e., non-audit services, marketing activities) (e.g. Clow *et al.*, 2009;

Sori et al., 2010; Broberg et al., 2013). This study, however, posits that there is a need to develop the concept of commercialization beyond the use of proxies, by exploring how auditors perceive it in an effort to gain a more praxis-oriented perspective on the development of audit firms' functioning.

This study may be of interest and importance given the institutional settings within which it is positioned. The Swedish audit industry has been hit by number of scandals, in which, for example, auditors' inaction, incompetence, and inappropriate relationships with management have contributed to the sudden bankruptcy of the relatively large HQ bank (in 2010). The Swedish audit industry had been the longest surviving protected dominion in Europe, given that until 2010 all corporations irrespective of size had to be audited. With the abolition of statutory audit for small firms in 2010, the Swedish audit industry was forced to rapidly diversify and to put in place different organizational structures in order to adapt. The magnitude of change and the move toward free competition in the Swedish market (Broberg *et al.*, 2013) may have left a mark on auditors' perception of the commercialization of their firms and the industry as a whole. It has also changed the notion of what it means to be a professional auditor. These rapid changes provided a valuable opportunity to explore the relationship between auditors' identities and commercialization.

This paper continues by presenting three distinct aspects of the commercialization of audit firms, which are drawn from the marketing literature. We then conclude this section by presenting the arguments for our hypotheses.

Literature review

Commercialization of auditing

The explosive change in the audit industry happened rather unexpectedly when the Enron scandal started to unravel at the beginning of 2000. Enron's management, together with its auditors, have received most of the blame for the scandal. The public, media and researchers alike have all suggested that the focus of Arthur Andersen (Enron's audit firm) on financial gains and the orientation of its partners toward accumulating wealth were the major reasons for the fraudulent Enron schemes. Since then, any mention of a commercial orientation in relationship to the audit industry has had increasingly negative connotations. Even prior to the scandal, researchers were claiming that auditing and commercialization were incompatible activities, since audit professionals, being experts in their field, are naturally predisposed to perform their professional duties rather than to focus on business development activities (Kotler and Connor, 1977). Researchers have also claimed that taking an active role in marketing and attracting clients can be viewed as unethical (cf. Broberg *et al.*, 2013). Researchers have also posed that signaling expertise through one's reputation is the way forward and most appropriate in the profession (Hodges and Young, 2009). In the 1990s, some researchers (e.g., Humphrey and Moizer, 1990; Chesser *et al.*, 1994) warned that the increasingly commercial orientation of audit firms in terms of doing activities other than audits might trigger an increasing orientation toward financial gain. This, they argued, could make an impact on auditors' independence in relation to their clients. Self-fulfilling prophecy or not, the Enron scandal reinforced the idea that any type of commercialization in the industry was problematic and laid the ground for a stream of research exploring the consequences of commercialization for the auditing profession. The studies appearing after the Enron scandal have all shown and argued that commercialization of the audit industry is a driver of unethical behavior and of reduced audit quality and independence (Sharma and

Sidhu, 2001; Citron, 2003; Suddaby *et al.*, 2009; Sori *et al.*, 2010; Carter *et al.*, 2015). They implied that the result was a de-professionalization of the auditing profession.

Two major ways of exploring the commercialization of audit firms can be found in the literature: exploration of non-audit services and of the marketing activities of audit firms. (Exploration of NAS is often limited to the European context since the Sarbanes–Oxley Act of 2002 (SOX) considerably limits the offering of these services in the US.) NAS include a number of consulting-oriented activities, for example, advisory services on accounting, tax, strategy and financial structure, and merger and acquisition-related activities. On the one hand, the introduction of NAS can be seen as a response to an increased demand from clients to get just-in-time service (Jaworski *et al.*, 2000; Clow *et al.*, 2009). On the other hand, its inclusion has been argued to be motivated internally because of the lucrative nature of providing NAS (Sweeney and Pierce, 2004). It has therefore been suggested that increasing customer orientation and profitability through offering NAS services embodies the commercialization of the audit industry (Sharma and Sidhu, 2001; Sori *et al.*, 2010;). Marketing and advertising activities of audit firms have been used as yet another indicator of commercialization. Deregulation of advertising and marketing in professional firms (Bates vs. State Bar Arizona, 1977) has led to increased marketing activity by audit firms (Clow *et al.*, 2009). According to Hodges and Young (2009), the increased level of marketing activity by professional firms indicates their desire to retain existing customers as well as target and acquire new ones, with the aim of building a competitive advantage. Recent studies in the field indicate that audit firms are increasingly using marketing techniques to develop and extend their existing customer base and markets (Broberg *et al.*, 2013).

Some commonalities and interrelations exist between the two approaches outlined above. The NAS approach puts forward the idea that commercialization is being triggered by the customer demand for business services, which in turn leads audit firms to adapt to *customer orientation* to meet this demand. This differs from the client-oriented approach in which the public interest rather than commercial gains is in focus (Öhman, 2007; Suddaby *et al.*, 2009). The adaption to the demand for services reinforces the idea that supplying additional services might result in additional financial gains. To capitalize on the demand and to take advantage of those potential gains, audit firms are often forced to introduce structures that differ from those traditionally associated with a professional firm. Because of the increasing multiplicity of products/services offered, this can, for example, involve moving from a professional bureaucracy toward structures associated with a divisionalized firm (Hill and Hoskinsson, 1987). In terms of strategy, audit firms are thus being forced to create a number of strategic business units (SBU) to supply services for distinct domains of activity (Johnson, Whittington, and Scholes, 2011). Changing from being a provider of one professional service to being a provider of multiple (not always professional) services delivered by different SBUs, requires a firm to adopt a business strategy and a *firm process orientation* (i.e., coordination between units, cost-center identification, supply-chain adjustments, etc.). Customer and firm process orientations have been adopted as yet another way of observing commercialization in the industry. Becoming more oriented toward customers and firm processes often go together with the retention of existing customers and acquisition of new ones. This is being achieved by surveying the market and adopting different market strategies to address its needs. Broberg *et al.*, (2013) report that, apart from providing auditing activities, auditors are becoming actively involved in the arrangement of and participation in events that increase their visibility and the recruitment of new clients, as well as in learning about marketing strategies. Such activities, which seek to discover and meet the needs

(customer demands) of the market through a firm's product mix (auditing and NAS) closely resemble the core of the concept *market orientation* (Jaworski *et al.*, 2000).

Professional and organizational identities and market orientation

Market orientation is positioned at a firm's strategy level and characterizes how a firm addresses the market. Marketing researchers have argued that a market orientation is often a combination of a market-driven strategy (i.e., reactive, adapting to market needs) and a market-driving strategy (i.e., proactive, suggesting to the market what it needs) (Jaworski *et al.*, 2000). The combination and pursuit of both strategies is considered to be the way to achieve superior performance. A market-driven strategy involves addressing market needs and expectations of clients, while a market-driving strategy involves developing a range of products/services and making them distinct. To operate both strategies, audit firms and auditors must be "commercially aware" (Hanlon, 1996) and must, for example, engage in marketing activities (e.g., Hodges and Young, 2009; Broberg *et al.*, 2013) and use pure business skills (Jönsson, 2005) to keep clients and gain new ones.

A market orientation (in general) is not a new within the audit profession. It has, for example, long been established that the audit profession must continuously modify its relation with its external partners and clients (cf. Mautz and Sharaf, 1961). Yet, it could be assumed that auditors are more used to a market-driven strategy than to a market-driving strategy. In the Swedish context, this notion ought to be of particular importance to audit firms because of the relatively recent abolition of the statutory audit for all companies. Swedish auditors are not accustomed to emphasizing the proactive aspect of market orientation.

Research has shown that audit firms are an important context for understanding auditor behavior and audit practice (Pentland, 1993; Grey, 1998; Carrington and Catasús, 2007; Broberg, 2013; Tagesson and Öhman, 2015). It has, for example, been shown that socialization and the use of firm-specific manuals and routines are important aspects of auditing. At the same time, qualities related to the audit profession (such as independence, integrity, altruism, etc.) are also important aspects of auditing and must be considered. Öhman (2007) has developed a model indicating that auditors are dependent on both the audit firm (their employer) and the audit profession (it authorizes and disciplines auditors and issues rules and auditing standards). When more business-like activities (such as NAS) are carried out, auditors put an emphasis on the audit firm context but when public interest activities (i.e., auditing) are carried out, auditors must be attentive to both the audit firm and to the audit profession (Öhman, 2007; Suddaby *et al.*, 2009). Hence, it could be assumed that when they have to embrace business and market-driving activities, auditors with a stronger organizational identity do not experience the clash between the profession and the organization to the same extent as auditors with a stronger professional identity.

Following this reasoning, we argue that auditors with a stronger professional identity, emphasizing aspects such as autonomy, independence, professional judgment, public interest activities (cf. Bamber and Iyer, 2002; Gendron *et al.*, 2006) ought to be less engaged in and less responsive to and observant of the business-related as well as the market-driving activities of the firm. This reasoning is rooted in the findings of social and work psychology literature that claims that an individual's identity is closely associated with the individual's perceptions of the environment in which they are embedded in (e.g., Bonaiuto, Breakwell and Cano, 1996). While there does not have to be much of a contradiction between professional and market-driven activities, there is more of a clash when it comes to market-driving activities because they, to a greater extent, emphasize the marketing orientation of the audit

firms. Auditors' organizational identity puts the emphasis on participation in collective firm rituals and routines (Pentland, 1993) and stresses organizational prosperity and survival. Having a sense of belonging to the firm increases auditors' awareness of its market-oriented actions such as gaining market share, introducing new products and services, and making investments for the further development of the firm. The latter especially represents the market-driving side of market orientation. We therefore also argue that auditors with a stronger organizational identity are more engaged in and responsive to business and market-driving activities and therefore are more market oriented.

Hypothesis 1: Auditors' professional identity is negatively associated with a market orientation of an audit firm.

Hypothesis 2: Auditors' organizational identity is positively associated with a market orientation of an audit firm.

Professional and organizational identities and customer orientation

It has been claimed that "to be successful in accountancy, one has to be cost competitive, commercially aware and biased in favour of the paying customer" (Hanlon, 1996:345). An increased emphasis on auditors building and maintaining a close, or even intimate, relationship with auditees indicates an increased need for auditors to be familiar with customers and their activities (cf. Macey and Sale, 2003; Carrington *et al.*, 2011; Broberg, 2013; Svanberg and Öhman, 2015). It has been claimed that, in addition to carrying out auditing activities, auditors need to get involved in activities such as communication, marketing, public relations, and networking (Sweeney and McGarry, 2011; Broberg *et al.*, 2013). Such activities are often seen as aspects of customer orientation (Kohli and Jaworski, 1990). Sweeney and McGarry (2011) claim that auditors' involvement in such activities lean toward becoming more commercial and thus less professional.

Recent research findings have indicated that communication with the audited entity's managers and representatives is an important part of auditor day-to-day work (Broberg, 2013). Such communication is integral to understanding the audited entity and its environment and identifying and to assessing risk and materiality (e.g., IAASB, ISA 315). However, research has indicated that this communication also ought to be seen as a sign of commercialization and an increased focus on NAS. For example, Broberg (2013) suggests that auditors in their day-to-day work tend to focus on the customers (the audited entity's managers and representatives) (see also Hanlon, 1996) rather than on the clients (traditionally defined as the audited entity's stakeholders) (Zeff, 1987; Öhman *et al.*, 2006). From an auditor's perspective, adding value (for customers) seems to be an important part of audit quality (Broberg, 2013). The increase in competitiveness because of globalization has contributed to a more intense service-oriented approach toward customers (Clow *et al.*, 2009). Customer acquisition and retention has become more important (Hodges and Young, 2009), and attracting and retaining both auditing and NAS customers are seen as important not only for audit firms but also for individual auditors. This development has resulted in independence and objectivity being pushed aside by profit and commercial gain (Wyatt, 2004; Zeff, 2003a; Zeff, 2003b; Suddaby *et al.*, 2009)

This increased familiarity and relationship building are often referred to as threats to independence (cf. Zeff, 1987; Humphrey and Moizer, 1990; Bailey, 1995; Jeppesen, 1998; Svanberg and Öhman, 2015). While auditor independence is regulated, to some extent auditors are required to make their own assessments of threats that could impair their

independence. Thus, individual judgment and discretion ought, to some extent, to determine what activities auditors get involved in and to what extent they get involved. Yet, it is also important to stress that independent judgments may not result from conscious and calculated trade-offs (cf. Cooper and Robson, 2006), but may be the manifestation of an individual's professional values and sense of professional identity (cf. Warren and Alzola, 2009). In line with this, we argue that it can be assumed that auditors identifying themselves with the profession, emphasizing public interest, values of autonomy and independence (Suddaby *et al.*, 2009) are less engaged in and less responsive to customer-oriented activities.

Yet, individual auditors face increased pressure (from audit firms, i.e., the employer) to take responsibility for finding and retaining new auditing and NAS customers (Broberg, 2013; Broberg *et al.*, 2013). As with market orientation, we argue that customer orientation is an important strategic issue for firms and often an integral factor leading to a competitive advantage (Huber *et al.*, 2001). When it comes to the influence on independence, auditors' attitudes and actions could result from consciously calculated actions but also be based on professional values and the logic emphasized in the auditors' firms (cf., Cooper and Robson, 2006; Carrington *et al.*, 2011). As commercialism seem to be the favored logic in accounting firms (Sweeney and McGarry, 2011; see also Gendron, 2002), we also argue that auditors with a stronger organizational identity, and thus a stronger involvement in the firm and its goals, are more engaged in and responsive to customer-oriented activities and therefore are more customer oriented.

Hypothesis 3: Auditors' professional identity is negatively associated with the customer orientation of an audit firm.

Hypothesis 4: Auditors' organizational identity is positively associated with the customer orientation of an audit firm.

Professional and organizational identities and firm process orientation

Firm process orientation represents firm's socialization process (Chen *et al.*, 2009) as well as the efficiency and effectiveness of business processes within a firm. These aspects are captured in auditing literature that discusses auditing and audit firms in terms of, for example, business and financial gain (cf. Kaplan, 1987; Hanlon, 1996; 1998; Gendron, 2002; Boyd, 2004; Forsberg and Westerdahl, 2007; Broberg, 2013), and costs, time efficiency, and effectiveness (e.g., Mullarkey, 1984; Cushing and Loebbecke, 1986; Bamber *et al.*, 1989; Fischer, 1996; Hanlon, 1996; Myers, 1997; Manson *et al.*, 2001; Power, 2003; Broberg, 2013; Broberg *et al.*, 2016).

Even though doing business could be seen as being in conflict with serving the public interest (cf. Brante, 1988), it has been claimed that auditing has always included business aspects and serving the paying client (Anderson-Gough *et al.*, 2000). Managing auditing more as a business activity (cf. Power, 2003) can lead to firms use a more systematic and prescriptive auditing approach, often categorized as "structured" (Cushing and Loebbecke, 1986; Humphrey and Moizer, 1990; Anderson-Gough *et al.*, 2000). Greater structure can, for example, facilitate cost control and make the audit process more manageable (Cushing and Loebbecke, 1986; Bamber *et al.*, 1989; Manson *et al.*, 2001; Power, 2003). Thus, it reflects increased competition and an enhanced focus on the business side of auditing (Dirsmith and McAllister, 1982a, b; Manson *et al.*, 2001).

A structured audit approach focuses on guidelines, checklists, instructions, prescribed procedures, and computer support. The significance of audit firm's manuals and formal procedures has been frequently discussed in auditing research (cf. Broberg, 2013). Structure is often contrasted with judgment (e.g., Power, 2003; Öhman *et al.*, 2006), judgment being seen as an important determinant of audit quality (Warren, 1984; Dillard and Bricker, 1992) and a sort of manifestation of auditor independence. More structure is generally claimed to reduce or limit the scope of judgment (cf. Dirsmith and Haskins, 1991; Francis, 1994; Kosmala MacLulich, 2001, 2003) and thus audit quality.

Broberg (2013) finds that structure is an important part of auditors' work and uses the concept "fimalization" for audit practices being determined, to a great extent, by the firms' audit system (including the manuals, division of work, and organization of work). This firmalization involves a strong conviction that audits that are carried out according to the firm procedures are of high quality. The auditors trust that "the firm's way" of carrying out audits meets all obligations required (irrespective of using a professional or a business perspective) and auditing within the firm's system makes them comfortable. Adherence to firmalization could be seen as a result of an auditor's formal and informal socialization process and of learning how to become an auditor at a specific audit firm, of accepting that using and trusting the firm system is "appropriate behaviour" (Broberg, 2013; see also Pentland, 1993).

In line with our other hypotheses, we argue that auditors with a stronger professional identity emphasizing professional judgment and independence are less engaged in and less responsive to an audit firm's process orientation. As a result, we argue that they also experience less process orientation. Auditors with a stronger organizational identity ought to be disposed to embracing firmalization, and thus be more engaged in and responsive to the audit firm's process activities and therefore also experience more firm process orientation.

Hypothesis 5: Auditors' professional identity is negatively associated with the firm process orientation of the audit firm

Hypothesis 6: Auditors' organizational identity is positively associated with the firm process orientation of the audit firm

Our research model, which is built on the six hypotheses, is presented in Figure 1.

 Insert Figure 1 about here

The three models¹ that this paper is exploring are as follows:

$$\text{Market orientation}_i = \beta_0 + \beta_1 \text{Professional identity}_i + \beta_2 \text{Organizational identity}_i + e$$

$$\text{Customer orientation}_i = \beta_0 + \beta_1 \text{Professional identity}_i + \beta_2 \text{Organizational identity}_i + e$$

$$\text{Firm process orientation}_i = \beta_0 + \beta_1 \text{Professional identity}_i + \beta_2 \text{Organizational identity}_i + e$$

¹ We present the three models here without control variables since the theoretical argumentation does not take the control variables into account. Full empirical models including control variables are, however, presented in the method section of the paper.

Method

Data were obtained using a survey. A questionnaire was used because it is an efficient method of collecting data from large samples and has been used in previous studies (e.g., Mael and Ashforth, 1992; Deshpandé *et al.*, 1993; Chen *et al.*, 2009; Broberg *et al.*, 2013). The survey was sent to an initial sample of 3588 auditors, who were authorized and approved auditor members of FAR (the total number of registered member email addresses in May 2013 was 3600). Data collection for this paper was performed as a part of the master's thesis (Skog and Theodorsson, 2013).

The survey questions measuring the constructs under study were based either on previously developed and tested auditors instruments (i.e., on professional and organizational identity) or were adopted from instruments inspired by marketing research (i.e., the three orientations). However, and to our knowledge, these orientation measures have not been used in the Swedish context or in the audit context, which created the risk of the respondents misunderstanding them and, as a consequence, decreasing the validity and reliability of the results. To minimize the risks, four academics with substantial experience in survey methods and audit research pre-screened the questionnaire.

From the initial sample, 374 respondents submitted answers (a response rate of about 10%). The remaining 3183 were considered non-respondents. Table 1 presents demographic statistics for the final sample. A total of 369 respondents answered the question regarding gender, and of these 95 (25.4%) were female and 274 (73.3%) male. Five respondents did not state gender. On the question regarding position in firm, 194 auditors (51.9%) answered that they were non-partners and 171 auditors (45.7%) answered as partners. The average age of the respondents was 47.58, with a range between 26 and 75 years. The average number of years in the profession among respondents was 21.29, ranging from 3 to 52 years. The average number of years in the firm was 14.71, with a maximum of 45 years.

 Insert Table 1 about here

Our sample differs slightly from the population in terms of gender representation, as according to the Supervisory Board of Public Accountants (2014) approximately 30 per cent of auditors in Sweden are female and 70 per cent are male. The average age and the average number of years in the profession in our sample are similar to the averages reported in the most recent study, which was done with a larger sample surveying Swedish auditors (Broberg *et al.*, 2013). Based on statistical reporting from different sources dealing with Swedish auditors (e.g., Supervisory Board of Public Accountants, 2014), one can estimate that partners represent around 25 per cent of Swedish auditors, which means that in our sample partners are overrepresented. In our sample 39.6 per cent of auditors represent *other* (small local audit firms) and this representation is similar to that reported in Broberg *et al.*, (2013). The sample has 46 per cent Big 4 and 54 per cent non-Big 4, which is similar to the proportion reported by the Supervisory Board of Public Accountants (2014), where 53 per cent are Big 4 and 47 per cent are non-Big 4.

All items in the questionnaire were in Swedish to avoid misinterpretation, which would have decreased the measurement validity of the results (the English translation of the questionnaire is in Table 2).

Three regression models were used with each one testing a set of two of the hypotheses. Model 1's dependent variable was *market orientation*; Model 2's dependent variable was *customer orientation*; and Model 3's dependent variable was *firm process orientation*. Each variable represents a dimension of commercialization. Each model then included two independent variables, *professional* and *organizational* identities, and five control variables, gender, age, years in the firm, position and whether "Big 4 or not". (Years in the profession was the sixth variable, which we excluded from further analysis; we have provided further information on it in the results and analysis section).

The dependent variables were operationalized as follows. All the questions on *market*, *customer*, and *firm process* orientations, found on the organizational level of analysis were posed on a seven-point Likert Scale. The leading question was "Please indicate to what extent you think the following statements are consistent with your firm," where 1 = Strongly disagree and 7 = Strongly agree. Prior to aggregating the survey questions into summative scores, we performed Cronbach alpha reliability tests. Because this is an explorative study in the sense that it explores established marketing concepts measuring commercialization in a new context, and in line with Hair *et al.*, (2010), we accepted the value of $\alpha = 0.6$ and above. Yet, as will be reported later, the lowest Cronbach alpha was 0.692, which potentially satisfies the criterion for aggregation for explanatory studies where Cronbach alpha is recommended to be close to 0.7 or higher (Aron, Aron and Coups, 2012).

- *Market orientation* measures were adopted from different studies on the subject. The concept of market orientation was represented by multiplicative interaction between market driven – which is a reactive approach (Deshpandé *et al.*, 1993) – and market driving – which is a proactive approach (Narver *et al.*, 2004; Tarnovskaya *et al.*, 2008). This is based on the assumption that these two approaches are non-substitutable and interdependent. Six statements were adapted from the studies, three from each market orientation approach. Being market driven was investigated through questions 3.1–3.3, while market driving was investigated through questions 3.15–3.17 (see Table 2). The original statements were changed slightly to match our study and to be suitable for the audit profession. Adequate reliabilities were found for both market driven ($\alpha=0.774$) and market driving ($\alpha=0.692$). With sufficient adequacy of reliability, the summative scores² of market driven were multiplied by the summative scores of market driving to form the market orientation variable. The multiplicative measures interaction representing market orientation had a reliability of $\alpha=0.727$.
- *Customer orientation* was based on a study by Deshpandé and Farley (1998); the study used five statements (3.10–3.14) to measure customer orientation (see Table 2) The customer orientation measure had not been used in audit research, and small changes were made to the original measure to match the purpose of our study. The measure of customer orientation had a reliability of $\alpha=0.801$, which allowed us to use a summative score of the five statements as a measure.
- *Firm process orientation* was measured through six statements (3.4–3.9) previously developed from a study by Chen *et al.*, (2009), which we adjusted to fit the purpose and context of this study(see Table 2). The measure of firm process orientation had a

² Here and when describing the use of summative scores of the different orientations we rely on Hair, Black, Babin and Anderson (2010) who posit that a summated scale has the advantage of reduced measurement error. It represents the multiple facets of a concept and may be used as a compromise between the use of a surrogate variable and the use of factor scores. The use of summated scores, however, requires that reliability tests be performed.

reliability of $\alpha=0.806$, which allowed us to use a summative score of the six statements as a measure.

The independent variables were operationalized as follows: All the questions related to professional and organizational identities, found on the individual level of analysis, were posed on a seven-point Likert Scale. The leading question was “Please indicate to what extent you think the following statements are consistent with your role as an auditor,” where 1 = Strongly disagree and 7 = Strongly agree.

- *Professional* and *organizational* identities were measured through the questions about the auditor’s identification with the audit profession and with the audit firm, respectively. The measure of identity was based on studies by Mael and Ashforth (1992) and Svanberg and Öhman (2016). Both concepts were measured with four questions each (the number of questions was reduced compared to the original measure, to reduce the length of the questionnaire and to potentially increase the response rate). Professional identity was observed through statements 2.1–2.4, while organizational identity was observed through statements 4.1–4.4 (see Table 2). Previous studies (e.g., De Bruin, 2004; Watson, 2008; Petriglieri and Petriglieri, 2010) have indicated that professional and organizational identity are often overlapping concepts; rather than representing two separate identities, the two are merged into one identity construct. Thus, instead of using summative scores for the answers (where adequate reliability on measures of both concepts was achieved – professional identity had $\alpha=0.774$ and organizational identity had $\alpha=0.809$), we further explored the data on the two identities and performed a principle component analysis (PCA). We checked correlations between the variables (which exceeded 0.3), sampling adequacy (MSA, which was high), and Kaiser-Meyer-Olkin (KMO, above 0.7). The eigenvalues and screen plot indicated that two components should be used (all communality values were preferred 0.4). Four professional identity questions (2.1–2.4) were loaded in one factor and three questions about organizational identity (4.2–4.3) were loaded into the second factor. Question 4.1 “I am proud to tell my friends that I am part of my current firm” was almost equally cross-loaded into both factors (0.575 to professional identity and 0.533 to organizational identity). Our interpretation of the cross-loading is that being a part of an auditing firm might represent affiliation to the specific firm but also signals belonging to the profession. Due to the cross-loading of one of the questions, we decided to use factor scores rather than summative scores of the questions to represent professional and organizational identities. This not only solved potential issues of multicollinearity between the two identities, but also provided the respondents’ (data-driven) division between the two identities.

The control variables were operationalized as follows:

- Gender – used as a control variable based on the assumption that females have a higher degree of commercial orientation in an audit firm compared to their male counterparts. For example, Broberg *et al.*, (2013) reported that, compared to male colleagues, female auditors attribute more importance to marketing-related activities, which could indicate a more commercial orientation among female auditors. The variable is dichotomous, where female is coded as 1 and male as 0.
- Age – used as a control variable based on the assumption that older auditors come from a tradition where commercially oriented activities have been perceived to be unprofessional and even unethical (Clow *et al.*, 2009; Broberg *et al.*, 2013). The variable is continuous and is measured by the biological age (years) reported by the respondents.

- Years in the firm – used as a control variable based on the assumption that longer tenure in a firm decreases respondents’ desire to strive for change and innovative solutions (Katz, 1982), which are embedded in commercialization. The variable is continuous and is measured by the number of years spent at the present firm as reported by the respondents.
- Position – used as a control variable based on the assumption that partners would be more oriented than non-partners toward commercialization, since they have a personal interest in the firm’s financial performance (Balachandran and Ramakrishnan, 1987; Hay *et al.*, 2007; Huddart, 2013). Thus they would have a direct interest in the financial returns of the firm, which commercialization potentially increases. This variable is dichotomous, where partners are coded as 0 and non-partners as 1.
- Big 4 – used as a control variable based on the assumption that the Big 4 auditing firms are driving commercialization in the industry with their increasing marketing and consultancy activities (Broberg *et al.*, 2013). Previous research has also shown that the Big 4 firms have an influence on the development of audit practices in the auditing landscape (Broberg, 2013). Research also shows they are more commercial as compared to smaller firms (Sweeney and McGarry, 2011). Commercial orientation appears to be deeply engrained in the organizational culture of Big 4 firms (Broberg, 2013), which is reinforced by the strong in-socialization mechanisms and hierarchical structures that characterize these firms (Kosmala and Herrbach 2006). The variable is dichotomous, where Big 4 firms are coded as 1 and Other firms as 0.

 Insert Table 2 about here

The empirical models explored in this paper can be presented as follows:

Model 1: Market orientation_i = $\beta_0 - \beta_1$ Professional identity_i + β_2 Organizational identity_i + β_3 Gender_i - β_4 Age_i - β_4 Years in Firm_i - β_5 Position_i + β_6 Big 4_i + *e*

Model 2: Customer orientation_i = $\beta_0 - \beta_1$ Professional identity_i + β_2 Organizational identity_i + β_3 Gender_i - β_4 Age_i - β_4 Years in Firm_i - β_5 Position_i + β_6 Big 4_i + *e*

Model 3: Firm process orientation_i = $\beta_0 - \beta_1$ Professional identity_i + β_2 Organizational identity_i + β_3 Gender_i - β_4 Age_i - β_4 Years in Firm_i - β_5 Position_i + β_6 Big 4_i + *e*

Results and analysis

The analysis of the data was conducted using a Pearson correlation test and multiple linear regressions. The correlation matrix in Table 3 presents means, standard deviations, and correlations of the variables.

 Insert Table 3 about here

A number of highly significant correlations were detected. Professional identity had a statistically significant positive correlation with all three orientations: market orientation (0.293***), customer orientation (0.262***), and firm process orientation (0.309***). These results indicate that auditors with stronger professional identification have a positive

association with commercialism in audit firms. Organizational identity had a statistically significant positive correlation with all three orientations: market orientation (0.312***), customer orientation (0.195***), and firm process orientation (0.203***). This indicates that auditors with stronger organizational identification have a positive association with commercialism in audit firms.

Furthermore, gender had a weakly statistically significant positive correlation with organizational identity (0.107*) and firm process orientation (0.107*), indicating that, compared to male auditors, female auditors tend to have stronger organizational identity and to see their firms as more firm process-oriented. The results showed that age had a statistically significant negative correlation with customer orientation (-0.151**), indicating that younger auditors tend to see their firms as more customer-oriented than older auditors do. A comparable observation can be made when observing the weakly statistically significant negative correlation between years in the profession and customer orientation (-0.131*). The variable *position* has a statically significant negative correlation with organizational identity (-0.252***), meaning that non-partners identified themselves with the organization less than partners did. In addition, there were also indications that non-partners associated themselves more with the profession than non-partners did (0.107*). Further, the results indicated that non-partners were more customer and market oriented than partners, because the variable *position* had a statically significant positive correlation with customer orientation (0.158**) and market orientation (0.116*). There were significant positive correlations between the variable *Big 4* and all three orientations as well as with professional identity, indicating that, compared to non-Big 4 employed auditors, auditors in Big 4 firms tended to see their firms as more commercial and to associate themselves more with the profession (.184**). Yet it appears that Big 4 auditors tend to have a weaker organizational identity than non-Big 4 auditors, taking into account the statistically significant negative correlation between Big 4 and organization identity variables (-0.203***).

Not surprisingly, there was a high correlation between the *age* of auditors and *years in profession* (0.919***). In further testing, we first used *age* and later *years in profession* as control variables, but since the results of the additional tests did not differ from each other, we retained only age as a variable, thus excluding years in profession from any further tests.

To investigate the results of the correlation test, we also performed independent sample t-tests to explore whether there were significant differences in answers between our two dichotomous variables, gender, partner/non-partner (Big 4/other variable is being explored through separate regression analysis in Tables 6 and 7). The results are presented in Table 4.

 Insert Table 4 about here

What can be observed from the table is consistent with our findings from the correlation matrix: Female auditors felt significantly ($p < 0.05$) more “organizational” in their identity ($M = 0.187$) than male auditors ($M = -0.054^3$), and females ($M = 30.967$) assessed their organizations as significantly ($p < 0.05$) more oriented to firm processes- than their male counterparts do ($M = 29.447$). When it comes to position in the firm, non-partners considered their firms to be significantly ($p < 0.05$) more market- ($M = 284.326$) and customer- ($M = 26.46$) oriented than partners did (market orientation $M = 263.848$; customer orientation $M = 24.491$).

³ Factor scores were used to calculate the means for identity constructs which explains their negative value

Non-partners were also shown to have significantly ($p < 0.05$) higher professional identity ($M = .104$) than partners ($M = -0.107$), while partners had significantly ($p < 0.001$) higher organizational identity ($M = .283$) than non-partners ($M = -0.208$).

Before the regression analysis (see Table 5) was performed, the models were tested for multicollinearity by checking the tolerance (T) and VIF values in each model. These ranged between 0.564 and 0.959 (T), and 1.043 and 1.773 (VIF), indicating that all the models passed the test.

 Insert Table 5 about here

Model 1 ($n = 328$) shows that both organizational and professional identities have a significant positive relationship with market orientation. While our Hypothesis 2 is thus supported, Hypothesis 1 is not supported. In Model 1, only one of the control variables – Big 4 or Not – is significant, indicating that compared to respondents from the non-Big 4 firms, respondents from Big 4 companies tend to perceive their firms as more market oriented. The variations of the independent variables in Model 1 explain 23 per cent of the variation of the dependent variable ($R^2 = 0.229$).

Model 2 ($n = 331$), in which the dependent variable is customer orientation, shows results similar to Model 1. In Model 2, both organizational and professional identities have a significant positive relationship with customer orientation. Thus, while Hypothesis 4 is supported, Hypothesis 3 is not supported. In Model 2, like Model 1, only one of the control variables – Big 4 or Not – is significant, indicating that, compared to the non-Big 4 firms, respondents from Big 4 companies tend to perceive their firms as more customer-oriented. The variations of the independent variables in Model 2 explain 22 per cent of the variance of the dependent variable ($R^2 = 0.222$).

The findings in Model 3 ($n = 329$) are similar to the findings of Models 1 and 2; the same control variable – Big 4 or Not – is shown to be significant, indicating that respondents from Big 4 auditing firms perceive their companies to be more firm process-oriented. Both organizational and professional identities appear significantly positively correlated to firm process orientation. This supports Hypothesis 6 but not Hypothesis 5. The variation of the independent variables explains 18 per cent of variation in the dependent variable *firm process orientation* ($R^2 = 0.184$).

The results of all three models show significant differences between auditors in Big 4 and other firms in relation to commercialization, which motivated us to explore the data further. We performed regression analysis separately for the Big 4 firms and other firms, retaining the same independent, control, and dependent variables in the six regressions described below. First, we performed regression analyses to explore the relationship between professional and organizational identities and the three constructs representing commercialization in Big 4 audit firms.

 Insert Table 6 about here

In Model 4 ($N = 151$) and Model 5 ($N = 156$), only the organizational identity of auditors in the Big 4 firms appears to have a significant positive relationship with the dependent variables of market ($R^2 = 0.183$) and customer ($R^2 = 0.190$) orientations. Professional identity appears not to

have any significant relationship with these dependent variables. The variation of the independent variables explains 18 per cent of variation in the dependent variable *market orientation* ($R^2 = 0.183$) in Model 4. The variation of the independent variables explains 19 per cent of variation in the dependent variable *customer orientation* ($R^2 = 0.190$). It is only in Model 6 (N=150) that both professional and organizational identities appear to have a significant positive relationship with firm process orientation. Professional identity has a weaker significant positive relationship ($p < .01$) with firm process orientation compared to organizational identity ($p < .001$). The variation of the independent variables explains 20 per cent of variation in the dependent variable *firm process orientation* ($R^2 = 0.202$). All the regression models have slightly higher VIF values compared to Models 1–3, but they do not, however, exceed the recommended multicollinearity value of 4 (Pallant, 2013).

On performing the same regression analyses (see Table 7) for the Other firms, we found slightly different relationships.

 Insert Table 7 about here

In Models 7–9, both professional and organizational identities had significantly positive relationships to all three orientations representing the commercialization of audit firms. Yet the explanatory strength of independent variables on the variation of the dependent variable was lower than in the previous models. In Model 7, 17 per cent of the variation is explained by independent variables, while in Models 8 and 9 only 7 per cent and 10 per cent of the variation can be explained, respectively. In Model 9 professional identity had a stronger significant relationship with firm process orientation ($p < .001$), compared to a weaker positively significant relationship of organizational identity with the same dependent variable ($p < .05$).

Discussion and conclusions

Studies within the auditing field often seek to explain the outcome of commercialization, yet few studies have been done on what influences commercialization. Both external (environmental) and internal (organizational) forces have been said to drive commercialization in audit firms. Some authors have posited that these forces are manifested through the professional and organizational identities of the auditors (e.g., Settles, 2004; Johnson *et al.*, 2006). Building on this idea, we sought to explain *how auditors' professional and organizational identities are associated with commercialization in audit firms*.

Our empirical findings suggest that both professional and organizational identities drive commercialization in audit firms. We drew this conclusion because our results indicated that increasing identification with the profession and the organization, respectively, shows positive associations with perceived commercialization of an audit firm – irrespective of what dimension of commercialization was considered. When it comes to professional identity, our findings (non-supported hypotheses 1, 3 and 5), stand in contrast to those of Gendron and Spira (2010), Sori *et al.* (2010) and Sweeney and McGarry (2011), which suggest that professional identity is negatively associated with commercialization. Commercialization may have become an essential part of auditors' reality, just as Broberg *et al.* (2013) suggested marketing activities have become. This is why a sense of belonging to the profession has a positive association with audit firms' commercial activities rather than manifesting itself in a negative association. Further explanations of these results may lie in the specificity of the Swedish context and recent exposure to the forces of market competition, where

commercialization could be associated with survival of the industry. Based on this assumption, a sense of belonging to the profession might mean taking responsibility for the survival of the industry. Finally, the meaning of professional identity, while different from that of organizational identity, as our empirical results show, might also differ from that advocated by Gendron and Spira (2010), Sori *et al.* (2010) and Sweeney and McGarry (2011), which they relate to commercialization. Instead, we may have observed professional identity that has adjusted to the conditions of the external environment (i.e., regulatory changes and market conditions) and the changing nature of the audit firms (Cooper and Robson, 2006).

Our findings further show that organizational identity, and in line with our argumentation (supported hypotheses 2, 4 and 6), was more associated with commercialization in audit firms than professional identity was. This could be explained through a strong presence of organizational “mind-set” in the auditors’ reality, given the greater interaction of auditors with organization (cf. Öhman, 2005), which serves as an intermediary in their relationship to the profession (cf. Broberg, 2013). The positive association between the two constructs might be of a reciprocal nature in that an auditor is likely to put a greater focus on their employer, when trying to ensure and contribute to the firm’s survival and success in the light of greater competition (Broberg *et al.*, 2013). Auditor also have increased pressure from employers because audit firms depend on the effort and input of all employees. The latter might mean a higher inclination on the part of an auditor to be receptive to such pressure. As the audit profession and audit firms are constantly exposed to changes (regulatory, needs of their clients, etc.), greater organizational pressure is likely to occur. This is not only a Swedish phenomenon (even though it was especially evident in Sweden just before and during the time of this study); it may be seen across the entire audit profession and in most audit firms (Power, 2003).

Further exploration of the data indicates a more nuanced picture. When the results of Big 4 auditors and non-Big 4 auditors are separated, they show that organizational identity and not professional identity is driving commercialization in terms of market and customer orientation in Big 4 audit firms. In non-Big 4 audit firms, both professional identity and organizational identity are driving commercialization. Following the reasoning by Evetts (2011), this could be explained by the fact that Big 4 auditors, unlike their non-Big 4 counterparts, work in large-scale international organizations where organizational rationales dominate. To be able to compete and survive, non-Big 4 audit firms and their auditors have to emphasize and be more observant of professional values. The different findings for Big 4 and non-Big 4 auditors may also be explained by the fact that a commercial orientation is deeply engrained in the organizational culture of the Big 4 audit firms (Broberg, 2013; Umans *et al.*, 2016). It is reinforced by strong indoctrination and hierarchical structures (Kosmala and Herrbach 2006), here manifested by the predominant influence of organizational identity.

In line with Suddaby *et al.* (2009), we further found that partners have a stronger organizational identity than professional identity, motivated by their strong commitment to the organization because of employment and ownership. Furthermore, the extended testing indicated that female auditors have stronger organizational identity than male auditors. Studies show that women take more caring and nurturing roles in organizations (Plowman, 2000) and usually are more dependent on organizations when it comes to career opportunities (Baumgartner and Scheider, 2010)

Two important questions arise from these results. First, if both professional and organizational identities drive audit firms' commercial orientation and development, what does that mean for audit quality? Second, would there be an audit profession if there were no audit firms?

We can only speculate on the answers. When it comes to audit quality, the impact of audit firm orientation and development depends on how detached auditors are from their audit firms. Just as being independent in relation to the client is an important prerequisite for (high) audit quality (e.g., DeAngelo, 1981), being independent in relation to their audit firm it ought to be important. However, Broberg (2013), for example, indicates that auditors' work is not independent from audit firms, but rather dependent on audit firms and their structures and systems. In line with such reasoning, it can be suggested that auditor's dual identities is a threat to audit quality.

In considering the question about the existence of an audit profession without the existence of audit firms, we can speculate that there would still be an audit profession. This would be the case because auditors are identified as professionals through individual certification (in Sweden issued by the Supervisory Board of Public Accountants) and individual membership of the professional organization (in Sweden, FAR). We could also argue that there is an organizational professionalism (cf. Evetts, 2011), indicating that "professionalism is changing and being changed as service professionals now increasingly work in large-scale organizations" (Evetts, 2011:418). Thus, a strong identification with the audit firm may not indicate that auditors are ignoring professionalism, but rather that auditors' professionalism includes both occupational and organizational professionalism (cf. Evetts, 2011). The stronger organizational identity might also show how "organizational values" are present in everyday professional work, while "professional values" are imposed "from above" (cf. Evetts, 2011). They are not present in everyday professional work, but rather as something that improves the occupation's status and provides different kinds of rewards.

The research implications of this study can be summarized as following. First, researchers might wish to consider moving beyond the old notion of the profession and direct their attention to the changing meaning of organizational identify and, especially, of professional identity constructs. This is particularly the case in their association with commercial orientation of audit firms. What constitutes professional identity may need to be reconsidered and expanded to reflect the changes in the audit profession associated with the increasing pressure from external environment. Second, researchers might consider whether the traditionally assumed duality of the identity of auditors is sufficient to capture the multiplicity of identities that auditors might have. For example, the stream of research dealing with client identity (e.g., Bauer, 2014) could potentially be better integrated into studies of auditors' identities. One could also explore identities related to demography, such as national, gender, cultural, generational identities. These could be better intertwined with social role-related identities to better capture multiplicity of identities a given individual (auditor) might possess (Illia, 2010). Third, the important implication of our findings is that exploring commercialization in terms of three orientations rather than in terms of proxies such as NAS and marketing activities might be the way forward in uncovering different dimensions of commercialization. Combining marketing literature with that of accounting and auditing might be the way to enrich studies dealing with market-related developments in the audit industry. The three orientations might need to be studied in relationship to each other. Questions could be posed such as whether market orientation might be the driver of customer and firm process orientations or whether an internal focus on firm process orientation might be driving customer orientation within audit firms.

Our study further shows that an auditor could maintain two identities and hold both organizational and professional values, where the latter are not necessarily in conflict with those of commercial orientation of the firm. This implies that regulators might consider that commercialization is not necessarily a negative force that has to be de-limited, and that the professional discretion of decision making in relationship to commercialization should be maintained. At the same time, regulators and audit firm managers might need to be aware that “being professional” might be in a state of constant change and depends on changes in external and internal environments. This is why changes in regulations and in management/organizational structure need to be made in consultation with individual auditors.

Limitations

This study has a number of limitations. One is the relatively small sample, which does not allow us to generalize to the population of all Swedish auditors. Yet given that the sample reflects the population rather closely, we posit that our findings provide some indications of how organizational and professional identities relate to commercialization of audit firms. Another limitation was the use of instruments that have not been used in Sweden or in the audit context. While our study has reported acceptable reliabilities for the instruments used and the questionnaire was pre-screened by experienced scholars, these instruments were not pre-tested on the auditors. This might, for example, explain why our hypotheses on professional identity were not supported. Further, our study could have used other control variables related to commercial activities of audit firms, for example, the commercial orientation of the individuals or specific risk-related individual characteristics. Finally, an important limitation of this study is that auditors in Sweden, as well as in other European countries, are not affected by SOX in the same way as auditors in the US. Thus, the conditions for competition differ, and the pressure from the profession versus the pressure from the audit firm might influence auditors working directly under SOX differently than it does auditors not working directly under SOX.

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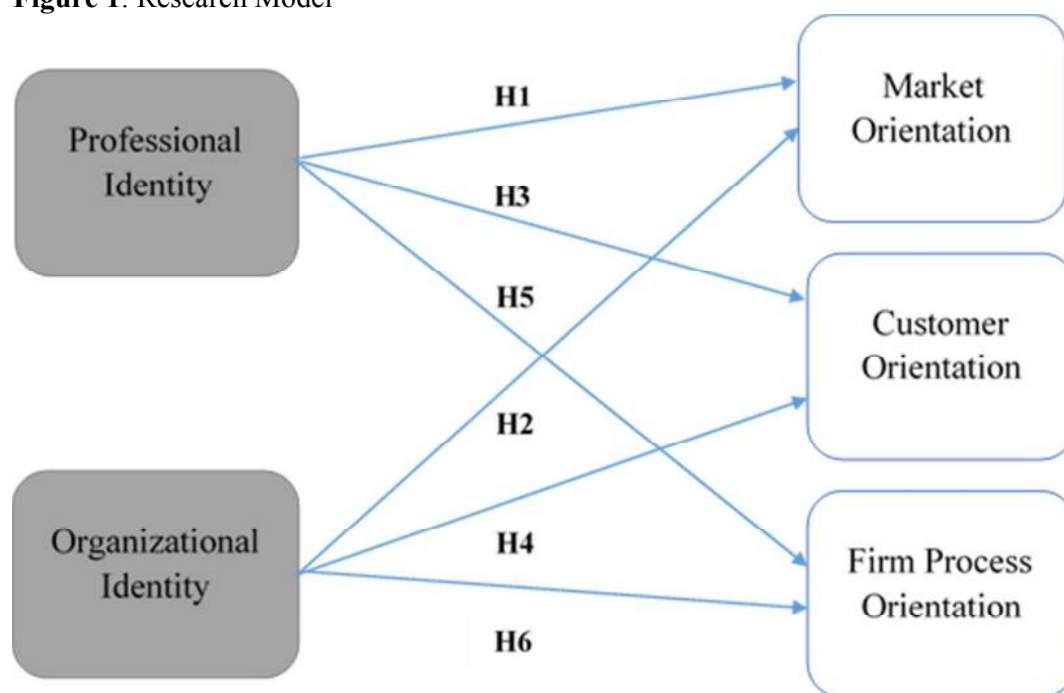
Figure 1: Research Model

Table 1: Descriptive Statistics

Variable		Frequency	Percentage	
Gender	Female	95	25,4	
	Male	274	73,3	
	<i>Missing</i>	5	1,3	
Position	Non-partner	194	51,9	
	Partner	171	45,7	
	<i>Missing</i>	9	2,4	
Firm	BDO	10	2,7	
	Deloitte	16	4,3	
	E&Y	41	11	
	GT	29	7,8	
	KPMG	46	12,3	
	Mazars SET	11	2,9	
	PwC	69	18,4	
	Other	148	39,6	
	<i>Missing</i>	4	1,1	
		Mean	Minimum	Maximum
	Age	47.58	26	75
Years in profession	21.29	3	52	
Years in firm	14.71	0	45	

Note: n=374

Table 2. Survey instrument

Dependent variables	Market driven	Q.3.1	The firm's strategy for competitive advantage is based on its understanding of customers' current needs.
		Q.3.2	The firm constantly tries to improve current technologies and techniques to meet immediate needs of customers.
		Q.3.3	The firm constantly listens to our customers in order to be able to satisfy their needs.
	Market driving	Q.3.15	The firm constantly innovates and develops new technologies and techniques to find new solutions for our customers.
		Q.3.16	The firm's strategy for competitive advantage is based on uncovering and satisfying the customers' future needs by proving to these customers that their need for these new solutions.
		Q.3.17	The firm constantly thinks about new solutions and more valuable offerings that may satisfy the needs the customers might have in the future.
	Customer orientation	Q.3.10	The firm's objectives are driven primarily by customer satisfaction.
		Q.3.11	In the firm, we share experiences from interaction with clients across different departments.
		Q.3.12	The firm's strategy for gaining competitive advantage is based on our understanding of customer needs
		Q.3.13	The firm, measures customer satisfaction frequently.
	Firm process orientation	Q.3.14	The firm, regularly surveys end customers to assess the quality of its services.
		Q.3.4	In the firm, business process are sufficiently defined so that most employees have a clear understanding of these processes.
		Q.3.5	The firm, allocates resources based on the business processes.
		Q.3.6	The firm, sets specific performance goals for different business processes.
Q.3.7		The firm, measures the outcomes of different business processes.	
Independent variables	Professional identity	Q.3.8	The firm, clearly designates process owners and their responsibilities.
		Q.3.9	The firm's employees are rewarded based in their performance in each given assignment.
		Q.2.1	I am proud to tell my friends that I am an authorized /approved auditor.
		Q.2.2	When someone praises my profession, it feels like a personal compliment.
	Organizational identity	Q.2.3	When I talk about my profession, I usually say "we" rather than "they."
		Q.2.4	The success of the profession is my success.
		Q.4.1	I am proud to tell my friends that I am part of my firm.
		Q.4.2	When someone praises my firm, it feels like a personal compliment.
Organizational identity	Q.4.3	When I talk about my firm, I usually say "we" rather than "they."	
	Q.4.4	The success of the firm, is my success.	

Table 3. Descriptive Statistics and Pearson Correlation Coefficients

Variable	Mean	St.D	1	2	3	4	5	6	7	8	9	10
1. Gender	.26	.44										
2. Age	47.58	11.04	-.139**									
3. Years in profession	21.29	10.51	-.154**	.919***								
4. Years in bereau	14.71	10.06	-.094	.581***	.647***							
5. Position	.53	.50	.145**	.309***	-.338***	-.190***						
6. Big 4	.46	.50	-.112*	-.242***	-.202***	.039	.431***					
7. Professional identity	0	1	.084	-.095	-.05	-.059	.107*	.184***				
8. Organizational identity	0	1	.107*	-.002	.031	.026	-.252***	-.203***	0			
9. Market orientation	273.23	89.11	.042	-.095	-.072	-.001	.116*	.253***	.293***	.312***		
10. Customer orientation	25.31	5.30	-.061	-.151**	-.131*	.015	.158**	.357***	.262***	.195***	.748***	
11. Firm process orientatation	29.79	6.19	.107*	-.053	-.024	.033	.075	.257***	.309***	.203***	.663***	.690***

Note: *** p < 0.001; ** p < 0.01; * p < 0.05

Table 4. Independent Sample T-tests

		Mean	Sig.		Mean	Sig.
Professional identitiy	Female	.150	.116	Non-partner	.104	.046
	Male	-.041		Partner	-.107	
Organizational identity	Female	.187	.044	Non-partner	-.208	.000
	Male	-.054		Partner	.283	
Market orientation	Female	280.692	.427	Non-partner	284.326	.030
	Male	272.140		Partner	263.848	
Customer orientation	Female	25.925	.250	Non-partner	26.146	.003
	Male	25.195		Partner	24.491	
Firm process orientation	Female	30.967	.043	Non-partner	30.314	.156
	Male	29.447		Partner	29.380	

Table 5. Results of Regression Analysis for the Concept of Commercialization

Variables	Model 1		Model 2		Model 3	
	Market orientation		Customer orientation		Firm process orientation	
	Std.B	Std.E	Std.B	Std.E	Std.B	Std.E
Professional identity	.231***	4.479	.193***	.062	.254***	.328
Organizational identity	.363***	4.598	.259***	.066	.240***	.337
Gender	-.048	10.069	-0.01	.121	.053	.731
Age	.020	.525	-.034	.006	.075	.037
Years in firm	-.010	.557	.045	0.07	.002	.040
Position	.066	10.015	.067	.120	.008	.733
Big 4	.279***	10.202	.348***	.121	.273***	.743
Constant	239.087***	24.446	2.917***	.491	25.978***	1.753
F-value	14.930***		14.512***		11.570***	
Adj. R ²	.229		.222		.184	
VIF value, highest	1.773		1.746		1.723	
	n=328		n=331		n=329	

Note: *** p < .001; ** p < .01; * p < .05

Table 6. Results of Regression Analysis for the Concept of Commercialization in Big 4 Firms

Big 4	Model 4		Model 5		Model 6	
	Market orientation		Customer orientation		Firm process orientation	
	Std.B	Std.E	Std.B	Std.E	Std.B	Std.E
Professional identity	.131	7.437	.129	.392	.179**	.455
Organizational identity	.422***	6.545	.391***	.348	.384***	.401
Gender	-.122	13.360	-.122	.700	-.015	.819
Age	-.151	.813	-.203	.042	-.943	.048
Years in firm	.122	.993	.137	.051	2.015	.059
Position	.070	15.669	-.020	.821	.600	.970
Constant	333.699***	31.963	30.801***	1.681	31.649***	1.947
F-value	6.656***		7.108***		7.319***	
Adj. R ²	.183		.190		.202	
VIF value, highest	2.514		2.369		2.374	
	n=151		n=156		n=150	

Note: *** p < .001; ** p < .01; * p < .05

Table 7. Results of Regression Analysis for the Concept of Commercialization in Non-Big 4 Firms

Non-Big 4 Variables	Model 7 Market orientation		Model 8 Customer orientation		Model 9 Firm process orientation	
	Std.B	Std.E	Std.B	Std. E	Std.B	Std.E
Professional identity	.307***	5.961	.237**	.396	.296***	.476
Organizational identity	.352***	6.466	.206**	.438	.179*	.517
Gender	.024	15.176	.083	.986	.111	1.194
Age	.111	.717	.066	.046	.136	.056
Years in firm	-.051	.711	-.005	.046	-.063	.056
Position	.066	13.741	.119	.889	.004	1.090
Constant	202.032***	34.140	21.052***	2.200	24.207***	2.657
F-value	6.940***		3.310**		4.249**	
Adj. R ²	.168		.074		.099	
VIF value, highest	1.475		1.488		1.464	
	n=176		n=174		n=178	

Note: *** p < .001; ** p < .01; * p < .05

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