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The Influence of Individual Executives on Corporate Financial Reporting: A Review and Outlook from the Perspective of Upper Echelons Theory

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Abstract

In recent years, numerous studies have investigated whether individual executives and their characteristics relate to financial reporting choices. In this article, we review archival, experimental and survey research on the influence of individual executives on corporate financial reporting and use upper echelons theory as our organizing framework. Our review of 60 studies shows that research consistently finds that top management executives exert significant influence on financial reporting decisions, particularly on disclosure quality. Empirical research has developed promising

approaches to investigate executives' psychological attributes and character traits. The results of studies examining the influence of demographic characteristics of individual executives are, however, sometimes contradictory and ambiguous. Nevertheless, the overall empirical results we review are supportive of upper echelons predictions. Additional research in this field is needed to clarify the influence of unexamined upper echelon characteristics, important moderator variables, and adverse selection effects. We also suggest that future research more closely investigates the magnitudes of managerial influence and adopts a more holistic perspective on financial reporting outcomes.

Keywords

Upper echelons theory, Accounting, Financial reporting, Voluntary disclosure, Earnings management, Accounting conservatism, Chief financial officer, Chief executive officer

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1 Introduction

Over the past two decades, scientific interest in top management executives as the primary decision makers of business organizations has increased steadily. The growth in empirical research on this topic can be traced back to the pioneering work of Hambrick and Mason (1984, 1993), who defined organizational outcomes as the “reflections of the values and cognitive bases of powerful actors” (i.e., the “upper echelons”) in such organizations. One of the key points of this perspective is Hambrick and Mason’s (1984) argument that corporate strategic choices and decision outcomes can be predicted by individual managerial characteristics and idiosyncrasies. Considerable

empirical research based on upper echelons theory confirms the influence of managerial idiosyncrasies on strategic choices and firm performance (for reviews, see Carpenter, Geletkanycz, & Sanders, 2004; Finkelstein, Hambrick, & Cannella, 2009; Hambrick, 2007; Hiebl, 2014; Nielsen, 2010).

Financial accounting choices are vital organizational outcomes for a company's assessment by capital markets and other stakeholders. A myriad of studies empirically confirms the value relevance of accounting figures (e.g., Barth, 1994; Barth & Beaver, 1996; Park, Park, & Ro, 1999), and a substantial interest in financial accounting decisions by management executives can therefore be assumed. For such relationships, upper echelons theory can be a suitable framework with which to examine how management executives and their characteristics are related to financial accounting outcomes.

In recent years, a number of empirical studies in financial accounting research have explicitly or implicitly drawn on the main tenets of upper echelons theory. By "implicit," we refer to studies that analyze the effect of upper echelons and/or their characteristics on financial accounting choices without explicitly referring to "upper echelons theory". In this article we review the literature that views financial reporting choices as a reflection of management executives and their characteristics. We therefore aim to synthesize empirical financial reporting research explicitly or implicitly with reference to the upper echelons perspective. Based on this review, we then critically analyze the current state of the research in this field and suggest areas for further work.

Based on a comprehensive keyword search not limited to a specific period of time or to certain journals, and including both mandatory and voluntary financial reporting choices, we identified 60 research articles dealing with our topic of interest. Our

findings indicate that the predictions of upper echelons theory tend to be reflected by the evidence. Specifically, we find that overconfident executives to be embroiled more often in accounting manipulation and earnings management, and note that female executives tend to report more conservatively and typically display more risk-averse accounting behavior than their male counterparts. The role of the age, education, knowledge, and experience of top management on financial reporting choices is still ambiguous. Our study also highlights academic voids with respect to upper echelon characteristics, important moderator variables, and adverse selection effects. We point out that future research should more closely investigate the magnitudes of managerial influence and more strongly utilize interdisciplinary research approaches.

Section 2 briefly introduces upper echelons theory. The review methods we apply to identify existing empirical upper echelons research in financial accounting are outlined in section 3. Section 4 provides a detailed review of these studies, while section 5 critically analyzes the findings and highlights important areas for further research. Section 6 concludes.

2 Upper echelons theory and financial reporting choices

Both neoclassical and agency perspectives in finance and accounting research postulate the predominantly rational behavior of management (e.g., Bronfenbrenner, Sichel, & Gardner, 1990; Lieberman & O'Connor, 1972; Mas-Colell, Whinston, & Green, 1995). This perspective leaves little room for discretion, personal idiosyncrasies, erroneous or irrational conduct, and decision outcomes. However, numerous psychological and socio-economic studies of judgment and decision-making behavior have provided evidence that individual characteristics influence decision outcomes (e.g., Gordon, 1966; Saunders & Stanton, 1976; Stumpf & Dunbar, 1991). In line with this latter view,

Hambrick and Mason (1984) postulate that individual characteristics play a significant role in corporate-level decision making. Accordingly, they propose that top managers' characteristics significantly influence firms' strategic choices and eventually firm performance.

Hambrick and Mason (1984, 1993) were the first to combine the roots and reasons of organizational action and outcomes with a number of theories on the influence of the "values and cognitive bases of powerful actors in the organization." Based on the concept of bounded rationality, upper echelons theory posits that in situations of strategic choice, individuals are confronted with phenomena too complex to comprehend and process thoroughly. Consequently, individuals simplify such situations by constraining the number and richness of details and facets. This simplification can be imagined as a lens or skewed screen between one's perception and the real-world situation. It is construed by the individual's cognitive base and values and therefore reflects individual characteristics and idiosyncrasies in decision-making situations (Finkelstein et al., 2009; Hambrick & Mason, 1984). Cognitive bases and values, as well as additional, more tangible personal characteristics, affect all levels of this filtering process in information perception and therefore create an individual managerial perception that affects the evaluation of alternatives and, ultimately, individual and corporate-level decision outcomes.

Psychological factors are often difficult to measure in empirical research. Hambrick and Mason (1984) therefore recommended using demographics as proxies for psychological personality dimensions to reduce ambiguity as well as obtain more reliable measurability and validation (Nielsen, 2010). For instance, Hambrick and Mason (1984) suggest that managerial age is reflective of risk taking and physical and mental stamina, and consequently propose that firms with younger managers are more inclined to pursue

risky strategies such as unrelated diversification, production innovation, and financial leverage. Thus, a key aspect of upper echelons theory is that the characteristics of management individuals (or top management teams, TMTs) can be used to predict strategic choices and, ultimately, firm performance. Hambrick and Mason (1984) further suggest that both upper echelon characteristics and strategic choices are influenced by the “objective situation.” Under this term, they subsume external and internal organizational influences that can influence the selection of certain top managers. For instance, national culture can decisively influence the importance of certain personal characteristics when selecting top managers (Carpenter et al., 2004). Figure 1 summarizes the upper echelons perspective and often-studied upper echelon characteristics.

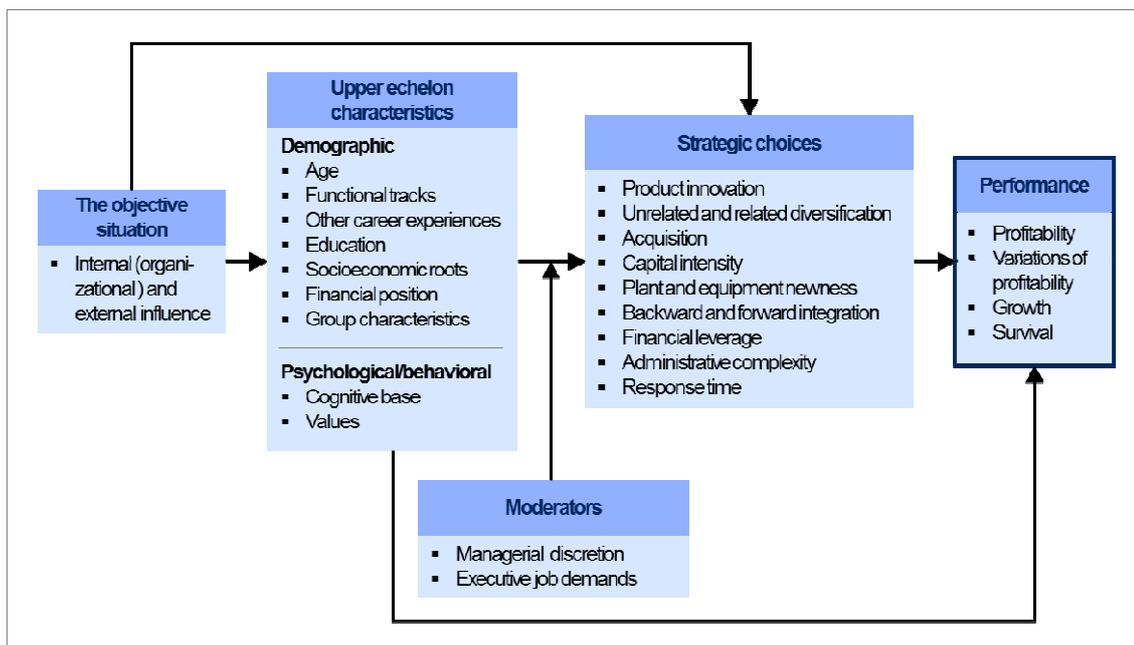


Fig. 1: Upper echelons perspective on organizations
(based on Finkelstein et al., 2009; Hambrick, 2007; Hambrick & Mason, 1984, 198)

Since 1984, upper echelons theory has received extensive acknowledgement in the literature and has motivated an extensive stream of empirical research (Carpenter et al., 2004; Finkelstein et al., 2009). Nevertheless, upper echelons theory competes with opposing theories and perspectives arising primarily from population ecology and new

institutional theory, which assert that norms and structures, inertia, and external constraints are the primary determinants of organizational outcomes (e.g., DiMaggio & Powell, 1983; Hannan & Freeman, 1977, 1984). Challenged from both empirical insights and the acceptance of these alternative views in theoretical discussions, the upper echelons perspective has profited from the introduction of two important factors that moderate the relationship between upper echelon characteristics and strategic choices (Hambrick, 2007), as explained next.

First, Hambrick and Finkelstein (1987) introduce the concept of **managerial discretion** to integrate different views about how much influence individual executives can exert on corporate-level decision outcomes. Managerial discretion is defined as the extent of possible latitude of action, which is the absence of constraints from environmental, organizational, or personal conditions and, at the same time, the presence of multiple plausible decision alternatives. Thus, upper echelon characteristics are proposed to be better suited to predict strategic choices when managerial discretion is high (Hambrick, 2007).

Second, Hambrick, Finkelstein, and Mooney (2005) introduce **executive job demands** as a measure of the difficulty of the needs and challenges in executives' professional daily routines. Specifically, job demands are proposed to stem from task challenges (e.g., scarcity of organizational resources), performance challenges (e.g., requirements from shareholders and stakeholders), and executive aspirations (e.g., personal desire to outperform others). Similar to managerial discretion, executive job demands moderate the extent of individual influence on corporate-level decision outcomes. Whenever a management executive faces high job demands (e.g., information overload, time pressure, severe decision consequences), s/he is likely to take mental shortcuts and rely on his/her cognitive base, values, and experiences to a greater degree than in a situation

with low demands and plenty of time to evaluate the alternatives and attain a more rational, objective, and deliberate decision outcome. Similar to managerial discretion, Hambrick (2007) proposes that upper echelon characteristics are a better predictor of strategic choices in situations with high executive job demands.

Empirical research on upper echelons theory began shortly after Hambrick and Mason's framework was published in 1984. The theory gained considerable attention from scholars in various disciplines of economics and business research. However, early empirical research almost exclusively focused on the associations between managerial characteristics and corporate strategic decisions or firm performance, not on accounting choices (e.g., Certo, Lester, Dalton, & Dalton, 2006; Finkelstein et al., 2009; Nielsen, 2010). Applications of upper echelons theory to the fields of finance and accounting has been observed only recently (Hiebl, 2014). It seems more probable at first blush that managerial style and influence are more prominent in the less regulated field of corporate strategic decisions than in the highly regulated field of financial reporting. That is, accounting standards set limits on the impact of managerial idiosyncrasies. Still, influence can be exerted even in the presence of regulations, either (1) systematically by pursuing a conservative or aggressive accounting style (for a review on the literature on accounting conservatism, see Ruch & Taylor, 2015) or (2) opportunistically by managing earnings upward or downward whenever this seems beneficial (for reviews on the earnings management literature, see for instance Dechow & Skinner, 2000; Healy & Wahlen, 1999). Financial accounting choices are pivotal for a firm's communication with capital markets (e.g., Barth, 1994; Barth & Beaver, 1996; Park et al., 1999), and they can be interpreted as part of a firm's set of strategic choices—choices that are rendered by top managers. As detailed below, the empirical findings support this view by suggesting that management executive characteristics are reflected in financial reporting outcomes.

Upper echelons theory adds a new perspective on judgment and decision-making research in accounting by focusing on the personality and characteristics of the individuals involved, which are often just considered as information producers in decision processes without paying extra attention to their idiosyncratic “input factors” in cognitive processes (e.g., Bonner, 2008). Therefore, the upper echelons perspective contributes towards “a comprehensive theory of accounting choice,” as suggested by Fields, Lys, and Vincent (2001, 300), who express regret over the slow progress of empirical research when reviewing studies of the determinants and consequences of accounting choice in the 1990s.

3 Review criteria

To review the evidence on individual executives’ influence on financial reporting, we first conducted a comprehensive keyword search (similar to Menz, 2012) of the *Elsevier Sciverse*, *EBSCO Business Source Premier*, *EconLit*, *Psychology and Behavioral Sciences*, *PsycINFO*, and *SocINDEX* databases. Two types of keywords are used: those related to upper echelons, and accounting keywords. The set of upper echelons keywords comprised “upper echelon,” “top management team,” “chief executive officer,” “chief financial officer,” “executives,” “personality,” “demographics,” “age,” “tenure,” and “gender,” as well as acronyms of these keywords.¹ The set of accounting keywords comprised “accounting choice,” “financial reporting decision,” “accounting conservatism,” “earnings management,” “disclosure quality,” “voluntary disclosure,” “misstatement,” “restatement,” and “financial reporting fraud.” We used pairwise combinations of these upper echelons and accounting keywords to search the titles, abstracts, and keywords defined by the respective authors. This procedure resulted in

¹ To be precise, we used asterisks to account for the plural use of keywords (e.g., “upper echelon*” in order to match “upper echelons theory,” “upper echelon characteristics,” and similar instances as well).

more than 90 different database search requests. During the course of our research, we dropped previously included keywords such as “characteristics” and “accounting” because of a lack of sufficient specificity, which was producing an unmanageably high number of search results. We did not constrain our search to specific journals or research domains, resulting in a comprehensive and far-reaching literature overview.² Further, the publication date was not limited in order to include all relevant studies through 2015.³

In the second step, we selected all studies that explore the relationship between management executives’ characteristics as independent variable(s), as well as any kind of measurable financial reporting outcome as dependent variable(s). In addition to studies of management executives’ characteristics, we included studies examining the individual characteristics of supervisory board members and non-executive directors. Conversely, we excluded the large field of research on management incentives’ effects on financial reporting decisions, because it strongly relates to agency theory and offers little empirical insight on individual executives’ influence in financial reporting decisions (see, e.g., Armstrong, Jagolinzer, & Larcker, 2010; Cheng, Warfield, & Ye, 2010; Jiang, Petroni, & Wang, 2010; Weng, Tseng, Chen, & Hsu, 2014). Similarly, we excluded the literature on the impact of management turnover on financial reporting outcomes (see, e.g., Bornemann, Kick, Pfungsten, & Schertler, 2015; Choi, Kwak, & Choe, 2014; Wilson & Wang, 2010) because the effect of turnover events on financial reporting decisions is likely to be dominated by external or situative circumstances and cannot be easily linked to idiosyncratic managerial characteristics. In addition, we eliminated all studies from our preliminary results that:

² Despite this broad and extensive research approach, we do not claim completeness.

³ This includes articles already accepted in 2015 for publication and that are expected to be published in 2016 or later, as well as unpublished working papers available to the public.

- Investigate the relationship between accounting outcomes and their effects on management executives in the inverse direction to that proposed by upper echelons theory (e.g., effects of accounting fraud on management turnover or effects of accounting choice on executive compensation),
- Investigate the relationship between accounting outcomes and capital market reactions without examining management executives' influence (e.g., value relevance studies),
- Focus primarily on auditing matters, corporate governance issues, corporate financial decisions (e.g., investment policy, capital structure), firm performance, or capital market performance indicators instead of financial reporting choices,
- Employ only general board or TMT characteristics (e.g., board size, number of meetings) and do not take the personal characteristics of the involved directors/executives into account,⁴
- Provide only theoretical discussions without empirical evidence,
- Use keywords or acronyms with divergent meanings (e.g., “CFO” for “cash flow from operations” instead of “chief financial officer”),
- Are not available in English.

The first two steps yielded 48 database hits (21 in *Business Source Premier*, 10 in *EconLit*, four in *PsycINFO*, and 13 in *Elsevier Sciverse*). After removing seven duplicates, this number decreased to 41. In the third step, we identified 19 additional relevant studies via references in or citations of the publications identified in the first run by applying the same inclusion and exclusion criteria mentioned before. These procedures resulted in 60 studies dealing with top management impact on financial accounting choices, as reviewed in the next section.

⁴ For meta-analyses on the broad topic of associations between board independence/quality and voluntary disclosure, see Garcia-Meca & Sanchez-Ballesta (2010) and Khaled, Hichem, & Hussainey (2015).

4 Results

4.1 Publication characteristics and categorization

Table 1 shows information for the 60 studies included in this review. The upper echelons stream in financial reporting research is largely expounded by studies published in accounting journals, which account for 40 of the 60 articles. In comparison, publications in economics and financial journals (7), as well as business ethics, governance, and strategic management journals (10), are much smaller. Three of the studies included are working papers that have not yet been published.

The dominance of accounting scholars in this research field can be attributed to the expert knowledge needed to detect and investigate variances in accounting choice in practice. This dominance possibly also explains why a majority of the studies in this review implicitly utilize aspects or rudiments of upper echelons theory in their research methods, whereas only a minority of 17 studies explicitly mention or integrate the upper echelons perspective in their hypothesis building or research design (e.g., Biggerstaff, Cicero, & Puckett, 2015; Ge, Matsumoto, & Zhang, 2011).

When analyzing the accounting outcomes investigated, the identified studies can be grouped into five distinct categories discovered in a bottom-up process during the compilation of this review, which coincide well with existing research streams in accounting. First, the large majority of upper echelons studies in financial reporting investigate managerial influence on earnings management and earnings quality, which are often used as antonyms in similar or identical research questions (e.g., Krishnan & Parsons, 2008). The second largest research stream focuses on different types of financial accounting irregularities, including misstatements, restatements, and fraud. An

almost equal number of studies deal with disclosure quality, which is the extent and frequency of (mostly voluntary) disclosure decisions. A fourth research stream investigates managerial influence on accounting conservatism, while the remainder of the studies deal with specific financial accounting choices such as tax-related accounting choices, asset impairments, and timeliness of audit reports.

For a detailed analysis of the identified publications in the following subsections, we follow the main tenets of the upper echelons approach (see Fig. 1) and cluster the 60 studies included in our review into the following three categories:

1. Six studies that primarily examine the general influence of top management executives on financial reporting choices without analyzing the personal characteristics of the people holding these positions.
2. Forty-one studies that primarily examine the relationship between demographic upper echelon characteristics and financial reporting choices.
3. Nineteen studies that examine the relationship between the (assumed) psychological or behavioral upper echelon characteristics and financial reporting choices.

Table 2 presents an overview of all studies reviewed. Research by Bamber, Jian, and Wang (2010), Dyreng, Hanlon, and Maydew (2010), Feng, Ge, Luo, and Shevlin (2011), Schrand and Zechman (2012), and Davis, Ge, Matsumoto, and Zhang (2015) are included in more than one category because they address two or all of the above three categories at the same time.

We classify studies as supportive (+), partially supportive (+/-), or non-supportive (-) of the main tenets of upper echelons theory. This classification rests on an analysis of whether the respective studies provide evidence suggesting the influence of top managers on financial reporting outcomes. Studies providing such evidence are

classified as “supportive.” We assign the label “partially supportive” if parts of the empirical material indicate the significant influence of upper echelons on financial reporting choices, while other parts of the empirical material in the same study do not confirm such an influence. We also assigned the label “partially supportive” if studies find an influence of top managers on financial reporting choices, but this influence is only subordinate or of marginal effect. The label “non-supportive” marks studies that do not find an influence of top managers on financial reporting as proposed by upper echelons theory. As displayed in Figure 2, 44 of the 60 studies show supportive results, meaning that upper echelons have a significant influence on financial reporting outcomes. This classification, however, does not imply the absence of contradictory results. For instance, a reviewed study could find indications of both downward and upward management of earnings in the early years of upper echelons’ tenure (see Section 4.4). Altogether, 13 studies yield partially supportive results, while only three find no support for upper echelons predictions. Taken together, these results provide sufficient evidence that managerial idiosyncrasies influence financial reporting choices.

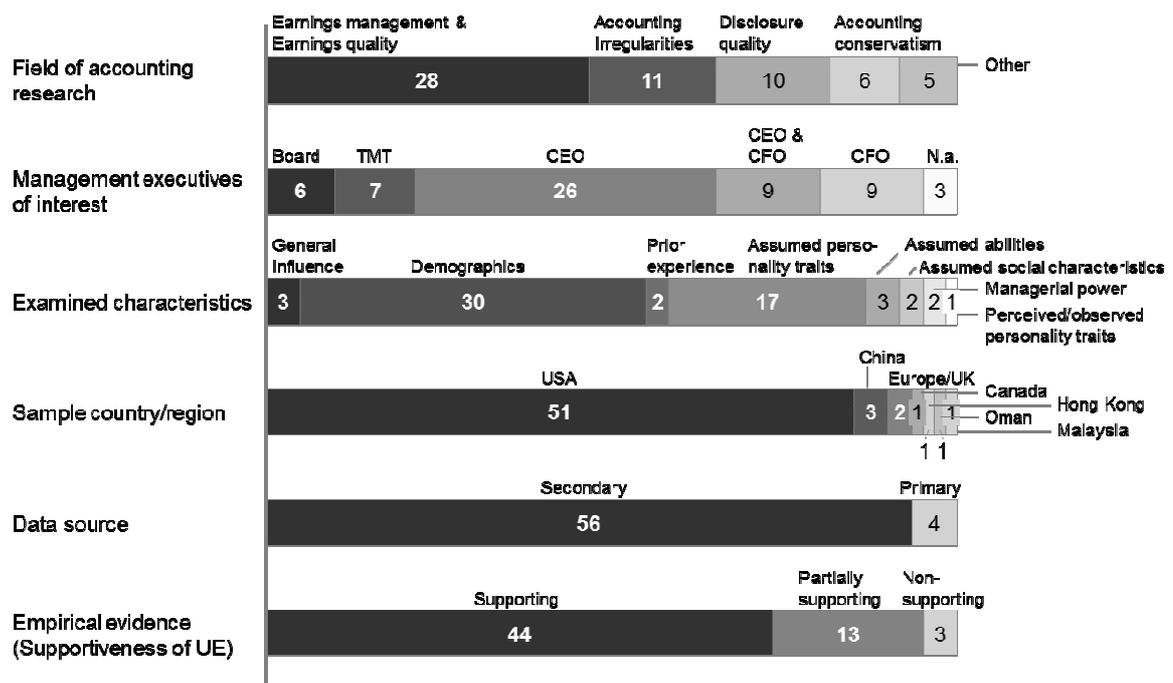


Fig. 2: Summary of empirical research on financial reporting in line with upper echelons theory

Figure 2 also provides an overview of the cornerstones of the research designs and results of the studies included in this review. As indicated above, the large majority of studies focus on earnings management and earnings quality as the primary measures of financial reporting outcomes. Further, the vast majority of studies use U.S. samples and focus on CEOs as the executives of interest. This imbalance likely reflects extensive data availability in the U.S. as compared to other countries and the generally increased availability of CEO data relative to data on other executives.⁵ Nevertheless, CFOs have gained importance in empirical research, underpinned by the growing number of recent studies of CFO characteristics. It also seems noteworthy that most studies rely on secondary data sources. The only studies relying on primary data are those by Clikeman, Geiger, & O'Connell (2001), Murphy (2012), Majors (2016) (experiments with student participants), and Beaudoin, Cianci, & Tsakumis (2015) (field survey). While secondary data are often necessary to build large sample sizes and retrieve reliable data, experimental and survey settings can provide an attractive focus on upper echelons decision making, which can reveal more detailed insights into the specific characteristics or aspects influencing financial reporting outcomes.

⁵ For instance, the often-used database S&P ExecuComp keeps a significantly more comprehensive history of CEO information than CFO information for U.S. companies.

| Primary field of journal and journal title | 1991–2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total |
|---|-----------|----------|----------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|-----------|
| Accounting | 1 | | 1 | | 1 | 2 | 1 | | 3 | | 4 | 6 | 3 | 4 | 5 | 6 | 3 | 40 |
| Accounting & Finance | | | | | | | | | | | | 1 | | | | | | 1 |
| Accounting Horizons | | | | | | 1 | | | | | 1 | 1 | | | 1 | | | 4 |
| Accounting, Organizations and Society | | | | | | | | | | | | | 1 | | | | | 1 |
| Advances in Accounting | | | | | | | | | | | 1 | | | 1 | | | | 2 |
| Contemporary Accounting Research | | | | | | | | | 1 | | | 3 | | | | 1 | 1 | 6 |
| Critical Perspectives on Accounting | | | | | | | | | 1 | | | | | | | | | 1 |
| European Accounting Review | | | | | | | | | | | | | | | | 1 | | 1 |
| Journal of Accounting and Economics | 1 | | | | | | 1 | | | | | 1 | 1 | | | 1 | | 5 |
| Journal of Accounting and Public Policy | | | | | 1 | 1 | | | 1 | | | | | | | | | 3 |
| Journal of Accounting Research | | | | | | | | | | | | | 1 | 1 | 1 | | | 3 |
| Journal of Business Finance and Accounting | | | 1 | | | | | | | | | | | 1 | 1 | | | 3 |
| Journal of Management Accounting Research | | | | | | | | | | | | | | | 1 | | | 1 |
| Journal of the American Taxation Association | | | | | | | | | | | | | | | 1 | | | 1 |
| Managerial Auditing Journal | | | | | | | | | | | | | | | | 1 | | 1 |
| Review of Accounting Studies | | | | | | | | | | | | | | | | 1 | | 1 |
| Review of Quantitative Finance and Accounting | | | | | | | | | | | | | | | | | 1 | 1 |
| The Accounting Review | | | | | | | | | | | 2 | | | 1 | | | 1 | 4 |
| The British Accounting Review | | | | | | | | | | | | | | | | 1 | | 1 |
| Economics and Finance | | | | | | | | | | 1 | 1 | | 1 | 2 | 1 | 1 | | 7 |
| International Review of Economics & Finance | | | | | | | | | | | | | | | | 1 | | 1 |
| Journal of Financial Economics | | | | | | | | | | | | | 1 | 1 | 1 | | | 3 |
| Journal of Multinational Financial Management | | | | | | | | | | | | | | 1 | | | | 1 |
| Managerial Finance | | | | | | | | | | | 1 | | | | | | | 1 |
| Quarterly Journal of Economics | | | | | | | | | | 1 | | | | | | | | 1 |
| Others | | 1 | | | | | | 1 | 1 | | | 2 | | 1 | 2 | 2 | | 10 |
| Journal of Business Ethics | | | | | | | | | 1 | | | 1 | | 1 | 1 | 2 | | 6 |
| Journal of Management and Governance | | | | | | | | 1 | | | | | | | | | | 1 |
| Strategic Management Journal | | | | | | | | | | | | | | 1 | | | | 1 |
| Strategic Organization | | | | | | | | | | | 1 | | | | | | | 1 |
| Teaching Business Ethics | | 1 | | | | | | | | | | | | | | | | 1 |
| Unpublished working papers | | | | | | | | | | | | 1 | 1 | | | 1 | | 3 |
| Total | 1 | 1 | 1 | | 1 | 2 | 1 | 1 | 4 | 1 | 5 | 9 | 5 | 7 | 8 | 10 | 3 | 60 |

Table 1: Bibliographic sources of the publications included in the review

| Review category, author(s) (year) | Position of interest | | | Examined upper echelon characteristics | Examined accounting choices/consequences | | | | | Result supportiveness of upper echelons |
|---------------------------------------|----------------------|-----|-----------|---|--|---------------------|-------------------------|------------------------------|--------|---|
| | CEO | CFO | TMT/board | | Irregularities/misstatements/fraud | Earnings management | Accounting conservatism | Extent/quality of disclosure | Others | |
| General upper echelons effects | | | | | | | | | | |
| Davis, Ge, Matsumoto, & Zhang (2015) | ✓ | ✓ | | General managerial influence | | | | ✓ | | + |
| Dejong & Ling (2013) | ✓ | ✓ | | General managerial influence | | ✓ | | | | + |
| Ge, Matsumoto, & Zhang (2011) | | ✓ | | General managerial influence | | ✓ | | | | + |
| Bamber, Jiang, & Wang (2010) | ✓ | ✓ | | General managerial influence | | | | ✓ | | + |
| Dyreng, Hanlon, & Maydew (2010) | ✓ | ✓ | ✓ | General managerial influence | | | | | ✓ | + |
| Roychowdhury (2006) | | | ✓ | General managerial influence | | ✓ | | | | + |
| Demographic characteristics | | | | | | | | | | |
| Liu, Wei, & Xie (2016) | | ✓ | | Gender | | ✓ | | | | + |
| Ali & Zhang (2015) | ✓ | | | Tenure | | ✓ | | | | + |
| Baatwah, Salleh, & Ahmad (2015) | ✓ | | | Functional experience; Tenure | | | | | ✓ | + |
| Davis, Ge, Matsumoto, & Zhang (2015) | ✓ | ✓ | | Age; Gender; Education; Experience | | | | ✓ | | - |
| Francis, Hasan, Park, & Wu (2015) | | ✓ | | Gender | | | ✓ | | | + |
| Ho, Li, Tam, & Zhang (2015) | ✓ | | | Gender | | | ✓ | | | + |
| Liao, Luo, & Tang (2015) ⁶ | | | ✓ | Gender | | | | ✓ | | + |
| Ran, Fang, Luo, & Chan (2015) | | | ✓ | Age; Compensation; Education; Gender, Functional background | | ✓ | | | | +/- |
| Francis, Hasan, Wu, & Yan (2014) | | ✓ | | Gender | | | | | ✓ | + |
| Kuang, Qin, & Wielhouwer (2014) | ✓ | | | Origin (insider/outsider) | | ✓ | | | | + |
| Lewis, Walls, & Dowell (2014) | ✓ | | | Education; Tenure | | | | ✓ | | + |
| Demerjian, Lev, Lewis, & McVay (2013) | | | ✓ | Managerial ability | | ✓ | | | | + |
| Jiang, Zhu, & Huang (2013) | ✓ | | | Financial experience | | ✓ | | | | +/- |
| Schrand & Zechman (2012) ⁷ | | | ✓ | Age; Education; Founder status; Gender; Tenure | ✓ | | | | | +/- |
| Hazarika, Karpoff, & Nahata (2012) | ✓ | ✓ | | Tenure | | ✓ | | | | + |
| Baik, Farber, & Lee (2011) | ✓ | | | Managerial ability | | | | ✓ | | + |

⁶ This study also investigates the effects of board independence and the existence of an environmental board committee on the likelihood of voluntary disclosure, which are not displayed here.

⁷ This study also includes a descriptive analysis of the year-to-year escalation in misstatements, which is not displayed here.

| | Position of interest | | | Examined upper echelon characteristics | Examined accounting choices/consequences | | | | | Result supportiveness of upper echelons |
|---|----------------------|-----|-----------|--|--|---------------------|-------------------------|------------------------------|--------|---|
| | CEO | CFO | TMT/board | | Irregularities/misstatements/fraud | Earnings management | Accounting conservatism | Extent/quality of disclosure | Others | |
| Review category, author(s) (year) | | | | | | | | | | |
| Brochet & Welch (2011) | ✓ | ✓ | | Transaction experience | | | | | ✓ | +/- |
| Feng, Ge, Luo, & Shevlin (2011) | ✓ | | | Power | ✓ | | | | | + |
| Ge, Matsumoto, & Zhang (2011) | | ✓ | | Age; Gender; Education | | ✓ | | | | - |
| Koh (2011) | ✓ | | | Award win | | ✓ | ✓ | | | +/- |
| Krishnan, Raman, Yang, & Yu (2011) | ✓ | ✓ | | Social ties with board directors | | ✓ | | | | + |
| Srinidhi, Gul, & Tsui (2011) | | | ✓ | Gender | | ✓ | | | | + |
| Sun, Liu, & Lan (2011) | | | ✓ | Gender | | ✓ | | | | - |
| Troy, Smith, & Domino (2011) | ✓ | | | Age; Education; Functional experience | ✓ | | | | | + |
| Barua, Davidson, Rama, & Thiruvadi (2010) | | ✓ | | Gender; Tenure | | ✓ | | | | + |
| Bamber, Jiang, & Wang (2010) | ✓ | ✓ | | Age; Education | | | | ✓ | | + |
| Dyreng, Hanlon, & Maydew (2010) | ✓ | ✓ | ✓ | Age; Gender; Education; Tenure | | | | | ✓ | - |
| Peni & Vähämaa (2010) | ✓ | ✓ | | Gender | | ✓ | | | | +/- |
| Ye, Zhang, & Rezaee (2010) | ✓ | ✓ | | Gender | | ✓ | | | | - |
| Malmendier & Tate (2009) ⁸ | ✓ | | | Award win | | ✓ | | | | + |
| Francis, Huang, Rajgopal, & Zang (2008) | ✓ | | | Reputation (press citations) | | ✓ | | | | + |
| Kalyta & Magnan (2008) | ✓ | | | Power | | | | ✓ | | + |
| Krishnan & Parsons (2008) | | | ✓ | Gender | | ✓ | | | | + |
| Masters-Stout, Costigan, & Lovata (2008) | ✓ | | | Tenure | | | | | ✓ | + |
| Davidson, Xie, Xu, & Ning (2007) | ✓ | | | Age; Compensation | | ✓ | | | | +/- |
| Cerbioni & Parbonetti (2007) ⁹ | ✓ | | | Power | | | | ✓ | | +/- |
| Aier, Comprix, Gunlock, & Lee (2005) | | ✓ | | Financial expertise | ✓ | | | | | + |
| Haniffa & Cooke (2005) ¹⁰ | | | ✓ | Cultural origin | | | | ✓ | | + |
| Gul & Leung (2004) | ✓ | | ✓ | Power | | | | ✓ | | + |
| Clikeman, Geiger, & O'Connell (2001) | - | - | - | Gender; National origin (student experiment) | | ✓ | | | | - |

⁸ This study also investigates the effect of CEO award wins on firm's stock returns, operating performance, CEO compensation, and CEO distracting activities, which are not displayed here.

⁹ This study also investigates the influence of board size, composition, and structure on intellectual capital disclosure, which are not displayed here.

¹⁰ This study also investigates the effect of board independence and shareholder origin, which are not displayed here.

| | Position of interest | | | Examined upper echelon characteristics | Examined accounting choices/consequences | | | | | Result supportiveness of upper echelons |
|--|----------------------|-----|-----------|---|--|---------------------|-------------------------|------------------------------|--------|---|
| | CEO | CFO | TMT/board | | Irregularities/misstatements/fraud | Earnings management | Accounting conservatism | Extent/quality of disclosure | Others | |
| Review category, author(s) (year) | | | | | | | | | | |
| Dechow & Sloan (1991) | ✓ | | | Tenure | | ✓ | | | | + |
| Psychological/behavioral characteristics | | | | | | | | | | |
| Hribar & Yang (2016) | ✓ | | | Overconfidence | | | | ✓ | | + |
| Majors (2016) | - | - | - | Machiavellianism; Psychopathy; Narcissism | | ✓ | ✓ | | | + |
| Beaudoin, Cianci, & Tsakumis (2015) | | ✓ | | Ethics in incentive conflict situations | | ✓ | | | | + |
| Biggerstaff, Cicero, & Puckett (2015) | ✓ | | | Unethical behavior | ✓ | | | | | + |
| Davidson, Dey, & Smith (2015) ¹¹ | ✓ | ✓ | | Frugality; Existence of legal record | ✓ | | | | | + |
| Ham, Lang, Seybert, & Wang (2015) | ✓ | ✓ | | Narcissism | ✓ | ✓ | ✓ | | | + |
| Patelli & Pedrini (2015) | ✓ | | | Tone at the top | | | ✓ | | | +/- |
| Hsieh, Bedard, & Johnstone (2014) | ✓ | | | Overconfidence | | ✓ | | | | + |
| Jia, van Lent, & Zeng (2014) | ✓ | | | Masculinity | ✓ | | | | | + |
| Olsen, Dworkis, & Young (2014) | ✓ | | | Narcissism | ✓ | ✓ | | | | +/- |
| Ahmed & Duellman (2013) | ✓ | | | Overconfidence | | | ✓ | | | + |
| Presley & Abbott (2013) | ✓ | | | Overconfidence | ✓ | | | | | + |
| Rijsenbilt & Commandeur (2013) | ✓ | | | Narcissism | ✓ | | | | | + |
| Dikolli, Keusch, Mayew, & Steffen (2012) ¹² | ✓ | | | Integrity | | ✓ | | | | + |
| Larcker & Zakolyukina (2012) | ✓ | ✓ | | Sincerity in telephone calls | ✓ | | | | | + |
| Murphy (2012) | - | - | - | Machiavellianism | ✓ | ✓ | | | | + |
| Schrand & Zechman (2012) | | | ✓ | Overconfidence | ✓ | | | | | + |
| Dyreng, Hanlon, & Maydew (2010) | ✓ | ✓ | ✓ | Optimism; Overconfidence | | | | | ✓ | - |
| Heflin, Kwon, & Wild (2002) | | | ✓ | Stewardship over corporate assets | | ✓ | | | | + |

Table 2: Categorization and results of the publications included in the review

¹¹ This study also examines the impact on governance and internal control issues, which are not displayed here.

¹² This study also examines the effect of CEO integrity on perception by subordinates as well as the likelihood of receiving material weakness opinions, higher audit fees, option backdating, and lawsuits, which are not displayed here.

4.2 Upper echelon positions and financial accounting choices

The general influence of top management positions on financial accounting outcomes can be explored in different ways. Dyreng et al. (2010) track top management executives along multiple employments across companies and find that incorporating managerial fixed effects increases the explanatory power of their model on the antecedents of a firm's effective tax rate. They observe that CEOs have the highest influence on the tax rate among TMT members. The research design of this study was first developed by Bertrand and Schoar (2003) and has subsequently been applied by Bamber et al. (2010), Ge et al. (2011), and Davis et.al. (2015). In their study on 303 CEOs and CFOs, Bamber et al. (2010) detect that top management executives exert significant influence on a firm's voluntary disclosure style, measured by the frequency, precision, content, accuracy, and optimism/pessimism of management earnings forecasts. Ge et al. (2011) track CFOs across companies and find that they have a significant impact on accounting decisions, even when incorporating CEO fixed effects. Consistent with the theoretical upper echelons predictions, they find that CFO fixed effects are reflected more strongly in settings with high managerial discretion and high executive job demands.

In a similar manner, Davis et al. (2015) track CEOs and CFOs in earnings conference calls. They find evidence that the tone used in such calls is manager-specific and that CEOs generally use a more positive tone than CFOs. Dejong and Ling (2013) also compare the managerial influence of CEOs vs. CFOs, finding that CEOs are on average more inclined to manage earnings than CFOs and use different ways to manipulate earnings. Using a different research design, Roychowdhury (2006) assumes an indirect influence of executives on earnings management, finding that real earnings management

activities (earnings management by intervention in business activities) increase when performance targets are difficult and when achieving positive earnings or meeting analyst forecasts is at risk.

4.3 Demographic upper echelon characteristics and financial accounting choices

Research on the influence of executives' demographic characteristics on financial reporting choices has primarily focused on gender, age, education, and experience. Several studies investigate the effect of gender on earnings management, with Barua et al. (2010) and Liu, Wei, and Xie (2016) reporting that female CFOs engage less in earnings management than their male counterparts. Peni and Vähämaa (2010) find that female CFOs engaging in earnings management tend to manage earnings downward and report conservatively, but they do not find such results for female CEOs. According to the results of Krishnan and Parsons (2008), Srinidhi et al. (2011), Ran et al. (2015), and Liao, Luo, and Tang (2015), gender diversity on supervisory boards and in TMTs generally seems to increase earnings quality and nurture the voluntary disclosure of additional reporting information. However, Sun et al. (2011) do not detect effects on earnings management for female participation on audit committees. Moreover, the studies of Clikeman et al. (2001), Ge et al. (2011), Schrand and Zechman (2012), Ye et al. (2010), and Davis et al. (2015) do not observe any effect of executive gender on financial accounting outcomes.

Francis et al. (2015) conduct a detailed analysis of the impact of CFO gender on accounting conservatism. Their results show that newly appointed female CFOs report more conservatively than their predecessors, as compared to newly appointed male

CFOs who have succeeded either female or male CFOs. According to their results, female conservatism increases further when faced with higher litigation, default, market, or job security risk. In additional analyses, Francis et al. (2015) find that firms show lower leverage, capital expenditure, sales growth, and R&D expenses as well as higher tangible assets after the appointment of a female CFO, and that such firms simultaneously reduce the dividend payout ratio. Using the same data sample as in their 2015 study, Francis et al. (2014) investigate the tax aggressiveness of female and male CFOs and find that the latter engage significantly more often in tax sheltering activities than their female counterparts. However, they do not observe differences between female and male CFOs in low-risk tax avoidance strategies. Dyreng et al. (2010) also investigate the impact of executives' gender on effective corporate tax rates, but do not observe significant differences. Adding to the evidence on gender effects on financial accounting choices, Ho et al. (2015) find that companies with female CEOs report more conservatively if the company faces high litigation or takeover risks. However, in non-litigious industries and in firms not threatened by takeovers, Ho et al. (2015) do not find significant gender effects.

Studies of executive age show that older CEOs are less often involved in fraudulent actions (Troy et al., 2011) and have a higher tendency to manage earnings upward in the two years before their departure (Davidson et al., 2007). In addition, Bamber et al. (2010) find that managers born before World War II disclose less voluntary information than younger executives. However, studies by Dyreng et al. (2010), Ge et al. (2011), Ran et al. (2015), Schrand and Zechman (2012), and Davis et al. (2015) do not reveal any observable age effect.

Studies of executive tenure and financial reporting choices mostly arrive at conclusions in line with upper echelons predictions. Hazarika et al. (2012) report that CFOs with higher tenure are less often involved in restatements. Similarly, Schrand and Zechman (2012) show that executives of misreporting and fraud firms generally have shorter tenures. Baatwah, Salleh, and Ahmad (2015) find that higher tenured CEOs are associated with a more timely completion of audit reports. In turn, Lewis, Walls, and Dowell (2014) find that the likelihood of voluntary information disclosure decreases with CEO tenure. Consistent with big-bath theory, Masters-Stout et al. (2008) observe significantly higher goodwill impairments in the early years of a CEO's tenure. In contrast, Ali and Zhang (2015) find that CEOs are more likely to overstate earnings in their early and final years of tenure, which are often decisive for reputation building and performance-based retirement plans. Similarly, Dechow and Sloan (1991) find that CEOs reduce R&D spending in their final year in office to manage earnings upward. In contrast, Dyreng et al. (2010) do not find any tenure effect when investigating the impact of individual managers on corporate tax rates.

Other studies focus on education and prior experience and consistently find significant relationships with financial reporting choices. Bamber et al. (2010), Lewis et al. (2014), and Ran et al. (2015) show that executives holding MBA degrees are more conservative in earnings forecasts, are more likely to disclose information voluntarily, and report higher quality earnings, respectively. Furthermore, CEOs with financial or accounting expertise are associated with lower earnings management (Jiang et al., 2013; Ran et al., 2015), higher audit report timeliness (Baatwah et al., 2015), and less frequent but more precise forecasting styles (Bamber et al., 2010). In addition, more educated CEOs seem to be less often involved in fraudulent actions (Troy et al., 2011). Baik, Farber, and Lee

(2011) show that high-ability CEOs are more likely to issue earnings forecasts and, in addition, generally issue more accurate forecasts.¹³

In particular, CFO education seems to affect financial reporting choices: CFOs with an MBA degree or CPA certification are less often involved in restatements than CFOs without such degrees (Aier et al., 2005). Brochet and Welch (2011) find evidence that CFOs with prior acquisition experience are significantly more likely to impair goodwill than CEOs with similar experience. Moreover, stock markets seem to acknowledge prior transaction experience, insofar as goodwill impairments show higher value relevance when CFOs have relevant knowledge and experience (Brochet & Welch, 2011). Likewise, Demerjian et al. (2013) report that high-ability management executives decrease earnings management and that hiring high-ability CFOs can further improve earnings quality through the better estimation of accruals. Despite this evidence from multiple studies on the effect of executive education and experience on financial accounting choices, four studies in our sample did not find such effects (Davis et al., 2015; Dyreng et al., 2010; Ge et al., 2011; Schrand & Zechman, 2012).

The remaining financial accounting studies of demographic upper echelon characteristics focus on various characteristics. Malmendier and Tate (2009) observe that celebrity CEOs often underperform after winning prestigious awards and subsequently engage in more earnings management. Francis et al. (2008) show that CEOs with a high reputation tend to misuse their status in order to manage earnings in their favor. At the same time, Francis et al. (2008) find that highly reputable CEOs are more likely to be appointed by firms with poorer innate earnings quality. Koh (2011)

¹³ A related study by Yang (2012) not included in this review shows that management executives can benefit from establishing a personal disclosure reputation through accurate forecasting, because the stock price reactions to forecasts from executives with a high forecasting reputation are significantly stronger.

detects more timely loss reporting after CEOs win awards, but does not observe changes in earnings management behavior. According to Krishnan et al. (2011), another supporting factor for earnings management can be a CEO's strong social ties among the TMT.

Two studies investigate the influence of cultural/national origin on financial reporting decisions. While Clikeman et al. (2001) do not find national differences in earnings management behavior in their experimental setting, Haniffa and Cooke (2005) detect higher corporate social disclosure quality in firms with boards dominated by domestic directors in Malaysia. Kuang et al. (2014) adopt an approach similar to turnover studies and find that outsider CEOs use more income-increasing accruals in their early years in their new position, as compared to insider CEOs. However, they do not detect any general differences in earnings management behavior between outsiders and insiders at higher tenure levels.

Four studies address the influence of executive power. Gul and Leung (2004) and Cerbioni and Parbonetti (2007) investigate the effect of CEO power proxied by CEO duality (i.e., CEOs who simultaneously act as chairpersons) on disclosure quality, finding that CEO power reduces the extent of voluntary information disclosed. Kalyta and Magnan (2008) find that powerful CEOs benefit to a greater extent from supplemental executive retirement plans as part of their compensation, since in Canada mandatory disclosure requirements for such plans are less rigorous than for other compensation forms, thus impeding shareholder monitoring of rent extraction by management executives. Finally, Feng et al. (2011) examine intra-TMT power as a possible cause of earnings management and find evidence that CFOs can be pressured by powerful CEOs to manipulate financial reporting outcomes.

Overall, the vast majority of studies on demographic characteristics using a common company-based data sample find results consistent with upper echelons theory, whereas studies tracking executives across multiple firms report weaker-findings. It is likely that this difference can be attributed to the additional restrictions imposed on sample selection by multi-employment manager data samples (see section 5.2.2). From the studies relying on a common approach, it can be concluded that female managers in both executive and non-executive board positions generally report more conservatively, and are more likely to disclose additional information voluntarily. The only two studies in our sample that do not confirm this relationship are those of Clikeman et al. (2001) and Sun et al. (2011), which is probably due to their research design investigating students instead of management executives in the former and the generally low sample size in both the former and the latter. Similarly, age, tenure, experience, and education seem to reduce risk-tolerance in financial reporting, although occasional opportunistic earnings management in the first and final years in office can be observed. In contrast, power concentration on one single executive is almost always detrimental to earnings and disclosure quality.

4.4 Psychological and behavioral upper echelon characteristics and financial accounting choices

Psychological characteristics and traits as well as managerial attitude and behavior cannot be easily and reliably measured in research (Hambrick, 2007). Thus, the studies in this category refrain from direct assessments of executives' psyches and values. Instead, they either assume certain psychological characteristics and behavior from observable characteristics or they define scoring models from observable executive data. The respective studies included in this review can basically be differentiated into

studies of managerial overconfidence, managerial narcissism/Machiavellianism, and studies of executives' ethical behavior.

The results on the consequences of overconfidence—as proxied primarily by the timing of in-the-money stock options—consistently support the predictions of upper echelons theory. Ahmed and Duellman (2013) present evidence that overconfident CEOs make significantly less use of conservative accounting than their normally confident counterparts, even if firms have above-average monitoring and control mechanisms in place. Presley and Abbott (2013) and Schrand and Zechman (2012) find that overconfident executives have a significantly greater likelihood of accounting restatements and fraud. The Sarbanes–Oxley Act does not seem to influence this relationship. However, these studies also find that the likelihood of restatements decreases with more financial experts on the audit committee. Hsieh et al. (2014) confirm these findings by showing that overconfident CEOs are more inclined to manage earnings and feel less constrained by the Sarbanes–Oxley Act than normally confident CEOs. Hribar and Yang (2016) find that overconfident CEOs are more likely to issue earnings forecasts and tend to choose a narrower forecast range, but subsequently are more likely to miss their own forecasts. Unlike other studies that rely on stock-option timing as a measure of overconfidence, Dyreng et al. (2010) use the frequency of missing earnings forecast directly as a proxy for overconfidence, but do not find any effects on corporate tax rates.

The consequences of managerial narcissism and Machiavellianism are empirically investigated in different ways. Murphy (2012) examines more than 200 participants in an experimental setting, including questionnaires assessing personal predispositions, and finds that participants with higher attitude towards misreporting and/or higher

personal Machiavellianism scores misreport to a greater extent and feel less guilty about it. In another experiment, Majors (2016) rates participants on a “Dark Triad” personality score of Machiavellianism, narcissism, and psychopathy. She observes that participants with excess scores in any of the three dimensions report more aggressively as long as they are not obliged to disclose ranges for reported estimates.

Archival studies tend to confirm these results. Rijsenbilt and Commandeur (2013) show that narcissistic CEOs are significantly more inclined to commit fraud than non-narcissistic CEOs. Olsen, Dworkis, and Young (2014) find that narcissistic CEOs are more likely to manage earnings through either real activities or just meeting or beating earnings forecasts, although they do not find relationships between narcissism and accruals management or the likelihood of restatements. Ham, Lang, Seybert, and Wang (2015) examine narcissistic CFOs, finding that they tend to manage earnings more aggressively, report less conservatively, try to keep weaker internal control systems, and are associated with more frequent restatements. Jia, van Lent, and Zeng (2014) find similar results for highly masculine CEOs, who are associated with a higher likelihood of financial misreporting, SEC’s Accounting and Auditing Enforcement Release (AAER) incidents, opportunistic insider trading, and stock option backdating.

Six studies investigate executives’ ethical behavior and its influence on financial reporting outcomes. Heflin et al. (2002) find that management executives with low-rated stewardship scores over corporate assets are more responsive to contractual incentives towards earnings management than managers with high stewardship scores. Similarly, Beaudoin et al. (2015) show that, in the presence of conflicts between personal financial and corporate financial incentives, CFOs with higher personal ethics tend to resist self-interested earnings management. Biggerstaff et al. (2015) and

Davidson et al. (2015) find that CEO unethical behavior, measured by stock option backdating and the existence of legal records, is associated with financial reporting fraud. Larcker and Zakolyukina (2012) find that the low truthfulness and honesty of executives during earnings conference calls can be a reliable predictor of subsequent misreporting and restatements. In similar research designs, Dikolli, Keusch, Mayew, and Steffen (2012) and Patelli and Pedrini (2015) examine the language used by CEOs in shareholder letters, observing that CEOs with lower integrity (as indicated by an excess usage of causation words) are associated with lower earnings quality, while CEOs using a resolute, complex, and non-engaging language tend to report more aggressively.¹⁴

Summarizing, the results on psychological characteristics are consistent: overconfident, narcissistic, and Machiavellian executives with low integrity tend to engage more in earnings management, report more aggressively, and are more often involved in irregular practices in financial reporting. The only reported non-finding in our review from Dyreng et al. (2010) can probably be attributed to their multi-employment sample selection approach.

5 Discussion

Questions arise about how these results can be interpreted in light of Hambrick and Mason's (1984) fundamental theory. This section assesses the validity of the upper echelons perspective in financial accounting research, critically discusses state-of-the-art approaches, and identifies fruitful avenues for future research.

¹⁴ Dikolli et al. (2012) observe this relationship only in the period prior to the Sarbanes-Oxley-Act (SOX). Although the authors do not explicitly discuss this fact in view of the upper echelons framework, the SOX could potentially exert a moderating effect on this relationship by constraining managerial discretion.

5.1 Empirical validity of upper echelons theory in the case of financial reporting research

From our above review of the literature, it can be concluded that empirical research is generally supportive of upper echelons theory, although the differences in results caused by the data sampling approach necessitates some further discussion (see section 5.2.2). We consider studies of psychographic and behavioral characteristics as the most powerful validations of upper echelons theory in financial accounting research, because these characteristics are more closely linked to idiosyncrasies than mere demographic characteristics or unspecific managerial fixed effects. In addition, the majority of studies closely follow well-tested research designs from empirical upper echelons studies in other domains (e.g., Bamber, Jiang, & Wang, 2010; Graham, Harvey, & Puri, 2013; Patel & Cooper, 2014).

Thus, our review suggests that the basic tenets of upper echelons theory seem to hold for the domain of financial reporting, even though financial reporting is more regulated than other corporate functions for which managerial discretion can generally be regarded as larger. In turn, we advise management scholars to incorporate financial reporting or—more broadly—accounting choices in future upper echelon studies. To date, the more general upper echelons literature seems to have forgone considering accounting choices as outcomes of upper echelons' decisions. This is exemplified by existing reviews of the upper echelons literature (Carpenter et al., 2004; Hambrick, 2007; Nielsen, 2010) that do not include corporate accounting choices as part of the strategic choices encompassing echelons theory. Given that our review suggests that upper echelons and their characteristics impact financial reporting choices and thus reported financial performance, management scholars should benefit from incorporating

the influence of managers on accounting performance measures in upper echelons studies.

At the same time, the question arises as to why some studies find links between managerial characteristics and financial reporting outcomes, while others do not. While we are unaware of any consistent patterns or obvious explanations for these differences, we would like to share some observations.¹⁵ First, the majority of studies reporting non-findings employ complex research designs following Bertrand and Schoar (2003), which track executives across multiple employments (see also section 5.2.2). While all of these studies report positive relationships between managerial fixed effects and financial reporting outcomes, they are generally unable to link these outcomes to simple demographic characteristics (mostly age, gender, and education), with the only exception being the study of Bamber et al. (2010) on disclosure quality. The only experimental study with non-findings is the work of Clikeman et al. (2001), who also rely on simple demographic characteristics. Conversely, studies on the extent and frequency of disclosure (disclosure quality) almost exclusively yield positive results. This is somewhat intuitive, as unlike mandatory financial reporting, voluntary disclosure is not as highly regulated and hence leaves more room for managerial discretion. Recapitulating, this leads to the conjecture that, in contrast to psychological and behavioral characteristics, simple demographic characteristics likely have low explanatory power in linking managerial idiosyncrasies and financial reporting outcomes, particularly when executives are tracked across multiple firms. At the same time, this supposition puts pressure on archival research designs in which firm-specific and manager-specific effects cannot be segregated in a like manner and results might be

¹⁵ We have, among other measures, carefully compared management executives, independent and dependent variables, sample country, sample size, research designs, data sources used, and publication years, but could not identify any patterns of potential reasons for non-findings.

blurred by the interference of external fixed effects. Therefore, further research with even more refined research designs is needed to shed light on the empirical validity of certain upper echelons characteristics in financial reporting research. We elaborate on this issue in more detail in section 5.2.2.

5.2 Critical assessment and future research

As the upper echelons perspective found its way into financial accounting research later than other research domains, the research designs employed in financial accounting research have mostly been inherited from other upper echelons research streams and have often been combined with accounting concepts such as conservatism and earnings management. Such procedures are beneficial because they allow for the consistency and comparability of results across research streams. Nonetheless, they also transfer the potential weaknesses and deficiencies of empirical approaches and methods. In the course of our review, we identified nine aspects that are capable of stimulating possible refinements and advancements in future research. We detail these aspects in the following subsections.

5.2.1 Economic significance

Most of the identified empirical studies do not disclose their assumptions about the required statistical significance levels, statistical power, and effect sizes of relationships upfront or offer calculations on optimal sample sizes based on such assumptions. Instead, sample sizes seem to be often based on to the maximum amount of data available in certain databases. Such sampling approaches lead to generally large sample sizes, which are advantageous and even preferable in terms of statistical power and the ability to generalize findings. However, large sample sizes notably increase the probability of statistically significant observed effects, however small in magnitude.

This is particularly important, since relatively rigid and comprehensive legal regulation could lead us to expect that managerial influence on financial reporting outcomes is lower than that on other outcomes such as strategic investments and internationalization decisions (see Section 2).

Thus, we encourage scholars either to calculate optimal sample sizes upfront based on assumptions of minimum required effect sizes¹⁶ or to include discussions on economic significance in the interpretation of the results (McCloskey & Ziliak, 1996). Attention should be paid to statistical key figures such as partial R^2 values or deltas of R^2 from hierarchical regression models and the effect sizes in the interpretation or conclusion. Noteworthy examples that already have included a discussion of these parameters are the studies by Heflin et al. (2002), Bamber et al. (2010), Ge et al. (2011), and Davis et al. (2015), who report R^2 increases of 12%, 9.1%, 1–3%¹⁷, and 7–45%, respectively, when adding managerial characteristics and managerial fixed effects in their regression models. As an alternative measure of economic significance, Baik et al. (2011) discuss the magnitude of changes when moving between different quartiles of CEO ability. Certainly, a discussion on how to obtain reliable estimates is desirable as part of the appreciation of economic and statistical significance (Engsted, 2009).

5.2.2 Secondary data sampling

Data on financial reporting decisions and financial accounting choices are usually obtained on a per-company basis, analyzing managers' fixed effects and controlling for the relevant observable firm-specific characteristics in the dataset. However, this widely used sample construction hampers the separation of manager-specific and firm-specific

¹⁶ This could, for example, be done with the help of software tools, such as the program G*Power, available at <http://www.gpower.hhu.de>.

¹⁷ Both values are stated as absolute R^2 increases.

effects, particularly when management turnover is low and/or executives change management positions from or to firms outside the sample. Some firm-specific differences might be unobservable, either directly or introduced by omitted factors, which can be correlated with managers' fixed effects. Hence, to ensure the correct attribution of observed effects to managerial idiosyncrasies, Bertrand and Schoar (2003) construct a manager/firm-matched panel dataset that tracks individual managers across different firms over time. Ge et al. (2011), for example, replicate and extend this approach when tracking CFOs across different firms using placebo comparison data before and after a CFO's time in office. Although the advantages of such an approach are beyond doubt, sample construction can require considerably larger efforts. In addition, executives need to be removed from the sample if they do not work for at least two firms within the period of analysis. This necessarily reduces sample size. Further, practicability and data availability could justify building samples on a more straightforward per-company basis.

On balance, two different conclusions can be drawn from these results. The first is that upper echelons theory is considered empirically valid due to the predominantly supportive results of studies on demographic, psychographic, and behavioral characteristics, which follow a common research design, and the failure of almost all studies to utilize a multi-employment approach to detect attribute-specific managerial influences beyond mere fixed effects, which is attributed to their rather inefficient and biased data-sampling. Second, the multi-employment approach could be considered a superior research design, which consequently calls into question the results other studies not using this approach. When taking into account that almost all studies control for various different firm-specific characteristics and try to mitigate causality and endogeneity concerns by different additional analyses (e.g., instrument variables and

time lagging), the second conclusion is too harsh. Nevertheless, if we want to rule out the confounding effects of manager and firm influence, it is difficult to deny the advantage of a manager/firm-matched panel dataset. Hence, more research using such sampling procedures is needed to enable a clear segregation of managerial influence on financial reporting choices and other impact factors and add clarification to the current disparity in results between the two approaches.

5.2.3 Reverse causality

A considerable number of cross-sectional studies tend to interpret the statistically significant relationships between managerial characteristics and financial reporting outcomes as directions of causality. However, the theoretical direction of causality can only be derived from Hambrick and Mason's (1984) upper echelons framework, not from regression analyses of cross-sectional data. In fact, indications exist for the reverse effects, where by management executives actively seek and advance within environments that suit their personality and preferences (Greve, Nielsen, & Ruigrok, 2009). While such interpretations seem reasonable, Hambrick (2007) points to a second, less intuitive form of reverse causality in upper echelons studies: firms may select executives based on their personal characteristics and expect them to behave in a certain way. If such executives later behave in line with the hiring bodies' expectations, the organizational outcomes may not be (entirely) attributed to managerial characteristics, but to the selection decisions by hiring bodies and their strategic intentions. Potential remedies against the misinterpretation of causality include manager/firm-matched panel datasets, longitudinal research designs with cross-lagged correlations, controls for prior states of the dependent and independent variables, instrumental variables measuring the expected value of the independent variables of interest, and recursive equation models (Carpenter et al., 2004; Finkelstein et al., 2009; Hambrick, 2007).

Only a minority of studies in our review incorporate such procedures into their designs and/or explicitly discuss the possibility of reverse effects (e.g., Barua et al., 2010; Francis et al., 2015; Matsunaga et al., 2013). However, for a comprehensive assessment of the empirical validity of upper echelons predictions, such considerations are highly useful. In particular, triangulation using alternative research methods such as experiments, surveys, and interviews is a fruitful way to enhance inferences of causality (Gassen, 2014). Nonetheless, even if reverse causality cannot be ruled out by the research design, the results are still consistent with upper echelons theory to the extent that executives hired by firms according to certain preferences implement strategies and decisions desired by the firm. That is, ultimately it is still the executives and their characteristics that matter in corporate decision making.

5.2.4 Measurement of financial accounting outcomes

Most of the studies we review use the Jones (1991) model, the modified Jones model (Dechow, Sloan, & Sweeney, 1995) of discretionary/abnormal accruals,¹⁸ or the Basu (1997) timeliness of earnings model to measure accounting conservatism and earnings management. Although these models are frequently used in empirical accounting research, their underlying assumptions have also been criticized. Basu's (1997) model assumes that markets efficiently reflect all available news on returns and defines conservatism as the more timely recognition of bad news in earnings than good news. The assumption of market efficiency, however, contradicts the assumption of returns reflecting the additional value-relevant information of earnings and hence the model could reflect differences in returns rather than in the earnings recognition effect. Moreover, the model is potentially biased in situations of information asymmetry, such

¹⁸ For other less common discretionary accruals models, see Dechow et al. (2010).

as cross-country settings with different regulatory and market environments (Dechow, Ge, & Schrand, 2010; Dietrich, Muller, & Riedl, 2007).

Discretionary accruals models attempt to single out distortions caused by accounting interventions (e.g., earnings management) by defining a level of “normal” accruals depending on firm fundamentals and declaring any residuals as “abnormal” or “discretionary.” Normal accruals can be determined either at the firm or at the industry level. The former facilitates variation in normal accruals levels across firms, but implies time-invariant parameter specifications for each individual firm. The latter assumes constant parameter specifications per industry and thus conditions the levels of discretionary accruals on industry classification for each firm (Dechow et al., 2010). In both cases, discretionary accruals arise from a relative definition and are therefore dependent on both sample size and sample composition. Furthermore, discretionary accruals derived from these models tend to be positively correlated with total accruals and can be biased when applied to firms with extreme financial performance (Dechow et al., 1995). Since the development of generally accepted and empirically validated proxies is still evolving (DeFond, 2010), the majority of studies use multiple proxies to measure earnings management and accounting conservatism (e.g., Ahmed & Duellman, 2013; Francis et al., 2015; Krishnan & Parsons, 2008)¹⁹. While we acknowledge the deficiencies in the application of current accruals models and the lack of suitable alternatives, we encourage researchers to use directly observable decision outcomes as measures of earnings management and/or accounting conservatism whenever possible.

¹⁹ Any upper echelons study of the determinants of accounting conservatism and earnings management is a joint test of the theory and accruals model as a metric, i.e., large discretionary accruals may arise from earnings management or conservative (aggressive) accounting, but could also arise from a misfit in the accruals model (Dejong & Ling, 2013).

Such measures might include the relative volume of operating lease obligations and estimates of pension obligation discount rates (Ge et al., 2011).

5.2.5 Opening the “black box” of upper echelon individuals

Although multiple studies have begun to examine the consequences of selected individual characteristics on financial accounting outcomes, many observable managerial attributes and facets of personality have remained largely neglected in financial accounting research. As examples, the personal characteristics studied in the broader upper echelons literature include functional background (e.g., Naranjo-Gil & Hartmann, 2007; Young, Charns, & Shortell, 2001), industry expertise and experience (e.g., Higgins & Gulati, 2006; Kor, 2003; Patzelt, zu Knyphausen-Aufseß, & Nikol, 2008), leadership style (e.g., Waldman, Javidan, & Varella, 2004), cultural and national origin (e.g., Crossland & Hambrick, 2007, 2011), and private wealth and financial situation (e.g., Hiebl, 2015).

Moreover, further studies of behavioral and psychological characteristics would be beneficial for upper echelons research. Thus far, behavioral characteristics have been approximated by observable variables. Recent efforts have been made by a number of scholars to dig deeper into executives’ personalities by developing new metrics and proxies for psychological characteristics. Examples include stock option behavior as a surrogate for overconfidence (e.g., Hsieh et al., 2014; Presley & Abbott, 2013) and the signature size or prominence of executives’ photographs in annual reports as surrogates for narcissism (e.g., Ham et al., 2015; Olsen et al., 2014). These proxies are well-tested and have been used in upper echelons research on corporate strategy and firm performance (e.g., Chatterjee & Hambrick, 2007; Patel & Cooper, 2014). However, proxies of psychological characteristics are not limited to a narrow set of already

empirically tested metrics. Other scholars have developed new measurement suggestions such as compensation relative to other executives and excess investment and financing activities (Ahmed & Duellman, 2013; Schrand & Zechman, 2012). Further examples include CEO sentiments in press citations (Hribar & Yang, 2016) as a proxy for overconfidence, which helps to mitigate endogeneity concerns of stock-option-based metrics. Rijssenbilt and Commandeur (2013) have compiled a multivariate measurement score for narcissism including publicity, awards, corporate jet use, length of biography, compensation ratios, role titles, photograph prominence, and value and number of acquisitions. Nonetheless, the development and utilization of metrics for psychological characteristics in archival upper echelons research in financial accounting is still in its infancy. We encourage future research to continue the development and validation of meaningful measures to enable closer links between managerial idiosyncrasies and financial reporting choices.

In addition to proxies derived from archival sources, directly-measured psychological characteristics also provide ample opportunity to delve into the process of making strategic choices under conditions of bounded rationality, on which the upper echelons perspective is based. Since psychographic data are often unobservable and can only be approximated by observable characteristics in secondary-data designs (as suggested by Hambrick and Mason, 1984), we encourage future accounting researchers to create and utilize primary data from surveys and questionnaires, similar to the approach already evidenced in upper echelons research fields other than financial accounting (e.g., Peterson, Galvin, & Lange, 2012; Reina, Zhang, & Peterson, 2014). A suitable approach for collecting psychographic profiles of executives could be the usage of established frameworks, such as the NEO Personality Inventory for measuring the big five personality traits of extraversion, agreeableness, conscientiousness, neuroticism, and

openness to experience (Costa & McCrae, 2014; Raad & Perugini, 2002) or the four-dimensional Myers-Briggs-type indicator classifying humans into 16 psychological types (Quenk, 2009). Although the latter has been criticized for its low reliability and validity (see Pittenger, 2005), both methods are popular in scientific research and practice to measure individual psychographic characteristics (Renner, Menschik-Bendele, Alexandrovicz, & Deakin, 2014) and provide a more detailed and reliable assessment of upper echelons idiosyncrasies. We acknowledge that this approach can be effortful and complex, as it requires access to a large number of executives willing to participate in scientific research as well as adequate funding. Nevertheless, psychological assessments of executives can be a promising way to tackle the “black box problem” (Lawrence, 1997) of unknown psychological and social processes that map executive characteristics to corporate strategic decisions.

Given that it is difficult to encourage top management executives of large public companies to participate in a scientific study, survey, or questionnaire, experimental settings with student participants and careful consideration of corresponding incentives can often be similarly insightful (e.g., Murphy, 2012; Majors, 2016), insofar as university students have a high likelihood of taking over executive positions and also considering that personal values and cognitive bias do not change much over time.

5.2.6 Interdependencies and power distribution between executives

Another direction for future research could be the selection of management executives of interest. While early research almost exclusively focused on CEOs, CFOs are increasingly attracting scholarly attention. However, although CFOs are typically the primary decision makers in accounting, the actual influence on financial reporting decisions within the TMT differs across firms. Accordingly, we prefer to draw on the

concept of intra-TMT power introduced by Finkelstein (1992), who demonstrated that incorporating a TMT member's power yields more accurate predictions of decision outcomes. In our review sample, only Feng et al. (2011) explicitly incorporate the concept of differences in intra-TMT power. Because it is neither realistic that CFOs make independent accounting decisions nor uncommon that CEOs or further TMT members have a larger say in corporate decisions than others, this concept is likely to be of value for integrating CFO and CEO stakes (and potentially other TMT members' influence) into financial reporting decisions in future research designs, particularly for firms in which CFOs are not acting on the same formal hierarchical level as their CEOs.

5.2.7 Integrating upper echelons moderators

Only two studies in our review sample consider moderators to upper echelons theory in the sense of managerial discretion (Hambrick and Finkelstein, 1987) and executive job demands (Hambrick et al., 2005). First, Presley and Abbott (2013) include the number of financial experts on the audit committee as a moderator representing lower discretion for overconfident CEOs, who affect the likelihood of restatements. Second, Ge et al. (2011) assume that CFO discretion is constrained by auditor industry expertise (defined by an auditor's sales revenue in the industry) and that a CFO's executive job demands depend on the number of operating and reporting segments. They report significant results for both moderators. Other possible proxies for audit quality as a limitation of CFO discretion could include an auditor's firm-specific knowledge by tenure (Johnson, Khurana, & Reynolds, 2002; Myers, Myers, & Omer, 2003), audit effort (Caramanis & Lennox, 2008), and audit fees (Frankel, Johnson, & Nelson, 2002). Additional proxies for discretion could potentially include the proportion of institutional shareholders, shareholdings of the largest shareholder, and affiliation of the CFO with family owners in family businesses. In terms of executive job demands, potential further measures

could include the number of consolidated subsidiaries, the number of different legal environments/markets in which the firm is present, and multi-factor scoring models of firm complexity. In summary, including moderators in empirical research designs can uncover effects that would otherwise have been obscured or remained undetected. In comparison with other corporate domains, accounting is subject to a large set of regulations that condition rational decisions and lessen idiosyncratic influences (Carruthers & Espeland, 1991). In particular, experimental settings can be advantageous to examine moderating effects and develop moderator measures for future research, allowing the researcher to control and even manipulate the magnitude of moderating effects by altering the experimental conditions.

5.2.8 Taking a more holistic perspective

Future upper echelons research in accounting could also benefit from a move away from pure reporting-related decisions towards a more holistic and general perspective of financial reporting outcomes. If management executives pursue certain earnings (or other) targets, it seems unrealistic to assume that they try to achieve such targets only by exploiting latitude in accounting regulations. In addition, executives could engage in altering policies and influencing financing and investing activities often termed real earnings management (e.g., see Roychowdhury, 2006). Real earnings management could serve as a valuable environment for examining upper echelons effects, particularly in light of the notable amount of type I and type II errors with which accruals models still struggle (Dechow et al., 2010).

5.2.9 Geographic diversity of research and samples

Upper echelons research in accounting and in other domains has been conducted almost exclusively based on samples of U.S. firms. While some exceptions exist in research on

managerial influence on firm performance (Ahn, Bhattacharya, Jung, & Nam, 2009; Balsmeier, Buchwald, & Stiebale, 2014; Buyl, Boone, Hendriks, & Matthyssens, 2011; Cheng, Chan, & Leung, 2010; Nielsen & Nielsen, 2013), we are unaware of any upper echelons studies on financial accounting with non-U.S. samples. As the heterogeneity of top management executives differs around the world, it is by no means clear that upper echelons predictions are globally valid. American executives tend to be relatively heterogeneous and usually enjoy a large extent of discretion encouraged by venturesome investors, strong societal beliefs in individualism, and correspondingly relaxed institutional environments (Hambrick, 2007). Other countries place greater weight on the importance of collectivism and exhibit greater risk aversion (e.g., Japan or China; see Hofstede, 2014) and strong supervisory boards (e.g., Germany). These differences are likely to be particularly relevant in domains with high formal regulatory environments such as financial reporting, underscoring the importance of extending the scope of analysis of upper echelons research in accounting beyond U.S. borders.

6 Conclusion

Using upper echelons theory as an organizing framework, we find supportive evidence in the literature for the influence of executives' idiosyncratic characteristics on financial accounting irregularities, earnings management, accounting conservatism, disclosure quality, and specific financial accounting-related corporate decisions. While upper echelons research in accounting is indubitably on the rise, a number of promising future research avenues remain open. Future progress in this field would particularly profit from studies delving deeper into measurement and utilization of behavioral and psychographic characteristics, the integration of moderating effects according to the underlying theory, a focus from firm-specific to manager-specific research designs

incorporating the potential effects of reverse causality, and empirical validations of upper echelons predictions outside the United States. Contributions beyond this field could take up the ongoing discussion on the development of generally accepted measures of earnings management and conservatism in accounting. Finally, future research could strive to serve not only to gain a better understanding of the validity of upper echelons theory in accounting, but also as a source of relevant knowledge for practitioners and hiring bodies.

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