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# Does accounting comparability affect corporate employment decision-making?

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## ABSTRACT

This paper investigates whether accounting comparability affects corporate employment decision-making. We find that firms with greater accounting comparability experience a lower degree of inefficiency in labour investments. Further, our results show that accounting comparability affects labour investments via improved external monitoring and internal governance mechanisms. Additional analyses indicate that our findings are not driven by non-labour investments and are robust to alternative explanations and endogeneity concerns. Collectively, the results are consistent with the view that comparability is an effective monitoring tool, which mitigates agency conflict and thereby reduces opportunistic employment decision-making.

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## 1. Introduction

In this paper, we depart from earlier studies that have predominantly investigated the information role and/or consequences of accounting comparability to instead focus on its potential monitoring role by examining its effect on corporate employment decision-making. Specifically, we investigate whether accounting comparability can improve corporate labour investment efficiency<sup>1</sup> by mitigating agency conflict and information asymmetry issues that are often associated with employment decisions, through enhancing the ability of internal and external monitors of a firm's management behaviour and decisions.

Investment in labour is economically significant for modern firms, which are often human capital intensive (Bernanke, 2004; Zingales, 2000). In particular, deviation from the optimal level of labour investment – namely over- or under-investment in labour – can be costly and detrimental to firms' competitive advantage (Becker, 1962), productivity (Hansson, Johanson, & Leitner, 2004) and ultimately future performance (Jung, Lee, & Weber, 2014; Khedmati, Sualihu, & Yawson, 2019; Pinnuck & Lillis, 2007). More importantly, distinct from other forms of physical investment where detailed

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<sup>1</sup> For simplicity, the phrase 'corporate employment decision-making' is used interchangeably with 'labour investment efficiency'.

specifications are readily available, labour investment decisions may suffer severe agency conflicts and, in particular, salient information asymmetry because such decisions rely heavily on private managerial information about the skills and productivity of employees (Atanassov & Kim, 2009; Ghaly, Dang, & Stathopoulos, 2020). Specifically, privileged access to such information facilitates self-interested managers to participate in empire-building activity, such as over-hiring or under-firing employees (Jensen, 1986; Richardson, 2006), potentially leading to over-investment in labour. Equally, self-interested managers may under-hire or over-fire in order to meet short-term earnings targets (Ghaly et al., 2020), which can give rise to deviations from optimal employment.

Meanwhile, high quality accounting information can enhance the monitoring abilities of investors and other stakeholders (Bushman & Smith, 2001; Healy & Palepu, 2001). Accounting comparability, an important qualitative characteristic of accounting information, is expected to play a significant role in monitoring management behaviour. Specifically, comparable financial reporting could reduce the effort and costs for outside market participants to interpret accounting information and gain access to insights on firm performance (Flourou & Pope, 2012; Yip & Young, 2012; Yu & Wahid, 2014). Furthermore, comparability “enables users to identify similarities in and differences between two sets of economic phenomena” (Financial Accounting Standards Board (FASB) (1980), pp. CON2-6) and thus facilitates stakeholders to draw sharper inferences about economic similarities and differences across comparable firms (De Franco, Kothari, & Verdi, 2011). With the lower costs of acquiring and processing information and the higher information quality available to users, information is more transferrable within and among comparable firms. Therefore, we argue that accounting comparability can significantly reduce the monitoring costs of internal and external stakeholders such as analysts, institutional investors, auditors, labour unions, and corporate boards (De Franco et al., 2011). In particular, through inferences based on the disclosures of comparable industry peers, these monitoring agents can more easily detect any opportunistic behaviours of managers, even when undisclosed (Kim, Li, Lu, & Yu, 2016).

We therefore argue that accounting comparability can enhance labour investment efficiency via external monitoring and internal governance mechanisms. Primarily, it enriches the quality of information available to external monitoring agents, which may prevent managers from undertaking suboptimal labour investments that destroy corporate value (Byard, Li, & Yu, 2011; Owen & Lloyd, 1985). It may, for example, help auditors better understand a firm's operations through parallelizing with those of industry peers. This may enhance their ability to influence corporate employment decision-making through their recommendations arising from risk assessments (Zhang, 2018). Similarly, through inferences based on the disclosures of a firm's comparable peers, especially disclosures related to human resources, institutional investors can more easily understand the firm performance and obtain value-relevant information (Kim et al., 2016). In this instance, accounting comparability could enable institutional investors to, for example, apply greater pressure on managers to use human capital more efficiently. Also, enhanced accounting comparability related to employment-related information could increase the bargaining power of labour unions in corporate employment decisions. It could confer power on labour unions through supporting their access to more meaningful peer-to-peer industry comparisons (Owen & Lloyd, 1985).

Further, accounting comparability can improve internal governance mechanisms and prevent managers from wasting corporate resources by allowing internal monitoring agents, like boards of directors, to also make meaningful comparisons with industry peers. This can improve scrutiny in management decisions, including those related to labour investment.

In short, we suggest that accounting comparability can improve transparency in managerial employment decisions for a number of powerful internal (such as boards of directors) and external (such as auditors, analysts, institutional investors, and labour unions) corporate monitors involved in governance. All these stakeholders may usefully be enabled to apply appropriate counter-balancing pressures to ultimately compel managers to make optimal employment decisions. For instance, labour unions may apply pressure against under-hiring and investors against over-hiring.

A number of past studies have examined the effects of accounting comparability on various corporate measures (Choi, Choi, Myers, & Ziebart, 2019; De Franco et al., 2011; Kim et al., 2016; Kim, Kraft, & Ryan, 2013; Lobo, Neel, & Rhodes, 2018; Zhang, 2018). In their seminal study, De Franco et al. (2011) have examined its benefits. Using a sample of US firms, they find that accounting comparability is positively related to analysts following and forecast accuracy, but negatively associated with the dispersion in the earnings of analyst forecasts. Overall, their findings indicate that accounting comparability aids in increasing the overall quality and quantity of information available to analysts about a firm by lowering the cost of information acquisition. Similarly, Kim et al. (2013) have investigated the association between accounting comparability and debt market outcomes. Using a sample of US firms, their findings suggest that increased accounting comparability reduces: (i) the estimated bid-ask spreads; (ii) credit risk spreads; and (iii) credit default swap term structure. Taken together, their results highlight the ability of accounting comparability to reduce the levels of uncertainty that market participants may have about firms' credit risk by increasing the quality and quantity of information.

Several other past studies have reported that accounting comparability enhances audit quality (Zhang, 2018), seasoned equity offerings (Shane, Smith, & Zhang, 2014), the economic outcomes of mandatory IFRS adoption (Neel, 2017), the efficiency of acquisition decisions (Chen, Collins, Kravet, & Mergenthaler, 2018), relative performance evaluation in CEO compensation (Lobo et al., 2018), and informativeness of stock prices on future earnings (Choi et al., 2019), but reduces credit risk (Kim et al., 2013), stock crash risk (Kim et al., 2016), accruals and real-earnings based management (Sohn, 2016), cost of equity capital (Imhof, Seavey, & Smith, 2017) and aggressive tax avoidance (Suk & Zhao, 2017). Notably, existing accounting comparability studies have focused almost exclusively on the informational role of accounting comparability, with few examining its potential monitoring role. These works to date have investigated neither the effect of accounting comparability on corporate employment decision-making nor the specific mechanisms through which accounting comparability influences labour investment efficiency.

There are studies that have investigated the effect of certain firm-specific characteristics on corporate employment decision-making. For example, the findings of past scholarship have indicated that labour investment efficiency is affected by financial reporting quality (Jung et al., 2014), stock price informativeness (Ben-Nasr & Alshwer, 2016), institutional investor horizons (Ghaly et al., 2020), political promotions (Kong, Liu, & Xiang, 2018), firm performance (Cao & Rees, 2019), and CEO-director ties (Khedmati, Sualihu, & Yawson, 2019). As before, none of the existing labour investment efficiency studies has investigated its potential relationship with accounting comparability, a unique cross-firm attribute. These limitations, therefore, offer opportunities for unique contributions to both the accounting comparability and corporate employment decision-making strands of the existing literature.

Therefore, we seek to contribute to the extant accounting comparability and labour investment efficiency literature by investigating both the monitoring role of accounting comparability in firms' employment decision-making and the unique mechanisms through which it affects labour investment decisions. We test our Hypothesis using 54,601 firm-year observations for 6,295 US firms, spanning the period 1984–2015. We are particularly interested in the US labour market, which is arguably one of the largest and most efficient in the world, with entrenched liberal labour laws and regulations ('a strong culture of hire and fire'). To proxy for accounting comparability, we adopt two aggregated, firm-specific variables proposed by De Franco et al. (2011) and two alternative measures. Following Jung et al. (2014) and Khedmati et al. (2019), we measure labour investment inefficiency using abnormal net hiring (the absolute deviation from optimal labour investment).

In line with our prediction, we find a strong negative association between accounting comparability and abnormal net hiring. For instance, we document that, on average, a one-standard-deviation increase in the level of accounting comparability leads to a 4.11%–6.16% reduction in labour investment inefficiency.<sup>2</sup> We also demonstrate that accounting comparability can reduce different forms of labour investment inefficiency, namely over- or under-hiring and over- or under-firing. It does not simply affect firing or hiring per se; rather, it helps steer labour investment towards an optimal level.

Next, we investigate the mechanisms through which accounting comparability improves labour investment efficiency. Our results reveal that the relation between the two is more pronounced in firms with weak monitoring both internally (from corporate boards) and externally (from analysts, institutional investors, auditors, and labour unions). The results support our assertion that accounting comparability influences employment decision-making via external monitoring and internal governance mechanisms.

This paper makes three-fold contributions to the field. First, we document novel evidence for the monitoring role of accounting comparability in mitigating agency conflicts associated with employment decisions. Prior literature in this area has mainly focused on the informative role of accounting comparability. The seminal work by De Franco et al. (2011) argues that comparable accounting information enriches its users' information environments and enables market participants to make more accurate valuation judgements on firm performance and risk levels. In line with this research, other studies examine the impact of accounting comparability on firm credit risk (Kim et al., 2013), stock crash risk (Kim et al., 2016), analyst forecasting accuracy (De Franco et al., 2011), and audit accuracy (Zhang, 2018). However, the monitoring role of accounting comparability is largely neglected. Our study seeks not only to depart from these studies, but also extend them, by exploring the monitoring role of accounting comparability in employment decision-making, with results suggesting it serves as an important monitoring tool supporting efficient labour investment.

Second, we contribute to the literature by identifying the mechanisms through which accounting comparability affects corporate investment efficiency, specifically by means of external monitoring and internal governance. In particular, we argue that comparable accounting information enables greater accessibility by both internal and external monitoring agents, such as analysts, institutional investors, auditors, labour unions, and boards of directors, which in turn constrains managerial opportunism in employment decisions.

Finally, our study enriches the literature on labour investment decision-making. Employment decision-making is underscored by investors, regulators, practitioners, and researchers as a core human-capital-intensive feature of modern firms (Bernanke, 2004; Jung et al., 2014). Previous literature examines the impact of firm-specific attributes, such as accounting quality (Jung et al., 2014), CEO-director ties (Khedmati et al., 2019), and the promotion incentives of politicians (Kong et al., 2018) on labour investment. Distinct from these studies using firm-specific factors, we show that accounting comparability, a cross-firm attribute, plays an important monitoring role in corporate employment decisions, even after controlling for various firm-specific attributes.

The article proceeds as follows. Section 2 reviews the related literature and develops our Hypothesis. The research methodology, sample construction, and data are described in Section 3. We present primary empirical results in Section 4. Section 5 offers robustness checks related to our main findings, while Section 6 concludes.

## 2. Literature review and hypothesis development

### 2.1. The inefficiency in employment decision-making

The importance of labour investment has been underscored by previous research. Maintaining optimal levels of employment is economically significant to firms. Hamermesh (1995) notes that labour capital represents around two-thirds

<sup>2</sup> This economic effect is based on the results shown in Table 2.

of the cost of producing goods and services. According to the US Census Bureau's Annual Survey of Manufacturers reports, US payroll and employee benefits in 2016 cost USD839 billion compared to USD168 billion in capital expenditure. Deviations from optimal labour investment can be costly and detrimental to firms' competitive advantage (Becker, 1962), productivity (Hansson et al., 2004) and ultimately their future performance (Jung et al., 2014; Khedmati et al., 2019; Pinnuck & Lillis, 2007).

A salient feature of labour investment is that employment decisions are largely driven by private information available to managers internally, such as employee skills profiles and productivity. Privileged access to such information allows self-interested managers to participate in empire-building activities, such as over-hiring or under-firing employees (Jensen, 1986; Richardson, 2006) which may lead to over-investment in labour. Williamson (1963) speculates that managers' personal desires for promotion, power and prestige may incentivise them to expand staffing beyond optimal levels. Labour over-investment could also occur if managers resist firing unproductive employees in a mutually beneficial arrangement (Ghaly et al., 2020). It is argued that managers tend to retain poorly performing employees in order to avoid cost and effort associated with company layoffs (Bertrand & Mullainathan, 2003). Similarly, Atanassov and Kim (2009) document the incidence of underperforming managers increasing value-reducing asset sales to prevent large-scale layoffs, thereby garnering reciprocal employee support for managerial retention.

Meanwhile, self-interested managers may also under-hire or over-fire employees in order to meet short-term earnings targets (Ghaly et al., 2020). Prior studies (Froot, Perold, & Stein, 1992; von Thadden, 1995) suggest that managers concerned with short-term stock price may turn down profitable projects in the face of pressure from myopic outsiders. Even without external pressure, managers may not proceed with potentially valuable investment opportunities in the interests of their work-life balance, preferring 'the quiet life' (Bertrand & Mullainathan, 2003). Supporting this view, Graham, Harvey, and Rajgopal (2005) argue that managers may eliminate or postpone hiring in order to avoid missing earnings targets. As a result, concerns over short-term earnings targets may indeed result in under-investment in labour.

## 2.2. *The monitoring role of accounting comparability*

High quality accounting information can enhance the monitoring abilities of investors and other stakeholders (Bushman & Smith, 2001; Healy & Palepu, 2001). When corporate managers are less accountable to shareholders and stakeholders, they are more prone to pursuing private interests, potentially resulting in misallocation of corporate resources and destruction of firm value. High quality accounting information reduces information asymmetry and the risk of agency conflict between managers and outsiders, which enhances the ability of shareholders and other stakeholders to monitor managerial decision-making (Bushman & Smith, 2001; Healy & Palepu, 2001). This can prevent managers from taking projects that expropriate shareholder interests (Cheng & Wu, 2018) and it can discourage earnings manipulation (Kaszniak, 1999).

Comparability, as an important qualitative characteristic of accounting information, is expected to play a significant role in monitoring and thereby governing management behaviour. Diversity in accounting methods utilised across different firms increases costs for outsiders and market participants needing to interpret their accounting information and assess performance (Choi et al., 2019; Gong, Li, & Zhou, 2013). Conversely, comparable financial reporting can reduce effort in judgement calculations, according to the literature on mandatory IFRS adoption that promotes standardised financial reporting information (Florou & Pope, 2012; Yip & Young, 2012; Yu & Wahid, 2014). Likewise, Kim et al. (2013) maintain, *inter alia*, that accounting information comparability could relieve the efforts expended by creditors in analysing and evaluating various firms against their peers.

Furthermore, distinct from other qualitative characteristics focusing on firm-specific financial items and often computed independently, comparability empowers stakeholders to draw sharper inferences about economic similarities and differences across comparable firms. Specifically, the usefulness of accounting information "depends to a great extent on the user's ability to relate it to some benchmark" (Financial Accounting Standards Board (FASB) (1980), pp. CON2-3). De Franco et al. (2011) posit that accounting information comparability enhances analysts' understanding of how economic events translate into accounting performance, which allows for more accurate and less dispersed analyst forecasting.

With the lower costs of acquiring and processing information and the higher information quality available to users, information becomes more transferrable within and among comparable firms. This can significantly reduce the monitoring costs of internal and external stakeholders, such as analysts, institutional investors, auditors, labour unions, and corporate boards (De Franco et al., 2011). Therefore, we argue that accounting comparability could serve as an effective governance tool in mitigating agency problems. In particular, through inferences based on the disclosures of comparable industry peers, investors can detect opportunistic behaviours of managers, even when undisclosed; therefore, anticipating this, managers of firms with more comparable financial reporting may feel disincentivised towards opportunistic practices (Kim et al., 2016). Supporting this view, Sohn (2016) documents fewer managers' accrual-based earnings management activities that conceal private benefits when located within firms using greater accounting comparability. In a similar vein, Suk and Zhao (2017) argue that accounting information comparability assists in the detection of tax evasion or fraudulent activities; as a result, managers are less inclined to engage in aggressive tax avoidance.

### 2.3. Accounting comparability and employment decision-making

We argue that comparable accounting information can serve as an effective monitoring and governance tool and, consequently, inhibit managers from engaging in opportunistic employment decision-making practices.<sup>3</sup> It can influence the efficiency of labour investment through the following two mechanisms: (i) external monitoring and (ii) internal governance.

First, accounting comparability enriches the quality of information available to external monitoring agents, and thereby enhances their monitoring ability, which can ultimately lead to more efficient labour investment. Specifically, managerial opportunism in investment decisions can be curbed by intense monitoring from external stakeholders, such as analysts, institutional investors, and auditors. [De Franco et al. \(2011\)](#) contend that financial analysts play an important monitoring role by serving as information intermediaries between outsiders and insiders, and by disclosing information to the public via their forecasts. Similarly, auditors are said to have a monitoring effect that can reduce the likelihood of poor client investment choices ([Bae, Choi, Dhaliwal, & Lamoreaux, 2017](#); [Kim, Chung, & Firth, 2003](#)). Recent literature suggests that external monitoring by institutional investors helps mitigate agency conflict and reduces inefficiency in capital and labour investments ([Cella, 2020](#); [Chen, Goldstein, & Jiang, 2007](#); [Ghaly et al., 2020](#)).

The monitoring role of these outside stakeholders is argued to be influenced by the level of information available to them ([Chen, Xie, & Zhang, 2017](#); [Zhang, 2018](#)). It is suggested that comparability of financial accounts can improve analysts' information environment by making it easier to draw comparisons among industry peers. Analysts may inadvertently pressure managers towards making optimal labour investment decisions by improving the accuracy of their forecasts ([Byard et al., 2011](#)). Specifically, with comparable employee-related information, such as staff turnover costs, financial analysts can produce more precise and less dispersed forecasts, which can assist investors with greater insights into firms' labour investment decisions. This process may inhibit managers from undertaking opportunistic employment decisions, such as over-firing. Direct interactions with management in the process of calculating earnings forecasts can help financial analysts to directly monitor and thereby influence corporate hiring and firing decisions ([Chen et al., 2017](#)).

Similarly, comparable financial accounts can allow institutional investors to evaluate the efficiency of labour investment decisions through facilitating comparisons with industry peers, as well as by informing private meetings and votes on management proposals ([Kim et al., 2016](#)). Especially for long-term institutional investors, comparable information on human capital usage may allow them to apply greater pressure on corporate resource efficiently. For example, with comparable industry-peer information, these investors may push against over-hiring in order to maximise shareholder value. Also, the availability of employee-related information, like staff recruitment and retention costs, across comparable clients may help improve audit efficiency and accuracy, enhancing the ability of auditors to influence corporate employment decisions through their recommendations arising from risk assessments ([Zhang, 2018](#)).

Further, accounting comparability can enhance external monitoring by labour unions, which are directly linked to corporate employment decision-making, being often concerned with protecting and representing employee rights. Thus, they may gain powerful influence over firms' labour investment decisions through impacting political and stakeholder interests ([Banning & Chiles, 2007](#)). Unions often rely on published employment-related information when negotiating labour investment decisions with management. Hence, their bargaining power will improve if disclosed information is comparable ([Owen & Lloyd, 1985](#)). Therefore, comparable accounting information is expected to enhance the monitoring role of labour unions by reducing the reliance on information disclosed in singular management reports ([Banning & Chiles, 2007](#)). This may in turn bring about certain efficiencies in labour investment.

Second, accounting comparability can also improve internal control mechanisms and prevent managers from wasting corporate resources, by allowing internal monitoring agents like boards of directors to make meaningful comparisons with industry peers, which may also improve corporate employment decisions. Given that CEOs typically focus on strategic decisions, including those on corporate human resourcing ([Sharon, 2016](#)), ineffective monitoring by the board may mean failing to guard against managerial opportunism and thus, distortions in corporate investment ([Fracassi & Tate, 2012](#)). By contrast, effective internal monitoring can enhance the alignment of corporate employment decision-making with corporate strategy, leading to value creation in the short-, medium-, and long-term. [Khedmati et al. \(2019\)](#) find that stronger CEO ties with board members can impair the effectiveness of internal governance and result in suboptimal labour investment decisions. By drawing comparisons on employee-related matters, such as training and development expenses, with their peers through accounting comparability, internal monitoring agents like boards of directors could enjoy more meaningful insights in

<sup>3</sup> In this paper, we focus on the monitoring role of comparability in employment decisions. However, it is possible that enhanced comparability reduces inefficiency in employment decisions via increasing the funds available for labour investments. With lower information acquisition and processing costs, outside capital suppliers will tend to provide firms with more sufficient funding and charge less for it ([Kim et al., 2013](#); [Shane et al., 2014](#)), which allows managers to optimise labour investment. In an untabulated test, we examine the impact of comparability on labour investment inefficiency for sub-samples with high and low degrees of financial constraint, which is proxied by the Whited-Wu index ([Whited & Wu, 2006](#)). We partition our sample into firms with high financial constraints (those with an above-median Whited-Wu index each year) versus firms with low financial constraints (those with a below-median Whited-Wu index each year). The results show that the coefficients on the comparability proxies are statistically and negatively significant only for the sub-sample with high financial constraints. This implies that accounting comparability could also improve employment decision-making by increasing funds available for labour investment.

managing companies' workforces. This may enable them to apply appropriate counter-balancing pressures, like reducing under-firing, and ultimately compel managers to undertake optimal employment decisions.

In sum, we propose that comparable accounts could mitigate agency conflict through external monitoring and internal governance mechanisms, which can ultimately facilitate efficient labour investment.

**Hypothesis.** *Accounting comparability has a negative impact on labour investment inefficiency.*

### 3. Data and research design

#### 3.1. Labour investment efficiency measure

Our primary measure of labour investment efficiency is constructed based on the method of Ben-Nasr and Alshwer (2016), Li (2011), and Pinnuck and Lillis (2007). We first adopt Pinnuck and Lillis's (2007) labour demand model to determine the expected level of net hiring. This model is widely used in recent literature to examine the deviations from the optimal hiring practices (Ben-Nasr & Alshwer, 2016; Ghaly et al., 2020; Jung et al., 2014; Khedmati et al., 2019). The model takes the following form:

$$\begin{aligned} \text{Net\_Hiring}_{i,t} = & \alpha + \beta_1 \text{Sales\_Growth}_{i,t} + \beta_2 \text{Sales\_Growth}_{i,t-1} + \beta_3 \text{ROA}_{i,t} \\ & + \beta_4 \Delta \text{ROA}_{i,t} + \beta_5 \Delta \text{ROA}_{i,t-1} + \beta_6 \text{Return}_{i,t} + \beta_7 \text{Size}_{i,t-1} + \beta_8 \text{Quick}_{i,t-1} \\ & + \beta_9 \Delta \text{Quick}_{i,t} + \beta_{10} \Delta \text{Quick}_{i,t-1} + \beta_{11} \text{Lev}_{i,t-1} + \sum_{k=1}^5 \delta_k \text{Loss\_Bin}_{i,t-1}^k \\ & + \text{Industry Dummies} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

where *Net\_Hiring* – denoting a firm's net hiring – measures labour investments and is calculated as the percentage change in the number of employees. To estimate expected labour investment, the model includes a series of firm-specific characteristics, including sales growth (*Sales\_Growth*); return on assets (*ROA*); annual stock return (*Return*); firm size (*Size*); quick ratio (*Quick*); leverage ratio (*Lev*); loss interval indicators (*Loss\_Bin*); and industry dummies based on the 2-digit SIC.<sup>4</sup> [See Appendix A for detailed information on the construction of these variables.]

The fitted value from Eq. (1) represents expected net hiring, which measures the optimal level of labour investments justified by a set of a firm's fundamentals. A deviation of actual net hiring away from the optimal level reduces efficiency in labour investments. Thus, following Jung et al. (2014), we use abnormal net hiring ( $|Ab\_Net\_Hiring|$ ), calculated as the absolute value of the deviation from expected net hiring, as our primary proxy for labour investment inefficiency. We adopt the labour investment inefficiency proxy based on expected net hiring estimated using Pinnuck and Lillis's (2007) model in the main analysis due to its conceptual appeal and wide use in the extant literature. However, in Section 5.3 we consider alternative proxies based on augmented labor demand models or other approaches as a robustness check.

#### 3.2. Accounting comparability measure

We construct our proxies for accounting comparability based on the underlying logic that two firms' accounting systems are more comparable if they report similar accounting numbers given the same set of economic events (De Franco et al., 2011; Lobo et al., 2018). Following De Franco et al. (2011), we use earnings as a proxy for accounting numbers decided by individual firms, and choose returns as a summary measure of the underlying economic events. For each firm-year, we first estimate the firm *i*'s accounting system by running Eq. (2) using firm *i*'s 16 previous quarters of data,

$$\text{Earnings}_{i,t} = \alpha_i + \beta_i \text{Return}_{i,t} + \varepsilon_{i,t} \quad (2)$$

where *Earnings<sub>i,t</sub>* refers to the quarterly net income before extraordinary items deflated by the beginning-of-period market value of equity, and *Return<sub>i,t</sub>* denotes the stock price return during quarter *t*. The estimated coefficients,  $\hat{\alpha}_i$  and  $\hat{\beta}_i$ , represent the accounting system that maps firm *i*'s economic events (returns) into accounting numbers (reported earnings). Similarly, the accounting system of firm *j* from the same 2-digit SIC industry as firm *i* is proxied by  $\hat{\alpha}_j$  and  $\hat{\beta}_j$ , estimated using the firm *j*'s earnings and returns.

Then, we measure the similarities in the accounting systems of firms *i* and *j* by comparing their respective accounting response to the same set of economic events. Specifically, we calculate the predicted earnings of firms *i* and *j* using their accounting functions with firm *i*'s economic events,

<sup>4</sup> In line with Pinnuck and Lillis (2007), we find that net hiring is positively related to sales growth, return on assets, annual stock return, firm size and quick ratio, and negatively associated with leverage and loss interval indicators.

$$E(\text{Earnings})_{i,t} = \hat{\alpha}_i + \hat{\beta}_i \text{Return}_{i,t} \quad (3)$$

$$E(\text{Earnings})_{j,t} = \hat{\alpha}_j + \hat{\beta}_j \text{Return}_{j,t} \quad (4)$$

where  $E(\text{Earnings})_{i,t}$  is firm  $i$ 's predicted earnings given firm  $i$ 's accounting function and firm  $i$ 's return in period  $t$ , and  $E(\text{Earnings})_{j,t}$  is firm  $j$ 's predicted earnings given firm  $j$ 's accounting function and firm  $j$ 's return in period  $t$ . The pair-wise comparability between firms  $i$  and  $j$  ( $\text{Compacct}_{i,j,t}$ ) is calculated as the negative value of the average absolute difference between the predicted earnings using firm  $i$ 's and firm  $j$ 's accounting functions:

$$\text{Compacct}_{i,j,t} = -\frac{1}{16} \sum_{t-15}^t |E(\text{Earnings})_{i,t} - E(\text{Earnings})_{j,t}| \quad (5)$$

A smaller difference between  $E(\text{Earnings})_{i,t}$  and  $E(\text{Earnings})_{j,t}$  results in a higher value of  $\text{Compacct}_{i,j,t}$  and indicates a greater degree of comparability between firm  $i$ 's and firm  $j$ 's accounting functions. We estimate  $\text{Compacct}_{i,j,t}$  for each firm  $i$ /firm  $j$  combination ( $i \neq j, j = 1, \dots, J$ ), for  $J$  firms within the same 2-digit SIC industry. This approach explicitly controls for similarities in the underlying economic events in an attempt to isolate financial statement comparability (De Franco et al., 2011). Finally, we measure firm  $i$ 's comparability  $\text{Compacct}_{i,t}$ , using (i) the median  $\text{Compacct}_{i,j,t}$  for all firms  $j$  in the same industry as firm  $i$  during year  $t$  ( $\text{CompacctInd}_{i,t}$ ), (2) the average  $\text{Compacct}_{i,j,t}$  of the 10 firms  $j$  with the highest comparability to firm  $i$  during year  $t$  ( $\text{Compacct10}_{i,t}$ ).<sup>5</sup> Additionally, following De Franco et al. (2011), we consider two alternative measures of accounting comparability, labelled  $\text{CompacctBasu}_{i,t}$  and  $\text{CompacctPle}_{i,t}$ . The variable  $\text{CompacctBasu}_{i,t}$  is based on Basu's (1997) piece-wise linear model and captures the asymmetric timeliness of earnings, while  $\text{CompacctPle}_{i,t}$  is based on Collins et al.'s (1994) "prices lead earnings" model and captures the lead-lag relation between return and earnings. Appendix C provides detailed information on these two comparability measures.

### 3.3. Empirical specification

To investigate whether accounting comparability improves corporate employment decisions, we estimate the following regression:

$$\begin{aligned} |\text{Ab\_Net\_Hiring}|_{i,t} = & \alpha + \beta_1 \text{Compacct}_{i,t-1} + \beta_2 \text{MTBV}_{i,t-1} + \beta_3 \text{Size}_{i,t-1} \\ & + \beta_4 \text{Quick}_{i,t-1} + \beta_5 \text{Lev}_{i,t-1} + \beta_6 \text{Div\_Payer}_{i,t-1} + \beta_7 \text{Tangible}_{i,t-1} \\ & + \beta_8 \text{Loss}_{i,t-1} + \beta_9 \text{CFO\_Vol}_{i,t-1} + \beta_{10} \text{Sales\_Vol}_{i,t-1} + \beta_{11} \text{IO}_{i,t-1} \\ & + \beta_{12} \text{Stock\_Cov}_{i,t-1} + \beta_{13} \text{HHI}_{i,t-1} + \beta_{14} \text{AQ}_{i,t-1} + \beta_{15} \text{POP}_{i,t-1} \\ & + \beta_{16} \text{Central}_{i,t-1} + \beta_{17} \text{Net\_Hiring\_Vol}_{i,t-1} + \beta_{18} \text{Labour\_Intensity}_{i,t-1} \\ & + \beta_{19} \text{Union}_{i,t-1} + \beta_{20} |\text{Ab\_Other\_Invest}|_{i,t} \\ & + \text{Industry\&Year Dummies} + \varepsilon_{i,t} \end{aligned} \quad (6)$$

where  $|\text{Ab\_Net\_Hiring}|$  and  $\text{Compacct}$  are labour investment inefficiency and accounting comparability measures, as defined in Sections 3.1 and 3.2, respectively. Motivated by prior literature (Biddle & Hilary, 2006; Chen & Vann, 2017; Jung, Lee, & Yang, 2016; Lara, Osmá, & Penalva, 2016), we include a number of firm- and industry-level controls in our model and define them in Appendix A. Primarily, we include factors that affect investment generally, including market-to-book ratio ( $\text{MTBV}$ ), firm size ( $\text{Size}$ ), quick ratio ( $\text{Quick}$ ), leverage ratio ( $\text{Lev}$ ), dividend payer dummy ( $\text{Div\_Payer}$ ), tangible assets ( $\text{Tangible}$ ), loss dummy ( $\text{Loss}$ ), operating cash flow volatility ( $\text{CFO\_Vol}$ ), sales revenue volatility ( $\text{Sales\_Vol}$ ), institutional ownership ( $\text{IO}$ ) and product market competition ( $\text{HHI}$ ). Further, although our comparability measures from De Franco et al. (2011) are unlikely affected by underlying economic similarities, we also include a variable to ensure our comparability measures reflect accounting comparability with industry peers after controlling for similarities in underlying economic events. In particular, we use the stock return co-movement ( $\text{Stock\_Cov}$ ) to capture the similarity between a firm's underlying economic fundamentals and that of its industry peers.

We view financial statement comparability as a distinct dimension of accounting information that facilitates superior comparisons among peer firms. However, our comparability proxies essentially measure the comparability of earnings and it is possible that accounting comparability is correlated with other earnings attributes, such as accruals quality. Furthermore, prior studies suggest that high-quality earnings encourage more efficient capital and labour investment (Biddle & Hilary, 2006; Biddle, Hilary, & Verdi, 2009; Jung et al., 2014). In order to rule out the possibility that our

<sup>5</sup> The choice of how many firms should be included in the set of comparable firms is ad hoc (De Franco et al., 2011),  $t$ . In untabulated results, we obtain similar findings using the average  $\text{Compacct}_{i,j,t}$  of the four firms  $j$ , with the highest comparability to firm  $i$  during year  $t$ , and the average  $\text{Compacct}_{i,j,t}$  for all firms  $j$  in the same industry as firm  $i$  during year  $t$ .

**Table 1**  
Sample selection and descriptive statistics.

Panel A: Sample Selection						
	Obs.					
Total number of firm-year observations from 1983 to 2015 with the necessary information to estimate the expected level of net hiring	147,214					
Less: missing values for comparability proxies	(85,225)					
Less: missing values for the control variables used in our analyses	(7,388)					
Final sample	54,601					
Number of firms	6,295					
Panel B: Descriptive Statistics						
	Obs.	Mean	Std.dev	Q1	Median	Q3
$ Ab\_Net\_Hiring _{i,t}$	54601	0.160	0.267	0.043	0.092	0.176
$CompacctInd_{i,t-1}$	54601	-0.026	0.026	-0.029	-0.017	-0.011
$CompacctIO_{i,t-1}$	54601	-0.010	0.016	-0.010	-0.004	-0.002
$CompacctBasu_{i,t-1}$	53154	-0.035	0.023	-0.041	-0.029	-0.021
$CompacctPle_{i,t-1}$	51173	-0.032	0.022	-0.037	-0.026	-0.019
$MTBV_{i,t-1}$	54601	0.025	0.068	0.010	0.017	0.029
$Size_{i,t-1}$	54601	0.619	0.273	0.398	0.667	0.864
$Quick_{i,t-1}$	54601	1.966	3.123	0.765	1.189	2.033
$LeV_{i,t-1}$	54601	0.235	0.218	0.061	0.212	0.352
$Div\_Payer_{i,t-1}$	54601	0.478	0.500	0.000	0.000	1.000
$Tangible_{i,t-1}$	54601	0.321	0.247	0.119	0.253	0.479
$Loss_{i,t-1}$	54601	0.280	0.449	0.000	0.000	1.000
$CFO\_Vol_{i,t-1}$	54601	0.067	0.173	0.016	0.031	0.065
$Sales\_Vol_{i,t-1}$	54601	0.033	0.103	0.001	0.004	0.019
$IO_{i,t-1}$	54601	0.328	0.321	0.000	0.250	0.606
$Stock\_Cov_{i,t-1}$	54601	0.041	0.057	0.000	0.020	0.050
$HHI_{i,t-1}$	54601	0.064	0.054	0.034	0.050	0.073
$AQ_{i,t-1}$	54601	-0.071	0.083	-0.086	-0.048	-0.027
$Pop_{i,t-1}$	54601	13.683	1.098	13.206	13.680	14.277
$Central_{i,t-1}$	54601	0.863	0.344	1.000	1.000	1.000
$Net\_Hiring\_Vol_{i,t-1}$	54601	0.303	0.915	0.075	0.143	0.267
$Labour\_Intensity_{i,t-1}$	54601	0.008	0.013	0.002	0.005	0.010
$Union_{i,t-1}$	54601	0.138	0.131	0.040	0.094	0.194
$ Ab\_Other\_Invest _{i,t}$	54601	0.087	0.127	0.034	0.066	0.100

Note: Panel A shows our sample selection procedure. Panel B presents descriptive statistics for the labour investment, comparability, and control variables used in our main analysis. All variables are defined in [Appendix A](#).

measures of comparability may simply reflect the earnings quality of a company, and thus, affect labour decisions, we include accounting quality (AQ), as a control variable in our regressions.<sup>6</sup>

Following [Jung et al. \(2014\)](#) and [Ghaly et al. \(2020\)](#), we also consider three other factors that may impact abnormal net hiring, namely the standard deviation of *Net\_Hiring* over the previous five years (*Net\_Hiring\_Vol*) to control for the volatility of net hiring; the ratio of the number of employees to total assets (*Labour\_Intensity*) in order to control for labour intensity; and the industry-level unionisation rate (*Union*) in order to control for labour protection. Further, to account for any indirect impact on labour investment practices from other capital investment decisions, we incorporate abnormal non-labour investments ( $|Ab\_Other\_Invest|$ ) in our model. In addition, existing literature ([Call, Campbell, Dhaliwal, & Moon, 2017](#); [Hamm, Jung, & Lee, 2018](#); [John, Knyazeva, & Knyazeva, 2011](#)) contends that a firm's geographic location is an important determinant of labour adjustment costs, employee quality, labour protection, and the firm's access to labour and capital markets. Therefore, following [Jiraporn, Jiraporn, Boeprasert, and Chang \(2014\)](#) and [John et al. \(2011\)](#), we include county-level population (*POP*) and central location (*Central*) to control for the effects of location-specific variables on employment decisions.<sup>7</sup>

Our comparability proxies and all the controls excluding non-labour investment efficiency are lagged by one period. In addition, we include industry and year fixed-effects by adding industry dummies based on the 2-digit SIC and year dummies, and cluster standard errors at the firm level in all estimations ([Petersen, 2009](#)).

<sup>6</sup> We also perform our analysis controlling for other earning attributes, such as earnings predictability ([Dechow & Dichev, 2002](#)), earnings smoothness ([Kothari, Leone, & Wasley, 2005](#)), and conditional conservatism ([Khan & Watts, 2009](#)). Untabulated results show that our inferences remain the same after controlling for these factors.

<sup>7</sup> We also preform our analysis with additional controls, such as price informativeness, [Gompers, Ishii, and Metrick's \(2003\)](#) G-index, and [Bebchuck, Cohen, and Ferrell's \(2009\)](#) E-index. The results are materially unchanged.



### 3.4. Sample and descriptive statistics

We obtain stock returns data from the Centre for Research in Security Prices (CRSP) database; firm- and industry-level financial data from the COMPUSTAT database; institutional shareholdings data from the Thomson Financial Institutional Holdings (13f) database; board of directors' characteristics data from the BoardEx database; and industry unionisation data from the Hirsch and Macpherson's (2003) Union Membership and Coverage (UMC) database.

Our initial sample includes 147,214 firm-year observations spanning 1984 to 2015, with sufficient data to estimate the expected value of net hiring using Eq. (1). The period begins in 1984 because 1983 is the first year covered by the UMC database and our analysis requires one year of historical industry unionisation rate data. We exclude a total of 85,225 observations lacking sufficient data for our comparability measures, and a further 7,388 observations that have missing values for the institutional ownership, labour union data and other control variables used in our analyses. This process yields a final sample of 54,601 firm-year observations, representing 6,295 firms, with information sufficient to estimate the baseline model.<sup>8</sup> Panel A of Table 1 outlines the sample selection process. To mitigate the influences of outliers, all the firm-level variables are winsorised at the top and bottom one-percentiles.

Panel B of Table 1 reports the descriptive statistics for all the variables included in Eq. (6). The mean (median) of  $|Ab\_Net\_Hiring|$  is 0.160 (0.092), and the means (medians) of *CompacctInd*, *Compacct10*, *CompacctBasu*, and *CompacctPle* are  $-0.026$  ( $-0.017$ ),  $-0.010$  ( $-0.004$ ),  $-0.035$  ( $-0.029$ ) and  $-0.032$  ( $-0.026$ ), respectively. These distributions are similar to those reported in Pinnuck and Lillis (2007), De Franco et al. (2011), Ben-Nasr and Alshwer (2016) and Kim et al. (2016).

## 4. The impact of comparability on employment decisions

### 4.1. Baseline results

We first explore the role of accounting comparability in corporate employment decisions by estimating Eq. (6) and report the results in Table 2. In Model (1), *CompacctInd* is used as the proxy for the comparability of firms' financial statements. The result shows that comparability is significantly and negatively associated with abnormal net hiring at the 1% level. This supports our Hypothesis that accounting comparability improves efficiencies in labour investments. The negative effect is also economically significant: one-standard-deviation increase in the level of comparability in year  $t-1$  leads to a 6.16% reduction in labour investment inefficiency in year  $t$ .<sup>9</sup> Models (2) to (4) in Table 2 report the results of estimating Eq. (6) using alternative proxies for financial statement comparability (*Compacct10*, *CompacctBasu*, and *CompacctPle*). The estimated coefficients of these alternative comparability measures are all significantly negative at the 1% level, corroborating the finding in Model (1).

With regards to the control variables, consistent with prior literature (e.g., Ben-Nasr & Alshwer, 2016; Jung et al., 2014), firms with more tangible assets (*Tangible*), dividend pay-out (*Div\_Payer*), higher institutional ownership (*IO*), and greater labour intensity (*Labour\_Intensity*) tend to exhibit higher levels of efficiency in net hiring practices. More liquid firms (*Quick*), and firms with higher operating and net hiring volatility (*CFO\_Vol*, *Net\_Hiring\_Vol*) and loss (*Loss*) invest less efficiently in labour. Also, we find that centrally located firms (*Central*) and firms headquartered in counties with larger population size (*Pop*) are less efficient in labour investment. Furthermore, the results show that high-quality earnings can reduce abnormal net hiring, consistent with Jung et al. (2014). The findings confirm our conjecture that accounting comparability, which allows users to perform cross-firm comparisons and captures a distinct attribute of accounting information, can affect firms' decisions in labour investment. In addition, we find that the estimated coefficients, across all the specifications, on abnormal non-labour investments ( $|Ab\_Other\_Invest|$ ) are statistically significant and positive, indicating that non-labour and labour investments are complementary. These findings imply that the relationship between comparability and abnormal net hiring is not entirely driven by the influence of comparability on other investments.

One potential concern for our results is that accounting comparability and corporate net hiring practices are jointly determined by some unobserved factors. To address this concern, we repeat the analysis of Models (1) to (4), but using firm fixed-effects with results reported in Models (5) to (8) of Table 2. The estimated coefficients on our comparability proxies remain significantly negative at the 1% level, consistent with our earlier findings. Overall, results in Table 2 imply that comparability manifests a robust and negative effect on labour investment inefficiency, which provides supportive evidence for our Hypothesis that higher comparability facilitates more efficient labour investment.

### 4.2. Specific forms of labour investment inefficiency

We next explore the role of comparability in reducing any deviation of labour investment away from the optimal, namely over- or under-investment as suboptimal. Over-investment occurs when managers over-hire and/or under-fire employees working on unprofitable and non-strategic projects. Under-investment, on the other hand, occurs when managers under-hire

<sup>8</sup> All of our inferences remain unchanged after excluding financial and utility companies in our sample.

<sup>9</sup> The sample average value of  $|Ab\_Net\_Hiring|$  is 0.160. The estimated coefficient of *CompacctInd* is  $-0.379$  and its standard deviation is 0.026. A one-standard-deviation increase in *CompacctInd* <sub>$t-1$</sub>  results in a 6.05% decrease in the abnormal net hiring ( $-0.379 \times 0.026/0.160 = -0.0616$ ).

**Table 2**  
The impact of accounting comparability on employment decision-making.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>CompacctInd</i> <sub><i>i,t-1</i></sub>	-0.379 (-5.78)***				-0.302 (-5.38)***			
<i>Compacct10</i> <sub><i>i,t-1</i></sub>		-0.411 (-4.06)***				-0.376 (-4.25)***		
<i>CompacctBasu</i> <sub><i>i,t-1</i></sub>			-0.352 (-5.02)***				-0.278 (-4.54)***	
<i>CompacctPle</i> <sub><i>i,t-1</i></sub>				-0.411 (-5.19)***				-0.341 (-4.96)***
<i>MTBV</i> <sub><i>i,t-1</i></sub>	0.045 (1.88)*	0.046 (1.92)*	0.029 (1.24)	0.025 (0.98)	0.046 (2.77)***	0.047 (2.83)***	0.029 (1.72)*	0.031 (1.80)*
<i>Size</i> <sub><i>i,t-1</i></sub>	-0.008 (-0.99)	-0.010 (-1.23)	-0.004 (-0.52)	-0.005 (-0.65)	-0.052 (-5.93)***	-0.054 (-6.17)***	-0.050 (-5.67)***	-0.048 (-5.49)***
<i>Quick</i> <sub><i>i,t-1</i></sub>	0.007 (9.57)***	0.007 (9.51)***	0.007 (9.50)***	0.007 (9.32)***	0.006 (13.23)***	0.006 (13.20)***	0.006 (13.90)***	0.006 (13.67)***
<i>Levi</i> <sub><i>i,t-1</i></sub>	0.005 (0.52)	0.006 (0.68)	0.007 (0.85)	0.003 (0.31)	-0.016 (-2.35)**	-0.016 (-2.24)**	-0.012 (-1.72)*	-0.021 (-2.84)***
<i>Div_Payer</i> <sub><i>i,t-1</i></sub>	-0.017 (-4.92)***	-0.017 (-5.02)***	-0.017 (-5.02)***	-0.015 (-4.49)***	-0.009 (-2.61)***	-0.010 (-2.70)***	-0.009 (-2.42)**	-0.008 (-2.30)**
<i>Tangible</i> <sub><i>i,t-1</i></sub>	-0.057 (-4.95)***	-0.057 (-4.99)***	-0.060 (-5.22)***	-0.054 (-4.66)***	-0.011 (-1.30)	-0.013 (-1.48)	-0.014 (-1.61)	-0.007 (-0.82)
<i>Loss</i> <sub><i>i,t-1</i></sub>	0.024 (6.80)***	0.027 (7.37)***	0.027 (7.41)***	0.024 (6.69)***	0.011 (3.51)***	0.012 (4.00)***	0.012 (4.07)***	0.011 (3.75)***
<i>CFO_Vol</i> <sub><i>i,t-1</i></sub>	0.066 (2.35)**	0.069 (2.49)**	0.067 (2.40)**	0.043 (1.33)	0.066 (8.45)***	0.069 (8.81)***	0.069 (8.71)***	0.047 (5.58)***
<i>Sales_Vol</i> <sub><i>i,t-1</i></sub>	-0.001 (-0.09)	0.001 (0.07)	-0.000 (-0.01)	0.002 (0.19)	-0.040 (-2.49)**	-0.039 (-2.46)**	-0.041 (-2.55)**	-0.034 (-2.15)**
<i>IO</i> <sub><i>i,t-1</i></sub>	-0.036 (-7.06)***	-0.038 (-7.44)***	-0.038 (-7.53)***	-0.038 (-7.39)***	-0.050 (-7.99)***	-0.052 (-8.25)***	-0.053 (-8.39)***	-0.052 (-8.37)***
<i>Stock_Cov</i> <sub><i>i,t-1</i></sub>	-0.057 (-2.10)**	-0.060 (-2.19)**	-0.056 (-2.01)**	-0.052 (-1.88)*	-0.004 (-0.13)	-0.006 (-0.20)	-0.008 (-0.27)	0.012 (0.39)
<i>HHi</i> <sub><i>i,t-1</i></sub>	0.049 (1.88)*	0.049 (1.88)*	0.045 (1.78)*	0.039 (1.57)	0.043 (1.19)	0.039 (1.09)	0.038 (1.04)	0.039 (1.09)
<i>AQ</i> <sub><i>i,t-1</i></sub>	-0.190 (-5.38)***	-0.192 (-5.43)***	-0.198 (-5.57)***	-0.198 (-5.19)***	-0.135 (-7.64)***	-0.136 (-7.69)***	-0.134 (-7.49)***	-0.132 (-7.14)***
<i>Pop</i> <sub><i>i,t-1</i></sub>	0.003 (2.75)***	0.004 (2.78)***	0.003 (2.72)***	0.004 (2.87)***	0.007 (3.49)***	0.007 (3.55)***	0.007 (3.27)***	0.008 (3.72)***
<i>Central</i> <sub><i>i,t-1</i></sub>	0.009 (2.49)**	0.008 (2.35)**	0.010 (2.88)***	0.008 (2.23)**	0.005 (0.77)	0.005 (0.73)	0.008 (1.16)	0.005 (0.69)
<i>Net_Hiring_Vol</i> <sub><i>i,t-1</i></sub>	0.011 (3.70)***	0.011 (3.72)***	0.011 (3.69)***	0.011 (3.85)***	-0.004 (-3.05)***	-0.004 (-3.06)***	-0.004 (-2.77)***	-0.004 (-2.75)***
<i>Labour_Intensity</i> <sub><i>i,t-1</i></sub>	-0.788 (-5.10)***	-0.801 (-5.16)***	-0.825 (-5.54)***	-0.698 (-4.65)***	-1.483 (-9.80)***	-1.509 (-9.96)***	-1.503 (-9.83)***	-1.360 (-9.00)***
<i>Union</i> <sub><i>i,t-1</i></sub>	0.034 (1.58)	0.034 (1.57)	0.032 (1.47)	0.037 (1.63)	-0.023 (-1.26)	-0.026 (-1.44)	-0.027 (-1.48)	-0.026 (-1.43)
<i> Ab_Other_Invest</i> <sub><i>i,t</i></sub>	0.171 (5.62)***	0.173 (5.64)***	0.163 (5.53)***	0.182 (5.50)***	0.196 (19.46)***	0.198 (19.65)***	0.186 (18.74)***	0.211 (20.42)***
Intercept	0.211 (0.94)	0.215 (0.95)	0.209 (0.93)	0.206 (0.92)	0.059 (1.93)*	0.063 (2.06)**	0.064 (2.07)**	0.045 (1.49)
Industry fixed-effects	Yes	Yes	Yes	Yes				
Firm fixed-effects					Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.077	0.076	0.077	0.075	0.059	0.059	0.060	0.057
Obs.	54601	54601	53881	51339	54601	54601	53881	51339

Note: This table presents the results from the regressions of labour investment inefficiency on accounting comparability and control variables. In Models (1) to (4), we control for industry and year fixed-effects. In Models (5) to (6), we control for firm and year fixed-effects. All variables are defined in Appendix A. The *t*-statistics are computed based on the heteroscedasticity-robust standard errors clustered by firm and reported in parentheses. \*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

and/or over-fire staff working on profitable and strategic projects. Deviation from the optimal level of labour investment can create distortions in a firm's future operating performance and is likely counter to the interest of shareholders (Ghaly et al., 2020). In particular, a firm over- or under-invests if its actual net hiring is greater or less than the expected value. We estimate Eq. (6) for over- and under-investment sub-samples and report the results in Table 3.<sup>10</sup>

The results on the link between comparability and labour over-investment are reported in Models (1) to (4) of Panel A of Table 3. In Models (1) to (4), we use *CompacctInd*, *Compacct10*, *CompacctBasu*, and *CompacctPle* as proxies for financial statement comparability, respectively. We observe that the estimated coefficients of all comparability measures are negative and significant at the 5% level, implying that higher levels of comparability help alleviate labour over-investment problems.

We further deconstruct over-investment into over-hiring and under-firing by considering whether a firm's labour force should grow or contract according to firm-specific fundamentals. In particular, over-hiring (or under-firing) is defined as over-

<sup>10</sup> For brevity, the coefficients of control variables are not reported in Tables 3–7. The results of control variables are similar to those reported in Table 2 and are available upon request.

**Table 3**

The impact of accounting comparability on specific types of labour investment inefficiency.

<b>Panel A: The Impact of Accounting Comparability on Over-investment in Labour</b>												
	Over-investment				Over-hiring				Under-firing			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>CompacctInd<sub>i,t-1</sub></i>	-0.383 (-2.45)**				-0.405 (-2.12)**				-0.611 (-2.90)***			
<i>Compacct10<sub>i,t-1</sub></i>		-0.618 (-2.48)**				-0.762 (-2.43)**				-0.719 (-2.35)**		
<i>CompacctBasu<sub>i,t-1</sub></i>			-0.422 (-2.42)**				-0.456 (-2.22)**				-0.773 (-2.95)***	
<i>CompacctPle<sub>i,t-1</sub></i>				-0.403 (-2.11)**				-0.524 (-2.22)**				-0.477 (-2.21)**
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.070	0.071	0.071	0.071	0.081	0.081	0.081	0.082	0.061	0.060	0.058	0.064
Obs.	18594	18594	18328	17299	15091	15091	14907	14122	3503	3503	3421	3177
<b>Panel B: The Impact of Accounting Comparability on Under-investment in Labour</b>												
	Under-investment				Under-hiring				Over-firing			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>CompacctInd<sub>i,t-1</sub></i>	-0.381 (-7.48)***				-0.338 (-6.18)***				-0.566 (-4.95)***			
<i>Compacct10<sub>i,t-1</sub></i>		-0.320 (-4.32)***				-0.255 (-3.29)***				-0.593 (-3.20)***		
<i>CompacctBasu<sub>i,t-1</sub></i>			-0.323 (-6.05)***				-0.293 (-5.04)***				-0.469 (-3.77)***	
<i>CompacctPle<sub>i,t-1</sub></i>				-0.407 (-6.86)***				-0.362 (-5.70)***				-0.622 (-4.23)***
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.149	0.147	0.147	0.144	0.149	0.147	0.147	0.143	0.128	0.125	0.126	0.127
Obs.	36007	36007	35553	34040	30905	30905	30583	29378	5102	5102	4970	4662

Note: This table presents the results of the impact of comparability on specific types of labour investment inefficiency. Panel A reports the results from the regressions of labour investment inefficiency on accounting comparability and control variables for the over-investment sub-sample, which is further deconstructed into over-hiring and under-firing sub-samples. A firm over-invests if it has positive abnormal net hiring. Over-hiring is defined as over-investments when expected net hiring is positive, and under-firing is defined as over-investments when expected net hiring is negative. Panel B reports the results from the regressions of labour investment inefficiency on accounting comparability and control variables for the under-investment sub-sample, which is further deconstructed into under-hiring and over-firing sub-samples. A firm under-invests if its abnormal net hiring is negative. Under-hiring is defined as under-investment when expected net hiring is positive, and over-firing is defined as under-investment when expected net hiring is negative. The results for the control variables are not tabulated for brevity. All variables are defined in Appendix A. All regressions include year and industry fixed-effects. The *t*-statistics are computed based on the heteroscedasticity-robust standard errors clustered by firm and reported in parentheses. \*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

investment when expected net hiring is positive (or negative) respectively. Models (5) to (8) of Panel A of [Table 3](#) present the results for the over-hiring sub-sample. The significant negative coefficients of comparability measures indicate that comparable accounting information can reduce over-investment in the period of expansion. Models (9) to (12) of Panel A of [Table 3](#) report the results for the under-firing sub-sample. All the estimated coefficients on comparability proxies are significant and negative, suggesting that financial reporting comparability can mitigate labour over-investment issues in the period of expected contraction. Therefore, our inferences regarding the effect of comparability on over-investment in labour hold in periods of both expected expansion and expected recession.

The results on the association between comparability and under-investment are reported in Models (1) to (4) of Panel B of [Table 3](#). The negative and significant coefficients on all comparability measures suggest that accounting comparability can reduce labour under-investment. Comparing the coefficients of comparability for over-investment with those of the under-investment sub-sample, we observe that accounting comparability plays a relatively greater role in alleviating over-investment problems.

Likewise, we split under-investment into under-hiring and over-firing sub-samples. Under-hiring (or over-firing) is defined as under-investment when expected net hiring is positive (or negative). Models (5) to (8) and Models (9) to (12) of Panel B of [Table 3](#) report the results for under-hiring and over-firing sub-samples, respectively. As we observe, the coefficients of all comparability measures are negative and significant at the 1% level. The results indicate that comparable financial reports can mitigate the under-investment problem in both expected expansion and expected contraction periods.

Collectively, we find that comparability can alleviate all specific forms of inefficiency in labour investments, which is consistent with our supposition. The results indicate that accounting comparability does not simply increase or reduce labour investment per se, but rather ensures it is closer to the optimal, justified by the underlying fundamentals.

#### 4.3. Mechanisms through which comparability affects employment decision-making

Our results thus far show that accounting comparability fosters more efficient labour investment. In this section, we examine the underlying mechanisms through which comparability affects firms' employment decisions. We contend that it lowers labour investment inefficiency via external monitoring and internal governance mechanisms. We expect comparability to be more useful in employment decision-making when external monitoring and/or internal governance is weaker. Because firms with these two shortcomings are more likely to benefit from comparable accounting information, we expect it to exert greater impact on them than others.

Thus, we predict that the impact of accounting comparability on employment decision-making is more pronounced in firms under weak external monitoring or with weak internal governance environments. To test the prediction, we construct sub-samples based on firms' external and internal monitoring environments. This provides us with a means to examine whether comparability increases the decision-making usefulness of accounting information under different monitoring conditions.

For the external monitoring mechanism, we argue that comparability improves transparency for a number of powerful external corporate monitors (analysts, institutional investors, auditors, and labour unions) enhancing managerial labour investment decision-making by constraining managers from undertaking suboptimal employment decisions. Since institutional investors have more influence when they are larger shareholders ([Shleifer & Vishny, 1986](#)), we adopt institutional ownership concentration (*IOC*), proposed by [Hartzell and Starks \(2003\)](#), to capture strength of institutional investor influence. Analyst coverage (*Analyst*) is used to proxy for the strength of financial analyst oversight, consistent with previous studies ([Chen et al., 2017](#); [Yu, 2008](#)) that document less opportunistic activities in firms with high analyst coverage. Higher levels of analyst coverage and institutional ownership concentration indicate stronger monitoring by financial analysts and institutional investors, respectively. We adopt Big4 indicator (*Big4*) to measure the strength of external monitoring by auditors since the Big Four accounting and professional services firms are more effective in monitoring and deterring self-interested managerial opportunistic behaviour ([Becker, Defond, Jiambalvo, & Subramanyam, 1998](#); [Francis, Maydew, & Sparks, 1999](#)). Thus, Big Four clients tend to face stronger auditor monitoring than non-Big Four clients. Further, industry-level unionisation rate (*Union*) is used to measure the bargaining power of labour unions ([Ben-Nasr & Alshwer, 2016](#)). Operating in highly unionised industries indicates that a firm faces strong labour unions monitoring [See [Appendix A](#) for detailed definitions.].

Our samples are classified into strong or weak analyst, institutional investor, and labour union monitoring sub-samples if their respective monitoring measures (*Analyst*, *IOC* and *Union*) are above or below the respective median each year. Likewise, we partition our sample into strong auditor monitoring sub-sample (firms with *Big4* equal to 1) and weak auditor monitoring sub-sample (firms with *Big4* equal to 0) [See [Appendix B](#) for detailed information on the construction of these sub-samples.]. If accounting comparability enhances external monitoring by outside stakeholders (analysts, institutional investors, auditors and labour unions), one would expect a more pronounced impact on labour investment in firms with weak external monitoring environments.

The results of our baseline model for the sub-samples under weak and strong analyst, institutional investor, auditor, and labour union monitoring are reported in Panels A – Panel D of [Table 4](#), respectively. In Panel A, Panel B, and Panel D, we find

**Table 4**  
Mechanisms through which Comparability Affect Employment Decision-Making.

<b>Panel A: Financial Analysts</b>								
	Strong Analyst Monitoring				Weak Analyst Monitoring			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>CompacctInd<sub>i,t-1</sub></i>	-0.079 (-0.74)				-0.314 (-3.23)***			
<i>Compacct10<sub>i,t-1</sub></i>		0.052 (0.36)				-0.278 (-1.90)*		
<i>CompacctBasu<sub>i,t-1</sub></i>			-0.071 (-0.57)				-0.287 (-2.69)***	
<i>CompacctPle<sub>i,t-1</sub></i>				-0.128 (-1.04)				-0.321 (-2.90)***
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.075	0.075	0.074	0.075	0.078	0.078	0.078	0.072
Obs.	15417	15417	15279	14918	15337	15337	15099	14482
<b>Panel B: Institutional Investors</b>								
	Strong Institutional Investor Monitoring				Weak Institutional Investor Monitoring			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>CompacctInd<sub>i,t-1</sub></i>	-0.088 (-1.21)				-0.455 (-4.22)***			
<i>Compacct10<sub>i,t-1</sub></i>		0.028 (0.26)				-0.558 (-3.23)***		
<i>CompacctBasu<sub>i,t-1</sub></i>			-0.073 (-0.90)				-0.453 (-3.71)***	
<i>CompacctPle<sub>i,t-1</sub></i>				-0.118 (-1.32)				-0.468 (-3.89)***
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.074	0.074	0.075	0.074	0.078	0.077	0.077	0.073
Obs.	19301	19301	19060	18597	19017	19017	18654	17878
<b>Panel C: Auditors</b>								
	Strong Auditor Monitoring				Weak Auditor Monitoring			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>CompacctInd<sub>i,t-1</sub></i>	-0.168 (-2.72)***				-0.904 (-6.47)***			
<i>Compacct10<sub>i,t-1</sub></i>		-0.036 (-0.40)				-1.450 (-6.02)***		
<i>CompacctBasu<sub>i,t-1</sub></i>			-0.139 (-2.11)**				-0.899 (-5.71)***	
<i>CompacctPle<sub>i,t-1</sub></i>				-0.203 (-2.61)***				-0.930 (-5.50)***
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.068	0.068	0.068	0.066	0.100	0.100	0.098	0.096
Obs.	36573	36573	36108	34565	18005	18005	17752	16752
<b>Panel D: Labour Unions</b>								
	Strong Labour Union Monitoring				Weak Labour Union Monitoring			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>CompacctInd<sub>i,t-1</sub></i>	-0.143 (-1.50)				-0.399 (-3.60)***			
<i>Compacct10<sub>i,t-1</sub></i>		-0.174 (-1.17)				-0.343 (-1.96)**		
<i>CompacctBasu<sub>i,t-1</sub></i>			-0.113 (-1.11)				-0.393 (-3.05)***	
<i>CompacctPle<sub>i,t-1</sub></i>				-0.066 (-0.66)				-0.508 (-3.87)***
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(continued on next page)

Table 4 (continued)

Panel D: Labour Unions								
	Strong Labour Union Monitoring				Weak Labour Union Monitoring			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.095	0.095	0.095	0.095	0.070	0.070	0.070	0.066
Obs.	19159	19159	18859	18360	19583	19583	19273	18516
Panel E: Board Monitoring								
	Strong Board Monitoring				Weak Board Monitoring			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>CompacctInd<sub>i,t-1</sub></i>	-0.089 (-0.74)				-0.666 (-3.34)***			
<i>CompacctIO<sub>i,t-1</sub></i>		-0.118 (-0.68)				-0.795 (-2.44)**		
<i>CompacctBasu<sub>i,t-1</sub></i>			-0.124 (-0.91)				-0.676 (-2.85)***	
<i>CompacctPle<sub>i,t-1</sub></i>				-0.256 (-1.50)				-0.665 (-2.90)***
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.096	0.096	0.097	0.097	0.073	0.072	0.072	0.064
Obs.	9455	9455	9343	9075	7979	7979	7898	7693

Note: This table presents the results for the impact of comparability on labour investment inefficiency for firms under weak and strong internal and external monitoring. Panel A – Panel E report the results from the regressions of labour investment inefficiency on accounting comparability and control variables for weak and strong analyst, institutional investor, auditor, labour unions, and board monitoring sub-groups, respectively. The results for the control variables are not tabulated for brevity. All variables are defined in Appendix A.1. All regressions include year and industry fixed-effects. The *t*-statistics are computed based on the heteroscedasticity-robust standard errors clustered by firm and reported in parentheses. \*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

significantly negative coefficients on comparability only for the sub-samples with weak analyst, institutional investor, labour union monitoring. Consistent with our expectation, these results indicate that accounts comparability is more useful in improving labour investment efficiency when firms are facing weak external monitoring by analysts, institutional investors, or labour unions.

In Panel C, the coefficients of comparability are negative at the 1% level of significance in all the models for the weak auditor monitoring sub-sample, and are negative and significant at the 5% or 1% level in three models for the strong auditor monitoring sub-sample. The results suggest that accounts comparability could lower labour investment inefficiency even in firms with strong auditor monitoring. The difference in coefficients on our comparability measures between these two sub-samples are all significant and better in the weak auditor monitoring sub-sample at the 1% level.<sup>11</sup> The results suggest that enhanced comparability exerts a greater effect on employment decisions for firms under weak auditor monitoring environments.

Our results from testing external monitoring mechanisms provide corroborating evidence supporting our conjecture that accounts comparability enriches information available to external monitoring agents (analysts, institutional investors, auditors, and labour unions), thereby constraining managerial opportunism in employment decisions.

Next, we examine the internal governance mechanism. Following previous literature (Ferris, Jagannathan, & Pritchard, 2003; Fich & Shivdasani, 2006; Upadhyay, Bhargava, & Faircloth, 2014), we use the fraction of independent directors holding three or more external board seats (*Busy Board*) to measure the strength of internal monitoring by boards.<sup>12</sup> Since “effective monitoring requires a commitment of time and resources” (Allen, 1992, p. 457), serving on numerous boards may distract independent directors from providing adequate monitoring of managerial decision-making (Falato, Kadyrzhanova, &

<sup>11</sup> We use seemingly unrelated estimations to compare the difference in coefficients across sub-samples.

<sup>12</sup> In an untabulated test, we use board size dummy (*Bsizedum*) as an alternative measure of board monitoring. It equals 1 if the board size is between 5 and 12 directors, and 0 otherwise (García Lara, García Osmá, Mora, & Scapin, 2017). Previous literature (García Lara et al., 2017; Higgs, 2003) suggest that firms with unusually small or large boards are less effective in monitoring managerial behaviours. Therefore, firms with a board size between 5 and 12 directors tend to have stronger monitoring by boards than those with less than 5 or more than 12 directors. We partition our sample into a strong board monitoring sub-sample (firms with *Bsizedum* equal to 1) and a weak board monitoring sub-sample (firms with *Bsizedum* equal to 0). The results are materially unchanged.

Lel, 2014; Fich & Shivdasani, 2006; Shivdasani & Yermack, 1999). Higher *Busy Board* values imply weaker board monitoring and less effective internal governance.

We partition our sample into firms under strong board monitoring environments (those with a below-median *Busy Board* each year) versus those under weak board monitoring environments (those with an above-median *Busy Board* each year). If accounting information comparability improves internal governance mechanisms, one would expect the influence of comparability on labour investment inefficiency to be more pronounced in firms under weak board monitoring environments.

We estimate Eq. (6) on the strong and weak board monitoring sub-samples and report our results in Panel E of Table 4. The coefficients on comparability are significantly negative only in the weak board monitoring sub-sample, suggesting that comparability plays a more important role in labour investment practices in firms with weak board monitoring. This finding is in line with our argument that enhanced comparability strengthens the effectiveness of internal governance by allowing internal monitoring agents like corporate boards to make meaningful comparisons with industry peers, and this, in turn, improves their oversight of managers' labour investment decisions.

Overall, the results corroborate our argument that accounting comparability improves labour investment efficiency via external monitoring and internal governance mechanisms.

## 5. Robustness tests

### 5.1. Alternative explanations: non-labour investments

Labour investment may be linked with other types of investment, such as acquisitions or marketing. Thus, a concern with our inferences is that comparability indirectly affects investments in labour through its impact on other investments. For instance, if labour investments are simply a complement to other types of investment, the other investments could potentially drive the relation between comparability and investment in labour. While we have included  $|Ab\_Other\_Invest|$  in our regressions to control for abnormal non-labour investments, in this section we perform additional analysis to rule out the possibility that our findings are attributable to other contemporaneous non-labour investments. In particular, we examine four types of investments: capital expenditure (CAPX), advertising expenditure (XAD), R&D expenditure (XRD), and acquisitions expenditure (AQC). Also, following Jung et al. (2014) and Ben-Nasr and Alshwer (2016), we investigate the total investment in capital (TOC), which is measured as the sum of capital expenditure, R&D expenditure and acquisition expenditure, less proceeds from the sale of PPE (property, plant and equipment).

For each type of non-labour investment, we split our sample into three groups based on the relationship between labour investments (net hiring) and the specific investment type: The first group comprises firms for which labour investments and other investments are positively related. That is, firms in this group increase or decrease net hiring and other investments simultaneously; thus, labour investments are likely to complement other forms of investment. The second group comprises firms for which labour investments and other investments are negatively related. Firms in this group increase (or decrease) net hiring and decrease (or increase) other types of investment; therefore, labour investments are less likely to be a complement to other investments. The third group comprises firms that report zero or a missing value for that type of investment. Then we estimate Eq. (6) separately for each sub-sample. If our findings are primarily driven by relations between comparability and non-labour investments, we would expect the results to be concentrated in the sub-sample of firms with a positive association between labour investments and non-labour investments. For example, it is unlikely that the negative impact of comparability on abnormal net hiring is attributed to acquisition expenditure if such expenses and labour investments move in opposite directions. Similarly, the results are unlikely to be driven by acquisition expenditure for firms that do not invest in acquisitions.

Table 5 reports the results controlling for the association between labour investments and non-labour investments, including capital expenditure (Panel A), advertising expenditure (Panel B), R&D expenditure (Panel C), acquisition expenditure (Panel D) and total investments in capital (Panel E). We find that, irrespective of whether labour investments and other investments move in the same or opposite directions, the impact of accounting comparability on labour investment inefficiency remains negative and statistically significant. Moreover, the estimated coefficients on comparability are still negative and economically significant in the sub-sample of firms with zero or missing values in non-labour investments.<sup>13</sup> Therefore, the negative association between comparability and abnormal net hiring is not concentrated in the sub-sample of firms in which labour investments and non-labour investments complement one another.

Collectively, these results imply that our suppositions are not instead driven by contemporaneous non-labour investments. This concurs with Benmelech et al.'s (2015) evidence that market friction has an incremental effect on labour investments beyond other capital investments, and Merz and Yashiv's (2007) finding that labour investments influence firm value even after controlling for other investments in capital.

<sup>13</sup> There is one exception in panel A for the sub-sample that reports zero or missing value for capital expenditure. However, we note that only 121 firms (0.2% of the full sample) fall into this category, resulting in a small sample.

**Table 5**

The role of non-labour investments.

<b>Panel A: Capital expenditures (CAPX)</b>			
The relation between capital expenditures and labour investments is	Positive	Negative	Zero capital expenditures or not reported
<i>CompacInd<sub>i,t-1</sub></i>	-0.408 (-7.21)***	-0.274 (-2.87)***	-0.748 (-0.28)
Control	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.084	0.068	0.267
Obs.	37194	17286	121
<b>Panel B: Advertising expenditures (XAD)</b>			
The relation between advertising expenses and labour investments is	Positive	Negative	Zero advertising expense or not reported
<i>CompacInd<sub>i,t-1</sub></i>	-0.290 (-3.18)***	-0.285 (-2.31)**	-0.424 (-6.77)***
Control	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.085	0.086	0.079
Obs.	9160	6589	38852
<b>Panel C: Research and development expenditures (XRD)</b>			
The relation between R&D expenses and labour investments is	Positive	Negative	Zero R&D expense or not reported
<i>CompacInd<sub>i,t-1</sub></i>	-0.376 (-4.85)***	-0.398 (-3.76)***	-0.364 (-4.71)***
Control	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.095	0.069	0.087
Obs.	17798	10986	25817
<b>Panel D: Acquisition expenditures (AQC)</b>			
The relation between acquisition expenses and labour investments is	Positive	Negative	Zero acquisition expense or not reported
<i>CompacInd<sub>i,t-1</sub></i>	-0.295 (-4.87)***	-0.462 (-3.68)***	-0.568 (-5.07)***
Control	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.081	0.083	0.111
Obs.	35840	8525	10236
<b>Panel E: Total investments in capital (TOC)</b>			
The relation between other investments and labour investments is	Positive	Negative	Zero other investment or not reported
<i>CompacInd<sub>i,t-1</sub></i>	-0.251 (-2.38)**	-0.762 (-3.65)***	-0.381 (-6.74)***
Control	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.100	0.112	0.077
Obs.	8301	2157	44143

Note: This table presents the results for the impact of non-labour investment on the relationship between accounting comparability and labour investment. Panel A reports the results for the sub-samples based on capital expenditure (CAPX). Panel B reports the results for the sub-samples based on advertising expenses (XAD). Panel C reports the results for the sub-samples based on R&D expenses (XRD). Panel D reports the results for the sub-samples based on acquisitions (AQC). Panel E reports the results for the sub-samples based on total investments in capital (TOC) are reported in Panel E. Each panel reports the results for the sub-sample of firms with a positive relationship between the non-labour investment in question and net hiring; for the sub-sample of firms with a negative relationship between the non-labour investment in question and net hiring; and for the sub-sample of firms with a zero or missing value for the non-labour investment in question. The results for the control variables are not tabulated for brevity. All variables are defined in Appendix A. All regressions include year and industry fixed-effects. The *t*-statistics are computed based on the heteroscedasticity-robust standard errors clustered by firm and reported in parentheses. \*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

## 5.2. Addressing endogeneity

Given the endogenous nature of accounting information and corporate decision-making, the association we find between comparability and employment decisions may be driven by omitted firm-specific factors that affect both comparability and labour investment. Certain firms may be more likely to deliver financial statements at higher levels of comparability, and also invest more efficiently in labour. Accordingly, it is possible that both comparability and labour investment could be related to factors that are omitted or difficult to observe. For instance, firms with more able managers may simultaneously have higher accounting comparability and more efficient labour investment. If this is the case, our results could be driven by the omission of the proxy for managerial ability. We have attempted to mitigate this concern by incorporating an extensive list of control variables, and industry, firm, and year fixed-effects to ensure that our supposition cannot be attributed to the time-(in)



variant, (un)observed heterogeneity at industry- and firm-levels. Nonetheless, we cannot rule out the possibility that our results might suffer from omitted variable bias.

In order to further tackle such bias, we implement the propensity-score-matching technique to re-examine the influence of comparability on employment decisions. This method allows us to more clearly attribute the observed effects to comparability itself, rather than to firms' observed or unobserved factors associated with comparability (Bowen, Call, & Rajgopal, 2010; Yuan, Sun, & Cao, 2016). To construct a propensity-matched sample, we first estimate the probability of being a firm with higher accounting comparability by running Eq. (7) following Zhang (2018),

$$\text{Prob}(\text{High\_Compacct}_{i,t} = 1) = \text{logit}\left(\alpha + \beta_1 \text{MTBV}_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{Loss}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{Big4}_{i,t} + \beta_6 \text{Managerial Ability}_{i,t} + \text{Industry\&Year Dummies} + \varepsilon_{i,t}\right) \quad (7)$$

where the dependent variable is an indicator that equals one if the firm's accounting comparability (*CompacctInd*, *Compacct10*, *CompacctBasu*, and *CompacctPle*) is above the median each year, and zero otherwise. The independent variables are the determinants of comparability, including market-to-book ratio (*MTBV*) (Barth, Landsman, Lang, & Williams, 2012; De Franco et al., 2011), firm size (*Size*) (Bills, Jeter, & Stein, 2015; Minutti-Meza, 2013), loss (*Loss*) (De Franco et al., 2011), return on asset (*ROA*) (Zhang, 2018), Big4 indicator (*Big4*) (Francis, Pinnuck, & Watanabe, 2014), managerial ability (*Managerial Ability*) and industry and year fixed-effects. [See Appendix A for detailed definitions.] The estimation of Eq. (7) generates the propensity score that can be interpreted as the probability of having higher comparability conditional on these firms' observable factors. We then match two firms in the same industry and year with the closest propensity score, where one has above-median comparability, and the other has below-median comparability. Finally, we compare the level of efficiency in labour investments between the two matched firms.

To add credence to our results, we use three matching algorithms: one-to-one nearest neighbourhood, one-to-four nearest neighbourhood<sup>14</sup> and radius matching techniques.<sup>15</sup> The results are reported in Panel A of Table 6.<sup>16</sup> Regardless of the matching techniques employed, we find that the differences in labour investment inefficiency between firms with high comparability and matched firms with lower comparability are significantly negative at the 1% level. Specifically, the abnormal net hiring of firms with higher comparability is 2.4–3.6 points lower than that of matched firms with lower comparability. This further supports our finding of a negative relationship between financial statement comparability and labour investment inefficiency, and also helps alleviate concerns associated with endogeneity.

We then examine the influence of accounting comparability on the abnormal net hiring using matched sub-samples as described above. Panel B of Table 6 reports the results of estimating Eq. (6) using our four comparability measures over the matched sub-sample based on the one-to-one nearest neighbourhood matching algorithm.<sup>17</sup> This analysis allows us to investigate how differences in the abnormal labour investment of these firms are explained by variations in the full spectrum of financial statement comparability. As we expect, the results show that the coefficients on all the comparability proxies are significantly negative at the 5% or 1% level, corroborating our earlier findings.

Another source of endogeneity that may affect our results is simultaneity or reverse causality. Rather than comparability impacting on labour decision-making, as we imply in our analysis, employment decisions may in fact affect comparability. It is conceivable for managers to exercise discretion in choosing their firms' accounting methods or systems as well as in determining, directly or indirectly, the efficiency of labour investment. For instance, they can choose accounting systems or methods which are non-comparable with those of their firms' industry peers in order to undertake opportunistic employment decisions, such as over-hiring, more easily. Further, variation in employment decision-making might reflect dynamic endogeneity. It is possible that comparability of financial reporting is related to past levels of abnormal net hiring and other firm- and industry-level characteristics. For example, managers may reduce the comparability of their financial reports to obscure their historical opportunism in labour or non-labour investments.

To address such concerns, we implement the dynamic system GMM approach, which is widely used in corporate finance and corporate governance research to ameliorate potential endogeneity bias (Flannery & Hankins, 2013; Wintoki, Linck, & Netter, 2012). The approach estimates a system in which comparability, abnormal net hiring, and other key corporate characteristics are all jointly endogenous and dynamically interrelated. Thereby, it is useful to show that our results are

<sup>14</sup> Following Abadie, Drukker, Herr, and Imbens (2004), we use one-to-four nearest neighbourhood matching to minimize the mean squared error (MSE).

<sup>15</sup> According to Austin (2011), the optimal caliper width for propensity score matching is 20% of the standard deviation of the propensity scores. The standard deviations of the propensity scores for our models are from 0.26 to 0.29. The results reported are based on a caliper width of 0.05, which is close to the optimal caliper. We also perform the propensity-score-matching technique using a stricter caliper width of 0.01; the results are materially unchanged.

<sup>16</sup> We also check covariate balance by comparing the distribution of the covariates used in a propensity score analysis of firms with above-median comparability and firms with below-median comparability for the sample before and after matching. The results show that matching based on the propensity scores yields a comparable set of treatment (firms with above-median comparability) and control (firms with below-median comparability) firms that allows us to isolate the impact of accounting comparability on employment decisions.

<sup>17</sup> We also re-examine Eq. (6) using a matched sample based on the alternative matching techniques as discussed above. The results are materially unchanged.

**Table 6**

Addressing endogeneity: Propensity score matching.

Panel A: Difference in Labour Investment Inefficiency for Matched Sample				
	NN 1:1		NN 1:4	Radius
<i>Diff_CompactInd<sub>i,t-1</sub></i>	-0.025 (-8.47)***		-0.027 (-8.85)***	-0.028 (-8.25)***
<i>Diff_Compact10<sub>i,t-1</sub></i>	-0.024 (-10.73)***		-0.027 (-8.20)***	-0.027 (-10.37)***
<i>Diff_CompactBasu<sub>i,t-1</sub></i>	-0.031 (-11.10)***		-0.031 (-10.82)***	-0.033 (-10.48)***
<i>Diff_CompactPle<sub>i,t-1</sub></i>	-0.029 (-8.78)***		-0.031 (-9.79)***	-0.036 (-8.77)***
Panel B: Regression for Matched Sample				
	(1)	(2)	(3)	(4)
<i>CompactInd<sub>i,t-1</sub></i>	-0.238 (-2.93)***			
<i>Compact10<sub>i,t-1</sub></i>		-0.312 (-2.32)**		
<i>CompactBasu<sub>i,t-1</sub></i>			-0.279 (-3.28)***	
<i>CompactPle<sub>i,t-1</sub></i>				-0.382 (-3.59)***
Control	Yes	Yes	Yes	Yes
Industry fixed-effects	Yes	Yes	Yes	Yes
Year fixed-effects	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.068	0.065	0.064	0.065
Obs.	27607	27850	27332	26475

Note: This table reports our findings for matched samples with varying accounting comparability levels. Panel A presents the results of the propensity score matching used to test for the difference in abnormal net hiring between firms with above-median level of comparability and matched firms with below-median level of comparability, using the one-to-one nearest neighbourhood (without replacement) (NN 1:1), one-to-four nearest neighbourhood (NN 1:4) and radius (Radius) matching techniques with common support and with a caliper width of 0.05. We use the firm characteristics (market-to-book ratio, firm size, loss, return on asset, and auditor type), and year and industry dummies to perform the matching. Z-statistics are computed based on bootstrap procedure and reported in parentheses. Panel B presents the results for the impact of accounting comparability on the labour investment inefficiency, using the matched samples. We match on firm characteristics, and year and industry dummies using one-to-one nearest neighbourhood (without replacement) techniques. The results for the control variables are not tabulated for brevity. All regressions include year and industry fixed-effects. The *t*-statistics are computed based on the heteroscedasticity-robust standard errors clustered by firm and reported in parentheses. \*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

**Table 7**

Addressing endogeneity: Dynamic system GMM.

	(1)	(2)	(3)	(4)
<i>CompactInd<sub>i,t-1</sub></i>	-0.457 (-3.16)***			
<i>Compact10<sub>i,t-1</sub></i>		-0.487 (-2.13)**		
<i>CompactBasu<sub>i,t-1</sub></i>			-0.642 (-4.00)***	
<i>CompactPle<sub>i,t-1</sub></i>				-0.533 (-3.16)***
Control	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Obs.	54228	54228	53512	51019
<i>AR(1) test (p-value)</i>	0.000	0.000	0.000	0.000
<i>AR(2) test (p-value)</i>	0.496	0.556	0.999	0.742
<i>Hansen test of over-identification (p-value)</i>	0.194	0.307	0.587	0.176
<i>Diff-in-Hansen test of exogeneity (p-value)</i>	0.190	0.215	0.484	0.262

Note: This table presents the results for dynamic system GMM regressions of abnormal net hiring on accounting comparability, and control variables, allowing for two lags of the dependent variable. In this system GMM estimator, we assume that all control variables are endogenous with the exception of industry-level unionisation rate (*Union<sub>i,t-1</sub>*) and year dummies. We use lagged levels as instruments for the differenced equation, and lagged differences as instruments for the level equation. The *AR(1)* and *AR(2)* are tests for first-order and second-order serial correlation under the null of no serial correlation. The *Hansen* test of over-identification is under the null that all instruments are valid. The *Diff-in-Hansen* test of exogeneity is under the null that instruments used for the equations in levels are exogenous (Roodman, 2009). The results for the control variables are not tabulated for brevity. All variables are defined in Appendix A. The *t*-statistics are computed based on the heteroscedasticity-robust standard errors clustered by firm and reported in parentheses. \*, \*\* and \*\*\* indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

sufficiently robust to an approach that explicitly incorporates reverse causality, unobservable heterogeneity, and dynamic endogeneity.

Table 7 reports the results from the dynamic system GMM estimation. We observe that our comparability proxies remain significantly negative, consistent with our main results. In terms of diagnostic tests, the results from the second-order autocorrelation, over-identification, and exogeneity tests all indicate that the specifications we use are appropriate. The evidence indicates that the negative link between comparability and abnormal net hiring still holds after correcting for endogeneity concerns based on the dynamic system GMM estimator.

Overall, the robustness analyses, including the demonstration of the robustness of the findings to different matching procedures, and to the dynamic GMM approach, suggest a causal effect of comparability on employment decision-making, and thus alleviating any potential endogeneity concerns.

### 5.3. Alternative proxies and models for expected net hiring

A central issue in our research design is how we estimate a firm's expected net hiring. To strengthen the validity of our findings, we replicate our analysis employing several alternatives for measuring the expected level of net hiring. We first consider two variations in the labor demand model of Pinnuck and Lillis (2007). Since their model only controls for industry fixed effects, we add year dummies to Eq. (1) to control for year fixed effects (Ghaly et al., 2020). Next, similar to Jung et al. (2014) and Ben-Nasr and Alshwer (2016), we augment Pinnuck and Lillis's (2007) model with controls for net hiring in prior year, capital expenditures, R&D investments, advertising expenses, acquisition expenses, and industry unionisation level.

Further, we consider two alternatives based on other approaches that differ from Pinnuck and Lillis's (2007) model. In line with Cella (2020) and Jung et al. (2014), we adopt the industry-median value of labor investments as the expected level of net hiring. Finally, similar to the model adopted by Biddle et al. (2009) to determine optimal capital investments, we strip Eq. (1) back to only incorporate sales growth as the independent variable. Untabulated results show that our findings are robust to the use of these alternative measures of expected net hiring.<sup>18</sup>

## 6. Conclusion

In this paper, we investigate whether accounting information being comparable improves decision-making in corporate employment. We argue that such comparability can potentially affect labour investment efficiency via external monitoring (of analysts, institutional investors, auditors, and labour unions) and internal governance (of boards of directors) mechanisms. In particular, we suggest that unlike other forms of physical investment decisions, those surrounding employment are largely driven by private information available internally to managers, such as employee competence profiles and productivity, and therefore, suffer from salient information asymmetry (Prabowo, Hooghiemstra, & Van Veen-Dirks, 2018; Richardson, 2006). Accounting comparability, as an effective monitoring tool, can enrich the quality of information available to the above-mentioned internal and external corporate stakeholders. Therefore, it can enable them to directly or indirectly apply greater pressure on managers to use corporate resources like human capital more efficiently (Jung et al., 2014; Khedmati et al., 2019). For example, we argue that all these stakeholders may be enabled to apply appropriate counter-balancing pressures (for example, labour unions may resist under-hiring while investors may discourage over-hiring) which may ultimately compel managers towards making optimal employment decisions.

In line with the theoretical arguments and conjecture, our results demonstrate that greater accounting comparability leads to more efficient labour investment. Moreover, the evidence shows that financial statement comparability can mitigate both over-investment (over-hiring and under-firing) and under-investment (under-hiring and over-firing) issues. The findings imply that accounting comparability does not simply increase or reduce labour investments per se, but rather adjusts investment towards optimal levels.

Further, we identify the external monitoring and internal governance mechanisms through which comparability impacts employment decision-making. Our results support the view that accounting comparability can enhance the monitoring effectiveness of both internal and external users of financial information (boards of directors, analysts, institutional investors, auditors, and labour unions) and thus ensure more efficient labour investment also. Our inferences are robust to alternative measures of accounting comparability and expected net hiring, as well as the different approaches used to ameliorate potential endogeneity bias.

By documenting the role of monitoring in accounting comparability impacting decision-making for human resources, our findings provide direction for firms in mitigating conflict between shareholders and managers. Our results are consistent with those of prior research that has demonstrated the benefits of accounting comparability on firms performance through stock price informativeness (Choi et al., 2019), credit risk (Kim et al., 2013), stock price crash risk (Kim et al., 2016), auditor style, effort, and outcomes (Zhang, 2018), analyst forecast accuracy (De Franco et al., 2011), cost of equity (Imhof et al., 2017), and corporate innovative efficiency (Chircop, Collins, & Hass, 2019). Our research extends this strand of the literature by offering insights into a previously unexplored implication of accounting comparability, that of enhanced corporate employment decision-making. We underscore the importance and usefulness of accounting comparability and provide support for the claims of regulators and standard-setters that it facilitates efficiencies in the allocation of firm-level investment. We also provide clear direction for firms aiming to enhance human resource decisions, which is an increasingly visible aspect of modern and accountable corporate investment scrutiny.

Notwithstanding the clarity and benefit the above conclusions may bring, one caveat to be considered is that, similar to past empirical studies of this nature, our proxies for accounting comparability and labour investment efficiency, among others, may or may not strictly reflect practice or may do so with varying degrees of subtlety. Future researchers may find it useful, therefore, to corroborate and validate our conclusions with additional substantiating insight, through perhaps

<sup>18</sup> For brevity, these results are not reported, but are available upon request.

conducting in-depth case studies that may involve, for example, interviewing financial analysts, investors, auditors, labour unions, directors, or managers for their qualitative perspectives. Furthermore, our study focuses solely on the US so future studies may usefully extend our findings by garnering data from other economies.

## Appendix A. Variable Definitions

Variable	Definition (COMPUSTAT data items in parentheses)
<b>Comparability variables</b>	
<i>Compacct</i>	Negative value of the average absolute difference of the predicted value of a regression of firm <i>i</i> 's quarterly earnings on its quarterly return using the estimated coefficients for firm <i>i</i> and firm <i>j</i> , respectively, over the past 16 quarters. It is calculated for each firm <i>i</i> – firm <i>j</i> combination ( $i \neq j, j = 1, \dots, J$ ), for <i>J</i> firms in the same two-digit SIC industry as firm <i>i</i> .
<i>CompacctInd</i>	The median <i>Compacct</i> for all firms <i>j</i> in the same industry as firm <i>i</i> .
<i>Compacct10</i>	Average <i>Compacct</i> of the 10 firms <i>j</i> with the highest comparability to firm <i>i</i> .
<i>CompacctInd_PLE</i>	A firm-level alternative measure of <i>CompacctInd</i> that is adjusted for lead-lag relation between stock price and earnings.
<i>CompacctInd_Basu</i>	A firm-level alternative measure of <i>CompacctInd</i> that is adjusted for asymmetric timeliness of earnings.
<b>Labour investment variables</b>	
<i>Net_Hiring</i>	Percentage change in the number of employees (EMP).
<i> Ab_Net_Hiring </i>	Absolute difference between the actual net hiring and the expected net hiring. Expected net hiring is estimated value based on the Pinnuck and Lillis's (2007) model.
<b>Firm characteristics variables</b>	
<i>Sales_Growth</i>	Percentage change in sales revenue (SALE).
<i>ROA</i>	Ratio of net income (NI) over beginning-of-year total assets (AT).
$\Delta$ ROA	Change in <i>ROA</i> .
<i>Return</i>	Total annual stock return.
<i>Size</i>	Logarithm of the firm's book value of assets (AT).
<i>Quick</i>	Sum of cash and short-term investments (CHE) and receivables (RECT), scaled by the current liabilities (LCT).
$\Delta$ Quick	Change in <i>Quick</i> .
<i>Lev</i>	Ratio of long-term debt (DLTT) plus debt in current liabilities (DLC) to the book value of assets (AT).
<i>Loss_Bin<sup>k</sup></i>	Five dummy variables indicating each 0.005 interval of ROA from 0 to –0.025. For instance, <i>Loss_Bin<sup>1</sup></i> equals to 1 if ROA is between –0.005 and 0, and zero otherwise, and so on for the other <i>Loss_Bin</i> .
<i>MTBV</i>	The ratio of the market value of equity to the book value of equity.
<i>Div_Payer</i>	A dummy variable set equal to 1 if the firm pays common dividends (DVC), and zero otherwise.
<i>Tangible</i>	Property, plant, and equipment (PPENT) scaled by total assets (AT).
<i>Loss</i>	A dummy variable set equal to 1 if ROA is negative, and zero otherwise.
<i>CFO_Vol</i>	The standard deviation of cash flow from operation (OANVF) over the previous five years.
<i>Sales_Vol</i>	The standard deviation of sales revenue (SALE) over the previous five years.
<i>IO</i>	The fraction of outstanding shares held by institutional investors.
<i>Stock_Cov</i>	Stock return co-movement. Firm <i>i</i> – firm <i>j</i> stock return co-movement is the adjusted R <sup>2</sup> from a regression of firm <i>i</i> 's monthly stock return on the monthly stock return of firm <i>j</i> over the past 48 months. It is calculated for each firm <i>i</i> – firm <i>j</i> combination ( $i \neq j, j = 1, \dots, J$ ), for <i>J</i> firms in the same two-digit SIC industry as firm <i>i</i> . A firm-level measure is calculated by taking the average of firm <i>i</i> – firm <i>j</i> stock return co-movement for all firms <i>j</i> in the same industry as firm <i>i</i> .
<i>AQ</i>	Accounting quality. Defined based on Dechow and Dichev's (2002) model augmented by McNichols (2002). Specifically, the model is a regression of working capital accruals on lagged, current, and lead operating cash flows, property, plant and equipment, and changes in revenue. The earnings quality is the standard deviation of the residuals over years <i>t</i> –4 through <i>t</i> . The standard deviation is then multiplied by –1 to facilitate interpretation of results.
<i>HHI</i>	Herfindahl-Hirschman index is the sum of squared shares of market shares of the firms in each 2-digit SIC industry.
<i>Pop</i>	The natural log of population size of the county where a firm is headquartered, as reported in the 2010 Census.
<i>Central</i>	A dummy variable equal to one if the firm is headquartered in top ten metropolitan areas, and zero otherwise.
<i>Net_Hiring_Vol</i>	The standard deviation of percentage change in employees over previous five years.
<i>Labour_Intensity</i>	The ratio of number of employees (EMP) over total assets (AT).
<i>Union</i>	Industry-level unionisation rate.
<i> Ab_Other_Invest </i>	Abnormal non-labour (other) investments, defined as the absolute value of residuals from the following model: $Other\_Invest_{i,t} = \alpha + \beta_1 Sales\_Growth_{i,t-1} + \epsilon_{i,t}$ , where <i>Other_Invest</i> is the sum of capital expenditures (CAPX), R&D expenditures (XRD), and acquisition expenditures (AQC), less cash receipts from the proceeds from the sale of property, plant, and equipment (SPPE), scaled by lagged total assets (AT).
<i>Analyst</i>	Analyst coverage. Defined as the natural logarithm of the number of analysts the firm.
<i>IOC</i>	Institutional ownership concentration. Defined as the proportion of the institutional investor ownership accounted for by the top five institutional investors in the firm. The holdings of the top five institutions are calculated as the shares held by five largest 13-f institutional investors divided by the total number of shares outstanding.
<i>Big4</i>	A dummy set equal to 1 if a firm is audited by a "Big Four" auditor, and zero otherwise.
<i>Busy Board</i>	The ratio of independent directors holding three or more external board seats to the number of independent directors.

(continued)

Variable	Definition (COMPUSTAT data items in parentheses)
Managerial Ability	Managers' efficiency, relative to their industry peers, in transforming corporate resources to revenues based on Demergian, Lev, and McVay (2012).

## Appendix B. Sub-sample Definitions

Sub-samples	Definition
Strong/Weak Analyst Monitoring	Strong (or Weak) Analyst Monitoring sub-sample includes firms with analyst coverage ( <i>Analyst</i> ) above (or below) the median each year.
Strong/Weak Institutional Investor Monitoring	Strong (or Weak) Institutional Investor Monitoring sub-sample includes firms with institutional ownership concentration ( <i>IOC</i> ) above (or below) the median each year.
Strong/Weak Auditor Monitoring	Strong (or Weak) Auditor Monitoring sub-sample includes firms with Big4 indicator ( <i>Big4</i> ) equal to 1 (or 0).
Strong/Weak Labour Union Monitoring	Strong (or Weak) Labour Union sub-sample includes firms with industry-level unionisation rate ( <i>Union</i> ) above (or below) the median each year.
Strong/Weak Board Monitoring	Strong (or Weak) Board Monitoring sub-sample includes firms with the fraction of independent directors holding three or more external board seats ( <i>Busy Board</i> ) below (or above) the median each year.

## Appendix C. Alternative measures of comparability

### C.1. Comparability measure based on Basu's (1997) piece-wise linear model

Following De Franco et al.'s (2011), we adopt Basu's (1997) piece-wise linear model as a firm-specific accounting system, which incorporates the asymmetric accounting responses to gains and losses. Specifically, we estimate the following time-series equation with the 16 previous quarters of data,

$$Earnings_{i,t} = \alpha_i + \beta_1 Return_{i,t} + \beta_2 Neg_{i,t} + \beta_3 Return_{i,t} \times Neg_{i,t} + \varepsilon_{i,t} \quad (A.2)$$

where  $Neg_{i,t}$  is an indicator for negative  $Return_{i,t}$ . We then follow the algorithm used to compute *CompacctInd* to derive this comparability measure based on Basu's (1997) piece-wise linear model (*CompacctInd\_Basu*).

### C.2. Comparability measures based on "price lead earnings" model.

Collins, Kothari, Shanken, and Sloan (1994) find that firm-specific news is reflected in stock prices before being reported in accounting earnings, in other words, prices lead earnings. We incorporate lagged stock return into the accounting model by re-estimating the accounting comparability proxies using the following model,

$$Earnings_{i,t} = \alpha_i + \beta_1 Return_{i,t} + \beta_2 Return_{i,t-1} + \varepsilon_{i,t} \quad (A.1)$$

where  $Return_{i,t-1}$  is the stock return during the prior quarter. We follow the algorithm used to calculate the distance between accounting functions to compute the comparability measure based on this "prices lead earnings" model (*CompacctInd\_PLE*).

## Appendix D. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.bar.2020.100937>.

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