

# Tightening the belt in tough times: performance commitments and labor shares of Chinese reverse mergers

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## Abstract

**Purpose** – Reverse merger (RM) transactions in China are subject to mandatory performance commitments, imposing institution-driven performance pressure on RM firms in the early stages of listing. This paper investigates the impact of performance commitments on firm labor shares using manually collected data on RMs.

**Design/methodology/approach** – We manually compile a sample of all firms that went public through RMs as the treatment group. Each of the RM firms is matched with a comparable initial public offering (IPO) firm as the control group. We apply a difference-in-differences design to assess the impact of performance commitments on firm labor shares. We further examine whether this relationship differs based on firm financial pressure and labor quality. Our last analysis test whether the labor investment efficiency of RM firms is affected by performance commitment.

**Findings** – We find that RM firms experience a reduction in labor shares during the performance commitment period compared with IPO firms. This effect is particularly pronounced for firms characterized by high levels of debt burden, increased capital intensity and lower labor quality. Moreover, RM firms exhibit diminished labor-investment efficiency throughout the commitment period and lower performance thereafter.

**Practical implications** – Regulators may promote a comprehensive registration-based system grounded in information disclosure. A more efficient and transparent listing review process would reduce firms' incentives to pursue RMs and help alleviate the severe information asymmetry in the capital market. When formulating listing-regulation policies, regulators may look beyond the intended benefits and also assess the potential adverse effects on employee welfare.

**Originality/value** – Our findings corroborate the view that firms use labor share reductions as a key cost-saving response to the institution-driven performance pressure in RMs and shed light on the consequences of Chinese RM transaction institutions on employee welfare.

**Keywords** Firm labor share, Reverse merger, Performance commitment, Labor investment efficiency, Employee welfare

**Paper type** Research article

## JEL Classification — G34, G38, J30, M48

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## 1. Introduction

Since China became a member of the World Trade Organization in 2001, the labor income share in national income has followed a downward trend. According to the Statistics of the Chinese government, the labor share had remained stable prior to 2000 but witnessed a decline of 10.73% between 2001 and 2008, followed by a further decrease of 5.48% between 2009 and 2016. As it is closely linked to the widening income gap and social welfare, the continued decline in labor shares has attracted widespread attention in both academia and practice [1]. Theoretical frameworks underscore that the initial distribution of factors of production serves as a foundational determinant of individual income and the structure of social welfare (Li, Liu, & Wang, 2009). Given the critical role of labor share in shaping social welfare equity, existing studies have predominantly elucidated the drivers of labor share fluctuations from a macroeconomic perspective, such as factor costs (Karabarbounis & Neiman, 2014) and technological advances (Acemoglu, 2010). In addition, the factors influencing labor shares have been examined from a micro perspective, including trade union organizations (Lu, Tao, & Wang, 2010), compensation contracts (Murphy & Sandino, 2020; Sualihu, Rankin, & Haman, 2021) and property rights (Gu, Tang, & Wu, 2020). This study expands the existing research by examining the performance pressures on firms arising from Chinese public listing regulations [2].

In this study, we investigate the impact of performance commitments on firm labor shares in the context of reverse mergers (RMs). Firms under performance pressure are compelled to evaluate cost-related choices that encompass labor shares. However, investigating the influence of performance pressure on firm labor shares presents an inherent endogeneity challenge stemming from omitted variables. Unobservable firm-level characteristics, such as weak fundamentals, may simultaneously exacerbate performance pressure and detrimentally affect employee welfare (Cao, Ma, Tucker, & Wan, 2018; Doyle, Jennings, & Soliman, 2013; Li & Lu, 2019) [3]. Hence, it is necessary to identify an exogenous setting to gauge performance pressure.

China's information disclosure regulations for RMs provide an ideal setting to study the relationship between performance pressure and firm labor shares. First, mandatory performance commitments in Chinese RMs impose great post-listing performance pressure on the firms. Specifically, in an RM transaction, the acquirer (a listed firm, also known as a "shell" firm) and the acquiree (a non-listed firm, i.e. an RM firm) engage in a series of asset and equity transactions and the acquiree ultimately becomes the controlling shareholder of the listed firm. While RM transactions are common worldwide, Chinese RM firms often experience overvaluation of acquired assets to send a positive signal to the capital markets about the firm's promising business prospects. To mitigate information asymmetry in the valuation of the acquiree's assets, the China Securities Regulatory Commission (CSRC) requires acquirees to issue performance commitments when the income approach is used for valuation. Second, the acquiree is required to disclose whether it has met its performance targets during the three-year post-listing commitment period. If the shareholders of the RM firm fail to meet the expected performance, they must provide substantial compensation to the shareholders of the original listed firm, in both cash and stock. This carries huge financial losses and even risks loss of control for the RM firm. Despite these risks, acquirees frequently set ambitious performance targets to inflate post-merger share prices, thereby creating enormous institution-driven performance pressure. Consequently, the pressure from performance targets compels RM firms to prioritize cost-saving decisions to enhance profitability.

We hypothesize that great performance pressure imposed on RM firms during the performance commitment period may result in a decline in labor shares. On the one hand, throughout the performance commitment period, RM firms' controlling shareholders face strong incentives to improve profitability to meet their committed performance targets (Hou, Jin, Yang, Yuan, & Zhang, 2015). RM firms typically inflate future earnings forecasts when setting commitments to boost post-listing share prices, making these targets difficult to

achieve under existing business strategies. Compared with other major asset restructurings, compensation to investors of acquirers in RM transactions is notably higher. Failure to meet performance targets puts controlling shareholders at risk of losing control of the RM firm and incurring substantial financial losses. Thus, reducing labor investment to preserve profits becomes a rational choice for RM firms. On the other hand, performance pressure may encourage firms to substitute capital for labor, given the diminishing returns from factors (Humphrey & Moroney, 1975). Fixed assets and other capital elements not only offer marginal output but also serve as valuable collateral for financing. Faced with performance pressures, RM firms are more inclined to direct their limited resources towards asset-based investments rather than labor investments. Consequently, the combined effect of performance pressure and penalties for target non-attainment drives RM firms to increase profits through a reduction in their labor shares. We term this conjecture the “cost-saving” hypothesis.

Nevertheless, RM firms may also have incentives to enhance the value creation of employees by increasing labor shares under substantial performance pressure. Because employees are central to firm value creation, organizations may rely on diligent employees to improve performance, elevate operational efficiency and strengthen market competitiveness (Datta, Guthrie, & Wright, 2005). Accordingly, RM firms may motivate their employees to work harder and increase labor investment to achieve performance targets. This leads RM firms to increase labor shares after listing. We term this conjecture the “employee-incentive” hypothesis. Overall, the impact of performance commitments raised in Chinese RMs on firm labor shares remains an empirical question that warrants further investigation.

To test these competing hypotheses, we apply a difference-in-differences design to assess the impact of performance commitments on firm labor share using Chinese A-share listed firms from 2011 to 2022. Specifically, we constructed the treatment group using a manually collected sample of firms that went public through RMs between 2011 and 2017. To ensure a robust estimation, we used a matching method to construct a control group of IPO-listed firms with the closest assets to the RM firms, matched by year, industry and listing venue (Shanghai or Shenzhen Stock Exchange). The data set for this analysis spans a 6-year window post-listing for both RM and initial public offering (IPO) firms, yielding 924 firm-year observations [4]. We find that RM firms experience a reduction in labor shares in the period of performance commitment, in line with the “cost-saving” hypothesis. The economic significance of the results is meaningful as RM firms decrease their labor shares by 4.46% and 8.19% during the commitment period relative to those of IPO firms. Furthermore, our findings are confirmed through a series of robustness checks, including dynamic analyses, alternative matching specifications, placebo tests and the incorporation of additional fixed effects to account for unobserved firm-pair and listing-year-specific characteristics.

We directly examine the mechanism driving the decline in firm labor shares throughout the performance commitment years. Theoretically, under intense performance pressure, RM firms are incentivized to reduce labor shares and maximize profits to avoid substantial compensation payments to investors of the acquirer when performance targets are not met. Therefore, we used two settings to conduct the mechanism tests. First, the phenomenon of just meeting or beating performance targets also reflects the performance sprinting behavior of RM firms as they approach their targets, indicating that RM firms face greater performance pressure [5]. Second, as the performance commitment target escalates, the pressure on RM firms increases. In both settings, our analysis reveals that RM firms reduce labor shares during the performance commitment period when they barely achieve or exceed performance benchmarks or are confronted with elevated performance targets. These findings further corroborate the “cost-saving” hypothesis.

We then perform cross-sectional analyses to assess how the relationship between labor shares and performance commitments varies with firm characteristics. First, debt default can severely depress stock prices and hinder access to new debt financing (Even-Tov & Ozel, 2021). To avert debt default, firms prioritize preserving cash to meet maturing debt obligations. Therefore, we predict that RM firms with heavier debt burdens are more inclined

to reduce labor shares in the period of performance commitment. Second, given the inflexibility of fixed capital, labor costs represent a more adjustable margin for discretionary cost reduction when capital-intensive firms face performance pressure. We expect that RM firms with higher capital intensity will exhibit lower labor shares during the commitment period. Third, in the context of digital economic transformation, firms focus more on technological innovation and rely on high-quality workers. Highly skilled workers demand higher salaries in exchange for creating value in production, and they are more sensitive to salary changes because of their stronger competitiveness in the labor market (Cortés & Tessada, 2011). Conversely, firms are more likely to squeeze pay for low-skilled workers when facing performance pressure. We expect a reduction in firm labor shares during the performance commitment period when RM firms employ more lower-skilled workers. Our empirical results confirm these expectations.

We also examine labor shares across different employee groups within RM firms under performance pressure. Compensation choices are commonly segmented into two groups: management and rank-and-file employees. Because managers have greater authority over compensation decisions, they may shift welfare losses to rank-and-file employees to preserve their own benefits (Choi, Genc, & Ju, 2020). However, we find that the labor share decreased for both management and rank-and-file employees throughout the performance commitment years. This result indicates that the performance pressure arising from performance commitments can adversely affect the welfare of all employees. Finally, alongside the decline in firm labor shares, we observe decreases in both labor investment efficiency during the commitment period and long-term performance for RM firms in the post-commitment period.

Our paper makes several contributions to the literature. First, our study contributes to a growing literature on the determinants of firm labor share decisions by highlighting the role of performance commitments. Prior studies examine this issue from a macro perspective, including factor costs (Karabarbounis & Neiman, 2014), technology development (Acemoglu, 2010) and product market competition (Gouin-Bonenfant, 2022; vom Lehn, 2018). However, as Shi, Gao, Lu, and Li (2019) note, the influence of capital market mechanisms on firm labor shares has been largely overlooked. To address this gap, we investigate firm labor shares in the context of Chinese RM transactions. Our results demonstrate that firm labor shares are affected by performance pressures, causing a substantial decline in labor shares among RM firms in the period of performance commitment. These findings expand the literature on the determinants of firm labor shares from a capital market perspective and provide deeper insights into firms' cost-saving strategies under institution-driven performance pressure.

Second, we extend research on the consequences of performance pressure. Prior studies primarily focus on management behavior under high performance pressure, reflecting management's self-interests (Doyle *et al.*, 2013; Li & Lu, 2019). Other studies examine the impact of performance pressure on business decisions, such as mergers and acquisitions (M&A) and auditor choice (Hauser, 2018; Xia, Wong, & Xin, 2024). However, this stream of literature has neglected to characterize employee welfare under performance pressure. While reducing employee benefits may help firms lower short-term costs, enhancing such benefits can motivate employees to contribute to value creation. The extent to which firms prioritize cost-cutting over long-term value generation will be reflected in the choices they make under performance pressure. More importantly, previous studies measuring performance pressure have been constrained by endogeneity concerns. We address this issue by leveraging a unique exogenous setting derived from the institutionally mandated performance commitments, which enhances the reliability of the findings.

Third, our study contributes to the literature on institutional arrangements governing public listings. RMs are a widely used method of indirect listing in both China and Western economies. While RMs offer a faster path to listing than traditional IPOs, their valuation opacity poses significant risks to investors (Lee, Qu, & Shen, 2017). To mitigate information asymmetry, the CSRC mandates that RM firms fulfill post-listing performance commitments.

Although originally designed to protect investors, this institutional arrangement creates substantial performance pressure, incentivizing controlling shareholders to pursue short-term earnings at the expense of other stakeholders. Our study documents that cutting employee-related costs as real earnings management (REM) is a strategy used by RM firms to meet performance targets in the short run but ultimately undermines long-term firm value. By revealing this effect on employee welfare, our findings provide new evidence of managerial short-termism induced by listing regulations and enrich the literature on the unintended consequences of performance commitment institutions (Hou *et al.*, 2015; Lee *et al.*, 2015a, 2019; Li, Guo, & Wei, 2019; Mao & Ettredge, 2016; Mao & Yin, 2017).

The remainder of the paper is organized as follows. Section 2 provides the institutional background, reviews the relevant literature and outlines our hypotheses. Section 3 describes the research design, including the sample, data and variable construction. Section 4 reports the baseline empirical findings along with robustness checks, and Section 5 presents further analyses. Section 6 concludes the study.

## 2. Institutional background, related literature and hypothesis development

### 2.1 Institutional background

Unlisted firms primarily access the stock market via IPOs or RMs. Given the stringent regulatory framework governing IPOs in the Chinese stock market since its establishment in 1990, RM transactions have emerged as a highly attractive alternative for firms pursuing public listing. However, RM transactions are often criticized by investors as they involve drastic changes in firm's fundamentals and stock prices, which can foster insider trading and stock price manipulation. An RM requires the acquirer to issue new shares for the asset acquisition, making asset valuation paramount. In practice, to secure higher valuations, RM firms generally adopt the income approach, which is mainly dependent on the expected future earnings.

To protect the interests of investors and prevent inflated valuation by the acquirees, the *Administrative Measures for the Major Asset Reorganization of Listed Firms*, revised by the CSRC in 2011, require RM firms to set performance commitments within three years following public listing. RM firms must disclose the fulfillment of performance commitments annually and obtain a special audit opinion issued by an independent auditor. Failure to meet performance targets undermines the investors' expectations for RM firms, leading to sharp declines in share prices and reputational damage. Moreover, if the actual performance fails to meet the target, the controlling shareholders of RM firms are obligated to compensate investors with cash or shares. In particular, share-based compensation not only imposes financial losses on controlling shareholders but also weakens their control over RM firms.

For example, Beijing Xinwei Technology Group (hereafter referred to as Xinwei) specializes in selling communication equipment and software. After going public through an RM transaction in 2013, the firm committed to achieving net profit targets of 2, 2.25bn and 2.73bn RMB in the subsequent three years (2014, 2015 and 2016, respectively). The agreement stipulated that Xinwei's controlling shareholder would have to compensate the acquirer if these targets were not met. In its 2016 annual report, Xinwei disclosed a net profit of 1.8bn RMB, a shortfall of 0.93bn RMB against the commitment. The controlling shareholder of Xinwei was required to compensate the acquirer for failing to fulfill its performance commitments. According to the performance commitments, the number of shares for which Xinwei compensated the acquirer was 181,294,782, valued at a total of 2.65 bn RMB. The value of these shares used for compensation was equivalent to 1.47 times (2.65/1.80) the 2016 net profit of Xinwei and represented 18% (181,294,782/1,011,112,119) of the shares held by Xinwei's controlling shareholder. Hence, the performance commitment exerts significant pressure on the RM firm's financial performance [6].

While RMs are prevalent in both the USA and China, the two economies differ fundamentally in how they protect investors in RM transactions. In the USA, investor

protection primarily relies on litigation mechanisms and market discipline, with regulatory emphasis placed on post-listing disclosure requirements. In contrast, China adopts a more interventionist approach through ex ante administrative regulation, mandating that RM firms fulfill binding performance commitments under a condition of listing approval. This institutional arrangement reflects a broader preference in Chinese regulation for direct regulatory intervention over market-based governance. Although performance commitment is designed to protect investors by reducing information asymmetry, it simultaneously imposes substantial performance pressure on RM firms, raising concerns about regulatory efficiency (Lee, Li, & Zhang, 2015; Chen, Cheng, Lin, Lin, & Xiao, 2016). Our study shows that performance pressure harms employee welfare and highlights broader implications for designing RM listing regulations across different institutional contexts.

## 2.2 Related literature

Labor share refers to the ratio of labor income to total factor income and serves as an indicator of employees' distributional position within the economy (Autor, Dorn, Katz, Patterson, & Van Reenen, 2020). At the macro level, the initial distribution largely determines the final distribution within a society. A sustained reduction in the labor share can imply a widening income gap, leading to a lack of domestic demand, a slowdown in economic development and social instability (Autor, Dorn, Katz, Patterson, & Van Reenen, 2017; Gu *et al.*, 2020). From the micro perspective, irrational labor shares within firms can impair labor productivity and investment efficiency (Baloria, Lo, & Shu, 2025; Sualihu *et al.*, 2021), stifle innovation (Manso, 2011) and undermine firm value (Fedyk & Hodson, 2023). Therefore, achieving high-quality development requires that both nations and firms prioritize employee welfare, particularly ensuring the fairness and efficiency of labor share.

In the theoretical framework of neoclassical economics, economic stability is characterized by a constant labor share, known as the Kaldor fact (Kaldor, 1961). However, the literature documents a significant decline in labor shares worldwide, particularly in China (Autor *et al.*, 2017, 2020; Karabarbounis & Neiman, 2014). Prior studies attribute this trend to several factors, including wage stickiness in state-owned enterprises (SOEs) (Gu *et al.*, 2020), government incentives to attract foreign direct investment (Harrison, 2021) and the structural shift toward industrialization (Lin, Wang, & Zhao, 2004) [7]. The literature also highlights the substitutability between production factors as a key determinant of labor shares. On the one hand, the declining relative cost of capital incentivizes firms to replace labor with capital (Choi *et al.*, 2020; Lu *et al.*, 2010; Yu & Liang, 2014) and firms facing higher financing constraints tend to favor fixed asset investment over labor investment to lower financing costs (Jiang & Lin, 2022). On the other hand, technological progress exerts mixed effects. Automation and robotics substitute for labor and weaken employees' bargaining power (Acemoglu & Restrepo, 2018; Acemoglu, Kong, & Restrepo, 2024). At the same time, digital transformation can improve governance efficiency and expand free cash flow available for labor investment, thereby generating a labor welfare creation effect (Guo, Li, Wang, & Mardani, 2023; Koellinger, 2008).

In RM transactions, acquirees are incentivized to inflate earnings to meet post-listing performance commitments, whereas in M&A earnout arrangements, acquirers may conversely seek to suppress earnings below earnout thresholds to avoid future payments (Coelho & Loureiro, 2026). Despite their opposing motivations, both scenarios reflect managerial short-termism driven by performance pressure, with earnings management serving as the primary instrument (Cheng, Liu, Wang, & Zhao, 2024; Xin & Wang, 2025). For instance, Hou *et al.* (2015) document that controlling shareholders tend to exploit abnormal accruals to meet performance commitments. However, as regulatory scrutiny intensifies, managers increasingly shift from accrual-based manipulation toward REM. The literature indicates that REM involves interference with real business activities, imposing lasting adverse effects on firm fundamentals (Cain, Denis, & Denis, 2011; Cohen, Dey, & Lys, 2008;

Roychowdhury, 2006). This substitution effect is further corroborated by Coelho & Loureiro (2026), who find that acquirers facing earnout obligations are more inclined to adopt REM rather than accrual-based methods to manage earnings.

While there is evidence from both macro and micro perspectives that firms reduce labor shares to improve production efficiency and compress costs, little is known about how exogenous performance pressures driven by regulatory arrangements affect labor share decisions. We address this gap by examining the impact of performance commitments on labor shares in RM transactions. Given that employee compensation constitutes a discretionary operating expense, reducing employee-related costs represents a form of REM. Our study provides evidence that RM firms engage in REM through workforce cost reduction to meet performance targets, with adverse effects on employee welfare.

### 2.3 Hypothesis development

When facing performance pressure, management typically resorts to accrual manipulation, related-party transactions, or trade credit extension to window-dress financial statements (Ma, Hou, & Chang, 2024). However, intensified regulatory scrutiny during the performance commitment period significantly raises the detection risk of accrual-based manipulation, prompting management to shift toward REM, which is more difficult to detect (Cohen *et al.*, 2008; Roychowdhury, 2006). Among various REM tools, reducing employee compensation offers distinctive advantages. First, cutting labor costs generates immediate and certain cash flow effects, directly alleviating liquidity pressure. Our analysis of Chinese A-share listed firms from 2011 to 2022 reveals that labor expenditure accounts for an average of 15% of operating revenue, totaling approximately 682m RMB per firm, making it a natural target for cost cutting. Second, as a routine operating expenditure, employee compensation affords management with considerable discretionary latitude, reducing the likelihood of regulatory intervention (Wei, Hu, & Chen, 2020). Therefore, compared with other forms of REM, adjusting labor expenditure becomes a key channel through which management manipulates firm performance.

Shareholders of RM firms exhibit incentives to diminish labor costs in two aspects. First, the Chinese corporate accounting standards require that labor expenditures are normally recorded as either current manufacturing costs (included in inventory value) or period expenses. While labor costs embedded in unsold inventory do not immediately affect profits, period expenses directly reduce them. In such circumstances, the RM firm is unable to generate revenue and is unlikely to meet its performance targets. In practice, RM firms aim to maximize sales to increase revenue, and regardless of whether labor costs are integrated into inventory values or treated as period expenses, they are directly reflected in the income statement, ultimately curbing net profits. Therefore, for RM firms, reducing the labor share represents a highly effective approach to increase profits.

Second, the labor investment by a firm is not an isolated decision but a dynamic process intertwined with overall resource allocation. Firms must balance their limited resources between capital and labor investments, considering both the growth potential of these resources and their implications for refinancing capacity. The allocation of resources between labor and capital is primarily determined by the marginal productivity of these two production factors. In particular, the marginal productivity of capital is reflected not only in enhancing production efficiency but also in its ability to improve financing capability through leverage effects. Capital factors, such as fixed assets, generate fundamental marginal output and can also serve as collateral or pledges, enabling RM firms to secure additional financing. In contrast, employee compensation is classified as an operating expense and lacks leverage-enhancing properties. Under intense performance pressure, RM firms are more likely to allocate limited resources toward capital investment rather than labor investment. We term this conjecture the “cost-saving” hypothesis.

However, RM firms also have the option to enhance the labor share as a strategy to motivate employees to create value. The foundational tenets of labor economics emphasize the pivotal role of human capital in firm value creation (Ramaswamy & Ozcan, 2018). Empirical evidence in the literature consistently demonstrates that both monetary compensation and equity-based incentives serve as mechanisms for improving employee motivation (Cheng, Luo, & Yue, 2013; Murphy & Sandino, 2020; Sualihu *et al.*, 2021). Higher employee salaries not only enhance work efficiency, creativity and competitiveness but also mitigate the risk of losing skilled employees. Although higher wages raise operating costs, motivated employees contribute to greater operating income, helping RM firms achieve performance targets. As a result, labor shares in RM firms tend to rise in the period of performance commitment. We term this conjecture the “employee-incentive” hypothesis. Based on the aforementioned discussion, we propose the following competing hypotheses:

- H1a. Labor shares of RM firms decline over the duration of the performance commitment.
- H1b. Labor shares of RM firms increase with the duration of the performance commitment.

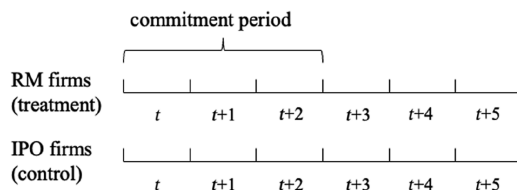
### 3. Sample and research design

#### 3.1 Sample selection

We manually compile a sample of all firms that went public through RMs in China between 2011 and 2017. Our sample began in 2011 because the revised *Decision on Material Asset Reorganization and Financing of Listed Firms* was implemented in that year. This revision mandates that RM firms provide comparable information while also meeting additional disclosure requirements for RMs, such as performance commitments. In this study, we examine firm labor shares over the six years following public listing, covering both the three-year performance commitment period and the three-year post-commitment period. However, due to data limitations, our analysis extends only to 2022. To ensure consistent coverage of the six-year observation window, we ended the RM firm sample selection in 2017 [8]. Accordingly, the empirical tests include observations spanning from 2011 to 2022.

We begin by identifying each RM firm, with verification conducted manually through merger transaction proposals. According to the CSRC criteria, an RM is defined by two conditions: a change in the actual controller of the listed firm and a transaction value that exceeds the total asset value of the RM firm. Transactions that satisfy both conditions are classified as RMs. Given that 92% of RM firms adopt a three-year commitment period, our study centers on this majority group to ensure comparability. All labor share data are collected from the Wind database. Additionally, firm financial and governance data for the empirical tests were obtained from the Wind database.

To empirically analyze the impact of performance commitment on firm labor shares, establishing a control sample for benchmarking is essential. Following prior literature (Lee *et al.*, 2019; Chen *et al.*, 2016), each of the RM firms is matched with a comparable IPO firm, which is defined as a firm that undergoes an IPO in the same trading market, industry and year while exhibiting similar total assets based on pre-listing financial data [9]. Our analysis focuses on firm labor share data over the six-year period following the public listing of both RM and IPO firms. The sample structure is illustrated in Figure 1. For RM firms (i.e. the treatment group in the DID approach), the six-year window encompasses the three-year commitment period and the subsequent three-year post-commitment period. For IPO firms (i.e. the control group in the DID approach), the six-year window consists of years  $t$ ,  $t+1$ ,  $t+2$ ,  $t+3$ ,  $t+4$  and  $t+5$  following their public listing. The final sample consists of 924 firm-year observations, after excluding firms operating in the financial industry, those with fewer than 100 employees and records with missing data.



**Figure 1.** Sample structure. Note: This figure illustrates the sample structure. For the RM firms (i.e. the treatment group in the DID approach), the six-year window covers the three-year commitment period and the three-year post-commitment period. For the IPO firms (i.e. the control group in the DID approach), the six-year window covers years  $t, t+1, t+2, t+3, t+4$  and  $t+5$  following public listing

### 3.2 Measures of firm labor share

Following Jiang and Lin (2022), our measure of firm labor share ( $LS$ ) is defined as the aggregate compensation paid to employees divided by sales revenue. Aggregate compensation is measured as cash compensation paid to employees plus changes in employee compensation payable. The measurement of  $LS$  is shown in Eq. (1).

$$LS_{i,t} = \frac{\text{aggregate compensation paid to employees}_{i,t}}{\text{sales revenue}_{i,t}} \quad (1)$$

In order to make the firm labor share in line with the normal distribution in terms of value, following the literature (Wang & Huang, 2017), we use the logarithmically converted form of firm labor shares ( $LN\_LS$ ). The measurement of  $LN\_LS$  is shown in Eq. (2).

$$LN\_LS_{i,t} = \ln \left( \frac{LS_{i,t}}{1 - LS_{i,t}} \right) \quad (2)$$

### 3.3 Model specification

To examine how the performance commitments in RM transactions affect firm labor shares, we estimate the following ordinary least squares regression model:

$$LS_{it} \text{ or } LN\_LS_{it} = \alpha_0 + \alpha_1 RM_i * PC_{i,t} + \alpha_2 PC_{i,t} + \beta X_{i,t} + \eta_j + \theta_k + \varepsilon_{it} \quad (3)$$

The dependent variables in Eq. (3) are  $LS$  and  $LN\_LS$ , respectively. The variable  $RM$  is a treatment firm indicator that equals one for RM firms (the treatment group) and zero for matched IPO firms (the control group).  $PC$  is a binary indicator equal to one for RM firms during their three-year performance commitment period and for IPO firms throughout the first three years after listing (years  $t, t+1$  and  $t+2$ ). It equals zero for RM firms during the three years following the end of their performance commitment period, and for IPO firms from the fourth to the sixth years after listing (years  $t+3, t+4$  and  $t+5$ ) [10]. In Eq. (3),  $\alpha_1$  captures the relative change in firm labor shares for RM firms compared to IPO firms throughout the performance commitment years.

We draw on the literature to identify and control for a wide range of factors that may affect firm labor shares, including the percentage of outstanding shares held by the largest shareholder ( $FIRST$ ), an indicator for firms whose CEO and board chair are the same person ( $DUAL$ ), an indicator for SOEs ( $SOE$ ), average employee wage ( $WAGE$ ), firm size ( $SIZE$ ), return on assets ( $ROA$ ), financial leverage ( $LEV$ ), gross margin of sales ( $MARGIN$ ), capital-to-output ratio ( $KY$ ), capital intensity ratio ( $CI$ ) and Tobin's  $Q$  value ( $TOBINQ$ ). We include year ( $\eta$ ) and firm ( $\theta$ ) fixed effects in all regressions to control for year- and firm-specific characteristics, respectively. In all cases,  $i$  denotes the firm and  $t$  denotes the year. All variable definitions are provided in Appendix A. To mitigate the impact of outliers, all continuous

variables are winsorized at the 1st and 99th percentiles. Additionally, we apply firm-level clustered robust standard errors in all regressions to address heteroscedasticity and serial correlation in the error terms.

4. Main empirical results

4.1 Descriptive statistics

Table 1 reports the descriptive statistics of the sample and its distribution across industries. Panel A presents descriptive statistics for all variables used in the baseline regression analyses. For the dependent variables, the mean (median) value of *LS* is 0.121 (0.098), indicating that the mean (median) firm labor share is 12.1% (9.8%). The average value of *RM* is 0.498, suggesting that about 49.8% of the observations are being listed via RMs. Furthermore, the largest

Table 1. Descriptive statistics

| Panel A: Descriptive statistics |          |        |       |        |        |        |        |        |
|---------------------------------|----------|--------|-------|--------|--------|--------|--------|--------|
| Variables                       | <i>N</i> | Mean   | SD    | Min    | Q1     | Median | Q3     | Max    |
| <i>LS</i>                       | 924      | 0.121  | 0.088 | 0.006  | 0.058  | 0.098  | 0.166  | 0.444  |
| <i>LN_LS</i>                    | 924      | −2.258 | 0.916 | −5.174 | −2.794 | −2.224 | −1.618 | −0.226 |
| <i>RM</i>                       | 924      | 0.498  | 0.500 | 0.000  | 0.000  | 0.000  | 1.000  | 1.000  |
| <i>PC</i>                       | 924      | 0.500  | 0.500 | 0.000  | 0.000  | 0.500  | 1.000  | 1.000  |
| <i>FIRST</i>                    | 924      | 0.392  | 0.152 | 0.100  | 0.289  | 0.375  | 0.500  | 0.771  |
| <i>DUAL</i>                     | 924      | 0.384  | 0.487 | 0.000  | 0.000  | 0.000  | 1.000  | 1.000  |
| <i>SOE</i>                      | 924      | 0.197  | 0.398 | 0.000  | 0.000  | 0.000  | 0.000  | 1.000  |
| <i>SIZE</i>                     | 924      | 22.654 | 1.145 | 20.379 | 21.919 | 22.515 | 23.206 | 26.859 |
| <i>LEV</i>                      | 924      | 0.465  | 0.251 | 0.054  | 0.295  | 0.446  | 0.612  | 0.961  |
| <i>ROA</i>                      | 924      | 0.040  | 0.129 | −0.814 | 0.024  | 0.051  | 0.093  | 0.296  |
| <i>MARGIN</i>                   | 924      | 0.004  | 0.633 | −4.266 | 0.041  | 0.103  | 0.188  | 0.513  |
| <i>WAGE</i>                     | 924      | 11.681 | 0.553 | 10.580 | 11.285 | 11.602 | 12.037 | 13.043 |
| <i>KY</i>                       | 924      | 0.510  | 0.773 | 0.003  | 0.120  | 0.278  | 0.556  | 5.268  |
| <i>CI</i>                       | 924      | 2.649  | 2.300 | 0.415  | 1.298  | 1.876  | 3.016  | 13.107 |
| <i>TOBINQ</i>                   | 924      | 1.868  | 0.981 | 0.903  | 1.261  | 1.574  | 2.141  | 6.766  |

| Panel B: Distribution by industries |                                                                      |          |       |
|-------------------------------------|----------------------------------------------------------------------|----------|-------|
| Code                                | Industry                                                             | <i>N</i> | %     |
| B                                   | Mining                                                               | 35       | 3.79  |
| C1                                  | Food and beverage manufacturing, textiles and apparel                | 57       | 6.17  |
| C2                                  | Paper and printing, petrochemicals, medicine and biological products | 171      | 18.51 |
| C3                                  | Machinery, metals and non-metals and electronics manufacturing       | 277      | 29.98 |
| C4                                  | Other manufacturing                                                  | 37       | 4.00  |
| D                                   | Electric power, gas production and tap water                         | 41       | 4.44  |
| E                                   | Construction                                                         | 22       | 2.38  |
| F                                   | Wholesale and retail trade                                           | 54       | 5.84  |
| G                                   | Transportation                                                       | 32       | 3.46  |
| I                                   | Information technology                                               | 67       | 7.25  |
| K                                   | Real estate                                                          | 35       | 3.79  |
| L                                   | Leasing and business services                                        | 9        | 0.97  |
| M                                   | Scientific research and integrated technological services            | 24       | 2.60  |
| N                                   | Public facilities and services                                       | 14       | 1.52  |
| R                                   | Cultural, sports and entertainment                                   | 49       | 5.31  |
| Total                               |                                                                      | 924      | 100   |

**Note(s):** This table presents the descriptive statistics for the variables used in our main analysis and the sample distribution by industries. All variables are defined in Appendix A. The industry group is based on the China Securities Regulatory Commission (CSRC) industry classification

shareholder (*FIRST*) holds 39.2% of the firm's outstanding shares on average. About 38.4% of the observations whose CEO and board chair are the same person (*DUAL*), and 19.7% of the observations are SOEs (*SOE*). The mean value of firm size (*SIZE*) is equivalent to about 6.89bn yuan. The value of financial leverage (*LEV*) is 0.465 and return on assets (*ROA*) is 0.040 on average. Our sample has an average sales margin of 0.4% (*MARGIN*). On average, the employee wage (*WAGE*) is 11.681, which is equivalent to about 0.12m yuan. The mean values of *KY* and *CI* were 0.510 and 2.649. Tobin's *Q* (*TOBINQ*) has a mean value of 1.868.

Panel B of Table 1 presents the distribution of sample firms across CSRC-defined industries. The industry group consisting of machinery, metals and non-metals and electronics manufacturing accounts for the largest share of observations in our sample (29.98%), followed by the industry group of paper and printing, petrochemicals, medicine and biological products (18.51%). In contrast, the public facilities and services industry has only 14 observations (1.52%), while the leasing and business services industry has the fewest, with just 9 observations (0.97%) [11].

Table 2 reports the difference-in-difference analysis of firm labor shares between the treatment and control groups. It includes *t*-statistics for mean difference tests conducted throughout and after the performance commitment years across both groups. Panel A of Table 2 shows that the reduction in labor share among RM firms (i.e. the treatment group), as shown by the difference between Columns (1) and (2), is statistically significant during the commitment period. However, the change in labor shares for the IPO firms (the control group) is insignificant. A comparison of labor share differences between both groups surrounding the performance commitment expiration indicates that the average labor share varies significantly between RM and IPO firms across the two periods. In Panel B of Table 2, we find a similar result regarding the differences in the logarithmically converted form of labor share.

The pairwise Pearson correlations for the variables used in the analysis are summarized in Table 3. The correlations between *LS* and *PC* and the correlations between *LN\_LS* and *PC* are significantly negative, suggesting that firm labor shares tend to be lower in the period of

**Table 2.** Difference-in-differences comparison

| Panel A: Difference-in-differences comparison of <i>LS</i> |            |       |          |       |                 |                          |
|------------------------------------------------------------|------------|-------|----------|-------|-----------------|--------------------------|
| Variable                                                   | (1) During |       | (2) Post |       | Diff<br>(2)-(1) | Diff-in-Diff<br>(RM-IPO) |
|                                                            | N          | Mean  | N        | Mean  |                 |                          |
| RM                                                         | 232        | 0.100 | 228      | 0.135 | 0.035***        | 0.031***                 |
| IPO                                                        | 230        | 0.123 | 234      | 0.127 | 0.004           |                          |

| Panel B: Difference-in-difference comparison of <i>LN_LS</i> |            |        |          |        |                 |                              |
|--------------------------------------------------------------|------------|--------|----------|--------|-----------------|------------------------------|
| Variable                                                     | (1) During |        | (2) Post |        | Diff<br>(2)-(1) | Diff-in-Diff<br>(Merger-IPO) |
|                                                              | N          | Mean   | N        | Mean   |                 |                              |
| RM                                                           | 232        | -2.483 | 228      | -2.201 | 0.282**         | 0.278**                      |
| IPO                                                          | 230        | -2.175 | 234      | -2.171 | 0.004           |                              |

**Note(s):** This table presents difference-in-differences comparisons of labor share between the treatment (RM firms) and control firms (IPO firms). Panel A reports the mean values of labor share (*LS*) for both the treatment and control firms during and after the commitment period. Panel B reports the mean values of logarithmically converted labor share (*LN\_LS*) for both the treatment and control firms during and after the commitment period. See Appendix A for variable definitions. The superscripts \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

**Table 3.** Pearson correlation matrix

| Variables     | <i>LS</i> | <i>LN_LS</i> | <i>RM</i> | <i>PC</i> | <i>FIRST</i> | <i>DUAL</i> | <i>SOE</i> | <i>SIZE</i> | <i>LEV</i> | <i>ROA</i> | <i>MARGIN</i> | <i>WAGE</i> | <i>KY</i> | <i>CI</i> | <i>TOBINQ</i> |
|---------------|-----------|--------------|-----------|-----------|--------------|-------------|------------|-------------|------------|------------|---------------|-------------|-----------|-----------|---------------|
| <i>LS</i>     | 1         |              |           |           |              |             |            |             |            |            |               |             |           |           |               |
| <i>LN_LS</i>  | 0.909***  | 1            |           |           |              |             |            |             |            |            |               |             |           |           |               |
| <i>RM</i>     | −0.042**  | −0.093***    | 1         |           |              |             |            |             |            |            |               |             |           |           |               |
| <i>PC</i>     | −0.110*** | −0.079**     | 0.009     | 1         |              |             |            |             |            |            |               |             |           |           |               |
| <i>FIRST</i>  | 0.011     | 0.031        | −0.246*** | 0.113***  | 1            |             |            |             |            |            |               |             |           |           |               |
| <i>DUAL</i>   | 0.042     | 0.067**      | −0.097*** | 0.033     | 0.001        | 1           |            |             |            |            |               |             |           |           |               |
| <i>SOE</i>    | 0.147***  | 0.143***     | −0.003    | −0.016    | 0.091***     | −0.246***   | 1          |             |            |            |               |             |           |           |               |
| <i>SIZE</i>   | −0.216*** | −0.220***    | 0.105***  | −0.195*** | 0.122***     | −0.034      | 0.027      | 1           |            |            |               |             |           |           |               |
| <i>LEV</i>    | 0.012     | −0.078**     | 0.111***  | −0.146*** | 0.063*       | −0.043      | 0.016      | 0.290***    | 1          |            |               |             |           |           |               |
| <i>ROA</i>    | −0.266*** | −0.168***    | −0.078**  | 0.261***  | 0.091***     | 0.029       | −0.019     | 0.081**     | −0.618***  | 1          |               |             |           |           |               |
| <i>MARGIN</i> | −0.333*** | −0.226***    | −0.118*** | 0.211***  | 0.072**      | −0.043      | 0.067**    | 0.132***    | −0.502***  | 0.427***   | 1             |             |           |           |               |
| <i>WAGE</i>   | 0.278***  | 0.207***     | 0.102***  | −0.273*** | −0.090***    | −0.075**    | 0.224***   | 0.129***    | 0.109***   | −0.195***  | −0.167***     | 1           |           |           |               |
| <i>KY</i>     | 0.209***  | 0.191***     | 0.036     | −0.053    | 0.002        | −0.078**    | 0.220***   | 0.018       | 0.056*     | −0.148***  | −0.131***     | −0.125***   | 1         |           |               |
| <i>CI</i>     | 0.301***  | 0.291***     | 0.174***  | −0.124*** | −0.090***    | −0.037      | 0.110***   | 0.084**     | 0.139***   | −0.326***  | −0.407***     | 0.176***    | 0.491***  | 1         |               |
| <i>TOBINQ</i> | 0.130***  | 0.133***     | 0.054     | −0.019    | −0.101***    | 0.081**     | −0.122***  | −0.307***   | −0.088***  | 0.012      | −0.082**      | 0.060*      | −0.082**  | −0.053    | 1             |

**Note(s):** This table presents the Pearson correlations among the main test variables for the sample of 924 firm-year observations in our study. See [Appendix A](#) for variable definitions. The superscripts \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

performance commitment. Both *LS* and *LN\_LS* are negatively and significantly correlated with *RM*, indicating that *RM* firms exhibit lower labor shares than *IPO* firms over the entire sample period. These findings are consistent with the results presented in Table 2, which provides preliminary evidence for the “cost-saving” hypothesis [12].

#### 4.2 Performance commitments and firm labor shares

Table 4 presents the estimates of our regression models regarding the impact of performance commitments on firm labor shares. In Column (1), when the control variables are excluded, the estimated coefficient on *RM\*PC* is  $-0.0389$ , which is statistically significant at the 1% level. After including all control variables in Column (2), the estimated coefficient on *RM\*PC* is  $-0.0220$ , statistically significant at the 1% level. In Column (3), after further controlling for

**Table 4.** Performance commitment and labor share

| Variables                 | <i>LS</i><br>(1)                | (2)                             | (3)                            | <i>LN_LS</i><br>(4)             | (5)                             | (6)                            |
|---------------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|
| <i>RM</i>                 | 0.0151<br>(1.059)               | 0.0039<br>(0.332)               |                                | 0.0624<br>(0.466)               | $-0.0097$<br>( $-0.078$ )       |                                |
| <i>PC</i>                 | 0.0147<br>(1.289)               | 0.0124<br>(1.202)               | 0.0109**<br>(2.010)            | 0.2264*<br>(1.837)              | 0.1873<br>(1.548)               | 0.0656<br>(1.634)              |
| <i>RM*PC</i>              | $-0.0389^{***}$<br>( $-3.750$ ) | $-0.0220^{***}$<br>( $-2.987$ ) | $-0.0163^{**}$<br>( $-2.411$ ) | $-0.3811^{***}$<br>( $-4.180$ ) | $-0.2374^{***}$<br>( $-3.081$ ) | $-0.1511^{**}$<br>( $-2.549$ ) |
| <i>FIRST</i>              |                                 | 0.0557*<br>(1.712)              | 0.0710<br>(1.525)              |                                 | 0.5829<br>(1.602)               | 0.6407<br>(1.636)              |
| <i>DUAL</i>               |                                 | 0.0089<br>(1.019)               | $-0.0012$<br>( $-0.283$ )      |                                 | 0.1043<br>(1.104)               | $-0.0202$<br>( $-0.459$ )      |
| <i>SOE</i>                |                                 | 0.0283*<br>(1.851)              | $-0.0156$<br>( $-1.511$ )      |                                 | 0.3790***<br>(2.656)            | $-0.0180$<br>( $-0.173$ )      |
| <i>SIZE</i>               |                                 | $-0.0088^*$<br>( $-1.695$ )     | $-0.0112$<br>( $-1.118$ )      |                                 | $-0.0851$<br>( $-1.538$ )       | $-0.1777^{**}$<br>( $-2.185$ ) |
| <i>LEV</i>                |                                 | $-0.0291$<br>( $-1.133$ )       | 0.0074<br>(0.318)              |                                 | $-0.4594$<br>( $-1.561$ )       | $-0.0170$<br>( $-0.069$ )      |
| <i>ROA</i>                |                                 | 0.0200<br>(0.402)               | $-0.0099$<br>( $-0.184$ )      |                                 | 0.0112<br>(0.022)               | $-0.3095$<br>( $-0.661$ )      |
| <i>MARGIN</i>             |                                 | $-0.0362^{***}$<br>( $-3.206$ ) | $-0.0238^{**}$<br>( $-2.295$ ) |                                 | $-0.2272^{**}$<br>( $-2.447$ )  | $-0.1085$<br>( $-1.436$ )      |
| <i>WAGE</i>               |                                 | 0.0230*<br>(1.863)              | 0.0508***<br>(4.841)           |                                 | 0.0877<br>(0.628)               | 0.4571***<br>(5.769)           |
| <i>KY</i>                 |                                 | 0.0158<br>(1.261)               | 0.0259***<br>(2.901)           |                                 | 0.0539<br>(0.504)               | 0.1070<br>(1.569)              |
| <i>CI</i>                 |                                 | 0.0083***<br>(2.675)            | 0.0114***<br>(4.532)           |                                 | 0.1079***<br>(3.869)            | 0.1420***<br>(7.950)           |
| <i>TOBINQ</i>             |                                 | 0.0064<br>(1.401)               | 0.0020<br>(0.769)              |                                 | 0.0718<br>(1.598)               | 0.0017<br>(0.085)              |
| <i>CONSTANT</i>           | 0.0757***<br>(3.289)            | $-0.0748$<br>( $-0.395$ )       | $-0.3175$<br>( $-1.257$ )      | $-2.6124^{***}$<br>( $-8.295$ ) | $-2.5633$<br>( $-1.379$ )       | $-4.5760^{**}$<br>( $-2.441$ ) |
| <i>YEAR FE</i>            | YES                             | YES                             | YES                            | YES                             | YES                             | YES                            |
| <i>INDUSTRY FE</i>        | YES                             | YES                             | NO                             | YES                             | YES                             | NO                             |
| <i>FIRM FE</i>            | NO                              | NO                              | YES                            | NO                              | NO                              | YES                            |
| <i>N</i>                  | 924                             | 924                             | 924                            | 924                             | 924                             | 924                            |
| <i>Adj. R<sup>2</sup></i> | 0.163                           | 0.393                           | 0.582                          | 0.179                           | 0.359                           | 0.608                          |

**Note(s):** This table presents regression results of the impact of performance commitment on labor share. The dependent variables are labor share (*LS*) and the logarithmically converted form of labor share (*LN\_LS*). See Appendix A for variable definitions. Our sample includes 924 firm-year observations. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

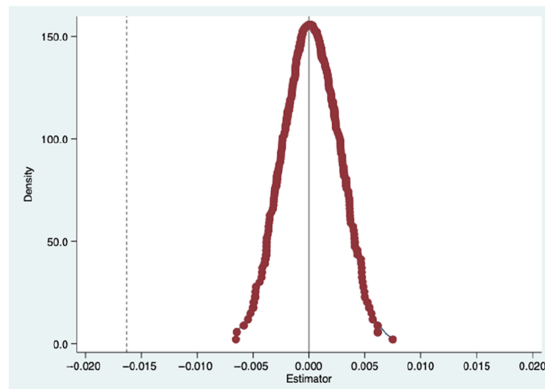
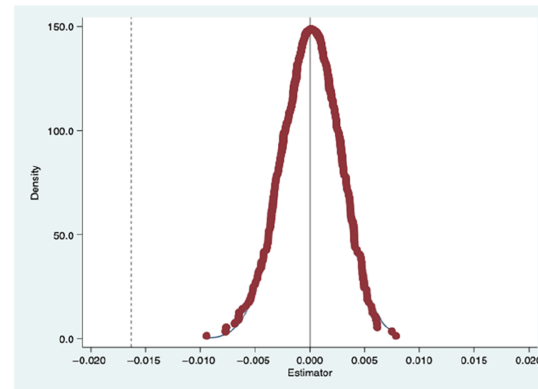
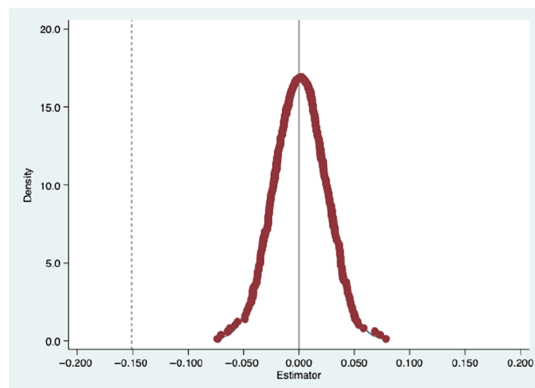
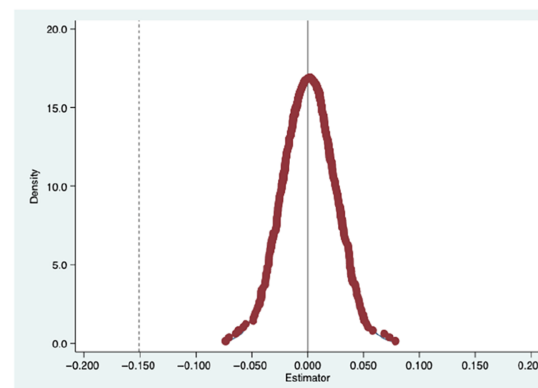
the firm fixed effects, the coefficient on  $RM*PC$  is  $-0.0163$ , which is statistically significant at the 5% level. A similar pattern emerges when we use the logarithmically converted form of labor share ( $LN\_LS$ ) as the dependent variable. Specifically, in Columns (4)-(6), the coefficients on the interaction term  $RM*PC$  are  $-0.3811$ ,  $-0.2374$  and  $-0.1511$ , respectively, each statistically significant at least at the 5% level. The effect of performance commitments on firm labor share is both statistically robust and economically meaningful. As shown in Columns (3) and (6), RM firms' labor shares decline by 4.46% and 8.19%, respectively, relative to those of IPO firms during the performance commitment period [13]. Overall, the results imply a tendency among RM firms to lower labor shares when subjected to heightened performance pressure during commitment periods, thus supporting the "cost-saving" hypothesis.

#### 4.3 Robustness tests

We use a DID approach in the baseline analysis and find that labor shares decline among RM firms throughout the performance commitment years. However, potential endogeneity concerns related to firms' listing choices may affect the validity of our results. Although the baseline model includes a range of control variables, we remain cautious about the possibility that omitted factors influencing firms' listing decisions could lead to misspecification in our estimation model.

**4.3.1 Placebo test.** To address the potential endogeneity issue, we adopt the methodology established in previous studies (Ma, Wang, Zhou, & Chen, 2023; Huang, Mo, & Zhang, 2025) and employ a non-parametric permutation test to statistically assess our estimates. Specifically, we benchmark the estimated coefficients against a distribution of placebo coefficients obtained by randomly reassigning RM firm identities across observations. To conduct this analysis, we randomly assigned IPO and RM firm labels to observations without replacement, repeating the process 300 and 500 times, respectively. For each set of placebo assignments, we re-estimate Eq. (3). Panels A and B of Figure 2 display the distributions of the estimated coefficients on the interaction term  $RM*PC$  from the 300 and 500 placebo regressions, respectively, using  $LS$  as the dependent variable. Similarly, in Panels C and D of Figure 2, the dependent variables are replaced by  $LN\_LS$ . As expected, the placebo coefficient distributions are centered around zero, with none exhibiting a more negative estimate than our actual results. The results suggest that the observed effect is unlikely to be driven by the firms' choice of listing method.

**4.3.2 Dynamic analysis.** Consistent with prior studies (Wu, Luo, & You, 2025), we utilize a dynamic specification to examine whether the parallel trend assumption holds in our DID estimation. Specifically, we use year-specific dummies to replace the  $PC$  indicator in Eq. (3) to trace the impact of the performance commitment period both before it begins and after it ends [14]. To operationalize this approach, we incorporate three variables,  $PC0$ ,  $PC1$  and  $PC2$ , corresponding to each of the three years during the RM firms' performance commitment period and the initial three post-listing years for IPO firms. We further include two indicator variables,  $PC3$  and  $PC4$ , to capture the two years following the performance commitment period for RM firms and the fourth and fifth post-listing years for IPO firms. Next, we interact the RM indicator with the timing dummy variables and re-estimate Eq. (3). The regression results are presented in Columns (1) and (2) of Table 5. The coefficients on  $RM*PC0$ ,  $RM*PC1$  and  $RM*PC2$  are negative and statistically significant in both columns, indicating that RM firms have lower labor shares in the period of performance commitment compared to IPO firms. The coefficients for  $RM*PC3$  and  $RM*PC4$  are statistically insignificant, indicating that the differences in labor shares between RM and IPO firms dissipate after the commitment period ends. These results are consistent with our baseline findings and also enhance the validity of the parallel trend assumption during the post-commitment period in the DID research design.

Panel A: DV =  $LS$ , simulations times = 300Panel B: DV =  $LS$ , simulations times = 500Panel C: DV =  $LN\_LS$ , simulations times = 300Panel D: DV =  $LN\_LS$ , simulations times = 500

**Figure 2.** Placebo tests. Note: This figure presents the distribution of the estimated coefficients of the placebo tests. We randomly assign RM and IPO firm status to observations without replacement, repeating the procedure 300 and 500 times. Panels A and B show the cumulative distribution density of the estimated coefficients on  $RM*PC$  when the dependent variable is  $LS$ . Panels C and D show the cumulative distribution density of the estimated coefficients of  $RM*PC$  when the dependent variable is  $LN\_LS$ . The vertical line indicates the corresponding coefficient estimates reported in Columns (3) and (6) in [Table 4](#)

**Table 5.** Dynamic analysis

| Variables                 | LS<br>(1)             | LN_LS<br>(2)          |
|---------------------------|-----------------------|-----------------------|
| <i>RM* PC0</i>            | −0.0230**<br>(−2.141) | −0.1536*<br>(−1.736)  |
| <i>RM* PC1</i>            | −0.0235**<br>(−2.137) | −0.1750**<br>(−1.999) |
| <i>RM* PC2</i>            | −0.0207*<br>(−1.972)  | −0.1906**<br>(−2.413) |
| <i>RM* PC3</i>            | −0.0087<br>(−0.984)   | −0.0448<br>(−0.735)   |
| <i>RM* PC4</i>            | −0.0095<br>(−1.380)   | −0.0239<br>(−0.494)   |
| <i>PC0</i>                | 0.0038<br>(0.302)     | −0.1298<br>(−1.310)   |
| <i>PC1</i>                | 0.0070<br>(0.700)     | −0.0849<br>(−1.024)   |
| <i>PC2</i>                | 0.0058<br>(0.722)     | −0.0635<br>(−0.916)   |
| <i>PC3</i>                | 0.0002<br>(0.042)     | −0.0791<br>(−1.558)   |
| <i>PC4</i>                | −0.0015<br>(−0.421)   | −0.0730*<br>(−1.778)  |
| <i>CONTROLS</i>           | Yes                   | Yes                   |
| <i>CONSTANT</i>           | −0.3037<br>(−1.143)   | −4.3203**<br>(−2.188) |
| <i>YEAR FE</i>            | Yes                   | Yes                   |
| <i>FIRM FE</i>            | Yes                   | Yes                   |
| <i>N</i>                  | 924                   | 924                   |
| <i>Adj. R<sup>2</sup></i> | 0.580                 | 0.607                 |

**Note(s):** This table presents the regression results of the dynamic analysis. The dependent variables are labor share (*LS*) and the logarithmically converted form of labor share (*LN\_LS*). See [Appendix A](#) for variable definitions. Our sample includes 924 firm-year observations. Year and firm fixed effects are included. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

**4.3.3 Controlling for other fixed effects: firm pair and listing year.** In the main analysis, although we control for firm and year fixed effects, the results may still be affected by omitted variables at other levels. Therefore, we enhance the regression models by incorporating firm-pair fixed effects and listing-year fixed effects to control for unobservable, time-invariant characteristics specific to matched pairs and potential omitted variables related to listing years ([Xin, Zhou, & Hu, 2018](#)). The regression results are reported in Columns (1) to (4) of [Table 6](#). In Columns (1) and (2), we include firm-pair fixed effects in the regression models. The coefficients of *RM\*PC* are both negative and significant at the 5% level. In Columns (3) and (4), we include listing-year fixed effects and find similar results. The evidence shown in [Table 6](#) corroborates our primary conclusions.

**4.3.4 Different matching strategies.** We recognize that, despite matching firms based on size in the baseline regressions, the difference-in-differences specification may still yield firm pairs with notable disparities in financial characteristics. To address this issue, we use three alternative matching approaches in this section. First, each RM firm is matched with an IPO firm from the same industry, year and trading venue with the closest firm size (*SIZE*) and a leverage (*LEV*) level within a 10% range. Second, each RM firm is paired with an IPO firm from the same year, industry and trading venue with the closest firm size (*SIZE*) and a return on assets within a 10% range. Third, IPO firms may also experience performance pressure during

**Table 6.** Controlling for other fixed effects: firm pair and listing year

| Variables                 | <i>firm-pair FE</i>    | <i>LN_LS</i>           | <i>Listing-year FE</i> | <i>LN_LS</i>          |
|---------------------------|------------------------|------------------------|------------------------|-----------------------|
|                           | <i>LS</i>              |                        | <i>LS</i>              |                       |
|                           | (1)                    | (2)                    | (3)                    | (4)                   |
| <i>PC</i>                 | 0.0116*<br>(1.788)     | 0.1080*<br>(1.918)     |                        |                       |
| <i>RM* PC</i>             | −0.0170**<br>(−2.029)  | −0.2166**<br>(−2.369)  | −0.0162**<br>(−2.389)  | −0.1500**<br>(−2.529) |
| <i>FIRST</i>              | 0.1228***<br>(3.970)   | 1.1982***<br>(3.984)   | 0.0703<br>(1.498)      | 0.6454<br>(1.626)     |
| <i>DUAL</i>               | 0.0096<br>(1.481)      | 0.1493*<br>(1.956)     | −0.0013<br>(−0.299)    | −0.0216<br>(−0.492)   |
| <i>SOE</i>                | 0.0178<br>(1.385)      | 0.3447**<br>(2.500)    | −0.0153<br>(−1.456)    | −0.0202<br>(−0.192)   |
| <i>SIZE</i>               | −0.0061<br>(−0.871)    | −0.0874<br>(−1.274)    | −0.0110<br>(−1.088)    | −0.1739**<br>(−2.117) |
| <i>LEV</i>                | −0.0147<br>(−0.664)    | −0.3300<br>(−1.480)    | 0.0067<br>(0.287)      | −0.0257<br>(−0.104)   |
| <i>ROA</i>                | 0.0026<br>(0.048)      | −0.0466<br>(−0.091)    | −0.0098<br>(−0.184)    | −0.3222<br>(−0.690)   |
| <i>MARGIN</i>             | −0.0368***<br>(−3.213) | −0.2469***<br>(−2.771) | −0.0242**<br>(−2.326)  | −0.1104<br>(−1.455)   |
| <i>WAGE</i>               | 0.0333***<br>(2.983)   | 0.3069***<br>(2.953)   | 0.0505***<br>(4.968)   | 0.4509***<br>(5.755)  |
| <i>KY</i>                 | 0.0191**<br>(2.032)    | 0.1439*<br>(1.784)     | 0.0260***<br>(2.921)   | 0.1065<br>(1.561)     |
| <i>CI</i>                 | 0.0043*<br>(1.657)     | 0.0561**<br>(2.369)    | 0.0114***<br>(4.527)   | 0.1424***<br>(7.976)  |
| <i>TOBINQ</i>             | 0.0071**<br>(2.256)    | 0.0706**<br>(2.465)    | 0.0019<br>(0.733)      | 0.0020<br>(0.099)     |
| <i>CONSTANT</i>           | −0.2330<br>(−1.327)    | −4.7411***<br>(−2.805) | −0.3003<br>(−1.134)    | −4.2617**<br>(−2.167) |
| <i>YEAR FE</i>            | YES                    | YES                    | YES                    | YES                   |
| <i>FIRM FE</i>            | NO                     | NO                     | YES                    | YES                   |
| <i>FIRM-PAIR FE</i>       | YES                    | YES                    | NO                     | NO                    |
| <i>LISTING-YEAR FE</i>    | NO                     | NO                     | YES                    | YES                   |
| <i>N</i>                  | 924                    | 924                    | 924                    | 924                   |
| <i>Adj. R<sup>2</sup></i> | 0.576                  | 0.602                  | 0.581                  | 0.608                 |

**Note(s):** This table presents regression results controlling for firm-pair and listing-year fixed effects. The dependent variables are labor share (*LS*) and the logarithmically converted form of labor share (*LN\_LS*). See [Appendix A](#) for variable definitions. Our sample includes 924 firm-year observations. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

the lock-up period and thus have incentives to manage earnings to support their share prices. As a result, using IPO firms as the comparison group for RM firms may introduce bias [15]. Therefore, we match each RM firm with an already-listed firm from the same year, industry and trading venue that is closest to size. [Table 7](#) reports the regression results of [Eq. \(3\)](#) based on these different matching approaches. Our main findings remain robust across all specifications.

**4.3.5 Alternative measures of labor share.** Following the literature ([Jiang & Lin, 2022](#)), we use alternative methods to measure firm labor share. Specifically, *LS\_A1* is measured as cash compensation paid to employees divided by sales revenue. *LS\_A2* is measured as aggregate compensation paid to employees divided by the sum of net profit, depreciation and tax. Moreover, we replace the labor share with the firm's number of employees (*LNHIRE*), actual

**Table 7.** Different matching strategies

| Variables                 | <i>LEV within 20%</i> |                        | <i>ROA within 20%</i>  |                        | <i>Matched to listed firms</i> |                        |
|---------------------------|-----------------------|------------------------|------------------------|------------------------|--------------------------------|------------------------|
|                           | <i>LS</i><br>(1)      | <i>LN_LS</i><br>(2)    | <i>LS</i><br>(3)       | <i>LN_LS</i><br>(4)    | <i>LS</i><br>(5)               | <i>LN_LS</i><br>(6)    |
| <i>PC</i>                 | 0.0095*<br>(1.731)    | 0.0427<br>(1.107)      | 0.0051<br>(0.775)      | 0.0189<br>(0.435)      | 0.0153**<br>(2.256)            | 0.0912*<br>(1.835)     |
| <i>RM* PC</i>             | −0.0155**<br>(−2.304) | −0.1190**<br>(−2.153)  | −0.0107<br>(−1.388)    | −0.1216**<br>(−2.258)  | −0.0277***<br>(−3.191)         | −0.2240***<br>(−3.090) |
| <i>FIRST</i>              | 0.1059<br>(1.638)     | 0.9045*<br>(1.671)     | 0.0553<br>(1.651)      | 0.4820**<br>(2.008)    | 0.1055*<br>(1.775)             | 0.9445*<br>(1.944)     |
| <i>DUAL</i>               | −0.0008<br>(−0.171)   | −0.0134<br>(−0.293)    | 0.0048<br>(0.877)      | 0.0526<br>(1.272)      | −0.0060<br>(−1.114)            | −0.0317<br>(−0.622)    |
| <i>SOE</i>                | −0.0103<br>(−1.057)   | −0.0974<br>(−1.064)    | −0.0112<br>(−0.804)    | −0.0268<br>(−0.235)    | −0.0139<br>(−1.203)            | −0.0171<br>(−0.155)    |
| <i>SIZE</i>               | −0.0121<br>(−1.033)   | −0.1616*<br>(−1.808)   | −0.0182**<br>(−2.122)  | −0.2693***<br>(−4.025) | −0.0076<br>(−0.653)            | −0.1455<br>(−1.602)    |
| <i>LEV</i>                | −0.0166<br>(−0.541)   | −0.2146<br>(−0.959)    | −0.0076<br>(−0.303)    | 0.1176<br>(0.382)      | 0.0238<br>(0.895)              | 0.0988<br>(0.413)      |
| <i>ROA</i>                | −0.1107**<br>(−2.087) | −1.1346***<br>(−3.133) | 0.0211<br>(0.556)      | 0.3376<br>(0.719)      | 0.0350<br>(0.503)              | −0.0975<br>(−0.195)    |
| <i>MARGIN</i>             | −0.0099<br>(−0.858)   | 0.0201<br>(0.270)      | −0.0513***<br>(−5.323) | −0.2076***<br>(−4.571) | −0.0395***<br>(−2.647)         | −0.1668**<br>(−2.028)  |
| <i>WAGE</i>               | 0.0428***<br>(5.020)  | 0.4327***<br>(8.009)   | 0.0366***<br>(3.743)   | 0.4121***<br>(4.899)   | 0.0493***<br>(3.857)           | 0.4144***<br>(4.443)   |
| <i>KY</i>                 | 0.0331***<br>(3.111)  | 0.1890**<br>(2.535)    | 0.0046<br>(0.231)      | −0.0071<br>(−0.048)    | 0.0283*<br>(1.934)             | 0.1213<br>(1.320)      |
| <i>CI</i>                 | 0.0112***<br>(3.982)  | 0.1282***<br>(6.936)   | 0.0105***<br>(3.815)   | 0.1488***<br>(7.030)   | 0.0110***<br>(3.145)           | 0.1438***<br>(6.377)   |
| <i>TOBINQ</i>             | 0.0023<br>(0.842)     | 0.0084<br>(0.432)      | 0.0021<br>(0.833)      | 0.0006<br>(0.041)      | 0.0024<br>(0.739)              | 0.0000<br>(0.002)      |
| <i>CONSTANT</i>           | −0.2036<br>(−0.703)   | −4.5707**<br>(−2.167)  | 0.0068<br>(0.033)      | −2.2365<br>(−1.587)    | −0.4023<br>(−1.368)            | −5.0040**<br>(−2.428)  |
| <i>YEAR FE</i>            | YES                   | YES                    | YES                    | YES                    | YES                            | YES                    |
| <i>FIRM FE</i>            | YES                   | YES                    | YES                    | YES                    | YES                            | YES                    |
| <i>N</i>                  | 860                   | 860                    | 647                    | 647                    | 924                            | 924                    |
| <i>Adj. R<sup>2</sup></i> | 0.533                 | 0.584                  | 0.663                  | 0.692                  | 0.622                          | 0.650                  |

**Note(s):** This table presents regression results using different matching strategies. The dependent variables are labor share (*LS*) and the logarithmically converted form of labor share (*LN\_LS*). In Columns (1) and (2), we pair each RM firm with a matched IPO firm in the same trading venue, year and industry that is closest in size and within 20% scale in *LEV*. In columns (3) and (4), we pair each RM firm with a matched IPO firm in the same trading venue, year and industry that is closest in size and within 20% scale in *ROA*. In Columns (5) and (6), the analysis is based on a matched sample of RM firms and already publicly listed firms. See [Appendix A](#) for variable definitions. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

expenditure on social insurance contributions paid for employees (*INSURANCE*) and average wage of employees (*WAGE\_AVG*). *LNHIRE* is the natural logarithm of the firm's number of employees. *INSURANCE* is measured as the ratio of the firm's enterprise-paid social insurance expenditures to total assets. *WAGE\_AVG* is measured as the total salary divided by the number of employees. The regression results using these alternative measures of firm labor share are reported in [Table 8](#). The coefficients on the interaction term *RM\*PC* are all significantly negative, aligning with our primary findings [\[16\]](#).

**Table 8.** Alternative measures of labor share

| Variables                 | <i>LS_A1</i><br>(1)   | <i>LS_A2</i><br>(2)   | <i>LNHIRE</i><br>(3)   | <i>INSURANCE</i><br>(4) | <i>WAGE_</i><br><i>AVG</i><br>(5) |
|---------------------------|-----------------------|-----------------------|------------------------|-------------------------|-----------------------------------|
| <i>PC</i>                 | 0.0117**<br>(2.157)   | 0.0145**<br>(2.324)   | 0.0476<br>(1.299)      | 0.0004<br>(0.584)       | −0.0030<br>(−0.103)               |
| <i>RM* PC</i>             | −0.0180**<br>(−2.499) | −0.0164**<br>(−2.120) | −0.1155**<br>(−2.035)  | −0.0150**<br>(−2.252)   | −0.0260**<br>(−2.168)             |
| <i>FIRST</i>              | 0.0793*<br>(1.667)    | 0.0880<br>(1.642)     | 0.5778<br>(1.384)      | 0.0109<br>(1.144)       | −0.2813<br>(−1.125)               |
| <i>DUAL</i>               | −0.0039<br>(−0.879)   | −0.0009<br>(−0.173)   | −0.0094<br>(−0.238)    | −0.0004<br>(−0.394)     | 0.0071<br>(0.279)                 |
| <i>SOE</i>                | −0.0095<br>(−1.057)   | −0.0207<br>(−1.596)   | 0.0208<br>(0.199)      | −0.0019*<br>(−1.860)    | 0.1623***<br>(2.726)              |
| <i>SIZE</i>               | −0.0082<br>(−0.808)   | −0.0211*<br>(−1.683)  | 0.8107***<br>(11.130)  | −0.0008<br>(−0.793)     | 0.1334***<br>(4.229)              |
| <i>LEV</i>                | 0.0180<br>(0.714)     | 0.0188<br>(0.700)     | 0.1355<br>(0.820)      | −0.0053<br>(−1.547)     | 0.2711**<br>(2.165)               |
| <i>ROA</i>                | 0.0024<br>(0.037)     | −0.0876<br>(−1.034)   | 0.1376<br>(0.661)      | −0.0066<br>(−1.101)     | −0.1138<br>(−0.725)               |
| <i>MARGIN</i>             | −0.0366**<br>(−2.544) | −0.0130<br>(−0.616)   | −0.1188***<br>(−2.946) | 0.0006<br>(0.589)       | −0.0759**<br>(−2.189)             |
| <i>WAGE</i>               | 0.0430***<br>(3.774)  | 0.0574***<br>(4.294)  | −0.6290***<br>(−8.829) | 0.0029**<br>(2.298)     | −                                 |
| <i>KY</i>                 | 0.0153<br>(1.309)     | 0.0263<br>(1.531)     | 0.0306<br>(0.592)      | −0.0004<br>(−0.515)     | −0.0561<br>(−1.109)               |
| <i>CI</i>                 | 0.0105***<br>(3.644)  | 0.0130***<br>(3.625)  | −0.0906***<br>(−5.572) | 0.0002<br>(0.849)       | −0.0184<br>(−1.556)               |
| <i>TOBINQ</i>             | 0.0046<br>(1.586)     | 0.0032<br>(0.910)     | 0.0133<br>(0.673)      | −0.0002<br>(−0.387)     | −0.0184<br>(−1.556)               |
| <i>CONSTANT</i>           | −0.3003<br>(−1.167)   | −0.1970<br>(−0.639)   | −3.6926**<br>(−2.167)  | −0.0058<br>(−0.307)     | 0.0142<br>(1.185)                 |
| <i>YEAR FE</i>            | YES                   | YES                   | YES                    | YES                     | YES                               |
| <i>FIRM FE</i>            | YES                   | YES                   | YES                    | YES                     | YES                               |
| <i>N</i>                  | 924                   | 924                   | 924                    | 682                     | 924                               |
| <i>Adj. R<sup>2</sup></i> | 0.559                 | 0.516                 | 0.686                  | 0.472                   | 0.526                             |

**Note(s):** This table presents the regression results using alternative measures of labor share. In Column (1), we define *LS\_A1* as cash compensation paid to employees divided by sales revenue. In Column (2), we define *LS\_A2* as aggregate compensation paid to employees divided by the sum of net profit, depreciation, and taxes. In Column (3), we measure *LNHIRE* as the natural logarithm of the firm's number of employees. In Column (4), we use the firm's actual social insurance contributions (*INSURANCE*) as an alternative variable. In Column (5), we use the average wage of employees (*WAGE\_AVG*) as the dependent variable. See [Appendix A](#) for variable definitions. Our sample includes 924 firm-year observations. Year and firm fixed effects are included. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

**4.3.6 Exclude the influence of SOEs.** The executive compensation caps imposed on SOEs in 2014 and 2018 may potentially confound the findings. These regulations required that executive compensation in SOEs not exceed the average employee wage, which likely contributed to a decline in labor expenditure among SOEs. To address this concern, we reconstructed the sample by excluding SOEs and their matched firms and re-estimated the baseline regressions. Hence, 322 observations were removed from the original sample. The results are reported in [Table 9](#). After excluding SOE-related observations, the findings remained consistent with the baseline results.

**Table 9.** Exclude the influence of SOEs

| Variables                 | <i>LS</i><br>(1)      | <i>LN_LS</i><br>(2)   |
|---------------------------|-----------------------|-----------------------|
| <i>PC</i>                 | 0.0129*<br>(1.839)    | 0.0761<br>(1.426)     |
| <i>RM* PC</i>             | −0.0210**<br>(−2.400) | −0.1970**<br>(−2.385) |
| <i>FIRST</i>              | 0.0815<br>(1.164)     | 0.8998<br>(1.472)     |
| <i>DUAL</i>               | −0.0027<br>(−0.501)   | −0.0244<br>(−0.419)   |
| <i>SIZE</i>               | −0.0093<br>(−0.723)   | −0.1649<br>(−1.645)   |
| <i>LEV</i>                | −0.0062<br>(−0.268)   | −0.0056<br>(−0.021)   |
| <i>ROA</i>                | −0.0501<br>(−0.800)   | −0.4464<br>(−0.661)   |
| <i>MARGIN</i>             | −0.0125<br>(−0.885)   | −0.0341<br>(−0.284)   |
| <i>WAGE</i>               | 0.0405***<br>(3.687)  | 0.3822***<br>(5.138)  |
| <i>KY</i>                 | 0.0253*<br>(1.895)    | 0.1929*<br>(1.683)    |
| <i>CI</i>                 | 0.0135***<br>(3.606)  | 0.1477***<br>(5.280)  |
| <i>TOBINQ</i>             | 0.0012<br>(0.402)     | −0.0065<br>(−0.280)   |
| <i>CONSTANT</i>           | −0.2482<br>(−0.800)   | −4.2086*<br>(−1.811)  |
| <i>YEAR FE</i>            | YES                   | YES                   |
| <i>FIRM FE</i>            | YES                   | YES                   |
| <i>N</i>                  | 602                   | 602                   |
| <i>Adj. R<sup>2</sup></i> | 0.575                 | 0.611                 |

**Note(s):** This table presents the regression results after excluding SOEs and their matched firms. The dependent variables are labor share (*LS*) and the logarithmically converted form of labor share (*LN\_LS*). See [Appendix A](#) for variable definitions. Our sample includes 602 firm-year observations. Year and firm fixed effects are included. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

#### 4.4 Mechanism tests: performance pressure of RM firms and labor shares

In the preceding analysis, we argue that RM firms make cost-saving decisions when they are faced with great performance pressure and reduce labor shares in the period of performance commitment. The potential financial losses associated with unmet performance targets create strong incentives for controlling shareholders of RM firms to ensure that the committed performance targets are achieved. As a result, these controlling shareholders may resort to earnings management to narrowly meet or slightly exceed the required thresholds ([Hou et al., 2015](#)). RM firms that fail to meet performance targets, or only marginally exceed them, are likely to face greater performance pressure. Even so, acquirers still overvalue their assets and accept the risk of setting ambitious performance targets within their commitments to secure sufficient revenue from RM transactions. These targets, which often exceed the achievable levels under RM firms' typical business strategies, further drive firms to reduce labor shares throughout the performance commitment years following the RMs.

Next, we examine the underlying mechanisms contributing to the reduction in labor shares among RM firms in the years when performance commitments are in effect. For this analysis, we focus on observations of RM firms within the performance commitment years and use three measures to proxy for RM firm-level performance pressure. We construct *ACHIEVE1* as a dummy variable equal to one if the RM firm fails to meet its expected performance in a given year, and zero otherwise [17]. The second indicator, *ACHIEVE2*, equals one if the RM firm either fails to meet its performance targets or only exceeds them by a margin of 5% or less and zero otherwise. The third measure, *CTB*, is calculated by dividing the performance target set during the commitment period by the book value of the RM firm in the year before the RM takes place. A higher *CTB* reflects more ambitious performance targets and greater pressure on the RM firm. As shown in Columns (1) and (2) of Table 10, we observe a significant negative association between *ACHIEVE1* and labor share (*LS* and *LN\_LS*). Similarly, Columns (3) and (4) reveal that the coefficients on *ACHIEVE2* are also significantly negative. In Columns (5) and (6), the coefficients on *CTB* are negative and statistically significant as well. These results support our conjecture that RM firms implement cost-saving decisions when faced with higher levels of performance pressure and decrease their labor shares during performance commitment periods.

#### 4.5 Cross-sectional tests

We examine whether the impact of performance commitments on labor share is moderated by differences in firms' financial standing and labor structure. To conduct cross-sectional analyses, we consider three settings. First, firms with high debt levels not only incur annual interest expenses but also face an elevated risk of debt default due to cash shortages (Chen & Wang, 2012). As debt increases, firms must allocate sufficient cash reserves to mitigate financial risk. Therefore, a higher debt burden diminishes firms' incentives to compensate employees, leading to a lower labor share. We define firm debt burden as an interest-bearing debt divided by sales revenue and partition our full sample into low (*LOW*) and high (*HIGH*) debt burden groups. The regression results are reported in Panel B of Table 11. The estimated coefficients of *RM\*PC* are negatively significant in the high debt burden groups, whereas they are insignificant in the low debt burden groups. These results indicate that RM firms experiencing greater debt burdens are more likely to reduce labor shares during the performance commitment period, reinforcing the motivation to curb costs.

Second, firms characterized by high capital intensity face limited flexibility in adjusting their cost structures, given the substantial commitment to fixed assets and non-discretionary depreciation expenses. Under stringent performance pressure, this structural rigidity compels firms to rely on labor-related costs as a strategic lever for REM. Unlike fixed costs, labor expenditures are more flexible and may therefore serve as a targeted instrument for narrowing performance gaps. Thus, we expect that RM firms with higher capital intensity will have stronger incentives to reduce labor shares throughout the performance commitment years. Specifically, capital intensity (*CI*) is calculated as the total assets divided by sales revenue. We divided the full sample into two subsamples based on the median value of capital intensity: low capital intensity (*LOW*) and high capital intensity (*HIGH*). The regression results are reported in Panel B of Table 11. The coefficients on *RM\*PC* are negative and statistically significant in the groups with high capital intensity but insignificant in the groups with low capital intensity. The findings support our prediction, showing that labor shares decrease more among RM firms with higher levels of capital intensity during the performance commitment period.

Third, in today's knowledge-based economy, the role of labor quality in corporate governance is becoming increasingly prominent because labor quality not only determines firm innovation efficiency but also influences overall productivity (Acemoglu, 2010; Cortés & Tessada, 2011). Compared to rank-and-file employees, highly skilled employees with talent are more competitive in the labor market and exhibit greater sensitivity to compensation. Firms that rely heavily on skilled labor are more likely to offer higher compensation to attract and

**Table 10.** Mechanism test: performance pressure of RM firms and labor share

| Variables           | LS<br>(1)              | LN_LS<br>(2)          | LS<br>(3)              | LN_LS<br>(4)          | LS<br>(5)             | LN_LS<br>(6)         |
|---------------------|------------------------|-----------------------|------------------------|-----------------------|-----------------------|----------------------|
| ACHIEVE1            | −0.0401*<br>(−1.689)   | −0.4948**<br>(−2.155) |                        |                       |                       |                      |
| ACHIEVE2            |                        |                       | −0.0284**<br>(−2.099)  | −0.2728*<br>(−1.845)  |                       |                      |
| CTB                 |                        |                       |                        |                       | −0.0644**<br>(−2.350) | −0.4827*<br>(−1.826) |
| FIRST               | 0.0359<br>(0.758)      | 0.7147<br>(1.382)     | 0.0452<br>(1.001)      | 0.8160<br>(1.601)     | 0.0842*<br>(1.912)    | 0.9286*<br>(1.871)   |
| DUAL                | −0.0035<br>(−0.284)    | 0.0072<br>(0.053)     | −0.0064<br>(−0.509)    | −0.0237<br>(−0.174)   | 0.0057<br>(0.446)     | 0.0129<br>(0.083)    |
| SOE                 | 0.0354*<br>(1.679)     | 0.4605*<br>(1.941)    | 0.0269<br>(1.316)      | 0.3664<br>(1.596)     | 0.0432*<br>(1.860)    | 0.4390*<br>(1.792)   |
| SIZE                | 0.0011<br>(0.149)      | 0.0411<br>(0.418)     | 0.0006<br>(0.083)      | 0.0394<br>(0.413)     | 0.0008<br>(0.101)     | 0.0573<br>(0.496)    |
| LEV                 | −0.0728*<br>(−1.935)   | −0.8649*<br>(−1.861)  | −0.0539<br>(−1.443)    | −0.6760<br>(−1.472)   | −0.0347<br>(−0.891)   | −0.6717<br>(−1.356)  |
| ROA                 | 0.1008<br>(1.208)      | 0.2905<br>(0.284)     | 0.1309*<br>(1.827)     | 0.7431<br>(0.750)     | 0.0573<br>(0.756)     | 0.0508<br>(0.049)    |
| MARGIN              | −0.0775***<br>(−3.355) | −0.4663*<br>(−1.771)  | −0.0834***<br>(−3.740) | −0.5650**<br>(−2.224) | −0.0511**<br>(−2.122) | −0.3191<br>(−1.113)  |
| WAGE                | 0.0083<br>(0.709)      | 0.0276<br>(0.203)     | 0.0084<br>(0.701)      | 0.0342<br>(0.257)     | 0.0074<br>(0.568)     | 0.0370<br>(0.240)    |
| KY                  | 0.0226*<br>(1.815)     | 0.1087<br>(0.954)     | 0.0280**<br>(2.354)    | 0.1656<br>(1.385)     | 0.0204<br>(0.991)     | 0.1665<br>(0.864)    |
| CI                  | 0.0100**<br>(2.223)    | 0.1205***<br>(2.862)  | 0.0111**<br>(2.429)    | 0.1301***<br>(3.067)  | 0.0103**<br>(2.347)   | 0.1027**<br>(2.255)  |
| TOBINQ              | −0.0078<br>(−1.560)    | −0.0258<br>(−0.464)   | −0.0030<br>(−0.638)    | 0.0295<br>(0.510)     | −0.0005<br>(−0.109)   | 0.0499<br>(0.929)    |
| CONSTANT            | −0.0402<br>(−0.195)    | −3.8421<br>(−1.480)   | −0.0954<br>(−0.471)    | −4.6774*<br>(−1.930)  | −0.0948<br>(−0.369)   | −4.9459<br>(−1.487)  |
| YEAR FE             | Yes                    | Yes                   | Yes                    | Yes                   | Yes                   | Yes                  |
| FIRM FE             | Yes                    | Yes                   | Yes                    | Yes                   | Yes                   | Yes                  |
| N                   | 223                    | 223                   | 223                    | 223                   | 223                   | 223                  |
| Adj. R <sup>2</sup> | 0.596                  | 0.535                 | 0.596                  | 0.526                 | 0.581                 | 0.530                |

**Note(s):** This table presents regression results of the association between performance pressure and labor share among RM firms. The dependent variables are labor share (*LS*) and the logarithmically converted form of labor share (*LN\_LS*). We use various independent variables to proxy for the performance pressure of RM firms. These variables include: (1) an indicator variable which equals 1 if the RM firm fails to achieve the performance target, and 0 otherwise (*ACHIEVE1*), (2) an indicator variable which equal 1 if the RM firm fails to achieve the performance target or just achieves the performance target within 5 percent, and 0 otherwise (*ACHIEVE2*) and (3) the amount of performance target in commitment divided by the book value of acquired assets (*CTB*). See [Appendix A](#) for variable definitions. The sample includes 223 RM firm observations during the commitment period. Year and firm fixed effects are included. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

retain top-tier talent. We expect that firms hiring a higher proportion of highly skilled employees will have less incentive to reduce labor shares under performance pressure. Following [Gu et al. \(2020\)](#) and [Wei et al. \(2020\)](#), we use the proportion of high-skilled workers as a measure of labor quality and divide the sample into two groups: high (*HIGH*) and low (*LOW*) labor quality. A highly skilled employee is defined as an employee who has a bachelor's degree or above. The regression results are presented in Panel C of [Table 11](#). The estimated coefficients on *RM\*PC* are negative and statistically significant only in the low

**Table 11.** Cross-sectional tests

## Panel A: Debt burden

| Variables                 | <i>LS</i>           | <i>HIGH</i>           | <i>LN_LS</i>        | <i>HIGH</i>           |
|---------------------------|---------------------|-----------------------|---------------------|-----------------------|
|                           | <i>LOW</i>          |                       | <i>LOW</i>          |                       |
|                           | (1)                 | (2)                   | (3)                 | (4)                   |
| <i>PC</i>                 | 0.0026<br>(0.503)   | 0.0103<br>(1.293)     | −0.0092<br>(−0.197) | 0.0606<br>(1.077)     |
| <i>RM* PC</i>             | −0.0048<br>(−0.707) | −0.0211**<br>(−2.287) | −0.0294<br>(−0.408) | −0.1942**<br>(−2.569) |
| <i>CONTROLS</i>           | Yes                 | Yes                   | Yes                 | Yes                   |
| <i>CONSTANT</i>           | 0.5036**<br>(2.319) | −0.5312<br>(−1.385)   | 0.8744<br>(0.414)   | −6.7859**<br>(−2.558) |
| <i>YEAR FE</i>            | Yes                 | Yes                   | Yes                 | Yes                   |
| <i>FIRM FE</i>            | Yes                 | Yes                   | Yes                 | Yes                   |
| <i>N</i>                  | 462                 | 462                   | 462                 | 462                   |
| <i>Adj. R<sup>2</sup></i> | 0.278               | 0.572                 | 0.263               | 0.584                 |
| <i>DIFF</i>               | 0.0163**            |                       | 0.1648***           |                       |

## Panel B: Capital intensity

| Variables                 | <i>LS</i>           | <i>HIGH</i>            | <i>LN_LS</i>        | <i>HIGH</i>            |
|---------------------------|---------------------|------------------------|---------------------|------------------------|
|                           | <i>LOW</i>          |                        | <i>LOW</i>          |                        |
|                           | (1)                 | (2)                    | (3)                 | (4)                    |
| <i>PC</i>                 | 0.0027<br>(0.874)   | 0.0260***<br>(2.746)   | 0.0256<br>(0.835)   | 0.1572**<br>(2.353)    |
| <i>RM* PC</i>             | −0.0061<br>(−1.151) | −0.0393***<br>(−3.275) | −0.0738<br>(−1.153) | −0.3334***<br>(−3.388) |
| <i>CONTROLS</i>           | Yes                 | Yes                    | Yes                 | Yes                    |
| <i>CONSTANT</i>           | −0.2650<br>(−0.645) | 0.1530<br>(0.474)      | −2.3928<br>(−0.794) | −2.8434<br>(−1.280)    |
| <i>YEAR FE</i>            | Yes                 | Yes                    | Yes                 | Yes                    |
| <i>FIRM FE</i>            | Yes                 | Yes                    | Yes                 | Yes                    |
| <i>N</i>                  | 462                 | 462                    | 462                 | 462                    |
| <i>Adj. R<sup>2</sup></i> | 0.524               | 0.652                  | 0.601               | 0.676                  |
| <i>DIFF</i>               | 0.0332**            |                        | 0.2596*             |                        |

## Panel C: Labor quality

| Variables       | <i>LS</i>             | <i>HIGH</i>         | <i>LN_LS</i>          | <i>HIGH</i>          |
|-----------------|-----------------------|---------------------|-----------------------|----------------------|
|                 | <i>LOW</i>            |                     | <i>LOW</i>            |                      |
|                 | (1)                   | (2)                 | (3)                   | (4)                  |
| <i>PC</i>       | 0.0164**<br>(2.192)   | 0.0101<br>(1.317)   | 0.0954*<br>(1.714)    | 0.0813<br>(1.391)    |
| <i>RM* PC</i>   | −0.0251**<br>(−2.533) | −0.0104<br>(−0.976) | −0.1812**<br>(−2.355) | −0.1769<br>(−1.652)  |
| <i>CONTROLS</i> | Yes                   | Yes                 | Yes                   | Yes                  |
| <i>CONSTANT</i> | 0.0316<br>(0.110)     | −0.6593<br>(−1.483) | −2.9454<br>(−1.475)   | −7.1760*<br>(−1.950) |
| <i>YEAR FE</i>  | Yes                   | Yes                 | Yes                   | Yes                  |

(continued)

Table 11. Continued

Panel C: Labor quality

| Variables                 | <i>LS</i>  | <i>HIGH</i> | <i>LN_LS</i> | <i>HIGH</i> |
|---------------------------|------------|-------------|--------------|-------------|
|                           | <i>LOW</i> |             | <i>LOW</i>   |             |
|                           | (1)        | (2)         | (3)          | (4)         |
| <i>FIRM FE</i>            | Yes        | Yes         | Yes          | Yes         |
| <i>N</i>                  | 462        | 462         | 462          | 462         |
| <i>Adj. R<sup>2</sup></i> | 0.671      | 0.526       | 0.676        | 0.605       |
| <i>DIFF</i>               | −0.0147**  |             | −0.0043*     |             |

**Note(s):** This table presents the regression results of cross-sectional tests. The dependent variables are labor share (*LS*) and the logarithmically converted form of labor share (*LN\_LS*). See [Appendix A](#) for variable definitions. Year and firm fixed effects are included. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

labor quality groups, suggesting that RM firms with fewer high-skilled employees are more inclined to reduce labor shares throughout the performance commitment years.

## 5. Further analyses

Our primary findings indicate that RM firms reduce labor shares in the period of performance commitment as a cost-saving strategy, rather than as a means of motivating employees to create value under intense performance pressure. In this section, we conduct several [supplementary](#) tests to further validate our baseline results.

### 5.1 Management and rank-and-file employee shares during the commitment period

Firm management makes decisions regarding operating expenses and determines the distribution of compensation between management and rank-and-file employees. In pursuit of personal interests, management often retains its compensation while reducing the compensation of rank-and-file employees in decisions to save firm costs, thereby shifting the performance pressure from the firm onto rank-and-file employees, as well as undermining the welfare of rank-and-file employees. The literature documents that the Chinese split-share structure reform has led to a decline in labor shares for rank-and-file employees while leaving management compensation unaffected ([Shi et al., 2019](#)). However, during the performance commitment period, management shares may decline for two key reasons. First, if an RM firm fails to achieve its expected performance, its controlling shareholder is required to compensate the acquirer with a significant amount of equity and cash. As controlling shareholders typically serve as the ultimate decision-makers in Chinese firms, they have strong incentives to reduce compensation for both management and rank-and-file employees to mitigate financial losses. Second, although controlling shareholders of the RM firms bear the liability for compensation when performance targets are not met, such failures tarnish the reputation of RM firms and trigger sharp declines in stock prices. Since management often holds equity in the firm, its financial position is directly affected by falling stock values. As a result, management may accept short-term compensation reductions in exchange for potential long-term equity gains.

Building on the aforementioned arguments, we further examine the impact of performance commitments on labor shares for both management and rank-and-file employees. Consistent with prior literature, we use *LSM* (*LSRE*), which is calculated as the aggregate compensation paid to management (rank-and-file employees) divided by sales revenue, to proxy for management (rank-and-file employees) shares. Additionally, we apply the logarithmically converted measures, *LN\_LSM* and *LN\_LSRE*, to enhance analytical robustness. The regression results are reported in [Table 12](#). Notably, we find the negative and significant coefficients on

**Table 12.** Management and rank-and-file employee shares during the commitment period

| Variables                 | <i>LSM</i><br>(1)     | <i>LN_LSM</i><br>(2)   | <i>LSRE</i><br>(3)     | <i>LN_LSRE</i><br>(4)  |
|---------------------------|-----------------------|------------------------|------------------------|------------------------|
| <i>PC</i>                 | 0.0104*<br>(1.946)    | 0.0607<br>(1.498)      | 0.0008***<br>(2.725)   | 0.2318***<br>(3.660)   |
| <i>RM* PC</i>             | −0.0157**<br>(−2.309) | −0.1473**<br>(−2.437)  | −0.0010***<br>(−4.176) | −0.2650***<br>(−3.300) |
| <i>FIRST</i>              | 0.0705<br>(1.519)     | 0.6539<br>(1.628)      | 0.0009<br>(0.632)      | 0.4237<br>(1.192)      |
| <i>DUAL</i>               | −0.0021<br>(−0.492)   | −0.0260<br>(−0.584)    | 0.0003<br>(1.391)      | −0.0125<br>(−0.173)    |
| <i>SOE</i>                | −0.0157<br>(−1.620)   | −0.0136<br>(−0.127)    | −0.0002<br>(−0.423)    | 0.0871<br>(0.585)      |
| <i>SIZE</i>               | −0.0087<br>(−0.870)   | −0.1582*<br>(−1.902)   | −0.0019***<br>(−6.446) | −0.6145***<br>(−7.934) |
| <i>LEV</i>                | 0.0096<br>(0.416)     | −0.0153<br>(−0.063)    | −0.0009<br>(−0.769)    | −0.4530<br>(−0.881)    |
| <i>ROA</i>                | −0.0098<br>(−0.182)   | −0.3174<br>(−0.672)    | 0.0025<br>(1.235)      | −0.3563<br>(−0.706)    |
| <i>MARGIN</i>             | −0.0240**<br>(−2.263) | −0.1171<br>(−1.526)    | −0.0010**<br>(−2.115)  | 0.0420<br>(0.577)      |
| <i>WAGE</i>               | 0.0500***<br>(4.593)  | 0.4585***<br>(5.544)   | 0.0002<br>(0.320)      | −0.1536<br>(−1.002)    |
| <i>KY</i>                 | 0.0273***<br>(2.989)  | 0.1195*<br>(1.716)     | −0.0002<br>(−0.421)    | −0.1073<br>(−1.021)    |
| <i>CI</i>                 | 0.0102***<br>(3.981)  | 0.1352***<br>(7.338)   | 0.0009***<br>(6.346)   | 0.2225***<br>(8.489)   |
| <i>TOBINQ</i>             | 0.0021<br>(0.824)     | 0.0019<br>(0.090)      | 0.0001<br>(0.766)      | 0.0380<br>(0.838)      |
| <i>CONSTANT</i>           | −0.3642<br>(−1.445)   | −5.0753***<br>(−2.666) | 0.0400***<br>(5.563)   | 8.1027***<br>(3.795)   |
| <i>YEAR FE</i>            | Yes                   | Yes                    | Yes                    | Yes                    |
| <i>FIRM FE</i>            | Yes                   | Yes                    | Yes                    | Yes                    |
| <i>N</i>                  | 924                   | 924                    | 924                    | 924                    |
| <i>Adj. R<sup>2</sup></i> | 0.569                 | 0.598                  | 0.556                  | 0.402                  |

**Note(s):** This table presents regression results for management and rank-and-file employee shares during the commitment period. The dependent variables in Columns (1) and (3) are management share (*LSM*) and rank-and-file employee share (*LSRE*), respectively. The dependent variables in Columns (2) and (4) are logarithmically converted forms of management share (*LN\_LSM*) and rank-and-file employee share (*LN\_LSRE*), respectively. See [Appendix A](#) for variable definitions. Our sample includes 924 firm-year observations. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

*RM\*PC* where the dependent variables are *LSM* and *LN\_LSM* in Columns (1) and (2). Meanwhile, the estimated coefficients on *RM\*PC* are still negatively significant when the dependent variables are *LSRE* and *LN\_LSRE* in Columns (3) and (4). The simultaneous decline in labor shares across both management and rank-and-file employees suggests that RM firms reduce labor shares of all employees to cope with performance pressure arising from performance commitments, which further reinforces the “cost-saving” hypothesis.

### 5.2 Labor investment efficiency during the commitment period

The baseline findings document a significant decline in labor shares for RM firms throughout the performance commitment period. The results reflect that RM firms tend to reduce expenditure on employees to increase profits when facing intense performance pressure. However, it is still unclear whether labor investment efficiency is affected by performance

commitment. To further corroborate the analysis, we examined how labor investment efficiency evolves during the performance commitment period.

Inefficient labor investment, whether in the form of overinvestment or underinvestment, can reduce productivity by deviating from optimal labor allocation and introducing distortions into corporate governance (Sualihu *et al.*, 2021). In light of our previous findings, RM firms decrease labor shares as a cost-saving measure rather than as a value-enhancing strategy during the commitment period. Such misalignment with underlying economic fundamentals undermines the efficiency of labor allocation and impairs overall labor investment effectiveness. To examine the relationship between performance commitment and firm labor investment efficiency, we first draw on previous studies (Baloria *et al.*, 2025; Harianto & Haman, 2024) and measure net hiring (*HIRE*) as the year-over-year percentage change in the number of employees. We then compute abnormal net hiring as the absolute deviation between actual labor investment and the level predicted by economic fundamentals. This measure, denoted as *ABS\_INEFFLABOR*, corresponds to the absolute value of the residuals from Eq. (4) and captures inefficiencies in labor investment [18]. The higher its value, the lower is labor investment efficiency. Accordingly, the signed value of the residual from Eq. (4) captures the level of labor investment efficiency. A positive residual indicates overinvestment, whereas a negative residual indicates underinvestment.

$$\begin{aligned} HIRE_{it} = & \alpha_0 + \alpha_1 GROWHT_{i,t-1} + \alpha_2 GROWHT_{i,t} + \alpha_3 \Delta ROA_{i,t} + \alpha_4 \Delta ROA_{i,t-1} + \alpha_5 ROA_{i,t} \\ & + \alpha_6 RETURN_{i,t} + \alpha_7 MV_{i,t} + \alpha_8 LIQ_{i,t-1} + \alpha_9 \Delta LIQ_{i,t-1} + \alpha_{10} \Delta LIQ_{i,t} + \alpha_{11} LEV_{i,t} \\ & + \alpha_{12} LOSSBIN1_{i,t-1} + \alpha_{13} LOSSBIN2_{i,t-1} + \alpha_{14} LOSSBIN3_{i,t-1} \\ & + \alpha_{15} LOSSBIN4_{i,t-1} + \alpha_{16} LOSSBIN5_{i,t-1} + Industry FE + \varepsilon_{it} \end{aligned} \quad (4)$$

We first regress the overall labor investment efficiency on performance commitment. The results are reported in Column (1) of Table 13. The estimated coefficient on *RM\*PC* is positive and statistically significant, indicating that the labor investment efficiency of RM firms deviates further from the optimal level during the commitment period. Moreover, as a reduction in the firm labor share leads to a decline in labor input, it may contribute to labor underinvestment. To assess this, we retained only underinvestment observations and excluded observations of labor overinvestment. We also use the signed value of the residual from Eq. (4) to measure labor investment efficiency (*INEFFLABOR*) as the dependent variable in the subsample regression. As demonstrated in Column (2) of Table 13, the coefficient of *RM\*PC* is negative and statistically significant, indicating that RM firms face a shortage of labor investment throughout the performance commitment years. Overall, the findings in Table 13 suggest that RM firms experience declines in labor investment efficiency, with the effect primarily reflected in labor underinvestment. These results also suggest that the decline in labor shares of RM firms is accompanied by lower labor investment efficiency, which allows RM firms to manage performance pressure by minimizing operating costs rather than enhancing firm value.

### 5.3 Labor share and long-term performance of RM firms

The decision of RM firms to reduce labor shares during the performance commitment period may give rise to two distinct outcomes. If the labor share reduction reflects efficiency-enhancing governance, firm performance should remain robust following the expiration of the commitment period. By contrast, if it reflects value-destructive REM, the short-term extraction of profits at the expense of human capital and employee motivation may lead to a significant deterioration in long-term performance in the post-commitment period. Prior evidence on this issue is mixed. Lee *et al.* (2015b) document that Chinese RM firms exhibit

**Table 13.** Labor investment efficiency during the commitment period

| Variables                 | ABS_<br>INEFFLABOR<br>(1) | Underinvestment<br>INEFFLABOR<br>(2) |
|---------------------------|---------------------------|--------------------------------------|
|                           |                           |                                      |
| <i>PC</i>                 | −0.1133***<br>(−2.790)    | 0.1004<br>(1.253)                    |
| <i>RM* PC</i>             | 0.0635*<br>(1.735)        | −0.0474**<br>(−2.190)                |
| <i>FIRST</i>              | −0.0713<br>(−0.214)       | 0.1208<br>(0.173)                    |
| <i>DUAL</i>               | 0.0321<br>(0.674)         | −0.0619<br>(−0.444)                  |
| <i>SOE</i>                | −0.0179<br>(−0.159)       | −0.2296<br>(−0.981)                  |
| <i>SIZE</i>               | 0.0102<br>(0.181)         | −0.0193<br>(−0.202)                  |
| <i>LEV</i>                | 0.1180<br>(0.926)         | −0.0166<br>(−0.065)                  |
| <i>ROA</i>                | −0.1053<br>(−0.374)       | 0.0844<br>(0.147)                    |
| <i>MARGIN</i>             | −0.0308<br>(−0.611)       | −0.0096<br>(−0.068)                  |
| <i>WAGE</i>               | 0.1790<br>(1.473)         | −0.6734**<br>(−2.356)                |
| <i>KY</i>                 | 0.0124<br>(0.356)         | 0.1196<br>(0.797)                    |
| <i>CI</i>                 | 0.0029<br>(0.192)         | 0.0014<br>(0.030)                    |
| <i>TOBINQ</i>             | 0.0343<br>(1.430)         | −0.0569<br>(−1.176)                  |
| <i>CONSTANT</i>           | −1.3529<br>(−0.820)       | 6.9120**<br>(2.335)                  |
| <i>YEAR FE</i>            | Yes                       | Yes                                  |
| <i>FIRM FE</i>            | Yes                       | Yes                                  |
| <i>N</i>                  | 620                       | 299                                  |
| <i>Adj. R<sup>2</sup></i> | 0.152                     | 0.251                                |

**Note(s):** This table presents regression results for labor investment efficiency during the commitment period. The dependent variable in Column (1) is the absolute value of residuals obtained from the OLS estimation of Eq. (4) (*ABS\_INEFFLABOR*). The dependent variable in Column (2) is the signed value of residuals obtained from the OLS estimation of Eq. (4) (*INEFFLABOR*). See Appendix A for variable definitions. The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

strong post-listing performance, whereas Xin and Wang (2025) find that post-listing performance reversals are pervasive among RM firms. To shed light on this issue, we use a sample of RM firms to examine the effect of labor share during the performance commitment period on long-term firm performance. The independent variable *LS\_AVG* is measured as the average labor share over the commitment period. The dependent variables *ROA\_P1* and *ROA\_P2* are measured as the return on total assets of RM firms in the first and second years after the performance commitment period [19].

As shown in Table 14, the coefficients of *LS\_AVG* are both positive and statistically significant. This indicates that RM firms with a lower average labor share during the performance commitment period tend to exhibit lower long-term performance after the commitment period. The suppression of employee compensation undermines human capital

**Table 14.** Labor share and long-term performance of RM firms

| Variables                 | ROA_P1<br>(1)        | ROA_P2<br>(2)        |
|---------------------------|----------------------|----------------------|
| <i>LS_AVG</i>             | 0.5764**<br>(2.255)  | 0.6221**<br>(2.455)  |
| <i>SIZE</i>               | 0.0598*<br>(1.878)   | 0.0537<br>(1.637)    |
| <i>LEV</i>                | −0.2786<br>(−1.423)  | −0.0571<br>(−0.329)  |
| <i>KY</i>                 | 0.0502<br>(1.381)    | 0.0747*<br>(1.827)   |
| <i>CI</i>                 | −0.0149<br>(−0.976)  | −0.0174<br>(−1.141)  |
| <i>FIRST</i>              | 0.1330*<br>(1.683)   | 0.1131<br>(0.728)    |
| <i>DUAL</i>               | 0.0546<br>(1.255)    | 0.0294<br>(0.529)    |
| <i>CONSTANT</i>           | −1.1831*<br>(−1.925) | −1.1683*<br>(−1.776) |
| <i>YEAR FE</i>            | YES                  | YES                  |
| <i>FIRM FE</i>            | YES                  | YES                  |
| <i>N</i>                  | 78                   | 78                   |
| <i>Adj. R<sup>2</sup></i> | 0.159                | 0.130                |

**Note(s):** This table presents regression results for long-term firm performance after the commitment period. The independent variable *LS\_AVG* is measured as the average labor share over the commitment period. The dependent variables in Columns (1) and (2) are the return on total assets of RM firms in the first and second years after the performance-commitment period (*ROA\_P1* and *ROA\_P2*), respectively. See [Appendix A](#) for variable definitions. We restrict our sample to RM firms (78 RM firms). The *t*-statistics based on robust standard errors clustered by firms are presented in parentheses beneath each estimate. \*\*\*, \*\* and \* indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively

investment and weakens employee motivation, which in turn damages sustained firm performance. This pattern is consistent with the value-destructive REM interpretation rather than the efficiency-enhancing governance view.

**6. Conclusion**

In this study, we investigate how performance pressure arising from the performance commitment regime shapes labor shares in RM firms within the context of Chinese RM transactions. Our study shows that, in contrast with IPO firms, RM firms experience a significant decline in labor shares during the performance commitment period. The variation in the labor share observed throughout the performance commitment period is economically meaningful, with RM firms experiencing a reduction between 4.46% and 8.19% over the three-year commitment period. This finding is consistent with the conjecture that RM firms adopt cost-saving strategies to cope with institution-driven performance pressure, leading to lower labor shares. Moreover, our results remain robust across a variety of robustness tests, including alternative matching strategies, additional fixed effects and alternative measures for firm labor shares. We also obtained consistent results after addressing potential endogeneity concerns.

In the mechanism test, we examine the performance pressure faced by RM firms and its impact on firm labor shares. Using the RM firm sample, we find that ambitious performance targets and just meeting or beating the performance targets are associated with reductions in labor shares. Cross-sectional analyses further reveal that the adverse effects of performance

commitments on labor shares are more pronounced among firms with higher debt burdens, higher levels of capital intensity and lower labor quality. These findings suggest that when facing performance pressures, RM firms tend to reduce labor shares as a strategy to maintain profits. In addition, we observe a decrease in both labor investment efficiency for RM firms in the period of performance commitment and long-term performance in the post-commitment period. Our findings further corroborate the view that RM firms use labor share reductions as a key cost-saving response to the pressures imposed by performance commitments in RM transactions, rather than investing in their workforce to promote long-term value.

Our findings offer valuable insights for regulators in both developed and emerging economies striving to enhance listing institutions and protect investor interests. Performance commitments were established to protect the investors of the acquirer from suffering losses due to the acquiree overestimating its assets. While performance commitments help mitigate information asymmetry in RM transactions, it is essential to recognize their unintended consequences. Our study highlights how RM firms, driven by cost-saving motives, shift performance pressure onto employees by reducing labor shares, thereby diminishing employee welfare. In contrast, RM transactions in developed countries, such as the USA and the United Kingdom, place greater emphasis on the completeness and authenticity of information disclosure rather than imposing mandatory performance targets on RM firms.

In light of these findings, we offer two policy recommendations. The first suggestion is that regulators could further promote a comprehensive registration-based system grounded in information disclosure. A more efficient and transparent listing review process would reduce firms' incentives to pursue RMs and help alleviate the severe information asymmetry in the capital markets. The second suggestion is that when formulating listing-regulation policies, regulators could look beyond the intended benefits and also assess the potential adverse effects on employee welfare. More broadly, our findings caution regulators in other jurisdictions against adopting rigid *ex ante* performance requirements in listing regulations without carefully weighing their broader socioeconomic consequences. Such arrangements may generate spillover costs that extend well beyond the listing process.

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### Notes

1. According to the World Bank, China's Gini index has been at a high level in recent years. For example, the Gini index of per capita disposable income for Chinese residents was 0.474 in 2012 and 0.465 in 2020. In comparison, the Gini index for per capita disposable income in the USA was notably lower, at 0.409 in 2012 and 0.397 in 2020, and even lower in the United Kingdom at 0.331 in 2012 and 0.326 in 2020. A higher Gini index signifies greater income disparities within the population, indicating reduced fairness in social welfare distribution.
2. China's stock market has long enforced a strict regulatory regime for IPO. Reverse mergers have become a popular listing method in China owing to their ability to circumvent the lengthy IPO review process. For details, please refer to the Institutional background section.
3. The literature has utilized various methods to measure performance pressure, such as the probability of firm losses, performance divergence from peer companies and deviations from analysts' earnings predictions. However, these measures are contingent on firms' year-end performance, which is endogenous to management behavior during the year.
4. The CSRC mandates that RM firms set a three-year performance commitment period after being listed. To maintain balance in the number of observations during and after the performance commitment period, we use the data from the six-year window following the firms' public listing.

5. Similar to the “big bath” in earnings management, the phenomenon of just meeting and beating performance targets reflects the attempt of RM firms to patch up their performance. This is because when a firm’s performance is close to the target, management has strong incentives to adjust profits through cost-saving decisions. In contrast, when firm performance is far below the target, there are few incentives for management to sprint towards the target, but rather to depress the current year’s profit to keep reserves for the future.
6. Another example involves an RM firm that cut labor costs to achieve its performance target. Hairun Photovoltaic (600,401) is one of the largest crystalline silicon solar cell manufacturers in China. This firm was listed in 2011 through a reverse merger with ST Shenlong and committed to achieving net profits of RMB 499m, 510m and 529m in the 2011–2013 period. For this purpose, the firm reduced employee-related expenditure. By the end of 2012, its total cash payments to employees amounted to just RMB 603m. As a result, many factories experienced wage arrears, layoffs and work stoppages. Market participants viewed these labor outcomes as a consequence of the firm prioritizing performance commitment targets over employee welfare.
7. Wage stickiness in SOEs primarily stems from their responsibility in maintaining social stability in China. The sensitivity of employee compensation to performance in SOEs is relatively low.
8. Another reason the RM firm sample ends in 2017 is that the CSRC revised the *Administrative Measures for Major Asset Reorganization* at the end of 2016, calling for tighter regulation of RM and encouraging the registration regime in the IPO. As a result, RM transactions became rare after 2017.
9. This matching approach is consistent with the literature (Chen *et al.*, 2016; Lee *et al.*, 2015a, 2019).
10. *t* refers to the first year of a firm’s listing.
11. In the robustness tests, we exclude the observations in the public facilities and services industry and the leasing and business services industry to avoid the influence of extreme samples. Our empirical results remain unchanged.
12. In addition, we check the variance inflation factors (VIFs) for all variables across our empirical tests. All VIFs are below 5.0, which is well below the threshold of 10.0, indicating that multicollinearity is not a significant concern.
13. In Column (3), the change in the labor share of RM firms during the performance commitment period is calculated by adding the coefficient on *RM\*PC* to the coefficient on *RM*, and then dividing the sum by the mean value of *LS*. That is,  $(-0.0163 + 0.0109)/0.121 \times 100\% = -4.46\%$ . In Column (6), the change in the labor share of RM firms during the performance commitment period is calculated by adding the coefficient on *RM\*PC* to the coefficient on *RM*, taking the exponential of the sum and then subtracting 1. That is,  $[\exp(-0.1511 + 0.0656) - 1] \times 100\% = -8.19\%$ .
14. As we use the data from the six-year window after the RM and IPO firms are publicly listed, we set five dummy variables (*PC0* to *PC4*) to proxy for years *t* to *t*+4 in which the firms are listed. Year *t* is denoted as the first year in which a firm is publicly listed. We use the sixth year (year *t*+5) in which the firms are publicly listed as the benchmark year.
15. We are very grateful to the anonymous reviewers for raising this point.
16. We examine the equity incentives implemented by firms after they go public. There is weak evidence indicating that the post-listing employee benefits are weaker for RM firms compared with those of the matched IPO firms. Notwithstanding the approaches used in our study to ensure the robustness of the results, we concede that it is impossible to completely rule out the influence of alternative forms of compensation on our findings.
17. A special audit is conducted by independent auditors to verify whether RM firms have met their performance commitments. The special audit report discloses the comparison of the RM firm’s actual performance and performance targets, along with the audit opinion. We rely on this special audit report to evaluate whether the RM firm meets its performance targets each year.
18. In Eq. (4), *HIRE* is the percentage change in employees; *GROWTH* is the percentage change in sale revenue; *ROA* is return on assets; *RETURN* is the annual stock return; *MV* is the percentile of the log of market value of equity at the beginning of the year; *LIQ* is the ratio of cash and short-term investments plus receivables to current liabilities; *LEV* is firm leverage; *LOSSBIN* is an indicator

variable for each 0.005 interval of prior-year ROA from 0 to  $-0.025$ . In all cases,  $i$  indicates firm and  $t$  indicates year.

19. We appreciate the anonymous reviewer's suggestion to consider long-term performance of RM firms.

### Supplementary material

The supplementary material for this article can be found online.

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