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## Accounting Comparability and Labor Productivity : Evidence from China's A-Share Listed Firms --Manuscript Draft--

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# Accounting Comparability and Labor Productivity: Evidence from China's A-Share Listed Firms

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**Abstract:** Facing a diminishing "demographic dividend" and escalating labor costs, enhancing labor productivity is essential to supporting the high-quality and sustainable development of the economy, thus numerous studies explored the determinants of labor productivity from various angles. However, few studies have focused on the relationship between accounting information quality and labor productivity. Based on the panel data of China's A-share listed firms from 2011 to 2022, this paper aims to investigate the impact of accounting comparability, one of the various quality attributes of accounting information, on firms' labor productivity. The results show that accounting comparability can significantly improve firms' labor productivity, suggesting that enhancing accounting information quality can maximize operational effectiveness and lead to "intensive growth". The mechanism test shows that promoting human capital accumulation and reducing agency cost are crucial channels through which accounting comparability improves firms' labor productivity. The heterogeneity test shows that the positive effect of accounting comparability on firms' labor productivity is more significant when firms have higher financing constraints, lower levels of corporate governance, and peer firms have stronger accounting information quality. Our findings add to the body of knowledge regarding the determinants of labor productivity and the economic consequences of accounting comparability, and have implications for promoting sustainable development.

**Keywords:** accounting comparability; labor productivity; human capital accumulation; agency cost

## 1. Introduction

Since the reform and opening up, China has achieved an average annual GDP growth of about 10% under the traditional model of relying on cheap labor inputs and massive accumulation of physical capital, which is known as the "Chinese growth miracle". However, with the gradual disappearance of the "demographic dividend" and the increase in labor costs, firms are facing increasingly prominent problems of "difficult employment" and "expensive employment", the traditional extensive growth mode has become unsustainable, and China's economy has gradually entered the "new normal" stage, exhibiting the characteristics of structural slowdown. As one of the three pillars of sustainable development (Manioudis, et al., 2022), enhancing labor productivity is not only crucial for China's economy to maintain a reasonable growth rate but also can help China cope with the double burden of the disappearance of the "demographic dividend"

and the increase in labor costs (Wu, et al., 2023), which has become a crucial tenet for the sustainable development of China's economy. Therefore, it has great theoretical value and practical significance to explore the influencing factors of firms' labor productivity.

Numerous research has explored the determinants of labor productivity from different perspectives (Saha, et al., 2023; Yang, et al., 2022; Hintzmann, et al., 2021; Zhu, et al., 2024; Radlo, et al., 2022) and found that management practices (Rico, et al., 2021), employee happiness (Bellet, et al., 2023), employment protection (Bjuggren, et al., 2018), human capital (Jibir, et al., 2023; Laut, et al., 2023), air pollution (He, et al., 2019), debt level (Yang, et al., 2022; Kale, et al., 2019) or external finance (Motta, et al., 2020), corporate wellness programs (Gubler, et al., 2018), corporate welfare policy (Darrough, et al., 2019), telework (Kazekami, et al., 2020), family motivation (Zhang, et al., 2020) all have significant effects on labor productivity. However, there are few studies focusing on the relationship between accounting information quality and labor productivity. Evidence shows that accounting information, as the internationally recognized business language, plays a crucial role in mitigating information asymmetry (Islam, et al., 2023; Wu, et al., 2023; Majeed et al., 2023), and its quality directly affects the effectiveness of capital markets and resource allocation efficiency (Chircop, et al., 2020; De, et al., 2021; Corona, et al., 2024). Accounting comparability, one of the many quality attributes of accounting information, is the capacity of accounting information to be compared and evaluated across time periods and between distinct entities (Kim, et al., 2013; Chen, et al., 2018). It enables users of financial statements to recognize and comprehend the parallels and divergences between two sets of economic phenomena (Li, et al., 2010; Torabi, et al., 2024; Chircop, et al., 2023). As a result, it has been acknowledged as the primary quality that improves the usefulness of accounting information in making decisions (Barth, et al., 2012).

In light of this, this paper aims to investigate the impact of accounting comparability on firms' labor productivity. Specifically, we suggest that accounting comparability may influence firms' labor productivity through the following mechanisms. On the one hand, accounting comparability can alleviate firms' financing constraints in human capital accumulation by reducing information asymmetry and the necessary rate of return required by investors (Islam, et al., 2023), thus encouraging firms to increase their investment in human capital, which, in turn, improves their labor productivity. On the other hand, ineffective supervision or insufficient incentive resulting from agency cost may lead to laziness, shirking, and embezzlement among managers and employees, which may lead to labor overinvestment or underinvestment issues (Ghaly, et al., 2020; Zhang, et al., 2020), thereby hampering labor productivity. Accounting comparability can enhance the effectiveness of supervision (Choi, et al., 2019; Zhang, et al., 2018), which, in turn, mitigates the negative impact of agency cost on labor productivity.

We test our predictions using the sample of China's A-share listed firms from 2011 to 2022 and the key results support our predictions. This study makes three contributions. First, our findings provide insights into what determines labor productivity. While previous literature has made significant advancements in identifying determinants of labor productivity (Zhu, et al., 2024; Jibir, et al., 2023), few studies have explored the relationship between accounting information quality and firms' labor productivity. We depart from this line of research, and instead, seek to understand how accounting comparability influences firms' labor productivity, thus enriching the relevant literature on determiners of labor productivity from a new perspective. Second, this paper adds to the body of knowledge regarding the economic consequences of accounting comparability.

Prior literature has examined the effects of accounting comparability on financing costs (Islam, et al., 2023; Kim, et al., 2013; Li, et al., 2010; Imhof, et al., 2017), firm innovation (Chircop, et al., 2020; Tseng, et al., 2024; Chircop, et al., 2024), merger efficiency (Chen, et al., 2018), earnings management (Sohn, et al., 2016; Farshadfar, et al., 2023), stock price informativeness (Choi, et al., 2019), tax avoidance (Hong, et al., 2023; Qingyuan, et al., 2018), executive incentives (Lobo, et al., 2018; Arianpoor, et al., 2024), performance evaluation (Wu, et al., 2023; Wu, et al., 2023; Bourveau, et al., 2023), and manager Oversight (Arianpoor, et al., 2024; Nam, et al., 2023). However, these studies predominantly focus on the relationship between accounting comparability and firms' financial behavior, investment decisions, and stock market performance. Insofar as we are aware, we present the initial proof linking accounting comparability and labor productivity. Third, we add to the understanding of how accounting comparability and labor productivity are transmitted. Our results indicate that accounting comparability can enhance labor productivity by promoting human capital accumulation and reducing agency cost, and such positive effect varies depending on firms' financing constraints level, corporate governance level, and peer firms' accounting earnings quality, thus providing empirical evidence to unlock the mystery of how accounting comparability affects firms' labor productivity.

## **2. Theoretical analysis and hypothesis**

### ***2.1. Accounting Comparability, Human Capital Accumulation and Labor Productivity***

Human capital plays a vital role in the creation, application, and spread of new technologies, and its accumulation also serves as a major catalyst for increases in labor productivity (Jibir, et al., 2023; Laut, et al., 2023). Numerous empirical studies have verified that human capital improves labor productivity in a variety of ways. For instance, Backman (2014) noted that increasing human capital allocation through on-the-job training to develop new skills or enhance current ones in employees is a useful strategy to increase firms' labor productivity. Konings and Vanormelingen (2015) used firm-level panel data of on-the-job training to estimate its impact on productivity and wages and found that the productivity premium of a trained worker is substantially higher compared to the wage premium. Laut et al. (2023) used panel data collected from 28 provinces in Indonesia to analyze the effect of human capital on labor productivity and found that the higher the level of education, the higher the productivity and higher educated labor also can provide knowledge spillover for the environment. Li et al. (2012) showed that the improvement of human capital quality, measured by educational attainment, contributes to individual labor productivity growth ranging from approximately 8% to 9%. Since human capital is a vital input of research and development operations, Cinnirella and Streb (2017) proposed that human capital accumulation can not only directly improve labor productivity but also can indirectly improve labor productivity by fostering technological advancement.

In addition, we propose that accounting comparability can promote firms' human capital accumulation by lowering financing constraints for human capital. Specifically, due to the information asymmetry between managers and external capital providers, the latter are often at an information disadvantage and can only assess firms' value based on the average market level (Kim, et al., 2013; Myers, et al., 1984). Accounting comparability, as an important valuable decision-making reference for external investors or creditors, can facilitate external financing by reducing information asymmetry and broadening the channels of information acquisition. This is attributed

to the fact that when accounting comparability is high, external investors or creditors can not only rely on the disclosed information of the target firm but also obtain valuable information from peer firms within the same industry (Fang, et al., 2016). Furthermore, the financing constraints alleviated by accounting comparability can promote firms' human capital accumulation in the following two ways. On the one hand, the alleviation of financing constraints can increase firms' willingness to invest in on-the-job training for employees, which is crucial for firms' human capital accumulation. For example, Yang et al. (2022) suggested that firms facing high financing constraints often reduce their investments in employee education, training, and other forms of human capital. On the other hand, the financing constraints alleviated by accounting comparability can improve the firms' allocation of human capital since firms frequently require additional working capital for labor recruitment (Neumeyer, et al., 2005; Fonseca, et al., 2022). For example, Brown and Matsa (2016) found that firms facing high financing constraints tend to hire lower-quality job seekers, as they are less attractive to highly skilled labor. Caggese et al. (2019) indicated that firms facing high financing constraints are unable to bear the high labor adjustment cost, which may drive them to hire less productive employees and fire more productive ones since more productive employees mean higher labor adjustment costs. Therefore, we posit that accounting comparability can improve labor productivity by facilitating human capital accumulation.

## ***2.2 Accounting Comparability, Agency cost and Labor Productivity***

The agency problem is an important factor that impedes firms' labor productivity (Aliahmadi, et al., 2023). According to earlier studies (Ghaly, et al., 2020; Aliahmadi, et al., 2023; Thu, et al., 2023), agency conflicts between shareholders and managers may cause problems with labor overinvestment or underinvestment, which would lower firms' labor productivity. For example, Bertrand and Mullainathan (2003) discovered that managers who enjoy a quiet life often keep ineffective staff members in order to avoid being legally responsible for supervising them, which leads to an over-investment in labor. Ghaly et al. (2020) found that when faced with performance pressure, short-sighted managers may either give up profitable long-term investment opportunities and reduce employment, or over-dismiss employees to avoid high labor costs and result in under-investment in labor. These behaviors, in turn, reduce labor productivity. Furthermore, in the absence of supervision and insufficient incentives, employees may have similar problems as managers, such as laziness and embezzlement, all of which undermine firms' labor productivity (Sandriani, et al., 2023). This view also has been substantiated by some scholar. For example, Bloom and Van Reenen (2007) found that the improvement of supervisory management practices can promote labor productivity; Kale et al. (2019) found that debt, as a crucial external corporate governance and monitoring instrument, can reduce agency cost and thus increase labor productivity.

Accounting comparability can effectively alleviate agency conflicts within firms through various mechanisms. On the one hand, prior research suggests that high-level accounting comparability enables shareholders to accurately obtain and understand firms' actual operation and financial status, which, in turn, improves their ability to supervise managers and restrict their self-interested behavior. Specifically, increased accounting comparability enables shareholders to infer whether research and development investments, profit status, marginal profit margins of products, and other business-sensitive information (such as production and sales plans for the next period) is accurate through competitors' accounting information in the same industry, which, in turn,

facilitates better monitor managers' self-indulgent behavior and motivates them to work hard to increase firms' long-term value (Graham, et al., 2005). For example, Sohn (2016) found that accounting comparability can improve the transparency of the firms' information, which will force managers to reduce manipulation activities. Zhang (2018) found that accounting comparability can reduce the cost of information acquisition and improve the quality of audit reports, thus enhancing the supervisory of managers. On the other hand, accounting comparability, linked to the relative performance evaluation system (RPE) based on peer firms' accounting information, plays a critical role in managerial contractual structures and incentive plans. Specifically, enhanced accounting comparability facilitates the establishment and execution of more efficient and rational compensation contracts for shareholders and managers, which can improve managers' performance-compensation sensitivity and enhance the incentive effect of compensation contracts on managers (Choi, et al., 2019), thus further restraining managers' lax behavior and self-interest in labor investment. Therefore, we posit that accounting comparability can improve labor productivity by reducing agency cost.

Based on the above, we propose the following hypotheses:

H1: Accounting comparability can enhance firms' labor productivity.

H2: Accounting comparability improves firms' labor productivity by promoting human capital accumulation and reducing agency cost.

### 3. Methodology

#### 3.1. Model Design

We use the panel data of China's A-share listed companies from 2011 to 2021 to analyze the impact of accounting comparability on labor productivity. Taking into account the continuously changing levels of accounting comparability and the evolving impact on labor productivity, as well as omitted variables that do not vary with individual or time heterogeneity, we construct a two-way fixed effects model as follows:

$$LABPROD_{i,t} = \beta_0 + \beta_1 AC_{i,t} + \sum Control_{i,t} + Year + Firm + \varepsilon_{i,t} \quad (1)$$

where subscripts  $i$  represents the firm;  $t$  represent the year, and  $LABPROD_{i,t}$  represents labor productivity of firm  $i$  in year  $t$ .  $AC_{i,t}$  represents accounting comparability of firm  $i$  in year  $t$ .  $Control_{i,t}$  represents control variables.  $Firm$  represents individual effects that do not go with firms,  $Year$  represents time effects and  $\varepsilon$  is the random error term.

#### 3.2 Variable Selection

##### 3.3.1. Dependent Variable: Labor Productivity (LABPROD)

Following the prior literature (Bjuggren, et al., 2018; Bender, et al., 2018), we use two indicators measures labor productivity:  $LABPROD1 = \ln(\text{operating revenue} / \text{total employees})$ ,  $LABPROD2 = \ln[(\text{net profit} + \text{income tax expenses} + \text{cash payments to and on behalf of employees}) / \text{total employees}]$ .

##### 3.3.2 Core Explanatory Variable: Accounting Comparability (AC)

Following De Franco et al. (2011), we estimate Model (2) using the data of company  $i$  for the current year ( $t$ ) and the preceding 12 quarters ( $q$ ):

$$EARN_{iqt} = \beta_{0i} + \beta_{1t} RET_{iqt} + \beta_{2i} NEG_{iqt} + \beta_{3i} NEG_{iqt} * RET_{iqt} + \varepsilon_{iqt} \quad (2)$$

In Model (2),  $EARN_{iqt}$  represents the ratio of net profit to the market value of equity at the beginning of quarter q for firm i in year t,  $RET_{iqt}$  represents the stock return of firm i in quarter q of year t, and  $NEG_{iqt}$  is a dummy variable equal to 1 if the stock return is negative and 0 otherwise.

Estimating Model (2) yields the estimates of  $\hat{\beta}_{0i}$ ,  $\hat{\beta}_{1i}$ ,  $\hat{\beta}_{2i}$ , and  $\hat{\beta}_{3i}$ . Based on these estimates, the expected earnings for firm i and firm j under the assumption of identical economic activities can be obtained through transformation functions.

$$E(EARN_{ijqt}) = \hat{\beta}_{0i} + \hat{\beta}_{1i}RET_{iqt} + \hat{\beta}_{2i}NEG_{iqt} + \hat{\beta}_{3i}NEG_{iqt} * RET_{iqt} + \varepsilon_{iqt} \quad (3A)$$

$$E(EARN_{ijqt}) = \hat{\beta}_{0j} + \hat{\beta}_{1j}RET_{iqt} + \hat{\beta}_{2j}NEG_{iqt} + \hat{\beta}_{3j}NEG_{iqt} * RET_{iqt} + \varepsilon_{iqt} \quad (3B)$$

The accounting comparability of firm i in year t is defined as the negative of the average absolute difference in expected earnings between the two companies.

$$AC_{ijt} = -\frac{1}{12} \times \sum_{q=-11}^0 |E(EARN_{iit}) - E(EARN_{ijqt})| \quad (4)$$

By repeating the above method, the accounting comparability between firm i and other peer firms can be calculated:

$$AC_{it} = \frac{1}{N-1} \times \sum_{j=1}^{N(j \neq i)} AC_{ijt} \quad (5)$$

### 3.3.3 Control Variables

Following the prior literature (Saha, et al., 2023; Zhang, et al., 2023), we control for a vector of variables that affect firms' labor productivity: (1) *SIZE*, natural logarithm of total assets. (2) *LNAGE*, natural logarithm of one plus the number of years a firm has been listed. (3) *LEV*, total liabilities/total assets. (4) *ROA*, net profit/total assets. (5) *GROWTH*, the growth rate of operating revenue. (6) *CASH*, operating cash flow/total assets. (7) *CUR*, current assets/ total assets. (8) *RDD* =  $[L_i - (S_i/S) * L] / L_i$ , Where  $L_i$  represents the total number of employees in company i,  $L$  represents the total number of employees in the industry,  $S_i$  represents the total operating revenue of company i, and  $S$  represents the total operating revenue of all companies in the industry. (9) *WAGE* =  $\ln$  (cash payments to and on behalf of employees/ total employees). (10) *CI* = total assets/operating revenue. (11) *FA* = fixed assets/total assets. (12) *FIRST*, the shareholding ratio of the largest shareholder. (13) *INDIR*, number of independent directors/number of directors. (14) *BOARD*, natural logarithm of the number of board directors.

### 3.3 Sample and Descriptive Statistics

We retrieved the data from the CSMAR and WIND database. Since employee education background data began systematically recorded for listed firms in 2011 in the WIND database, we take China's A-share listed firms from 2011 to 2022 as our initial sample. Then, we use the following ways to obtain our final sample: (1) Exclusion of ST companies, (2) Exclusion of firms in the financial industry. (3) Exclusion of observations with a total employee count less than 100. (4) Removal of observations with industry code changes within the first 12 quarters and those with incomplete stock returns or quarterly reports to ensure reliable estimation of accounting comparability. (5) Exclusion of observations with missing control variables. The final sample consists of 22,567 firm-year observations. Furthermore, to mitigate the influence of outliers, all

continuous variables are winsorized at the 1st and 99th percentiles.

**Table 1.** Descriptive statistics

Variables	Observations	Mean	Std. Dev.	Min	Median	Max
<i>LABPROD1</i>	28195	13.917	0.866	12.141	13.810	16.601
<i>LABPROD2</i>	28195	12.277	0.811	9.923	12.247	14.615
<i>AC</i>	28195	-0.016	0.010	-0.058	-0.013	-0.005
<i>SIZE</i>	28195	22.319	1.307	20.025	22.116	26.381
<i>LNAGE</i>	28195	2.259	0.714	0.855	2.340	3.372
<i>LEV</i>	28195	0.420	0.198	0.057	0.413	0.860
<i>ROA</i>	28195	0.045	0.044	-0.067	0.038	0.198
<i>GROWTH</i>	28195	0.174	0.366	-0.466	0.111	2.235
<i>CASH</i>	28195	0.050	0.066	-0.139	0.049	0.242
<i>CUR</i>	28195	0.570	0.198	0.102	0.586	0.944
<i>RDD</i>	28195	-0.047	0.983	-5.271	0.243	0.877
<i>WAGE</i>	28195	11.662	0.512	10.475	11.646	13.042
<i>CI</i>	28195	2.403	1.803	0.401	1.896	11.290
<i>FA</i>	28195	0.211	0.156	0.003	0.180	0.689
<i>FIRST</i>	28195	0.342	0.148	0.085	0.321	0.742
<i>INDIR</i>	28195	0.377	0.054	0.333	0.364	0.571
<i>BOARD</i>	28195	2.124	0.199	1.609	2.197	2.708

Table 1 reports descriptive statistics of the main variables. It can be found that the mean value of *LABPROD1* (*LABPROD2*) is 13.917 (12.277), which is greater than the median value of 13.810 (12.247), indicating that the level of *LABPROD* is skewed to the right with a sustainable trend in development for most firms. However, the standard deviation of *LABPROD* is More than 0.8, suggesting that there are some differences in labor productivity among different firms. In addition, the average value of *AC* is -0.016, which is smaller than the median value of -0.013, which is in line with the descriptive results of the body of current research.

## 4. Results

### 4.1. Baseline Results

Table 2 reports the baseline estimation results of the impact of accounting comparability on labor productivity using Equation (1). The results in column (1) show that when the dependent variable is *LABPROD1*, the coefficient of accounting comparability is 2.97, and it is statistically significant at the 1% level. The results in column (2) show that when the dependent variable is *LABPROD2*, there is also a positive correlation between accounting comparability and labor productivity at the 1% significant level. The results in columns (1) and (2) consistently demonstrate that improving the quality of accounting information has a significant positive effect on labor productivity. Moreover, the economic magnitude of the effect is substantial. The results in column (1) indicate that for every one-unit increase in the level of accounting comparability, the labor productivity is expected to increase by 2.97 units, and in column (2) indicates that a one-unit increase in accounting comparability is associated with an average increase in labor productivity of 4.02 units. Overall, the results in Table 2 support our hypothesis H1.

**Table 2.** Effect of accounting comparability on labor productivity

	<i>LABPROD1</i> (1)	<i>LABPROD2</i> (2)
<i>AC</i>	2.9661*** (6.23)	4.0230*** (9.10)
<i>SIZE</i>	0.1466*** (12.13)	0.1161*** (12.19)
<i>LNAGE</i>	-0.0108 (-0.62)	-0.0621*** (-4.04)
<i>LEV</i>	0.2408***	-0.2089***



	(6.31)	(-6.51)
<i>ROA</i>	1.5909***	10.6291***
	(17.70)	(76.78)
<i>GROWTH</i>	0.1187***	0.0442***
	(14.14)	(6.39)
<i>CASH</i>	-0.3782***	-0.2611***
	(-8.31)	(-6.43)
<i>CUR</i>	0.4646***	-0.0182
	(10.76)	(-0.53)
<i>RDD</i>	-0.3020***	-0.1284***
	(-28.91)	(-16.57)
<i>WAGE</i>	0.4896***	0.7791***
	(26.23)	(52.32)
<i>CI</i>	-0.0628***	0.0309***
	(-12.24)	(6.66)
<i>FA</i>	0.0041	-0.1900***
	(0.09)	(-4.08)
<i>FIRST</i>	0.0106	0.0903*
	(0.17)	(1.78)
<i>INDIR</i>	0.0135	-0.0112
	(0.17)	(-0.14)
<i>BOARD</i>	-0.0396	-0.0620**
	(-1.43)	(-2.43)
<i>Constant</i>	4.7869***	0.4579*
	(13.41)	(1.70)
<i>Year</i>	Yes	Yes
<i>Firm</i>	Yes	Yes
<i>N</i>	28195	28195
<i>R<sup>2</sup>-within</i>	0.710	0.777

T-statistics computed with robust standard errors clustered at the firm level are reported in parentheses; \*, \*\*, and\*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

## 4.2. Robustness Test

### 4.2.1 Instrumental Variable Approach

Endogeneity poses a significant challenge in empirical research. While the previous sections have partly addressed omitted variable bias by incorporating firm fixed effects, the potential for reverse causality remains. For instance, higher labor productivity may be attributed to employees' enhanced qualifications (Yang, et al., 2022; Laut, et al., 2023) and better-qualified employees can enhance the quality of accounting information (Call, et al., 2017). Therefore, there might be a reverse causality relationship between labor productivity and accounting comparability. To mitigate the potential reverse causality, following Li and Wang (2018), we selected the average accounting comparability of other firms (excluding the target firm itself) in the same industry as the instrumental variable (*IV*) for the two-stage regression. Theoretically, the accounting comparability of individual firms can be influenced by factors such as accounting policies, choices of accounting estimates, and the complexity of economic activities in the industry. However, the accounting comparability of other peer firms should not directly affect the labor productivity of individual firms. Nonetheless, relying solely on logical reasoning to assess the validity of instrumental variables is insufficient. The estimated results of the models with the two instrumental variables are shown in Table 3.

The results in column (1) show that the coefficient of the *IV* is significantly positive, and the Cragg-Donald F statistic is 1579.243, indicating that the *IV* satisfies the requirement of correlation with the explanatory variable. The results in columns (3) and (5) show that after controlling the accounting comparability of the target firm, the impact of the *IV* on the target firm's labor productivity is not significant, indicating that the *IV* satisfies the requirement that the *IV* is unrelated to the dependent variable. All these findings indicate that the *IV* selected in this study is

valid. The results in columns (2) and (4) show that accounting comparability can significantly improve labor productivity, supporting the conclusions mentioned previously.

Table 3. Results of Instrumental variable approach

	First stage <i>AC</i> (1)	Second stage <i>LABPROD1</i> (2)	IV exogenous test <i>LABPROD1</i> (3)	Second stage <i>LABPROD2</i> (4)	IV exogenous test <i>LABPROD2</i> (5)
<i>AC</i>		3.3682*** (3.27)	2.7952*** (5.39)	2.8757*** (3.16)	4.5106*** (9.08)
<i>IV</i>	0.7285*** (39.74)		0.4174 (0.50)		-1.1910 (-1.59)
<i>SIZE</i>	0.0007*** (3.38)	0.1463*** (12.08)	0.1467*** (12.14)	0.1170*** (12.26)	0.1158*** (12.17)
<i>LNAGE</i>	0.0038*** (10.30)	-0.0130 (-0.74)	-0.0108 (-0.62)	-0.0558*** (-3.50)	-0.0620*** (-4.04)
<i>LEV</i>	-0.0052*** (-7.12)	0.2432*** (6.26)	0.2402*** (6.31)	-0.2158*** (-6.70)	-0.2072*** (-6.45)
<i>ROA</i>	-0.0036* (-1.92)	1.5921*** (17.69)	1.5900*** (17.72)	10.6259*** (76.76)	10.6318*** (76.82)
<i>GROWTH</i>	0.0003** (2.13)	0.1186*** (14.07)	0.1188*** (14.15)	0.0447*** (6.47)	0.0441*** (6.38)
<i>CASH</i>	-0.0036*** (-4.65)	-0.3764*** (-8.34)	-0.3785*** (-8.31)	-0.2661*** (-6.56)	-0.2602*** (-6.40)
<i>CUR</i>	-0.0005 (-0.72)	0.4643*** (10.76)	0.4640*** (10.75)	-0.0174 (-0.50)	-0.0165 (-0.48)
<i>RDD</i>	0.0003** (2.06)	-0.3022*** (-29.16)	-0.3021*** (-28.97)	-0.1278*** (-16.41)	-0.1283*** (-16.54)
<i>WAGE</i>	-0.0009*** (-3.26)	0.4899*** (26.23)	0.4893*** (26.24)	0.7784*** (52.37)	0.7799*** (52.29)
<i>CI</i>	-0.0000 (-0.28)	-0.0627*** (-12.25)	-0.0627*** (-12.23)	0.0306*** (6.63)	0.0307*** (6.61)
<i>FA</i>	-0.0011 (-1.18)	0.0047 (0.10)	0.0041 (0.09)	-0.1917*** (-4.12)	-0.1900*** (-4.08)
<i>FIRST</i>	0.0019 (1.48)	0.0104 (0.16)	0.0115 (0.18)	0.0909* (1.79)	0.0877* (1.73)
<i>INDIR</i>	0.0012 (0.67)	0.0133 (0.17)	0.0140 (0.18)	-0.0107 (-0.13)	-0.0127 (-0.16)
<i>BOARD</i>	0.0012* (1.69)	-0.0400 (-1.44)	-0.0393 (-1.41)	-0.0611** (-2.40)	-0.0630** (-2.48)
<i>Constant</i>	-0.0154** (-2.48)		4.7897*** (13.41)		0.4500* (1.67)
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Firm</i>	Yes	Yes	Yes	Yes	Yes
<i>N</i>	28195	28195	28195	28195	28195
<i>R<sup>2</sup>-within</i>	0.540	0.663	0.710	0.741	0.777

T-statistics computed with robust standard errors clustered at the firm level are reported in parentheses; \*, \*\*, and\*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively. Running the xtvreg2 command in Stata, single-point cluster samples were excluded, resulting in a reduced sample size. Additionally, the command does not report the intercept term.

#### 4.2.2 Propensity score matching (PSM)

Selection bias serves as another source of endogeneity issues. In this paper, selection bias emerges when firms self-select to have high or low accounting comparability. To address this concern, we follow Chircop et al (2023) and perform propensity score matching (PSM). Specifically, based on the median of annual accounting comparability, we divide the sample into a high accounting comparability group (treat group) and a low accounting comparability group (control group). Then, we implement PSM using the nearest neighbor matching without replacement method with all control variables in Equation (1). The results of the covariate balance test show that the covariate deviations are less than the standardized difference (20%), suggesting an effective matching result. Table 4 reports the results of the sample regression analysis after

propensity score matching, showing that accounting comparability can significantly improve labor productivity at the 1% level, that is, after accounting for sample selection bias, the results again verified H1, and our baseline results are not driven by selection bias.

Table 4. The results of propensity score matching

	<i>LABPROD1</i> (1)	<i>LABPROD2</i> (2)
<i>AC</i>	2.9104*** (5.45)	3.6570*** (7.41)
<i>SIZE</i>	0.1422*** (11.32)	0.1161*** (11.46)
<i>LNAGE</i>	-0.0255 (-1.39)	-0.0699*** (-4.20)
<i>LEV</i>	0.2469*** (6.58)	-0.1931*** (-5.75)
<i>ROA</i>	1.5448*** (16.10)	10.4039*** (72.94)
<i>GROWTH</i>	0.1240*** (13.94)	0.0462*** (6.09)
<i>CASH</i>	-0.3472*** (-6.96)	-0.2881*** (-6.51)
<i>CUR</i>	0.4285*** (10.09)	-0.0466 (-1.22)
<i>RDD</i>	-0.3119*** (-27.54)	-0.1330*** (-14.74)
<i>WAGE</i>	0.4938*** (24.88)	0.7807*** (48.41)
<i>CI</i>	-0.0623*** (-11.39)	0.0276*** (5.67)
<i>FA</i>	-0.0248 (-0.51)	-0.2380*** (-4.97)
<i>FIRST</i>	0.0233 (0.33)	0.0885 (1.55)
<i>INDIR</i>	-0.0275 (-0.33)	-0.0633 (-0.70)
<i>BOARD</i>	-0.0420 (-1.37)	-0.0598** (-2.17)
<i>Constant</i>	4.8856*** (12.82)	0.5003* (1.72)
<i>Year</i>	Yes	Yes
<i>Firm</i>	Yes	Yes
<i>N</i>	23400	23400
<i>R<sup>2</sup>-within</i>	0.713	0.780

T-statistics computed with robust standard errors clustered at the firm level are reported in parentheses; \*, \*\*, and\*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

#### 4.2.3 High-dimensional Fixed Effect

Although we control the firm- and year-fixed effects in Eq. (1). However, it can-not be denied that there may be some macro-level factors that have different impacts on different provinces and industries in different years. For example, differences in labor resource endowments among different provinces may lead to differences in labor productivity across firms. Therefore, we further control the high-dimensional fixed effect of province\*industry\*year. The results in Table 5 show that after controlling the province\*industry\*year, accounting comparability still significantly improves labor productivity, indicating our findings are robust.

Table 5. Results of high-dimensional fixed effect

	<i>LABPROD1</i> (1)	<i>LABPROD2</i> (2)
<i>AC</i>	2.3357*** (4.69)	4.7943*** (8.33)
<i>SIZE</i>	0.1237*** (12.23)	0.1131*** (10.89)

<i>LNAGE</i>	-0.0426*** (-2.73)	-0.0922*** (-5.45)
<i>LEV</i>	0.2078*** (6.11)	-0.2328*** (-6.95)
<i>ROA</i>	1.3222*** (14.07)	10.3958*** (69.28)
<i>GROWTH</i>	0.1045*** (13.08)	0.0368*** (4.64)
<i>CASH</i>	-0.4177*** (-8.28)	-0.2830*** (-6.06)
<i>CUR</i>	0.3156*** (8.32)	-0.0579 (-1.56)
<i>RDD</i>	-0.3478*** (-29.68)	-0.1464*** (-16.20)
<i>WAGE</i>	0.4256*** (21.76)	0.7493*** (45.82)
<i>CI</i>	-0.0522*** (-9.93)	0.0321*** (6.44)
<i>FA</i>	0.0036 (0.08)	-0.1988*** (-3.86)
<i>FIRST</i>	-0.0518 (-0.87)	-0.0117 (-0.21)
<i>INDIR</i>	-0.0209 (-0.27)	-0.0723 (-0.76)
<i>BOARD</i>	-0.0449* (-1.69)	-0.0669** (-2.32)
<i>Constant</i>	6.2328*** (18.13)	1.0993*** (3.48)
<i>province*industry*year</i>	Yes	Yes
<i>Firm</i>	Yes	Yes
<i>N</i>	24444	24444
<i>R<sup>2</sup>-within</i>	0.950	0.917

The values in parentheses represent clustered t-statistics at the firm level; \*, \*\*, \*\*\* denote significance levels of 10%, 5%, and 1% respectively; after controlling for province\*industry\*year fixed effect, single-cluster samples were excluded from the regression process, resulting in a reduction in the sample size.

#### 4.2.4 Changing the Measure of Accounting Comparability

Considering that investors often select a few companies with the highest comparability in the same industry to assess the accounting comparability of the target firm, we follow De Franco et al. (De, et al., 2011) and use *AC\_TOP4* as a new proxy variable for accounting comparability. Specifically, the firm i's accounting comparability with other peer companies is ranked from highest to lowest, and the arithmetic average of the top four AC values is calculated as *AC\_TOP4*. The results in Table 6 show that the coefficients of *AC\_TOP4* are significantly positive at the 1% level.

Table 6. Results of changing the measure of accounting comparability

	<i>LABPROD1</i> (1)	<i>LABPROD2</i> (2)
<i>AC_TOP4</i>	4.7406*** (5.09)	8.6334*** (8.60)
<i>SIZE</i>	0.1479*** (12.25)	0.1174*** (12.29)
<i>LNAGE</i>	0.0047 (0.27)	-0.0415*** (-2.73)
<i>LEV</i>	0.2345*** (6.19)	-0.2120*** (-6.58)
<i>ROA</i>	1.5845*** (17.55)	10.6213*** (76.88)
<i>GROWTH</i>	0.1184*** (14.06)	0.0431*** (6.18)
<i>CASH</i>	-0.3843***	-0.2660***

	(-8.40)	(-6.54)
<i>CUR</i>	0.4690***	-0.0112
	(10.85)	(-0.32)
<i>RDD</i>	-0.3015***	-0.1282***
	(-28.74)	(-16.50)
<i>WAGE</i>	0.4888***	0.7783***
	(26.17)	(52.06)
<i>CI</i>	-0.0633***	0.0303***
	(-12.37)	(6.48)
<i>FA</i>	0.0062	-0.1840***
	(0.14)	(-3.94)
<i>FIRST</i>	0.0157	0.0989*
	(0.25)	(1.93)
<i>INDIR</i>	0.0166	-0.0061
	(0.21)	(-0.08)
<i>BOARD</i>	-0.0384	-0.0609**
	(-1.38)	(-2.41)
<i>Constant</i>	4.7197***	0.3752
	(13.25)	(1.39)
<i>Year</i>	Yes	Yes
<i>Firm</i>	Yes	Yes
<i>N</i>	28195	28195
<i>R<sup>2</sup>-within</i>	0.709	0.777

The values in parentheses represent clustered t-statistics at the firm level; \*, \*\*, \*\*\* denote significance levels of 10%, 5%, and 1% respectively.

### 4.3. Mechanism Test

As mentioned in theoretical analysis, accounting comparability has the potential to promote human capital accumulation and reduce agency cost, which, in turn, improve firms' labor productivity. In this part, we aim to examine the above mechanisms using the stepwise regression and provide empirical evidence for our hypothesis H2.

#### 4.3.1 Human Capital Accumulation

As mentioned in theoretical analysis, accounting comparability can alleviate firms' financing constraints on human capital accumulation and motivate them to improve their human capital quality through internal training and recruitment of external high-quality talents, which, in turn, enhance labor productivity. we examine the mediating effect of human capital accumulation from two dimensions: internal human capital accumulation and external human capital accumulation. Following prior literature, internal human capital accumulation (IHCA) is measured as the ratio of union funds and training expenses to the total number of employees, and external human capital accumulation (EHCA) is measured as the ratio of the number of technical, financial and sales employees to the total number of employees (Autor, et al., 2003).

Table 7 reports the test results of the transmission mechanism of human capital accumulation on labor productivity. The results in column (1) show that the coefficient of accounting comparability on internal human capital accumulation is statistically significant and positive, and the results in columns (2) and (3) show that the coefficients of internal human capital accumulation are statistically significant and positive, suggesting that the improvement of accounting comparability strengthens internal human capital accumulation, which, in turn, enhances labor productivity. Similarly, the results in column (4) show that the coefficient of accounting comparability on external human capital accumulation is statistically significant and positive, and the results in columns (5) and (6) show that the coefficients of external human capital accumulation are statistically significant and positive, and the coefficients of accounting comparability in columns (5) and (6) of Table 7 are less than the corresponding coefficients in Table 2, suggesting that the improvement of accounting comparability can strengthen external

human capital accumulation, which, in turn, improves labor productivity.

Table 7. Accounting comparability, human capital accumulation and labor productivity

	<i>IHCA</i> (1)	<i>LABPROD1</i> (2)	<i>LABPROD2</i> (3)	<i>EHCA</i> (4)	<i>LABPROD1</i> (5)	<i>LABPROD2</i> (6)
<i>AC</i>	0.3925*** (3.55)	2.8741*** (6.06)	3.9679*** (8.98)	0.3777** (2.16)	2.9230*** (6.13)	4.0070*** (9.08)
<i>IHCA</i>		0.2344*** (6.16)	0.1404*** (3.90)			
<i>EHCA</i>					0.1141*** (3.57)	0.0423* (1.67)
<i>SIZE</i>	-0.0007 (-0.28)	0.1468*** (12.14)	0.1162*** (12.20)	-0.0028 (-0.65)	0.1469*** (12.20)	0.1162*** (12.21)
<i>LNAGE</i>	-0.0396*** (-8.31)	-0.0015 (-0.08)	-0.0566*** (-3.67)	-0.0190*** (-2.79)	-0.0086 (-0.50)	-0.0613*** (-3.99)
<i>LEV</i>	-0.0091 (-1.04)	0.2429*** (6.40)	-0.2076*** (-6.48)	-0.0318** (-2.46)	0.2444*** (6.43)	-0.2075*** (-6.47)
<i>ROA</i>	0.1241*** (5.78)	1.5618*** (17.56)	10.6117*** (76.67)	-0.0567* (-1.96)	1.5974*** (17.77)	10.6315*** (76.73)
<i>GROWTH</i>	0.0052*** (2.95)	0.1175*** (14.05)	0.0435*** (6.30)	0.0038 (1.50)	0.1183*** (14.14)	0.0440*** (6.37)
<i>CASH</i>	0.0028 (0.27)	-0.3789*** (-8.34)	-0.2615*** (-6.43)	-0.0311** (-2.11)	-0.3747*** (-8.23)	-0.2598*** (-6.40)
<i>CUR</i>	0.0220** (2.16)	0.4594*** (10.78)	-0.0213 (-0.62)	-0.0186 (-1.23)	0.4667*** (10.83)	-0.0174 (-0.50)
<i>RDD</i>	-0.0082*** (-4.57)	-0.3001*** (-28.68)	-0.1273*** (-16.40)	-0.0082** (-2.53)	-0.3011*** (-28.78)	-0.1281*** (-16.54)
<i>WAGE</i>	0.0921*** (20.53)	0.4680*** (25.36)	0.7662*** (51.01)	0.0730*** (10.43)	0.4813*** (25.71)	0.7760*** (51.77)
<i>CI</i>	0.0035*** (3.70)	-0.0636*** (-12.49)	0.0304*** (6.58)	0.0018 (1.25)	-0.0630*** (-12.36)	0.0309*** (6.64)
<i>FA</i>	0.0274** (2.32)	-0.0023 (-0.05)	-0.1938*** (-4.17)	-0.0979*** (-5.61)	0.0153 (0.33)	-0.1859*** (-3.98)
<i>FIRST</i>	0.0421*** (2.68)	0.0007 (0.01)	0.0844* (1.66)	-0.0146 (-0.65)	0.0122 (0.19)	0.0909* (1.79)
<i>INDIR</i>	-0.0055 (-0.24)	0.0148 (0.19)	-0.0104 (-0.13)	-0.0569* (-1.83)	0.0200 (0.26)	-0.0088 (-0.11)
<i>BOARD</i>	-0.0040 (-0.52)	-0.0387 (-1.40)	-0.0615** (-2.41)	-0.0085 (-0.80)	-0.0387 (-1.39)	-0.0617** (-2.42)
<i>Constant</i>	-0.8836*** (-11.08)	4.9940*** (14.09)	0.5820** (2.17)	-0.3402*** (-2.72)	4.8257*** (13.57)	0.4722* (1.76)
<i>Year</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	28195	28195	28195	28195	28195	28195
<i>R<sup>2</sup>-within</i>	0.287	0.711	0.777	0.087	0.710	0.777

The results of the first stage of the mediation variable equation are consistent with Table 2 and are not reported here; the values in parentheses represent clustered t-statistics at the firm level; \*, \*\*, \*\*\* denote significance levels of 10%, 5%, and 1% respectively.

#### 4.3.2 Agency Cost

Following existing literature (Mullins, et al., 2023), we measure agency cost (MFEE) as the ratio of management expenses to operating income. Table 8 reports the test results of the transmission mechanism of agency cost on labor productivity. The results in column (1) show that the coefficient of accounting comparability on agency cost is statistically significant negative, indicating that accounting comparability can reduce firms' agency cost. The results in columns (2) and (3) show that the coefficients of agency cost are all statistically significant negative, and the coefficients of accounting comparability in columns (2) and (3) of Table 7 are less than the corresponding coefficients in Table 2, suggesting that the improvement of accounting comparability can alleviate agency problem, which, in turn, enhances labor productivity. According to Table 7 and Table 8, the H2 is verified.

Table 8. Accounting comparability, agency cost and labor productivity

	<i>MFEE</i> (1)	<i>LABPROD1</i> (2)	<i>LABPROD2</i> (3)
<i>AC</i>	-0.4876*** (-9.96)	1.9905*** (4.41)	3.5697*** (8.15)
<i>MFEE</i>		-2.0007*** (-17.46)	-0.9296*** (-9.44)
<i>SIZE</i>	-0.0194*** (-15.42)	0.1078*** (9.31)	0.0981*** (10.40)
<i>LNAGE</i>	-0.0121*** (-6.21)	-0.0350** (-2.10)	-0.0734*** (-4.88)
<i>LEV</i>	-0.0086** (-2.06)	0.2236*** (6.19)	-0.2169*** (-6.90)
<i>ROA</i>	-0.0743*** (-6.29)	1.4423*** (16.90)	10.5600*** (76.95)
<i>GROWTH</i>	-0.0033*** (-4.21)	0.1121*** (13.86)	0.0411*** (6.04)
<i>CASH</i>	0.0041 (0.91)	-0.3700*** (-8.39)	-0.2573*** (-6.36)
<i>CUR</i>	-0.0260*** (-5.58)	0.4126*** (10.14)	-0.0424 (-1.26)
<i>RDD</i>	0.0092*** (11.53)	-0.2835*** (-28.48)	-0.1199*** (-15.91)
<i>WAGE</i>	0.0226*** (13.24)	0.5349*** (29.55)	0.8002*** (55.40)
<i>CI</i>	0.0173*** (26.93)	-0.0283*** (-5.50)	0.0470*** (9.41)
<i>FA</i>	0.0138*** (2.73)	0.0317 (0.72)	-0.1772*** (-3.85)
<i>FIRST</i>	-0.0032 (-0.54)	0.0041 (0.07)	0.0873* (1.75)
<i>INDIR</i>	0.0136 (1.44)	0.0407 (0.53)	0.0014 (0.02)
<i>BOARD</i>	0.0058 (1.61)	-0.0281 (-1.06)	-0.0567** (-2.25)
<i>Constant</i>	0.2368*** (6.81)	5.2607*** (15.89)	0.6780*** (2.57)
<i>Year</i>	Yes	Yes	Yes
<i>Firm</i>	Yes	Yes	Yes
<i>N</i>	28195	28195	28195
<i>R<sup>2</sup>-within</i>	0.468	0.728	0.780

The results of the first stage of the mediation variable equation are consistent with Table 2 and are not reported here; the values in parentheses represent clustered t-statistics at the firm level; \*, \*\*, \*\*\* denote significance levels of 10%, 5%, and 1% respectively.

#### 4.4 Heterogeneity Analysis

##### 4.4.1 Financing Constraints Heterogeneity Analysis

As mentioned in theoretical analysis, we posit that accounting comparability can promote firms' human capital accumulation by reducing their financing constraints on labor investment. Therefore, the relationship between accounting comparability and labor productivity may vary with the degree of financing constraints. When firms face lower financing constraints, even if there is high accounting comparability among peer firms, the impact of financing constraints on their human capital accumulation may be relatively low. Conversely, when firms face higher financing constraints, the effect of accounting comparability in alleviating financing constraints can help firms better raise funds and thus increase their investment in human capital. Therefore, we expected that the positive relationship between accounting comparability and labor productivity would be more significant in firms facing higher financing constraints.

To test the above reasoning, we follow Hadlock and Pierce (2010) and use the SA index to measure firms' financing constraint levels. The results in columns (1) and (2) of Table 9 show that

the coefficients of AC\*SA are both statistically significant and positive, indicating that when firms face higher financing constraints, the positive impact of accounting comparability on labor productivity is more significant, which is consistent with our theoretical reasoning.

Table 9. Results of financing constraints heterogeneity analysis

	<i>LABPROD1</i>	<i>LABPROD2</i>
	(1)	(2)
<i>AC*SA</i>	0.4525*	0.6792***
	(1.67)	(2.79)
<i>AC</i>	0.4521	0.2265
	(0.30)	(0.17)
<i>SA</i>	-0.0192	0.0194
	(-0.64)	(0.78)
<i>SIZE</i>	0.1779***	0.1095***
	(5.05)	(3.69)
<i>LNAGE</i>	-0.0162	-0.0699***
	(-0.94)	(-4.54)
<i>LEV</i>	0.2346***	-0.2174***
	(6.12)	(-6.77)
<i>ROA</i>	1.5915***	10.6309***
	(17.68)	(76.64)
<i>GROWTH</i>	0.1185***	0.0441***
	(14.11)	(6.37)
<i>CASH</i>	-0.3761***	-0.2570***
	(-8.32)	(-6.37)
<i>CUR</i>	0.4664***	-0.0186
	(10.77)	(-0.54)
<i>RDD</i>	-0.3024***	-0.1294***
	(-29.18)	(-16.76)
<i>WAGE</i>	0.4890***	0.7777***
	(26.29)	(52.14)
<i>CI</i>	-0.0628***	0.0310***
	(-12.21)	(6.68)
<i>FA</i>	0.0092	-0.1849***
	(0.20)	(-3.98)
<i>FIRST</i>	0.0187	0.1000*
	(0.30)	(1.95)
<i>INDIR</i>	0.0129	-0.0100
	(0.16)	(-0.13)
<i>BOARD</i>	-0.0399	-0.0621**
	(-1.44)	(-2.44)
<i>Constant</i>	4.1962***	0.5362
	(6.20)	(0.95)
<i>Year</i>	Yes	Yes
<i>Firm</i>	Yes	Yes
<i>N</i>	28195	28195
<i>R<sup>2</sup>-within</i>	0.710	0.777

The values in parentheses represent clustered t-statistics at the firm level; \*, \*\*, \*\*\* denote significance levels of 10%, 5%, and 1% respectively.

#### 4.4.2 Corporate Governance Level Heterogeneity Analysis

If the alleviation of agency cost is an important channel through which accounting comparability improves labor productivity, it can be expected that the effect of accounting



comparability on agency costs may be more pronounced when firms have lower corporate governance levels. That is, the positive relationship between accounting comparability and labor productivity should be more significant in firms with lower corporate governance levels.

To test the above reasoning, we follow prior research (Chen, et al., 2012) and use the ownership type, the proportion of sole directors, and the executive shareholding to categorize firms into those with low and high corporate governance level. Specifically, if firms that are state-owned, have executive shareholdings that are lower than the industry median for the same year, and have a percentage of independent directors that is lower than the industry median will be identified as having a lower level of corporate governance, and the value of GOV is 1, otherwise, the firm is considered to have lower corporate governance level, and the value of GOV is 0. The results in Table 10 show that the coefficients of AC\*GOV are both statistically significant and negative, indicating that the positive effect of accounting comparability on labor productivity is more significant when firms have lower levels of corporate governance, which is consistent with our theoretical reasoning.

Table 10. Results of corporate governance level heterogeneity analysis

	<i>LABPROD1</i> (1)	<i>LABPROD2</i> (2)
<i>AC*GOV</i>	1.5089** (1.97)	1.9428*** (2.67)
<i>AC</i>	2.5633*** (5.06)	3.5072*** (7.49)
<i>GOV</i>	0.0283** (2.47)	0.0392** (3.54)
<i>SIZE</i>	0.1463*** (12.11)	0.1157*** (12.12)
<i>LNAGE</i>	-0.0089 (-0.52)	-0.0596*** (-3.88)
<i>LEV</i>	0.2414*** (6.33)	-0.2082*** (-6.50)
<i>ROA</i>	1.5889*** (17.68)	10.6265*** (76.83)
<i>GROWTH</i>	0.1183*** (14.06)	0.0436*** (6.34)
<i>CASH</i>	-0.3777*** (-8.31)	-0.2604*** (-6.43)
<i>CUR</i>	0.4649*** (10.80)	-0.0174 (-0.50)
<i>RDD</i>	-0.3020*** (-28.93)	-0.1284*** (-16.63)
<i>WAGE</i>	0.4898*** (26.24)	0.7792*** (52.41)
<i>CI</i>	-0.0629*** (-12.26)	0.0308*** (6.61)
<i>FA</i>	0.0043 (0.09)	-0.1897*** (-4.07)
<i>FIRST</i>	0.0076 (0.12)	0.0870* (1.71)
<i>INDIR</i>	0.0053 (0.07)	-0.0262 (-0.32)
<i>BOARD</i>	-0.0397 (-1.43)	-0.0619** (-2.43)
<i>Constant</i>	4.7849*** (13.40)	0.4568* (1.70)
<i>Year</i>	Yes	Yes
<i>Firm</i>	Yes	Yes
<i>N</i>	28195	28195
<i>R<sup>2</sup>-within</i>	0.710	0.777

The values in parentheses represent clustered t-statistics at the firm level; \*, \*\*, \*\*\* denote

significance levels of 10%, 5%, and 1% respectively.

#### 4.4.3 Peer Firms' Accounting Information Quality Heterogeneity Analysis

The improvement of accounting comparability helps financial statement users compare accounting information across different firms, thereby identifying and understanding the similarities and differences in financial statement items (Neel, et al., 2024). However, it is noted that if the accounting information quality of peer firms is poor, even if their accounting comparability is high, financial statement users also struggle to derive valuable new information from the comparison of low-quality information, thus limiting the role of accounting comparability in easing financing constraints. Thus, we expect that there is a complementary relationship between accounting comparability and the quality of accounting information in peer firms in terms of impact on labor productivity, and when the accounting information quality of peer firms is high, the positive relationship between accounting comparability and labor productivity is more significant.

To test the above reasoning, we follow Chircop et al (2020) and estimate accounting information quality (AQ) as the standard deviation of the residuals, obtained from running the following model:  $\Delta WC_t = b_0 + b_1 CFO_{t-1} + b_2 CFO_t + b_3 CFO_{t+1} + b_4 \Delta Sales_t + b_5 PPE_t + \varepsilon_t$ , where  $\Delta WC$  is changes in working capital, CFO is cash from operations,  $\Delta Sales$  is changes in sales, and PPE is gross property, plant, and equipment. In light of this, the variable *INDAQ* is measured as the average accounting information quality (AQ) of other firms in the same industry. The results in columns (1) and (2) of Table 11 show that the coefficients of *AC\*INDAQ* are both statistically significant and positive, indicating that when the accounting information quality of peer firms is high, the positive impact of accounting comparability on firms' labor productivity is more significant, which is consistent with our theoretical reasoning.

Table 11. Results of peer firms' accounting information quality heterogeneity analysis

	<i>LABPROD1</i>	<i>LABPROD2</i>
	(1)	(2)
<i>AC*INDAQ</i>	1.8014*** (2.77)	1.7764** (2.48)
<i>AC</i>	2.9567*** (6.20)	4.0074*** (9.06)
<i>INDAQ</i>	0.0489*** (2.67)	0.0567*** (2.70)
<i>SIZE</i>	0.1467*** (12.14)	0.1163*** (12.21)
<i>LNAGE</i>	-0.0106 (-0.61)	-0.0620*** (-4.03)
<i>LEV</i>	0.2402*** (6.30)	-0.2097*** (-6.54)
<i>ROA</i>	1.5896*** (17.70)	10.6273*** (76.79)
<i>GROWTH</i>	0.1187*** (14.14)	0.0442*** (6.39)
<i>CASH</i>	-0.3769*** (-8.28)	-0.2595*** (-6.40)
<i>CUR</i>	0.4649*** (10.77)	-0.0178 (-0.52)
<i>RDD</i>	-0.3021*** (-28.92)	-0.1285*** (-16.59)
<i>WAGE</i>	0.4894*** (26.23)	0.7789*** (52.30)
<i>CI</i>	-0.0628*** (-12.23)	0.0310*** (6.68)
<i>FA</i>	0.0045 (0.10)	-0.1896*** (-4.07)
<i>FIRST</i>	0.0103	0.0901*

	(0.16)	(1.77)
<i>INDIR</i>	0.0129	-0.0117
	(0.16)	(-0.15)
<i>BOARD</i>	-0.0398	-0.0622**
	(-1.43)	(-2.44)
<i>Constant</i>	4.7852***	0.4557*
	(13.41)	(1.69)
<i>Year</i>	Yes	Yes
<i>Firm</i>	Yes	Yes
<i>N</i>	28195	28195
<i>R<sup>2</sup>-within</i>	0.710	0.777

The values in parentheses represent clustered t-statistics at the firm level; \*, \*\*, \*\*\* denote significance levels of 10%, 5%, and 1% respectively.

## 5. Conclusions and Discussion

The quality of accounting information plays an important role in promoting both efficient resource allocation in capital markets and the high-quality development of firms. In the context of China's shrinking demographic dividend and growing labor costs, how to improve labor productivity and achieve "intensive growth" is crucial to the sustainable development of China's firms and economy. Therefore, this paper aims to examine the impact of accounting comparability, which is acknowledged as the main attribute that improves the value of accounting information in making decisions, on firms' labor productivity.

Based on the panel data of China's A-share listed firms from 2011 to 2022, we find that accounting comparability significantly enhances firms' labor productivity, indicating that enhancing the quality of accounting information can maximize operational effectiveness and lead to "intensive growth". Our further evidence suggests that accounting comparability increases firms' labor productivity through the promotion of human capital accumulation and the reduction of agency cost. Additionally, the positive impact of accounting comparability on firms' labor productivity is more pronounced when firms face higher levels of financing constraints, lower levels of corporate governance, and peer firms have higher accounting information quality.

### 5.1. Impact on Academic Research

Previous research has examined the determinants of labor productivity from various angles and found that management practices (Rico, et al., 2021), employee happiness (Bellet, et al., 2023), employment protection (Bjuggren, et al., 2018), air pollution (He, et al., 2019), debt level (Kale, et al., 2019) or external finance (Motta, et al., 2020), corporate wellness programs (Gubler, et al., 2018), corporate welfare policy (Darrough, et al., 2019), telework (Kazekami, et al., 2020), family motivation (Zhang, et al., 2020), digital inclusive finance (Wu, et al., 2023) all have significant effects on labor productivity. However, few studies have explored the relationship between accounting information quality and labor productivity. Our study, which focuses on examining how accounting information quality improves firms' operational efficiency and fosters their high-quality development, offers a fresh viewpoint for understanding firms' labor productivity.

In addition, we provide empirical evidence explaining the mechanisms behind the relationship between accounting comparability and firms' labor productivity. In particular, we found that improving accounting comparability can enhance firms' labor productivity by promoting human capital accumulation and reducing agency cost. These findings contribute to unlocking the "black box" of how accounting comparability improves firms' labor productivity. Concurrently, our findings are highly valuable in propelling the shift in a firm's growth from a

mode of factor input to one of efficiency enhancement, which significantly affects firms' sustainable development.

### **5.2. Impact on Practice**

This study makes significant policy implications.

First, in light of the current context of a declining demographic dividend and continuously rising labor costs, the traditional extensive growth mode of economic development needs to give way to "intensive growth". Our findings suggest that enhancing accounting comparability can promote labor productivity. Therefore, regulatory authorities should take proactive measures to continuously encourage the improvement of accounting comparability.

Second, it is imperative to make joint efforts to enhance the quality of human capital and cultivate a culture of innovation and creativity. Our results imply that the accumulation of human capital is an important catalyst for increasing firms' labor productivity. Therefore, to facilitate firms' high-quality and sustainable growth, the government should prioritize talent training, encourage internal team building within firms, and make effective use of the workforce's value and potential.

Third, it is crucial to acknowledge that enhancing the quality of accounting information is a systemic undertaking that utilizes the interactive and complementary effects of various aspects of accounting information quality to bolster financial and economic development. This would aid in addressing long-standing issues of challenging and costly financing faced by Chinese firms, promote the accumulation of human capital, and ease the shift of firms' production mode from input-driven to productivity-driven, which will strengthen the vigor and drive of socialist modernization and offer steady impetus for raising competitiveness and promoting high-quality development.

### **5.3. Limitations and Further Research Directions**

This paper examines the impact of accounting comparability on firms' labor productivity. It holds significant implications for understanding how accounting information quality fosters high-quality development. However, there are still some limitations. The concept of accounting information quality encompasses various characteristics, such as reliability, understandability, and relevance, which may have significant effects on labor productivity. Due to the challenges in assessing these indicators, we are unable to comprehensively and systematically study the impact of accounting information quality on labor productivity. If this problem can be successfully resolved in the future, it will present worthwhile research prospects for new avenues. Furthermore, regulatory policies on information disclosure in China's capital markets under-go continuous enhancements, exerting a significant influence on firms' information disclosure quality. However, capturing the comprehensive effects resulting from these changes remains challenging. Future research can examine how these regulatory changes affect labor productivity to complement our findings.

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