Do high skilled managers favour high skilled employees? Evidence from labour investment in China

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Abstract

We investigate the impact of managerial foreign experience on corporate labour cost. We show that foreign experienced managers pay higher wages to employees. Further, efficiency wage theory and employee protection can serve as underlying economic channels that increase labour cost by retaining and attracting high skilled employees and improving labour protection. Further analyses indicate that foreign experienced managers mainly focus on employees' wellbeing in state-owned enterprises (SOEs) and improve total factor productivity in private firms. The effect of managerial foreign experience on labour cost is more pronounced in firms without political connections, and in firms with excess cash holdings, or lower operating leverage. The positive relationship between managerial foreign experience and labour cost, benefits shareholders through increasing firm value. However, it also generates labour stickiness costs. Overall, our findings have implications for the emerging market regarding the transition from a low-cost labour development model to high-skilled-employees based model.

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1. Introduction

Foreign experience is a type of human assets which is valuable and difficult to imitate by others and such experiences help managers think globally and act locally (Carpenter, Sander and Gregersen, 2000; Coff, 1997). Despite the common discussion of foreign experienced executives on corporate governance and firm performance, there is little research on their influence on labour markets, particularly in China, where the legal system and ownership structure differ from the developed markets (Jiang and Kim, 2015). Typically, labour investment is funded from firms' operating cash flows, in contrast to capital investment which is financed through debt or equity (Taylor, Al-Hadi, Richardson, Alfarhan and Al-Yahyaee, 2019). Hence, under management entrenchment theory, labour investment may be a sunk cost as it is difficult to reduce or redeploy to other uses, should managers recruit employees for self-interest seeking (e.g. empire building activities). This study investigates the influence of managerial foreign experience on labour costs in China.

Endogenous growth theory suggests that human capital contributes significantly to economic growth (Aghion et al., 1998). However, a lack of high skilled employees constrains productivity and innovation within firms (Dollar, 2019), and this constraint is particularly problematic in Chinese firms. For example, according to a survey data from Peking University, the second biggest problem constraining Chinese enterprises' innovative activity is the lack of skilled employees (Peking University Open Research Data[1]). As foreign experienced managers are regarded as high skilled talents, they may have more interest in hiring high skilled employees to innovate and promote firm performance (Glaeser and Berry, 2006). Moreover, previous studies indicate that foreign experienced executives can improve firm performance through their superior skills and knowledge (e.g. Giannetti et al., 2015; Yuan and Wen, 2018). However, the improved organizational behaviours are not only subject to managerial ability,

[1] For more details, please see https://opendata.pku.edu.cn/dataverse/esiec

but also an outcome from other parties' efforts such as employees. Given foreign experienced managers capture significant attention from other parties (e.g. board of directors and public media), they may increase labour cost to retain and attract high skilled employees to improve firm performance. Thus, foreign experienced managers may increase labour costs to avoid high skilled labour risk (i.e. the risk of high skilled labour turnover).

In addition to hiring high skilled employees, foreign experienced managers' behaviors are influenced by those foreign country norms after working or studying abroad for many years, (Zhang, Kong and Wu, 2018). Although the Chinese government implemented the labour contract reform to strengthen the labour protection in 2008 (Kong et al., 2020), there are still some problems which are harmful to employees' welfare. For example, the Chinese government just announced that the two popular working norm "996" (employees need to work from 9am to 9pm, 6 days a week) is illegal, which has already existed for a long time to boost employees fully contributed to firms' development. Thus, managers gaining experience in high employee protection countries may extend similar employee treatment and working norms in their Chinese firms where traditionally labour protection and average wages are comparatively lower than those of more developed markets. As such, managers with foreign experience from high employee protection countries can be positively associated with labour costs.

On the other hand, some studies may make the opposite prediction. Paying high labour costs may reduce firms' profitability, resulting in lowering firms' internal capital availability (Klasa, Maxwell and Ortiz-Molina, 2009; Matsa, 2010; Kong et al., 2020). Given managers with foreign experience are treated as "super stars", with high salaries and additional bonuses, firms may be unlikely to further pay high wages to employees to avoid potential liquidity and bankruptcy risk.

Thus, the effect of managerial foreign experience on corporate labour cost is an open question that requires further investigation. Unlike the US where firm-level rank-and-file employee data is unavailable, the Chinese Accounting Standard for Business Enterprises-Basic Standard has required firms to report employees' compensation information (e.g. salaries, and allowance) since 2007. Moreover, the China Securities Regulatory Commission (CSRC) requires firms to disclose the descriptive statistics of their employee structures, including employee count, education and position. The data availability in China gives us a unique setting to investigate the relationship between managerial foreign experience and corporate labour costs.

Using the average wage expenses excluding top executives' compensation, we find evidence supporting our hypothesis that managerial foreign experience increases labour costs. This result is confirmed after endogeneity checks including instrumental variable (IV) test, difference-in-difference (DID) test and multiple fixed effects tests.

Next, we investigate potential mechanisms through which managerial foreign experience increase labour costs. We argue that both the efficient wage theory (e.g. firms hire more high skilled employees) and employee protection improvement are the potential mechanisms through which foreign experienced managers increase labour costs. Our empirical evidence indicates that firms with foreign experienced managers are associated with a high percentage of skilled employees and they are more likely to increase labour cost in firms located in high labour market competition areas. Both results support the efficiency wage channel. Moreover, we find that managers who gain their experience in high labour protection countries have a stronger impact on labour costs than those with experience in high investor protection countries. Additionally, the positive effect of managerial foreign experience on labour costs is more pronounced in provinces with low employee protection, which is also consistent with the high employee protection channel.

We then investigate whether and how government intervention in firms affects the inducement effect of managerial foreign experience. First, we find the relationship between managerial foreign experience and labour cost is significant in both SOEs and private firms. We argue that foreign experienced managers fulfil the political and social objectives (e.g. employees' wellbeing and safety) set by government, which may help their future political promotion opportunities in SOEs (Jiang and Kim, 2019). In contrast, evidence shows that foreign experienced managers are willing to benefit shareholders through performance-enhancing activities (e.g. increase total factor productivity) in private firms. Both incentives lead to an increase in labour cost.

Moreover, the inducement effect of managerial foreign experience is more pronounced in private firms without political connections. Thus, foreign experienced managers in politically connected firms are less sensitive to increase labour costs, as these firms are supported through rent-seeking activities (Chen, Sun, Tang and Wu, 2011; Chen, Li, Luo and Zhang, 2017), such as bank loans. Overall, we indicate the different incentives for foreign experienced managers to increase labour cost due to government intervention.

Next, we provide evidence on how firm characteristics and managerial compensation influence the relationship between managerial foreign experience and labour cost. We find it is more pronounced in firms with excess cash holdings and lower operating leverage. These results are consistent with He (2018) who argues presents that firms need a flexible and healthy financial condition to retain and attract high skilled employees.

Further, we find that the increased labour costs associated with foreign experience managers, positively affects firm value. This provides evidence that the increase in labour costs is more aligned to shareholder wealth maximisation goals, rather than empire building purposes.

Although the recruitment of high skilled employees is associated with several benefits, it may also increase the labour adjustment costs, resulting in labour cost stickiness. This is what we find. Foreign experienced managers are associated with labour cost stickiness, indicating a potential structural cost for firms appointing foreign experienced managers.

Our study makes several contributions to the existing literature. First, to our best knowledge, this is the first paper to investigate the relationship between managerial foreign experience and the cost of employees. Previous studies show foreign experienced executives affect firm performance and shareholders' value through their superior skills and knowledge (e.g. Giannetti et al., 2015; Yuan and Wen, 2018; Dai, Kong and Liu, 2018). In contrast, our study illustrates their impact on employees and the teams they build which also drives firm performance, as employees are critical corporate stakeholders and their loyalty and teamwork are crucial to corporate success (Hall, Jaffe and Trajtenberg, 2005). We argue that despite of the superior skills of knowledge that foreign experienced managers gained from overseas experience, they also implement favourable labour conditions (e.g. human capital building), which is the most valuable firm asset in today's knowledge-based economies (Pfeffer and Villeneuve, 1994; Zingales, 2000) and impact firms performance significantly.

Second, we contribute to the literature on labour investment. Previous literature mainly focuses on the influence of macro factors on labour cost, such as labour policy reform, government connections and the bargaining power from unionization (Cui et al., 2018; Li et al., 2020; Kong et al., 2020; Wei, Hu and Chen, 2020; Klasa et al., 2009). We argue that the micro factors (e.g. managerial foreign experience) also matters in determining corporate labour cost.

Third, we extend the literature on managerial foreign experience. Previous literature indicates positive effects of foreign experienced executives on firm performance, such as corporate innovation (Yuan and Wen, 2018), investment efficiency (Dai et al., 2018), corporate social

responsibility (Zhang, Kong and Wu, 2018). Given labour investment is distinguished from capital investment, we shed light on another dimension of corporate investment decision-making influenced by foreign experienced managers. In addition to increasing labour cost to attract and retain high skilled employees, we also find firms with foreign experienced managers increase labour stickiness costs, which is a potential cost of appointing foreign experienced managers.

Fourth, our study builds on the work of Kong et al. (2020) and others who argue that the efficiency wage channel can retain and attract high skilled employees and facilitate their working efficiency. Moreover, given foreign experienced managers are also regarded as high skilled talents (Yuan and Wen, 2020), we show that high skilled managers are more likely to hire high skilled employees to enhance firm performance (Dollar, 2019).

The remainder of the paper is organised as follows. Section 2 provides relevant literature and hypothesis development. Section 3 discusses data and methodology. Section 4 reports empirical results. Section 5 concludes the paper.

2. Literature review and hypothesis development

2.1 Literature review

Our study incorporates two streams of literature. The first stream of literature which is related to our study is the labour cost literature. In comparison with western countries, China's labour cost was relatively low before 2003, which was mismatched with the high growth of economy in China. Since 2003, the labour cost has increased dramatically, with an average growth rate above 12% from 2003 to 2015, particularly in urban areas due to the shortage of migrant workers (Li et al., 2020). In 2008, the Chinese government formally enacted the new Labour Contract Law which strengthens employees' legal rights and increases employees' wages and wellbeing including the social insurance, minimum wage and maximum working ours (Cui et

al., 2018). Moreover, human-capital-incentive firms may face high labour cost as human-capital-incentive sectors (e.g. high-tech industries) involve 'talent war', which induces firms to pay high wages to their employees to attract and retain high skilled workers (Cao and Rees, 2020). The increased labour costs can increase firms' precautionary cash holdings, as well as improving firms' productivity and innovation (Ni and Zhu, 2018; Cui et al., 2018; Kong et al., 2020; Li et al., 2020).

The second stream of literature refers to managerial foreign experience. The upper echelon theory argues that individual's characteristics can influence corporate performance significantly (Hambrick and Mason, 1984). Previous studies define foreign experienced executives as high skilled talents whose superior knowledge and skills to improve corporate performance, investment efficiency, innovation, and corporate social responsibility (Giannetti, et al., 2015; Dai et al., 2018; Yuan et al., 2018; Zhang et al., 2018). Moreover, foreign experienced executives can reduce stock price crash risk and corporate tax avoidance (Cao, Sun and Yuan, 2019; Wen, Cui and Ke, 2020).

2.2 Hypothesis development

Foreign experienced managers may increase labour costs for several reasons. First, efficiency wage theory argues that the excess payment to employees increases firm performance by strengthening employees' loyalty (Stiglitz, 1974; Salop, 1979), attracting high skilled employees (Weiss, 1980; Malcomson, 1981) and retaining talented employees (Albinger and Freeman, 2000). Foreign experienced managers are regarded as talented executives in China who are treated as "super stars", receiving high compensation and allowance to improve firm performance, as well as heightened attention from different parties such as boardroom, social media and employees (Giannetti et al., 2015; Yuan et al., 2018). However, enhancing firm performance and value is a process of team work rather than an individual's effort (Hall, Jaffe and Trajtenberg, 2005). Given skilled managers are more likely to hire high skilled workers for

facilitating firm performance (Glaeser and Berry, 2006), foreign experienced managers may be associated with a high proportion of skilled employees for performance enhancement to mitigate the pressure from other parties. Moreover, foreign experienced managers may increase labour costs through enhancing labour protection. Previous studies indicate where executives obtain their foreign experience impacts corporate decision-making. For example, Yuan et al. (2018) find that managers who gained experience in US have more influence on innovation. Likewise, the employee protection may be strong for firms whose top managers gained their experience from countries with high employee protection. As high employee protection is positively linked to labour costs (Cui, John, Pang and Wu, 2018), if foreign experienced managers increase employee protection, then labour costs will increase. Given such reasons, we hypothesis that:

H1a. Managerial foreign experience is positively associated with labour cost.

On the other hand, it is also likely that foreign experienced managers are associated with low corporate labour cost. Foreign experienced managers receive high compensations, which may unable firms to further increase labour costs as high labour costs may reduce corporate profitability and burden internal capital liquidity (Klasa et al., 2009; Matsa, 2010; Kong et al., 2020). Therefore, we propose:

H1b. Managerial foreign experience is negatively associated with labour cost.

Further, even if managerial foreign experience is associated with higher labour costs through efficiency wage theory and improving employee protection, the purpose may differ between SOEs and private firms. Jiang and Kim (2019) indicate that the government plays a significant role in promoting CSR in China, managers may engage in CSR components to nurture political connections (Lin, Tan, Zhao and Karim, 2015). Thus, SOE managers may be incentivised to

improve employee responsibility, which is a key component of CSR[2], to build government connections. Therefore, completing political goals tied to CSR, such as improving social stability and employees' wellbeing, makes and strengthens valuable government connections and help secure government subsidies and nonpecuniary benefits for SOE managers such as further political promotion. Building these government connections is even more critical for foreign experienced managers who typically have fewer prior political ties compared to non-foreign experienced managers (Giannetti et al., 2015).

In contrast, managers in private firms are less likely to provide nonpecuniary benefits to firms and employees due to few political connections (Kong et al., 2020), such as bank loans (Li, Meng, Wang, and Zhou, 2008), satisfying workplaces (Bloom, Kretschmer and Van Reenen, 2011), and general employee treatment (Chen, Chen, Hsu, and Podolski, 2016). They are more likely to improve firm performance by retaining and attracting high skilled employees with higher wages (Kong et al., 2020). Accordingly, due to fewer political ties (Giannetti et al., 2015), and hence fewer nonpecuniary benefits, foreign experience managers in private firms may be more likely to increase labour costs to retain and attract high skilled employees for value maximization activities such as improving firm productivity. Thus, we further hypothesise that:

H2. The reason of foreign experienced managers affecting labour cost differs between SOEs and private firms.

3. Data and methodology

Our sample consists of all firms listed on the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE) from 2008 to 2016. The data is from the China Stock Market &

[2] We acknowledge that there are several components which affect corporate CSR scores (e.g. employee responsibility, donation and environmental protection). However, we only focus on the factor of employee responsibility in this paper as it is closely related to our research question.

Accounting Research database (CSMAR). We start the sample from 2008 as CSMAR provides executives' profiles and background since 2008. The data of corporate employees' structure is retrieved from Resset database. We exclude financial firms and observations with missing value, which result in 16,026 firm-year observations.

Unlike western markets, the chairman in Chinese listed firms takes the most powerful managerial position and is concerned with daily operational matters (need reference). As such, we define foreign experienced managers as CEO, and chairman, who have worked or studied outside the mainland of China. We manually collect information on manager's academic background and countries where they gained their foreign experience, from their resumes, available in the CSMAR database. We cross-check the sample with Baidu (http://baike.baidu.com), Sina (http://finance.sina.com.cn) and annual reports retrieved from the firms' websites. We then exclude individuals' who gained experiences from foreign branches of Chinese firms (an office of a Chinese firm overseas etc.) or worked for Chinese branches of foreign firms (an office of a foreign firm in China etc.) to rule out non-pure managerial foreign experience (Yuan et al., 2018). Therefore, managerial foreign experience (*FE dummy*) is a dummy variable which equals to one if a firm's chairman, vice chairman or CEO has foreign experience.

3.1 Labour costs measures

Following (Li et al., 2020), we define our dependent variable *labour cost* as the natural logarithm of the amount of "paid for and on behalf of employees" reported in cash flow statements plus changes in "wages payable" in the balance sheet in a given year minus top executives' compensation in the previous year, divided by the total number of employees in a firm. We also use the industry adjusted labour cost (*Adj_labour*) as the second measure of labour cost. The variable *Adj_labour* is the natural logarithm of one plus the ratio of average labour compensation for a firm to the median compensation of a given industry and year.

3.2 Methodology

To test our hypothesis, the Equation 1 is applied for the regression models[3]:

$$labor\ cost_t\ or\ Adj\ labor_t = \alpha + \beta_1 FE\ dummy_t + \beta_2 quick\ ratio_{t-1} + \beta_3 leverage_{t-1} + \beta_3 firm\ size_{t-1} + \beta_4 roa_{t-1} + \beta_5 top1_{t-1} + \beta_6 labor\ intensity_{t-1} + \beta_7 indep_{t-1} + \beta_8 bsize_{t-1} + \beta_9 insti_{t-1} + \beta_{10} tangible_{t-1} + \beta_{11} Std\ cfo_{t-1} + \beta_{12} Std\ nethire_{t-1} + \beta_{13} otherinvestment_{t-1} + \beta_{14} div_{t-1} + \beta_{15} big4_{t-1} + \beta_{16} soe_{t-1} + \beta_{17} duality_{t-1} + \beta_{18} GDP\ Growth_{t-1} + \beta_{19} inflation_{t-1} + \beta_{20} Money\ supply\ growth_{t-1} + \varepsilon \quad (1)$$

where *labour cost* and *Adj labour* are the measures of labour cost and the *FE dummy* is defined as the measure of managerial foreign experience. Following Ben-Nasr and Alshwer (2016), Khedmati, Sualiu and Yawson (2020) and Kong et al. (2020) We also add a set of control variables including quick ratio (*quick ratio*), financial leverage (*leverage*), firm size (*firm size*), return on assets (*roa*), the largest shareholdings (*top1*), labour intensity (*labour intensity*), ratio of independent directors (*indep*), board size (*bsize*), institutional ownership (*insti*), percentage of tangible assets (*tangible*), volatility of operating cash flow (*Std cfo*), volatility of net hiring (*Std nethire*), other non-labour investment (*otherinvestment*), dividend payout (*div*), audit quality (*big4*), ultimate controller (*soe*), duality (*duality*), growth of provincial GDP (*GDP growth*), inflation rate (*inflation*) and the growth of money supply (*Money supply growth*). We use industry-year fixed effect to examine the relationship between managerial foreign experience and labour cost in China, and the standard errors are clustered by firm level. All the variable definitions are reported in Appendix A.

Table 1 reports the summary statistics. The natural logarithm of labour cost has a mean of 11.319, and standard deviation of 0.637, which are close to Li et al (2020) and Wei et al (2020). On average, 10.9% of our observations have foreign experienced managers. In our sample,

[3] All continuous variables are winsorized at the 1% and 99%.

about half of the firms are state controlled. Firms' largest shareholders on average own 35.4% of issued equity, while firms' average quick ratio is 1.129, have 48.1% financial leverage and 24.9% tangible assets, while their boards comprise 36.9% independent directors. With regard to the macro-economic variables, GDP growth throughout all provinces is 12.3% on average, the inflation rate is 2.8% and the growth rate of money supply from central bank is 16%.

[Insert Table 1 here]

4. Results

Table 2 reports the estimated result of Equation 1, which examines the effect of managerial foreign experience on employee compensation. Both of the coefficients of *FE dummy* are positively and significantly related to the labour cost measures at the 1% level. We also report the result of propensity score matching (PSM) test to check the robustness and address self-selection bias of our baseline result. To execute the PSM analysis, we estimate the propensity scores by considering a set of control variables in Equation 1 and match the sample with the nearest neighbour between the treatment group and control group[4]. According to Table 2, the significance of *FE dummy* remains qualitatively the same.

Taken together, our results suggest that foreign experienced managers are associated with high labour cost and this relationship is not influenced by self-selection bias. However, this relationship may be influenced by potential endogeneity issues such as reverse causality or omitted variables. Further, the mechanisms and motivations of foreign experienced managers increase labour costs; the factors which may moderate the relationship between managerial foreign experience and labour costs; and how this relationship affect firm performance or shareholders' value are still underdeveloped. We will discuss these questions in the following sections.

[4] In an untabulated result, the differences of control variables between the treatment and control group are insignificant in PSM sample, indicating that our matching sample is well matched.

[Insert Table 2 here]

4.1 Endogeneity checks

In this section, we apply a set of tests to address potential endogeneity concerns, including instrumental variable (IV) test, difference-in-difference (DID) test and multiple fixed effects.

4.1.1 Instrumental variables test

We first adopt the two-stage least square (2SLS) IV test to address the endogeneity concerns. Our first instrument variable is *christian*, following Dai et al. (2018), it is defined as the number of colleges for each province that were built by Christian missionaries up to 1920. Dai et al. (2018) argue that the Christian colleges import western culture and values which may impact local culture, and such influences may increase the opportunities for local residents to go abroad or increase the possibility for foreign experienced talents to come and work in these areas. In addition, the Chinese government enacted a series of policies to attract foreign experienced talents to live and work in China. Therefore, following Giannetti et al. (2015), we employ *policy* as our second instrument variable which is equal to one in years of the allowance policy implementation for each province, and zero otherwise. Both of our instrumental variables do not have direct influence on labour costs.

Table 3 reports the IV test results. In the first stage result, the coefficients on *christian* and *policy* are positive and significant at the 10% and 1% level, respectively, indicating that our instrumental variables are highly correlated with appointing foreign experienced managers. The value of F-statistics and the p-value of Hansen J-statistic indicate that our instrumental variables are valid and not weak. In the second stage analysis, both of the coefficients of *FE dummy* are positively and significantly related to labour cost measures at the 1% level, suggesting that our results are not influenced by potential endogeneity concerns such as reverse causality and omitted variables.

[Insert Table 3 here]

4.1.2 Difference-in-difference analysis

Second, we employ a DID analysis based on CEO turnover to address the endogeneity issues which may affect the relationship between managerial foreign experience and labour costs[5]. In detail, we follow Huang and Kisgen (2013) to first identify firms that experience a transition from non-foreign experienced CEO to foreign experienced CEO (treatment group). Next, we identify firms that transition from having a non-foreign experienced CEO to another non-foreign experienced CEO (control group). We then build our DID sample as firm-year observations 2 years before and 2 years after a CEO turnover[6], excluding the transition year *t*. Our DID model is as follows[7]:

$$labor\ cost_{i,t}\ or\ Adj\ labor_{i,t} = \beta_0 + \beta_1\ post_t * transition_i + \beta_2\ post_t + \beta_3\ transition_i + \sum_k \beta_k Controls_{k,i,t} + \varepsilon_{i,t}$$

where $post_t$ is a dummy variable equals one if firm-year observations are after the CEO transition and zero otherwise; $transition_i$ is a dummy variable equals one if a firm *i*'s transition in year *t* is from a non-foreign experienced to foreign experienced CEO transition and zero if a firm *i*'s transition in year *t* does not involve any foreign experienced CEOs.

If H_1 that managerial foreign experience increases labour costs holds, the coefficient of the interaction term $post_t * transition_i$, will be significantly positive. Table 4 presents the results of

[5] Following Yao, Wang, Sun, Liao and Cheng (2020), we select CEO turnover as benchmark in DID test as the CEO transition is more frequent than that of chairman, which allows us to incorporate more observations in the test.

[6] We contain 2 years before and after transition to obtain more firms in our sample selection.

[7] Similar with Huang et al. (2013), we control for year fixed effects instead of parallel trend check in our DID analysis as the CEO turnovers occur in different dates for different companies.

our DID test. In line with our conjecture, the estimated coefficients on $post_t$*$transition_i$ are positive and significant across the measures of labour costs, indicating that managerial foreign experience can significantly increase labour costs, ruling out the possibility that our results are affected by reverse causality and omitted variables[8].

[Insert Table 4 here]

4.1.3 Other fixed effects

We further apply multiple fixed effects in this section. First, we use firm-year fixed effects to rule out the potential problems generated by time-invariant firm-specific characteristics. According to Panel A of Table 5, both the coefficients on *FE dummy* are significantly positive at the 10% level, indicating that our results are not driven by time-invariant firm-specific characteristics.

Second, to address the endogeneity issues caused by omitted individual's characteristics, we follow Gormley and Matsa (2014, p.644), Hedge and Mishra (2019) and Mishra (2021) in using the 2SLS strategy within the CEO fixed effects framework as managers' foreign experience is practically orthogonal to other individual's characteristics. Specifically, we first retrieve residuals by regressing both of our labour costs measures on all control variables in Equation 1 with CEO, industry and year fixed effects, respectively. We then regress both group-average residuals (*Resid_labour* and *Resid_Adjlabour*) estimated in the first step with *FE dummy* and all control variables in the second step, including industry and year fixed effects, respectively. The results are reported in Table 5. In the second step results, *FE dummy* is positively and

[8] In an unreported table, we rerun our DID test by excluding the CEO turnover caused by dismissal, resignation and position transfer, as these turnovers might be endogenous (e.g. firms might change CEOs for specific purposes). The results remain the same after excluding the potential endogenous CEO turnovers, confirming the robustness of our DID test.

significantly associated with *Resid_labour* and *Resid_Adjlabour* at the 1% level, ruling out the potential bias that our results are affected by omitted individuals' characteristics[9].

[Insert Table 5 here]

4.2 Potential mechanisms

In this section, we investigate the potential mechanisms for managers with foreign experience to increase labour costs. According to efficient wages theory, firms pay excess wages to employees to enhance employees' loyalty and improve productivity (Kong et al., 2020). Apart from the superior knowledge that foreign experienced managers gained from other countries, based on the efficient wage theory, they may also seek to improve their firm's human capital to improve firm performance. Thus, in the context of the efficient wage theory, we expect foreign experienced managers increase labour cost by hiring high proportion of high skilled employees.

4.2.1 High skilled employees

Given foreign experienced managers are regarded as talented managers, they may prefer to hire a high proportion of skilled employees, as there is a positive relationship between talented managers and the recruitment of high skilled employees (Glaeser and Berry, 2006). The employee-friendly treatment will increase the attractiveness of recruitment and retention of high skilled employees to overcome the difficulties from technical or innovative activities, as well as reducing labour market friction and adjustment costs (Cao and Rees, 2020). Thus, we expect firms with foreign experienced managers to be associated with a high proportion of high skilled employees, and this association will increase labour costs.

[9] In untabulated results, we repeat the same process using chairman fixed effects and the results are qualitatively similar.

Following Kong et al. (2020) and Can and Rees (2020), we define high skilled employees based on their educational background (*High_edu*) and their job levels (*High_expert*). The variable *High_edu* is the proportion of employees who hold a bachelor's degree or above, while *High_expert* captures the proportion of employees whose jobs are located at zone 4 or 5[10] using JobZone data from Occupational Information Network. To design the test, we follow Ferreira and Laux (2007) and Cosset, Somé and Valéry (2016) by running two-stage regressions. In the first step, we separate the *High_edu* and *High_expert* that is explained by managerial foreign experience, and the rest which is irrelevant to managerial foreign experience, respectively. The results in Panel A of Table 6 indicate that managers with foreign experience are positively associated with the proportion of high skilled employee measures[11]. In the second step, we replace *FE dummy* in Equation 1 with both the fitted values and residuals of our high skilled employees' proxies. In Panel B of Table 6, the coefficients of *fv_High_edu* and *fv_High_expert* are all positively and significantly associated with our labour cost measures at the 1% level. The results indicate that managerial foreign experience increases labour costs through improving the proportion of high skilled employees, which is consistent with efficiency wage channel.

[Insert Table 6]

4.2.2 Labour market competition

We further investigate the underlying mechanisms through local labour market competition[12]. The Chinese labour market varies geographically because of the family commitments and the unique hukou system (Meng and Zhang, 2001; Fleisher and Wang, 2004). As a result,

[10] Job zones rank occupations into five zones from low to high level, based on the requirements of educational background, experience and training to perform the occupation.

[11] It is possible that firms with a high proportion of high skilled employees are more likely to hire foreign experienced managers. To address this concern, in an unreported table, we run the test in Panel A of Table 6 based on our DID sample, the coefficients on $post_t$ *$transition_i$ are positive and significant, ruling out the potential endogeneity problems.

[12] Given we are focusing on the provincial characteristics, we add province fixed effects in this section.

competitiveness of labour markets differs across provinces. Firms with foreign experienced managers may have high demand of talented employees in competitive labour markets which results in high excess wages to retain and attract skilled workers Based on the competitive wages mechanism, we conjecture that the effect of managerial foreign experience on labour costs are stronger in provinces with competitive local labour markets.

Following Kedia and Rajgopal (2009) and Kong et al. (2020), we measure the level of local labour market competition as the ratio of the number of firms in the same industry and province to the total number of firms in the province. We partition the sample into two subsamples based on the median value of labour market competition proxy. The result in Panel C of Table 6 indicates that our findings only hold in provinces with a high level of labour market competition, which is also in line with efficient wage theory.

Overall, our results are support the efficiency wage channel, which argues that foreign experienced managers pay excess wage to retain and attract high skilled employees to improve human capital for firms.

4.2.3 Employee protection

In addition to efficiency wage theory, foreign experienced managers may increase labour cost through improving employee protection. First, the country where a manager gains their foreign experience from may influence their labour investment decisions as foreign norms may affect executives' decision-making (Zhang et al., 2018). In countries with high employee protection, employee benefits are likely to be more important in terms of firm objectives than in countries with high investor protection (Atanassov and Kim, 2009). Thus, managers who gained experience from countries with high employee protection may have more pronounced effect on labour cost than those from countries with high investor protection. We use the index created by Atanassov and Kim (2009) to capture countries with high employee protection and high

investor protection. Specifically, *High employee protection* is a dummy variable which equals to one if the manager gained experience from countries with top5 labour protection index, otherwise zero, while *High investor protection* is a dummy variable which equals to one if the manager gained experience from countries with top5 investor protection index, otherwise zero.

The results are shown in Panel A of Table 7. The coefficients of *High employee protection* are positive and significant on labour costs measures at the 1% level, whereas the coefficients of *High investor protection* is insignificant on labour cost measures, suggesting that managers gaining their experience from countries with high labour protection have a more pronounced effect on increasing labour costs than those from countries with high investor protection.

[Insert Table 7]

We then consider the effect of provincial labour protection. Previous literature argues that high labour protection is associated with high labour costs (Cui et al., 2018). If foreign experienced managers have a positive effect on labour protection, the relationship between managerial foreign experience and labour costs should be more pronounced in regions with low rather than high labour protection, as high labour protection regions are already associated with high labour costs. Following Luo, Li and Chan (2020), we use the provincial minimum wage as a measure of provincial labour protection. The result is reported in Panel B of Table 7, the coefficients of *FE dummy* is only positive and significant in the subsample of low labour protection regions, suggesting that the level of provincial labour protection moderates the effect of managerial foreign experience on labour costs.

Overall, our results indicate that improving employee protection is another mechanism through which foreign experienced managers increase labour cost.

4.3 The effect of government intervention

We further test whether the casual relationship between managerial foreign experience and labour cost will alter due to ownership structure. The effect of managerial foreign experience may be less pronounced in SOEs as the government intervention may play a significant role in SOEs. We partition out sample between SOEs and private firms. Panel A of Table 8 indicates that the coefficients of *FE dummy* are positive and significant at the 1% and 5% level between SOEs and private firms subsample, respectively, suggesting that managerial foreign experience has positive and significant influence on labour cost in both SOEs and private firms. Although we do not find a significant different effect of managerial foreign experience on labour cost between SOEs and private firms, the motivation of foreign experienced managers increasing labour cost may be different between SOEs and private firms due to different goals. To investigate our conjecture, we further run regressions based on employees' responsibility, total factor of productivity and political connection, respectively.

4.3.1 Do foreign experienced managers improve employees' wellbeing?

Our findings indicate that foreign experienced managers are more likely to pay high wages to employees. However, the motivation to do so may differ between SOEs and private firms as SOEs mainly focus on the economy-based stability of social development, whereas private firms prefer value maximization (Jiang and Kim, 2015). Moreover, given foreign experienced managers have fewer political ties (Giannetti et al., 2015), they may seek future political promotions through enhancing employees' wages and wellbeing for social stability as it is one of the political goals for SOEs (Bai, Lu and Tao, 2006; Kong et al., 2020).

To design the test, we obtain the employee responsibility index (*Employee index*) from Hexun CSR scores[13]. The index incorporates employees' performance, employees' safety and the care

[13] We lose some observations as Hexun started reporting CSR score since 2010.

of employees (stock.hexun.com)[14]. The results are reported in Panel B of Table 8, the coefficients on *FE dummy* are positive and significant at the 10% level in full sample and SOEs subsample, whereas it is positive but insignificant in the subsample of private firms. Our results indicate that managers with foreign experience increase labour cost through friendly employee treatment, and this result mainly exists in SOEs. This is consistent with foreign experienced managers focusing on the additional political goals to enhance their future political promotion opportunities through enhancing CSR performance.

[Insert Table 8 here]

4.3.2 Does managerial foreign experience increase total factor productivity?

Dollar (2019) indicates that high skilled employees can improve total factor productivity. In addition, private firms have priority to maximum firm value (Jiang and Kim, 2015), whereas the aggregate total factor productivity may be low in SOEs, as firms with heavy government intervention are associated with high resource misallocation in China (Cull, Li, Sun and Xu, 2015; Wei et al., 2020). Thus, we expect managerial foreign experience to improve firms' total factor productivity, particularly in private firms.

Following Giannetti et al. (2015), we estimate total factor productivity (*TFP*) as the residuals from the regressions of the logarithm of firm sales on the logarithm of the number of employees, the logarithm of total assets, and the logarithm of the expenses for material and other inputs by each industry and year. According to Panel C of Table 8, *FE dummy* is statistically no different than zero in explaining *TFP* in our full sample and SOEs subsample. However, the coefficient of *FE dummy* is positive and significant at the 5% level in explaining *TFP* in the subsample of private firms. This is consistent with our conjecture that the presence of foreign experienced

[14] The details of Hexun CSR scores are available at http://stock.hexun.com/2013-09-10/157898839.html.

managers is positively associated with total factor productivity in private firms, although not in SOEs.

4.3.3 Do political connections matter?

Next, we investigate whether firms' political connections moderate the relationship between managerial foreign experience and labour costs. According to resource dependent theory (Pfeffer, 1972; Boyd, 1990; Hillman, 2005), firms with government connections are associated with easy access to key resources (e.g. bank loan), which may benefit from "soft budget constraints" (Kornai, 1979; Kornai, Maskin and Roland., 2003). Wei, Hu and Chen (2020) argue that depoliticized firms are associated with higher uncertainty and weaker operating performance than those with political connections due to less government support, and thereby experiencing higher risk of unemployment for employees and increasing precautionary cash holdings. Further, for politically unconnected firms, managers may unable to provide the nonpecuniary benefits (e.g. bank loans, satisfying workplaces, and employees treatment) as politically connected managers do (Li et al., 2008, Bloom, et al., 2011, Chen et al., 2016). Therefore, foreign experienced managers in politically unconnected firms may pay higher compensation to employees than those in politically connected firms to avoid high employee turnover costs, as well as, attracting or retaining high skilled employees to enhance firm performance (Wei et al., 2020). Thus, we expect our causal relationship between managerial foreign experience and labour cost is more pronounced in firms without politically connection as foreign experienced managers have less political ties (Giannetti et al. 2015).

Following Li et al. (2020), we only include private firms in our test as SOEs are expected to be politically connected in China. We define a firm as having political connections if either the chairman or CEO are politically connected. The result is reported in Panel A of Table 9, the coefficients on *FE dummy* are only positive and significant at the 5% level in firms without

political connections, indicating that firms without political connections are more likely to pay high wages to employees, than those with political connections.

In Panel B of Table 9, we also test whether foreign experienced managers have better access to bank loan between firms with and without political connections. Following Wei et al. (2020), we measure bank loan (*loan*) as the ratio of bank loan to debt. The coefficient of *FE dummy* is only positive and significant at 10% level in subsample of politically connected firms, whereas it is insignificant among politically unconnected firms. The results are consistent with resource independent theory, indicating that managers in politically connected firms have better access to bank loans, in comparison with those in politically unconnected firms. As a result, foreign experienced managers may have less incentives to improve firm performance through retaining and attracting high skilled employees with paying high wages in politically connected firms.

[Insert Table 9 here]

4.4 Additional tests

4.4.1 Do firm characteristics matter?

4.4.1.1 Excess cash holding

Previous literature indicates the importance of maintaining stable employment levels, especially for firms who heavily rely on high skilled employees due to the high replacement costs associated with firing, hiring and training new employees (Oi, 1962; Dolfin, 2006; Blatter, Muehlemann, and Schenker, 2012; Ghaly, Anh Dang and Stathopoulos, 2017). However, maintaining stable employment levels may weaken firms' ability to survive future cash flows shocks (Ghaly et al., 2017). Moreover, He (2018) argue that firms hold more cash to strengthen their financial ability for aggressive hiring strategies (e.g. raiding rivals), as well as retaining and attracting talented employees. Likewise, firms with foreign experienced managers may hold excess precautionary cash for increased probability of financial distress, stemmed from

high labour costs. Therefore, we expect the relationship between managerial foreign experience and labour cost is more pronounced in firms with high excess cash holdings than those with low cash holdings. A firm is defined as high excess cash holdings[15] if their excess cash holdings are above median value of our sample, and low excess cash holding otherwise.

According to Panel A of Table 10, the coefficients of *FE dummy* are only positive and significant at the 1% level in the subsample of firms with high excess cash holding, which is in line with our expectation. This result also supports the motivation of holding precautionary cash suggested by Keynes (1936).

4.4.1.2 Operating leverage

Cui et al. (2018) indicate that the increased labour cost has positive relationship with corporate operating leverage. Foreign experienced managers of firms with high level of operating leverage are less likely to increase labour costs in order to reduce financial distress and bankruptcy risk. Thus, we expect the operating leverage will moderate the relationship between managerial foreign experience and labour cost. Following Serfling (2014), we calculate operating leverage[16] as the percentage change in operating income for a percentage change in sales. The result is reported in Panel B of Table10, the coefficients of *FE dummy* are only positive and significant at the 1% level in the subsample of firms with low level of operating leverage, which is consistent with our conjecture.

[Insert Table 10 here]

[15] Following Xu, Chen, Xu and Chan (2016), we measure excess cash holding as the residuals of a regression between firms' actual cash holding and a set of variables, including firm size, net income, net working capital, the standard deviation of operating cash flow over total assets, the market to book ratio and financial leverage with firm and year fixed effects.

[16] We use quarterly non-missing data over a three-year window from year t to year t + 2. We then run the regression of operating income on sales, for each firm over the three-year window. $Operating\ income_i = \alpha + \beta Sales_i + \varepsilon_i$. The operating leverage is computed as $\beta_i(\frac{\overline{Sales_i}}{\overline{Operating\ income_i}})$, where $\overline{Sales_i}$ and $\overline{Operating\ income_i}$ indicates the average values of sales and operating income for firm i over three years, respectively.

4.4.3 Labour cost and shareholder value

So far, we provide evidence that foreign experienced managers increase labour cost through hiring more high skilled employees and improving labour protection. We further focus on economic implication of whether increased labour cost through managerial foreign experience affects shareholder value. We use Tobin's Q (*Tobin's Q*) as the measure of market valuation. According to Table 11, the interaction term between *FE dummy* and labour cost measures are positively related to *Tobin's Q* at the 10% and 5% level, respectively, suggesting that the increased labour cost through managerial foreign experience benefits shareholders by increasing corporate market valuation. This rules out the possibility that foreign experienced managers increase labour cost for their own interests such as empire-building activities[17].

[Insert Table 11]

4.4.4 Managerial foreign experience and labour cost stickiness

Given foreign experienced managers are associated with a high proportion of high skilled employees, employee turnover may be costly as it entails incurring labour adjustment costs such as the costs of firing and hiring staff (Anderson, Banker and Janakiraman, 2003). The labour stickiness costs are generated when the labour costs are more sensitive to an increase rather than a decrease in an event (Anderson et al., 2003). For example, the labour cost increases by 0.6% when the sales increases by 1% and it only decreases by 0.3% when the sales declines by 1%. As foreign experienced managers prefer to hire high skilled employees, it is unlikely for them to decrease wages or retrench high skilled employees when the sale is

[17] In an untabulated result, we further test whether the value-enhancing result is different between SOEs and private firms. We find that the interaction term between *FE dummy* and labor cost measures are only positive and significant to *Tobin's Q* in subsample of private firms. This result is consistent with our previous argument that foreign experienced managers have priority to complete political goals which enhance their future political promotions in SOEs.

decreased due to the 'talent war' and high labour adjustment costs. Thus, we expect an increase in labour cost stickiness with foreign experienced managers.

Following Anderson et al. (2003), Ben-Nasr et al. (2016), and Khedmati et al. (2020), we use the Equation 2 below for our empirical test:

$$Log\left(\frac{LabCost_t}{LabCost_{t-1}}\right) = \beta_0 + \beta_1 Log\left(\frac{Rev_t}{Rev_{t-1}}\right) + \beta_2 Decr_t * Log\left(\frac{Rev_t}{Rev_{t-1}}\right) + \beta_3 * Decr_t * Log\left(\frac{Rev_t}{Rev_{t-1}}\right) * FE\ dummy_t + \beta_4 Decr_t * Log\left(\frac{Rev_t}{Rev_{t-1}}\right) * Controls_t + \beta_5 FE\ dummy + \beta_6 Controls_t + Year\ FE + IndustryFE + Province\ FE + \varepsilon_t \quad (2)$$

where *LabCost* is the total labour cost; *Rev* is the total revenue; *Decr* is an indicator equal to one if the total revenue decreased from the previous year, otherwise zero; *FE dummy* is our key explanatory variable for managerial foreign experience; *Controls* include the following variables: asset intensity (*AI*) is defined as the ratio of total assets to total revenue; *Suc_Decr* is a dummy variable equal to one if the firm had a decrease in revenue in both the current and the previous years, otherwise zero; whether the firm reported a loss in the previous year using a dummy variable *(Loss)* equal to one if *ROA* is negative, otherwise zero; institutional ownership (insti); provincial GDP growth[18] (*GDP Growth*) and a set of fixed effects including industry, province[19] and year. The standard errors are clustered at the firm level. According to Table 12, β_1 is positive and β_2 is negative, indicating that labour costs are sticky (Ben-Nasr et al., 2016). The coefficient for $Decr_t * Log\left(\frac{Rev_t}{Rev_{t-1}}\right) * FE\ dummy_t$ is negative and significant

[18] Ben-Nasr et al. (2016) and Khedmati et al. (2020) control for labor union rather than GDP growth. Given the effect of labor union is not quite prevalent in Chinese listed firms (Cui et al., 2018), we control for local GDP growth as the local economy has significant influence on labor cost stickiness in China (Xu and Sim, 2017).
[19] We include province fixed effect as the labor sticky costs vary across regions in China (Xu and Sim, 2017).

at the 5% level, suggesting that managerial foreign experience increases labour cost stickiness, which is in line with our expectation.

Overall, our findings indicate that although foreign experienced managers increase labour costs through hiring high skilled employees, it is also associated with labour cost stickiness due to the 'talent war' and high labour adjustment costs.

[Insert Table 12 here]

4.5 Robustness test

For robustness we first an alternative measure of labour costs. Following Wei et al. (2020), we use the firm level aggregate employee pay to measure labour cost. The variable *aggr_cost* is measured as the natural logarithm of aggregate labour cost minus executives' compensation. According to Panel A of Table 13, the coefficient on *FE dummy* is positive and significant at the 5% level. Second, given our measure of managerial foreign experience is an aggregate measure including both chairman and CEO, we separate the *FE dummy* between chairman and CEO to test whether both of the positions have significant effect on labour cost. The variable *FE Chair* is a dummy variable equals one if the chairman of the firm has foreign experience, otherwise zero, while *FE CEO* is a dummy variable equals one if the CEO of the firm has foreign experience, otherwise zero. The results are reported in Panel B of Table 13, both of the *FE Chair* and *FE CEO* are positively and significantly related to our labour cost measures, indicating that both chairman and CEO have significant influence on corporate labour cost.

Overall, our results indicate that the relationship between managerial foreign experience and labour cost is robust using alternative measures of labour cost and managerial foreign experience.

[Insert Table 13]

5. Conclusion

Foreign experienced managers are important to firms' strategic decision-making. While prior research focuses on how foreign experienced executives improve firm performance, research on their impact on labour cost, a cost that is related to an important corporate stakeholder is unstudied. Studying labour investment is important as it can be a sunk cost for investors if managers hire employees to build their own empire. Our study of foreign experienced managers in China fills this gap.

We find that in China, firms with foreign experienced managers are associated with significantly higher labour costs. We argue that hiring a higher proportion of skilled employees and improving employee protection are potential channels through which foreign experienced managers increase labour costs. Further, the drivers increasing labour costs differ due to the different firm goals and incentives foreign experience managers facing in SOEs and private firms. In order to seek future political promotion, foreign experienced managers in SOEs are more likely to focus on political and social goals such as focusing on employee responsibility. However, foreign experienced managers association with higher labour cost in private firms should be driven by a desire to improve firm performance. Consistent with this, we find managerial foreign experience is significantly related to total factor productivity in private firms. Further, foreign experienced managers increase labour cost most in non-politically connected private firms.

We document that the relationship between managerial foreign experience and labour cost are more pronounced in firms with flexible financial policies (e.g. excess cash holdings and low operating cost). Moreover, the increased labour cost will increase firm value for shareholders, particularly in private firms. However, the increase of labour cost will generate labour stickiness cost. Overall, our findings document both the potential cost and benefit of appointing foreign experienced managers.

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Appendix

Appendix A Variable definition

Varaibles	Definition
Labour cost	Natural logarithm of the average wage expenses in a given year after excluding top executives' compensation in year t-1. Average wage expenses equal the amount of "paid for and on behalf of employees" reported in the cash flow statement plus changes in "wages payable" in the balance sheet, divided by the number of employees
Adj_labour	The ratio of *labour costs* over the median *labour costs* in the related industry during the year
aggr_cost	The natural logarithm of aggregate labour cost minus executives' compensation
Employee index	The employee responsibility index retrieved from Hexun CSR score
TFP	The residuals of regressions followed by Giannetti et al. (2015)
loan	The ratio of bank loan to debt
Tobin's Q	The sum of market value of equity and book value of total liability to the book value of total assets
FE dummy	A dummy variable that equals 1 if a firm has chairman, vice chairman or CEO with foreign experience, otherwise 0
FE Chair	A dummy variable equals 1 if the chairman of the firm has foreign experience, otherwise 0
FE CEO	A dummy variable equals 1 if the CEO of the firm has foreign experience, otherwise 0
christian	The number of colleges for each province that were built by Christian missionaries up to 1920
policy	A dummy variable that equals to 1 in years of the allowance policy implementation for each province, otherwise 0
post	A dummy variable that equals 1 if firm-year observations are after the CEO transition, otherwise 0
transition	A dummy variable equals 1 if a firm *i*'s CEO transition in year *t* is from a non-foreign experienced to foreign experienced CEO transition and 0 if a firm *i*'s transition in year *t* does not involve any foreign experienced CEOs
High_edu	The proportion of employees who hold a bachelor's degree or above
High_expert	The proportion of employees whose jobs are located at zone 4 or 5 using JobZone data from Occupational Information Network

High employee protection	A dummy variable that equals to 1 if the manager gained experience from countries with top5 labour protection index, otherwise 0
High investor protection	A dummy variable that equals to 1 if the manager gained experience from countries with top5 investor protection index, otherwise 0
quick_ratio$_{t-1}$	The sum of cash, short-term investment and receivables over current liabilities
leverage$_{t-1}$	Total liability over total assets
firm_size$_{t-1}$	The natural logarithm of total assets
roa$_{t-1}$	The net income over total assets
top1$_{t-1}$	The largest shareholding over the number of shares outstanding
labour_intensity$_{t-1}$	The number of employees (times 10^7) over total assets at the end of t-1
indep$_{t-1}$	The number of independent directors over the total number of directors on the board
bsize$_{t-1}$	The natural logarithm of total number of directors on the board
insti$_{t-1}$	The percentage of institutional ownership
tangible$_{t-1}$	The ratio of net fixed assets over total assets
Std_cfo$_{t-1}$	Standard deviation of the cash flow from operations in the previous five years (year t-5 to t-1)
Std_nethire$_{t-1}$	Standard deviation of the change in the number of employees in the previous five years (year t-5 to t-1)
otherinvestment$_{t}$	The absolute value of the residuals from the regression model of non-labour investments (i.e., (cash payments for fixed assets, intangible assets, and other long-term assets minus the cash receipts from selling these assets)/total assets) versus sales growth
div$_{t-1}$	A dummy variable that equals 1 if a firm pays dividend, otherwise 0
big4$_{t-1}$	A dummy variable that equals 1 if a firm hires the audit service of a top 4 auditor in China, otherwise 0
soe$_{t-1}$	A dummy variable that equals 1 if the ultimate controller of the firm is the state or state-owned enterprises, otherwise 0
duality$_{t-1}$	A dummy variable that equals 1 if a firm's chairman and CEO are the same person, otherwise 0
GDP growth$_{t-1}$	The growth of provincial GDP each year
inflation$_{t-1}$	The inflation rate in China each year
Money_supply growth$_{t-1}$	The growth of money supply from central bank each year

Tables

Table 1 summary statistics

This table report the summary statistics of our baseline model. All variables are defined in Appendix A.

	Obs	Mean	Std. Dev.	Min	Max
labour cost	16,026	11.319	0.637	9.570	13.434
Adj_labour cost	16,026	1.000	0.091	0.000	1.577
FE dummy	16,026	0.109	0.312	0.000	1.000
quick_ratio$_{t-1}$	16,026	1.129	1.532	0.046	9.703
leverage$_{t-1}$	16,026	0.481	0.224	0.059	1.251
firm_size$_{t-1}$	16,026	21.907	1.278	18.950	25.605
roa$_{t-1}$	16,026	0.033	0.064	-0.295	0.200
top1$_{t-1}$	16,026	0.354	0.152	0.088	0.750
labour_intensity$_{t-1}$	16,026	10.702	10.005	0.220	56.000
indep$_{t-1}$	16,026	0.369	0.052	0.250	0.571
bsize$_{t-1}$	16,026	2.168	0.201	1.609	2.708
insti$_{t-1}$	16,026	0.068	0.081	0.000	0.372
tangible$_{t-1}$	16,026	0.249	0.178	0.002	0.757
Std_cfo$_{t-1}$	16,026	0.034	0.068	0.001	0.437
Std_nethire$_{t-1}$	16,026	0.575	1.828	0.010	14.477
otherinvestment$_{t}$	16,026	0.038	0.031	0.001	0.186
div$_{t-1}$	16,026	0.622	0.485	0.000	1.000
big4$_{t-1}$	16,026	0.059	0.236	0.000	1.000
soe$_{t-1}$	16,026	0.500	0.500	0.000	1.000
duality$_{t-1}$	16,026	0.211	0.408	0.000	1.000
GDP_Growth$_{t-1}$	16,026	0.123	0.059	-0.007	0.323
inflation$_{t-1}$	16,026	0.028	1.836	-0.073	0.059
Money_supply growth$_{t-1}$	16,026	0.160	4.407	0.110	0.276

Table 2 Baseline results

Table 2 reports the results of OLS regression analysis and PSM analysis, consisting of 16,026 and 3,490 firm-year observations, respectively. The dependent variables are *labour cost* and *Adj labour*, the measurements of labour cost, and the test variable is *FE dummy*. Fixed effects are controlled by industry and year and standard errors are clustered by firm across two models. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

	Baseline		**PSM**	
	labour cost	***Adj_labour***	***labour cost***	***Adj_labour***
FE dummy	0.112***	0.010***	0.141***	0.013***
	(3.842)	(3.936)	(3.948)	(4.015)
quick_ratio$_{t-1}$	0.007	0.001	0.013	0.001
	(1.000)	(1.041)	(1.426)	(1.368)
leverage$_{t-1}$	-0.250**	-0.023***	-0.248*	-0.024**
	(-2.553)	(-2.597)	(-1.830)	(-1.978)
firm_size$_{t-1}$	0.063***	0.006***	0.060**	0.005**
	(3.216)	(3.250)	(2.272)	(2.236)
roa$_{t-1}$	0.739**	0.062**	0.106	0.005
	(2.483)	(2.328)	(0.283)	(0.159)
top1$_{t-1}$	0.149*	0.013*	0.049	0.004
	(1.743)	(1.690)	(0.357)	(0.347)
labor_intensity$_{t-1}$	-0.022***	-0.002***	-0.018***	-0.002***
	(-15.844)	(-15.559)	(-7.626)	(-7.503)
indep$_{t-1}$	-0.203	-0.022	0.156	0.007
	(-0.822)	(-1.012)	(0.374)	(0.193)
bsize$_{t-1}$	-0.057	-0.006	-0.003	-0.002
	(-0.768)	(-0.907)	(-0.025)	(-0.241)
insti$_{t-1}$	0.286**	0.025**	0.374*	0.034*
	(2.224)	(2.184)	(1.754)	(1.810)
tangible$_{t-1}$	-0.283***	-0.024***	-0.253	-0.022
	(-3.666)	(-3.506)	(-1.498)	(-1.471)
Std_cfo$_{t-1}$	-0.020	-0.006	-0.033	-0.005
	(-0.090)	(-0.277)	(-0.090)	(-0.161)
Std_nethire$_{t-1}$	0.006	0.000	0.012*	0.001
	(1.181)	(1.087)	(1.710)	(1.583)
otherinvestment$_{t}$	-1.039**	-0.101**	0.261	0.016
	(-2.340)	(-2.515)	(0.442)	(0.314)
div$_{t-1}$	0.070***	0.006***	0.111**	0.010**
	(2.969)	(2.956)	(2.350)	(2.315)
big4$_{t-1}$	0.117*	0.011*	0.198**	0.018**
	(1.686)	(1.786)	(2.240)	(2.325)
soe$_{t-1}$	0.176***	0.016***	0.108**	0.010**
	(6.236)	(6.302)	(2.133)	(2.229)
duality$_{t-1}$	0.011	0.001	-0.000	-0.000
	(0.418)	(0.509)	(-0.007)	(-0.032)
GDP_Growth$_{t-1}$	-1.131***	-0.103***	-1.776**	-0.167**
	(-3.067)	(-3.111)	(-2.085)	(-2.229)
inflation$_{t-1}$	-0.069***	0.005***	-0.018	0.010***
	(-4.302)	(3.176)	(-0.503)	(2.977)

Money_supply growth$_{t-1}$	-0.028***	0.001***	-0.017**	0.003***
	(-7.225)	(4.150)	(-2.427)	(4.181)
Constant	10.966***	0.893***	10.560***	0.863***
	(24.166)	(21.931)	(16.476)	(15.227)
Observations	16,026	16,026	3,350	3,350
Adjusted R-squared	0.127	0.083	0.113	0.083
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes

Table 3 Instrumental variable test

Table 3 reports the results of 2SLS instrumental variable analysis, consisting of 16,026 firm-year observations. The dependent variables are *labour cost* and *Adj_labour*, the measurements labour costs, and the test variable is *FE dummy*. The first instrument, *christian*, is defined as the number of colleges for each province that were built by Christian missionaries up to 1920. The second instrument, *policy*, is a dummy variable which is equal to one in years of the allowance policy implementation for each province, and zero otherwise. Fixed effects are controlled by industry and year and standard errors are clustered by firm across three models. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

	First step	***labour cost***	***Adj_labour cost***
FE dummy		4.507***	0.394***
		(2.947)	(2.934)
christian	0.019*		
	(1.787)		
policy	0.015***		
	(2.978)		
quick_ratio$_{t-1}$	0.006	-0.019	-0.002
	(1.540)	(-0.966)	(-0.939)
leverage$_{t-1}$	-0.029	-0.107	-0.010
	(-1.112)	(-0.686)	(-0.746)
firm_size$_{t-1}$	0.004	0.047	0.004
	(0.592)	(1.415)	(1.471)
roa$_{t-1}$	0.014	0.664*	0.056
	(0.239)	(1.713)	(1.620)
top1$_{t-1}$	-0.007	0.158	0.014
	(-0.213)	(0.899)	(0.886)
labor_intensity$_{t-1}$	0.000	-0.022***	-0.002***
	(0.289)	(-8.780)	(-8.730)
indep$_{t-1}$	-0.030	-0.018	-0.006
	(-0.325)	(-0.039)	(-0.153)
bsize$_{t-1}$	0.024	-0.149	-0.014
	(0.866)	(-1.024)	(-1.100)
insti$_{t-1}$	0.060	0.056	0.005
	(1.056)	(0.194)	(0.194)
tangible$_{t-1}$	0.061**	-0.507***	-0.043***
	(2.045)	(-2.984)	(-2.920)
Std_cfo$_{t-1}$	0.145	-0.705	-0.065
	(1.248)	(-1.176)	(-1.240)
Std_nethire$_{t-1}$	-0.003	0.018	0.002
	(-1.410)	(1.618)	(1.562)
otherinvestment$_{t}$	-0.054	-0.761	-0.077
	(-0.514)	(-1.203)	(-1.369)
div$_{t-1}$	0.006	0.031	0.003
	(0.754)	(0.695)	(0.714)
big4$_{t-1}$	0.081***	-0.267	-0.023
	(2.962)	(-1.444)	(-1.387)
soe$_{t-1}$	-0.070***	0.489***	0.043***
	(-5.668)	(3.922)	(3.949)
duality$_{t-1}$	-0.021*	0.095	0.009

	(-1.716)	(1.444)	(1.479)
GDP_Growth$_{t-1}$	0.017	-0.676	-0.063
	(0.134)	(-1.057)	(-1.120)
inflation$_{t-1}$	-0.014**	-0.069*	0.011***
	(-2.212)	(-1.700)	(3.216)
Money_supply growth$_{t-1}$	0.001	0.002	0.001
	(0.284)	(0.184)	(0.699)
Constant	0.000	10.163***	0.867***
	(0.002)	(13.313)	(12.888)
Observations	16,026	16,026	16,026
Adjusted R-squared	0.037	-	-
Industry	Yes	Yes	Yes
Year	Yes	Yes	Yes
Cragg-Donald Wald F statistic	22.995***	-	-
Hansen J-statistic *p* value	0.34	-	-

Table 4 Difference-in-differences test

Table 4 reports the results of the DID analysis, consisting of 888 firm-year observations. The dependent variables are *labour cost* and *Adj_labour*, and the test variable is $post_t * transition_i$. Fixed effects are controlled by industry and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

	labour cost	***Adj_labour cost***
***post*transition**	0.166*	0.016*
	(1.686)	(1.890)
post	-0.007	-0.001
	(-0.117)	(-0.164)
transition	0.100	0.009
	(0.720)	(0.743)
quick_ratio$_{t-1}$	0.007	0.000
	(0.240)	(0.013)
leverage$_{t-1}$	0.037	-0.002
	(0.171)	(-0.121)
firm_size$_{t-1}$	0.037	0.003
	(0.925)	(0.791)
roa$_{t-1}$	1.677***	0.136***
	(2.937)	(2.707)
top1$_{t-1}$	0.195	0.021
	(0.934)	(1.139)
labour_intensity$_{t-1}$	-0.021***	-0.002***
	(-6.349)	(-6.354)
indep$_{t-1}$	0.683	0.062
	(1.340)	(1.366)
bsize$_{t-1}$	0.172	0.019
	(1.094)	(1.362)
insti$_{t-1}$	0.172	0.020
	(0.648)	(0.839)
tangible$_{t-1}$	-0.235	-0.021
	(-1.274)	(-1.282)
Std_cfo$_{t-1}$	-0.611	-0.060
	(-0.694)	(-0.772)
Std_nethire$_{t-1}$	-0.018	-0.002
	(-1.107)	(-1.133)
otherinvestment$_t$	0.197	0.011
	(0.286)	(0.187)
div$_{t-1}$	0.084	0.005
	(1.611)	(1.018)
big4$_{t-1}$	0.506**	0.045**
	(2.360)	(2.360)
soe$_{t-1}$	0.166**	0.015**
	(2.496)	(2.588)
duality$_{t-1}$	0.075	0.007
	(1.245)	(1.238)
GDP_Growth$_{t-1}$	-2.268***	-0.203***
	(-2.606)	(-2.639)
inflation$_{t-1}$	0.023	0.013***

	(0.562)	(3.436)
Money_supply growth$_{t-1}$	-0.015	0.003**
	(-1.346)	(2.549)
Constant	10.262***	0.837***
	(11.590)	(10.357)
Observations	888	888
Adjusted R-squared	0.319	0.274
Industry	Yes	Yes
Year	Yes	Yes

Table 5 Other fixed effects

Table 5 reports the regression results by firm fixed effect, and CEO fixed effects with 2SLS analysis, consisting of 16,026 firm-year observations. The dependent variables include *labour cost, Adj_labour, Resid_labour*, and *Resid_Adjlabour* and the test variable is *FE dummy*. Fixed effects are selected among firm, CEO, industry and year across Panels A and B. The standard errors are clustered by firm in Panel A and Panel B. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

Panel A

	labour cost	***Adj_labour***
FE dummy	0.032*	0.003*
	(1.818)	(1.899)
quick_ratio$_{t-1}$	-0.013***	-0.001***
	(-3.414)	(-3.752)
leverage$_{t-1}$	-0.087***	-0.006
	(-2.730)	(-1.357)
firm_size$_{t-1}$	0.089***	0.007***
	(10.874)	(4.447)
roa$_{t-1}$	0.280***	0.022***
	(4.286)	(2.928)
top1$_{t-1}$	0.145***	0.016*
	(2.689)	(2.061)
labor_intensity$_{t-1}$	-0.010***	-0.001***
	(-17.785)	(-11.234)
indep$_{t-1}$	0.062	0.000
	(0.621)	(0.023)
bsize$_{t-1}$	0.061*	0.003
	(1.764)	(0.654)
insti$_{t-1}$	0.238***	0.020***
	(4.473)	(3.689)
tangible$_{t-1}$	-0.090**	-0.008*
	(-2.302)	(-1.851)
Std_cfo$_{t-1}$	-0.006	-0.005
	(-0.055)	(-0.457)
Std_nethire$_{t-1}$	-0.045***	-0.004***
	(-19.094)	(-5.896)
otherinvestment$_{t}$	0.016	-0.005
	(0.149)	(-0.582)
div$_{t-1}$	-0.006	-0.001
	(-0.693)	(-0.727)
big4$_{t-1}$	-0.010	-0.000
	(-0.300)	(-0.020)
soe$_{t-1}$	-0.031	-0.005
	(-1.402)	(-1.402)
duality$_{t-1}$	-0.022*	-0.002
	(-1.871)	(-1.621)
GDP_Growth$_{t-1}$	-0.043	-0.009
	(-0.335)	(-0.848)
inflation$_{t-1}$	-0.155***	0.002***
	(-18.641)	(2.966)
Money_supply growth$_{t-1}$	-0.003	0.001***

	(-0.858)	(3.791)
Constant	9.850***	0.845***
	(48.563)	(20.128)
Observations	16,026	16,026
Adjusted R-squared	0.169	0.070
Firm	Yes	Yes
Year	Yes	Yes

Panel B

	First stage	Second stage	First stage	Second stage
	labour cost	***Resid_labour***	***Adj_labour cost***	***Resid_Adjlabour***
FE dummy		0.080***		0.010***
		(3.569)		(3.896)
quick_ratio$_{t-1}$	-0.019***	0.029***	-0.002**	0.003***
	(-3.640)	(5.523)	(-2.272)	(3.998)
leverage$_{t-1}$	-0.151**	0.094*	-0.037**	0.014*
	(-2.113)	(1.833)	(-2.116)	(1.650)
firm_size$_{t-1}$	0.087***	-0.062***	0.008*	-0.002
	(4.194)	(-5.372)	(1.697)	(-1.193)
roa$_{t-1}$	0.074	0.622***	-0.014	0.076***
	(0.705)	(5.077)	(-0.409)	(2.838)
top1$_{t-1}$	0.227**	0.009	0.051***	-0.038***
	(2.437)	(0.166)	(2.722)	(-4.960)
labor_intensity$_{t-1}$	-0.007***	-0.015***	-0.001***	-0.001***
	(-6.771)	(-15.920)	(-3.342)	(-8.891)
indep$_{t-1}$	0.152	-0.082	0.001	-0.023
	(1.165)	(-0.530)	(0.038)	(-1.050)
bsize$_{t-1}$	0.059	-0.045	-0.003	-0.003
	(1.202)	(-0.938)	(-0.406)	(-0.380)
insti$_{t-1}$	0.182***	0.065	0.026***	-0.001
	(2.679)	(0.718)	(2.795)	(-0.073)
tangible$_{t-1}$	0.045	-0.336***	0.009	-0.033***
	(0.650)	(-6.195)	(0.550)	(-4.822)
Std_cfo$_{t-1}$	-0.109	0.083	-0.033	0.028
	(-0.809)	(0.422)	(-1.491)	(1.380)
Std_nethire$_{t-1}$	-0.049***	0.053***	-0.006***	0.006***
	(-5.419)	(13.263)	(-4.128)	(13.704)
otherinvestment$_{t}$	0.065	-0.348*	-0.036	-0.066
	(0.488)	(-1.714)	(-0.987)	(-1.624)
div$_{t-1}$	-0.006	0.059***	-0.002	0.008***
	(-0.573)	(3.866)	(-0.846)	(3.854)
big4$_{t-1}$	0.043	0.101**	-0.002	0.013**
	(0.843)	(2.332)	(-0.186)	(2.158)
soe$_{t-1}$	0.010	0.166***	0.010	0.006**
	(0.248)	(7.965)	(1.326)	(2.372)
duality$_{t-1}$	-0.010	0.022	-0.004	0.005**
	(-0.621)	(1.233)	(-1.124)	(2.347)
GDP_Growth$_{t-1}$	0.244	-1.084***	0.043	-0.146***
	(1.543)	(-4.470)	(1.327)	(-4.413)
inflation$_{t-1}$	-0.105***	0.041***	-0.001	0.005***
	(-12.850)	(4.621)	(-0.310)	(3.561)

Money_supply growth$_{t-1}$	-0.035***	0.009***	0.000	0.001***
	(-14.026)	(4.013)	(0.562)	(3.377)
Constant	10.489***	1.353***	0.881***	0.055
	(22.714)	(5.050)	(8.820)	(1.345)
Observations	16,026	16,026	16,026	16,026
Adjusted R-squared	0.232	0.137	0.018	0.047
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
CEO fixed	Yes	No	Yes	No

Table 6 Efficient wage channel

Table 6 reports the results of channel tests. Panel A presents the regression results for collecting fitted values and residuals between *FE dummy* and the potential channel's measure, *High_edu* and *High_expert*. Panel B presents the channel test results between the fitted values from Panel A and the labour cost measures. Panel C reports the results of labour market competition. Fixed effects are controlled by industry and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

Panel A High skilled employees		
	High_edu	***High_expert***
FE dummy	0.026***	0.018**
	(2.401)	(1.978)
Constant	0.033***	0.281***
	(10.684)	(12.045)
Observations	15,024	15,312
Adjusted R-squared	0.194	0.162
Industry	Yes	Yes
Year	Yes	Yes

Panel B High skilled employees				
	labour cost	***Adj_labour***	***labour cost***	***Adj_labour***
fv_High edu	3.945***	0.355***		
	(3.762)	(3.841)		
rsd_High edu	1.104***	0.096***		
	(17.873)	(17.383)		
fv_High expert			5.905***	0.538***
			(3.944)	(4.058)
rsd_High expert			0.967***	0.084***
			(13.628)	(13.322)
Constant	9.996***	0.806***	9.637***	0.772***
	(21.412)	(19.391)	(18.837)	(16.945)
Observations	15,024	15,024	15,312	15,312
Adjusted R-squared	0.186	0.141	0.176	0.128
Controls	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes

Panel C Labour market competition				
	Above median		**Below Median**	
	labour cost	***Adj_labour cost***	***labour cost***	***Adj_labour cost***
FE dummy	0.073**	0.007**	0.047	0.005
	(2.203)	(2.231)	(1.026)	(1.125)
Constant	9.948***	0.950***	8.127***	0.789***
	(14.791)	(15.551)	(13.384)	(14.545)
Observations	7,814	7,814	8,212	8,212
Adjusted R-squared	0.143	0.076	0.138	0.101
Controls	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Province	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes

Table 7 Employee protection

Table 7 reports the results of employee protection analysis. The dependent variables are *labour cost* and *Adj labour*, the measurements of labour cost, and the test variables are *High employee protection*, *High investor protection, and FE dummy* across Panel A and B, respectively. Fixed effects are controlled by industry, province and year across models and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

Panel A Employee protection index (country level)		
	labour cost	***Adj_labour cost***
High Employee protection	0.212***	0.028***
	(3.656)	(3.112)
High Investor protection	-0.022	0.003
	(-0.651)	(0.820)
Constant	11.327***	0.900***
	(42.652)	(21.693)
Observations	16,026	16,026
Adjusted R-squared	0.304	0.085
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes

Panel B Provincial minimum wage				
	Above median		**Below median**	
	labour cost	***Adj_labour cost***	***labour cost***	***Adj_labour cost***
FE dummy	0.034	0.003	0.130***	0.012***
	(0.951)	(1.094)	(2.843)	(2.866)
Constant	8.653***	0.838***	9.273***	0.886***
	(12.631)	(13.705)	(12.403)	(13.045)
Observations	7,912	7,912	7,041	7,041
Adjusted R-squared	0.108	0.120	0.106	0.081
Controls	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Province	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes

Table 8 The effect of government intervention

Table 8 reports the results of the effect of government intervention. Panel A reports the result of the effect of managerial foreign experience on labour cost between SOEs and private firms; Panel B reports the results of managerial foreign experience on employee responsibility; Panel C reports the results of managerial foreign experience on total factor productivity. Fixed effects are controlled by industry and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

Panel A SOEs versus private firms				
	SOEs		**Private firms**	
	labour cost	***Adj_labour***	***labour cost***	***Adj_labour***
FE dummy	0.191***	0.017***	0.079**	0.007***
	(3.212)	(3.211)	(2.483)	(2.613)
Constant	12.210***	1.005***	10.119***	0.822***
	(17.454)	(15.903)	(16.931)	(15.587)
Observations	7,965	7,965	8,061	8,061
Adjusted R-squared	0.137	0.092	0.127	0.071
Controls	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Panel B Employee responsibility				
	Full sample	**SOEs**	**Private firms**	
	Employee index	***Employee index***	***Employee index***	
FE dummy	0.320*	0.676*	0.164	
	(1.907)	(1.923)	(0.969)	
Constant	-17.693***	-18.747***	-14.808***	
	(-10.602)	(-7.648)	(-6.423)	
Observations	13,540	6,355	7,185	
Adjusted R-squared	0.192	0.201	0.131	
Controls	Yes	Yes	Yes	
Industry	Yes	Yes	Yes	
Year	Yes	Yes	Yes	
Panel C Total factor productivity				
	Full sample	**SOEs**	**Private firms**	
	TFP	***TFP***	***TFP***	
FE dummy	0.013	0.007	0.015**	
	(1.351)	(0.554)	(2.263)	
Constant	-0.353***	-0.491***	-0.292**	
	(-3.782)	(-4.007)	(-2.233)	
Observations	15,988	7,957	8,031	
Adjusted R-squared	0.256	0.313	0.222	
Controls	Yes	Yes	Yes	
Industry	Yes	Yes	Yes	
Year	Yes	Yes	Yes	

Table 9 The effect of political connection

Table 9 reports the results of the effect of political connection. Panel A reports the result of the effect of managerial foreign experience on labour cost between politically connected firms and politically unconnected firms; Panel B reports the results of managerial foreign experience on bank loans between politically connected firms and politically unconnected firms. Fixed effects are controlled by industry and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

Panel A				
	With		Without	
	labour cost	***Adj_labour***	***labour cost***	***Adj_labour***
FE dummy	0.073	0.007	0.084**	0.008**
	(1.252)	(1.264)	(2.134)	(2.243)
Constant	10.369***	0.840***	9.838***	0.796***
	(8.095)	(7.532)	(14.555)	(13.319)
Observations	2,189	2,189	5,872	5,872
Adjusted R-squared	0.138	0.087	0.123	0.065
Controls	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes

Panel B		
	With	Without
	loan	***loan***
FE dummy	0.134*	-0.008
	(1.650)	(-0.228)
Constant	1.987**	0.896***
	(2.189)	(2.615)
Observations	2,189	5,861
Adjusted R-squared	0.061	0.026
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes

Table 10 Firm characteristics

Table 10 reports the results of firm characteristics, and managerial compensation. The dependent variables are *labour cost* and *Adj labour*, the measurements of labour cost, and the test variable is *FE dummy*. Panel A reports the results based on the median value of excess cash holdings; Panel B reports the results based on the median level of operating leverage; Panel C reports the results based on whether executives receive equity compensation. Fixed effects are controlled by industry and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

Panel A Cash holdings				
	High		Low	
	labour cost	***Adj_labour***	***labour cost***	***Adj_labour***
FE dummy	0.079***	0.007***	0.052	0.005
	(2.745)	(2.928)	(1.184)	(1.198)
Constant	9.236***	0.884***	9.006***	0.866***
	(19.746)	(20.942)	(13.091)	(13.991)
Observations	7,978	7,978	7,978	7,978
Adjusted R-squared	0.169	0.114	0.124	0.087
Controls	Yes	Yes	Yes	Yes
industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Panel B Operating leverage				
	High		Low	
	labour cost	***Adj_labour***	***labour cost***	***Adj_labour***
FE dummy	0.050	0.005	0.082**	0.008**
	(1.501)	(1.563)	(2.110)	(2.194)
Constant	9.244***	0.890***	8.922***	0.855***
	(19.373)	(20.830)	(12.746)	(13.565)
Observations	8,013	8,013	8,013	8,012
Adjusted R-squared	0.149	0.201	0.099	0.088
Controls	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes

Table 11 Labour cost and shareholder value

Table 11 reports the results of the increased labour cost through managerial foreign experience and shareholder value. The dependent variable is *Tobin's Q*, and the test variables are the interaction between *FE dummy* labour costs measurements. Fixed effects are controlled by industry, province and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

	Tobin's Q	***Tobin's Q***
FE dummy* labour cost	0.145**	
	(1.973)	
labour cost	0.010	
	(0.381)	
FE dummy*Adj_labour cost		1.391*
		(1.671)
Adj_labour cost		0.063
		(0.220)
FE dummy	-1.442*	-1.190
	(-1.738)	(-1.424)
Constant	34.866***	34.926***
	(28.269)	(28.325)
Observations	16,025	16,025
Adjusted R-squared	0.402	0.402
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes

Table 12 Managerial foreign experience and labour costs stickiness

Table 12 reports the results of labour sticky costs, consisting of 15,823 firm-year observations. Fixed effects are controlled by industry, province and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

	Labour cost stickiness
$Log(Rev_t/Rev_{t-1})$	1.141***
	(18.590)
$Decr*Log(Rev_t/Rev_{t-1})$	-0.675***
	(-5.848)
$Decr*Log(Rev_t/Rev_{t-1})*FE\ dummy_t$	-0.238**
	(-2.677)
$Decr*Log(Rev_t/Rev_{t-1})*AI_t$	-0.006
	(-0.066)
$Decr*Log(Rev_t/Rev_{t-1})*SucDecr_t$	-0.035
	(-0.498)
$Decr*Log(Rev_t/Rev_{t-1})*Loss_{t-1}$	-0.054
	(-0.621)
$Decr*Log(Rev_t/Rev_{t-1})*insti_t$	0.809
	(1.363)
$Decr*Log(Rev_t/Rev_{t-1})*GDPGrowth_t$	-0.903*
	(-1.812)
$FE\ dummy_t$	0.001
	(0.119)
AI_t	-0.021***
	(-2.736)
$SucDecr_t$	-0.070***
	(-11.005)
$Loss_{t-1}$	-0.093***
	(-8.810)
$insti_t$	0.186***
	(7.613)
$GDPGrowth_t$	0.171**
	(2.131)
Constant	0.091***
	(4.065)
Observations	15,823
Adjusted R-squared	0.397
Industry	Yes
Province	Yes
Year	Yes

Table 13 Robustness checks

Table 13 reports the results of robustness checks. Panel A reports the result using aggregate labour cost, while Panel B reports the results of the effect of both foreign experienced chairman and CEO on corporate labour cost, respectively. Fixed effects are controlled by industry, and year and standard errors are clustered by firm. The variable descriptions are reported in Appendix A. The superscripts *, ** and *** demonstrate significance at the 90%, 95%, and 99% confidence levels, respectively.

Panel A Aggregated labour cost				
	Aggr_cost			
FE dummy	0.087***			
	(3.465)			
Constant	-0.831***			
	(-2.404)			
Observations	16,026			
Adjusted R-squared	0.789			
Controls	Yes			
Industry	Yes			
Year	Yes			
Panel B Splits between foreign experienced chairmen and CEOs				
	labour cost	***Adj_labour***	***labour cost***	***Adj_labour***
FE Chair	0.109***	0.010***		
	(3.471)	(3.567)		
FE CEO			0.100***	0.007**
			(2.816)	(2.543)
Constant	11.021***	0.898***	10.542***	0.884***
	(24.416)	(22.161)	(22.856)	(38.469)
Observations	16,026	16,026	16,026	16,026
Adjusted R-squared	0.127	0.083	0.122	0.204
Controls	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes