Chinese Import Competition and Labor Compensation: Evidence from India

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Abstract

This paper examines how increased Chinese import competition affects the composition and distribution of labor compensation within Indian manufacturing firms. Leveraging firm-level panel data and exploiting variation in industry-level import penetration, we document several important findings. First, greater import competition leads to an increase in overall labor compensation as a share of total firm expenditure, driven primarily by increased salaries for managerial and skilled employees. In contrast, firms do not adjust statutory components such as provident fund contributions but instead reduce discretionary, non-statutory benefits like welfare expenditures. These compositional shifts are more pronounced among larger firms, multi-product firms, and firms located in states with pro-worker labor regulations. Additionally, large domestic and exporting firms exhibit stronger increases in salary payments compared to small domestic firms, highlighting heterogeneous firm-level responses to trade shocks.

JEL Classification: C26, F1, F14, F16, J3, J31, J32, J33, M12

Keywords: Chinese import competition, compensation of workers, salary of workers, welfare of workers, provident fund contributions, managerial remuneration.

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1 Introduction

China's export performance expanded dramatically following its accession to the World Trade Organization (WTO) in December 2001. Between 1990 and 2007, Chinese exports rose from US$62 billion to US$1.2 trillion, growing by approximately 25 times in real terms between 1990 and 2005 (Feenstra and Wei, 2010), with an average annual growth rate of 20 percent (Iacovone et al., 2013). This surge was overwhelmingly concentrated in manufacturing goods (World Bank, 2007).

In case of India, there has also been a notable upward trend in the import of Chinese manufacturing goods as a share of total imports during the period 1992 to 2007. Between 1992 and 2001, this share remained relatively stable at around 5.5 percent, but it rose sharply to approximately 16 percent in the years following China's accession to the WTO (2002-2007) (Chakraborty and Henry, 2019). Thus, the post-WTO period marks a significant intensification of India's exposure to Chinese import competition.[1]

The global scale of China's export expansion has triggered significant economic shocks across countries, spurring a rich body of empirical literature investigating the consequences of Chinese import competition on a range of economic outcomes at the firm and industry levels. However, the bulk of this literature has focused on developed countries (Bernard et al., 2006; Liu, 2010; Autor et al., 2013; Mion and Zhu, 2013; Balsvik et al., 2015; Pierce and Schott, 2016; Malgouyres, 2017; Adem, 2024), with relatively fewer studies examining the effects on developing countries (Álvarez and Claro, 2009; Iacovone et al., 2013; Costa et al., 2016; Chakraborty and Henry, 2019; Chakraborty et al., 2024a,b,c; Medina, 2024; Heckl, 2024).

Studies such as Autor et al. (2013) and Autor et al. (2016) investigate the impact of Chinese import competition on U.S. local labor markets. They show that with greater import competition from China, manufacturing industries in the US face higher unemployment and reduced wages. Similarly, Malgouyres (2017) shows that with rising Chinese imports, employ-

[1]Regarding India's exports to China, while they did rise steadily, the rate of growth has been considerably lower compared to imports; exports have increased at roughly one-third the pace of imports (EXIM, 2016).

ment and labor income are negatively affected in both manufacturing and non-manufacturing sectors in France.

Building on this literature, the present study explores the causal impact of Chinese import competition on employee compensation and it's various components in Indian manufacturing firms. Specifically, these components are firm-level spending on worker salaries, welfare, and provident fund contributions. These outcomes allow us to explore not only the response of firms to trade shocks by adjusting the overall compensation to workers, but also how firms adjust the structure and composition of worker compensation. Our identification strategy leverages the sharp increase in import competition from China, following its accession to the World Trade Organization (WTO) in 2001 as a quasi-natural experiment[2].

To address potential endogeneity concerns, we employ an instrumental variable (IV) strategy that instruments Chinese imports to India using Chinese imports to a set of ten Latin American countries, following Chakraborty et al. (2024c). We use firm-level data from the PROWESS database and trade data from the UN-COMTRADE database. Our outcome variables are at the firm level and our explanatory variable, Chinese import penetration, is constructed at 4-digit National Industrial Classification (NIC) 2004. The analysis is conducted for the period 1995-2007, capturing a key phase of China's global trade expansion and its implications on compensation of workers in India's formal manufacturing sector.

Our analysis yields several important findings. First, we find that increased Chinese import competition leads to a rise in overall labor compensation as a share of total firm expenditure. Specifically, a 1 percentage point increase in Chinese import penetration is associated with a 0.0069 percentage point (7.6 percent) increase in labor compensation as a share of total firm expenditure. This rise is primarily driven by higher salaries. In particular, a 1 percentage point increase in import penetration results in a 0.0043 percentage point (0.5 percent) increase in salaries as a share total worker compensation.

In contrast, import penetration does not significantly affect the statutory component of labor compensation, as captured by employer contributions to the provident fund. On the other

[2]Lu and Yu (2015), Bloom et al. (2016a), and Chakraborty and Henry (2019) employ similar approaches using China's WTO accession as a quasi-experimental setting.

hand, we observe a significant negative effect on non-statutory component of compensation-welfare expenditures. A 1 percentage point increase in Chinese import competition results in a 0.004 percentage point (5.68 percent) reduction in welfare expenditures as a share of total worker compensation.

Further, we examine the impact of Chinese import penetration on managerial remuneration as a share of total employee compensation. Our results indicate a positive and statistically significant relationship between import penetration and this measure, suggesting that increased competitive pressure from Chinese imports prompts firms to allocate a larger share of compensation to workers with managerial skills. This reallocation indicates that, in the face of rising competition, firms may seek to incentivize skilled managerial personnel by enhancing their relative compensation. These results are consistent with Cuñat and Guadalupe (2009), who find that higher foreign competition doesn't necessarily reduce executive pay. On the contrary, as firms connect executive compensation with performance, they observe rising remuneration for the highest paid executives.

Second, we uncover substantial heterogeneity in the effects of Chinese import penetration across firm characteristics. Larger firms and multi-product firms show stronger increases in salary expenditures in response to import competition. Furthermore, we find that managerial remuneration increases in larger and multi-product firms, reinforcing the idea that such firms invest more in skilled labor to retain talent and maintain managerial efficiency. This fits into the existing trade literature which shows that trade openness can increase wage inequality (Cuñat and Guadalupe, 2009; Helpman et al., 2010).

We also find that larger and multi-product firms experience greater reductions in welfare expenditures as a share of total employee compensation in response to Chinese import penetration. Further, we find that firms operating in pro-worker or neutral labor law states show stronger increases in salary expenditures. Conversely, firms in pro-employer states tend to reduce more flexible components of compensation, such as welfare benefits, under increased competitive pressure.

Furthermore, when disaggregating by export status, we find that large domestic and

large exporting firms are more likely to increase salary expenditures while reducing welfare expenditures, relative to small domestic firms. These patterns underscore that the effects of trade vary across firms with different structural characteristics, consistent with the idea that trade liberalization can amplify wage inequality within the formal sector.

Our findings suggest that in response to trade-induced pressures, firms adjust the composition of compensation-shifting toward higher managerial salaries and reducing flexible components like welfare benefits-rather than reducing overall pay. These results contribute to the broader literature on globalization and wage structure by showing that trade shocks influence not only wage levels, but also the internal distribution of worker compensation within firms (Helpman et al., 2010; Amiti and Davis, 2012).

Our study also contributes to the growing body of literature that explores the causal impact of rising Chinese import penetration on Indian manufacturing firms. Chakraborty and Henry (2019) document that increased Chinese import penetration leads firms to reduce product scope, focusing on core products, especially among smaller manufacturers. Chakraborty et al. (2024a) show that increased exposure to Chinese imports lead to significant decline in firm-level prices and markups in India. Chakraborty et al. (2024b) finds that due to greater import competition from China, companies tend to increase domestic outsourcing of manufacturing jobs. The paper also shows that when labor regulations are strict, firms may prefer to outsource work rather than expand their own workforce. Chakraborty et al. (2024c) find that increased Chinese import competition leads to a rise in formalization, driven largely by the use of contract labor. Firms respond to heightened competitive pressure by shifting toward more flexible labor arrangements, particularly in labor-regulated environments.

The rest of the paper is organized as follows. Section 2 describes the data sets that we have used in this paper and section 3 lays out the empirical strategy. The results are presented in section 4 and Section 5 concludes the paper.

2 Data Sources and exploratory analysis

This section is divided into two subsections. Subsection 2.1 discusses the data and the various sources from which the datasets are obtained. In subsection 2.2, we present some stylized facts related to Chinese import penetration and the outcome variables, based on an initial exploratory analysis of the data.

2.1 Data

We conduct a firm level analysis for which we use the PROWESS database maintained by the Centre for Monitoring the Indian Economy (CMIE). It is a panel data at the firm level and covers nearly 9000 manufacturing firms over 105 (4-digit NIC 2004) manufacturing industries (Chakraborty et al., 2024b). The PROWESS database is classified according to 5-digit NIC 2008. However, we re-classify it to 4-digit NIC 2004 in order to match it with other important industry-level variables. Therefore, throughout the paper, industry level categorization is based on the 4-digit NIC 2004 classification.

The database is obtained from the balance sheets and annual income statements of companies and it mostly provides information on financial statements of firms. Majority of the firms are private Indian firms. A small percentage of them are government or foreign owned. The database covers many small firms, as well as large companies and companies listed on the major stock exchanges. With respect to the small firms, CMIE periodically surveys them for their data. With respect to the big companies, data for them are worked out from their balance sheets. However, this database does not collect information on firms in the informal sector. Since, China's imports in India was primarily dominated in manufacturing goods, our analysis is based on manufacturing firms for the period 1995 to 2007.

The PROWESS database provides information on total expenses incurred by firms on an annual basis. Total expenses includes expenses incurred on raw materials, compensation to employees, royalty, technical know-how fees, expenses on outsourcing of jobs, selling and distribution expenses etc. One of the major components of total expenditure of firms is ex-

penses incurred on compensation to employees.[3] Compensation of workers include expenses on salary, bonus, contribution to provident fund, staff welfare and training, arrears paid, reimbursement and other expenses on employees.[4]

In this study, we examine the impact of Chinese import competition on worker compensation and it's major components. Specifically, we focus on three key elements: salaries, provident fund contributions, and staff welfare expenses. Welfare expenses are incurred over and above regular wages and are intended to enhance the overall well-being of employees. They typically include provisions such as free or subsidized medical care, food and canteen services, transportation facilities, and recreational amenities.

A significant component of worker compensation in India is regulated by the Employees' Provident Fund and Miscellaneous Provisions Act, 1952, and more specifically, the Employees' Provident Fund (EPF) Scheme, 1952. Under this legal framework, all establishments employing 20 or more workers are mandated to make social security contributions toward a provident fund. In practice, both the employer and employee are typically required to contribute 12 percent of the employee's basic salary and dearness allowance to the fund. These contributions are intended to ensure long-term financial security, primarily for post-retirement support of workers (Naraparaju and Sharma, 2017).

Further, we look into the impact of Chinese import competition on managerial remuneration as a share of total worker compensation. Managerial remuneration includes compensation paid to key managerial personnel such as Chief Executive Officer (CEO), Chief Financial Officer (CFO), managerial director, whole-time director etc. They are full time salaried employees of the company and are involved in the day to day operations. The Prowess dataset, also, provides information on firm-level characteristics such as value of assets and sales, expenditures on royalty and R & D[5] and year of incorporation of the firms.

[3]Descriptive statistics in Table 1 reveals that compensation of workers forms 9 percent of total expenses of firms.

[4]Descriptive statistics in Table 1 reveals that expenses on salary of workers, welfare of workers and provident fund of workers are the main components of compensation to employees. These expenditures are measured in Indian Rupees (INR) million and real values of these expenditures are used (deflated using the industry-specific Wholesale Price Index.)

[5]We use their real values by deflating them with the industry-specific Wholesale Price Index.

We use year of incorporation to calculate the age of the firms.

Our trade data is sourced from the UN-COMTRADE database, which provides detailed import and export data at the Harmonized System (HS) 6-digit product level. Further, using the concordance table by Debroy and Santhanam (1993), we create our industry-level variables by matching the HS codes with 4-digit NIC 2004 industries.

Our key explanatory variable, Chinese import penetration ratio, denoted as $IMP^{China}_{IN,jt-1}$, captures the exposure of Indian industries to Chinese imports in the domestic market. This variable is constructed using data on Chinese imports into India, along with total imports to India and total exports from India, using 1994-the year preceding our study period-as a benchmark for initial trade flows. We supplement this with production data from the PROWESS database for the year 1994 to compute industry-level exposure to Chinese import competition.

Our second key variable is the instrumental variable $IMP^{China}_{LA,jt-1}$, which we use to address potential endogeneity concerns associated with our main explanatory variable, $IMP^{China}_{IN,jt-1}$. The construction of this instrument closely mirrors that of the main variable, with one key difference: instead of using Chinese imports into India, we use Chinese imports into a set of ten Latin American countries-Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay, and Venezuela.

This instrument captures exogenous variation in Chinese import patterns at the industry level that is plausibly uncorrelated with demand shocks in India, but still reflects global supply-side shifts in Chinese competitiveness. The approach follows the methodology introduced by Autor et al. (2013), who use Chinese exports to other high-income countries to instrument for Chinese import exposure in the U.S., isolating variation that is not driven by domestic industry conditions.

The third key variable is foreign competition in the U.S. market, denoted as $FComp^{China}_{IN,jt-1}$, which captures the extent of competition faced by Indian firms from China in an important export destination. Specifically, this variable measures the intensity of Chinese import penetration in the U.S. for industry j, which can affect Indian exporters by increasing competition

abroad. We construct this measure using UN-COMTRADE data on Chinese exports to the United States and total U.S. imports. This approach follows methodologies used in previous studies that assess the role of third-country trade exposure when estimating the domestic impact of Chinese import competition. (Chakraborty et al., 2024b,c). The detailed construction of these variables is described in Section 3.

2.2 Exploratory Analysis

In this paper, we examine how increased import competition from China affects the compensation structure of Indian firms. Specifically, our outcome variables are: (a) worker compensation as a share of total firm expenditure, (b) salaries as a share of total worker compensation, (c) welfare expenditures as a share of total worker compensation, and (d) provident fund contributions as a share of total worker compensation. Also, we study the impact of Chinese import penetration on managerial remuneration as a share of total compensation of workers. In this subsection, we discuss some empirical patterns related to Chinese import penetration and the outcome variables.

Figure A1 in Appendix A plots the Chinese import penetration ratio for the period 1995 to 2007. The break in 2001 is intended to capture the potential impact of China's accession to the World Trade Organization (WTO) in that year. The figure reveals a marked increase in import penetration following 2001, suggesting a structural shift in trade exposure.

Figure A2 plots the share of worker compensation in total firm expenditure and reveals an overall upward trend, with a notable acceleration after 2001. The average share rises from around 7.5 percent in 1995 to 9.5 percent by 2006, when it returns to the 2001 level. This pattern may reflect firm's initial responses to increased import competition following China's WTO accession-temporarily raising labor compensation to retain skilled workers-followed by cost adjustments as competitive pressures intensified. To explore these dynamics in greater detail, we examine how import competition affects the individual components of compensation: salaries, welfare expenditures, and provident fund contributions.

Figure A3 illustrates the trend in the expenditure on salary as a share of total worker compensation. As shown in Table 1, salary is the main component of total compensation

Table 1—Descriptive statistics

Variables	Mean	Standard Deviation	Observations
Expenses on compensation of workers as a share of total expenses of firms	0.09	.119	34,310
Expenses on salary of workers as a share of compensation of workers	0.84	.121	24,996
Expenses on welfare of workers as a share of compensation of workers	0.07	.072	19,967
Expenses on provident fund of workers as a share of compensation of workers	0.07	.043	19,805
Expenses on managerial remuneration as a share of compensation of workers	0.1	.151	15,240
Value of assets of firms	1134.89	6874.5	37,492
Expenditure on royalty and R&D	40.7	226	11,388
Age of firms (in years)	20.6	18.78	64,459

Notes: Total expenses includes expenses incurred on raw materials, compensation to employees, royalty, technical know-how fees, expenses on outsourcing of jobs, selling and distribution expenses etc. Compensation of workers includes expenses on salary, bonus, contribution to provident fund, staff welfare and training, arrears paid, reimbursement and other expenses on employees. Value of assets and expenditure on royalty and R&D are in INR million and in real terms. The sample period is from 1995-2007.

accounting for 84 percent of total worker compensation on average over the sample period. Notably, following a few years after China's WTO accession in 2001, there is a visible increase in the salary share around 2004. In contrast, Figure A4 shows a steady decline in welfare expenditures as a share of total compensation, from about 10 percent initially to around 7 percent by 2007. This decline accelerates after 2001, suggesting a potential link between rising import competition from China and reductions in non-wage benefits. The timing of these shifts implies that firms may have responded to heightened global competition by reallocating compensation toward wages while cutting back on more flexible, discretionary benefits like welfare expenditures.

In Figure A5, we plot the final key component of worker compensation: contributions to the provident fund. These contributions begin at approximately 7.5 percent of total compensation and rise to a peak of around 8 percent by 2001. Thereafter, they steadily decline, reaching their lowest level by 2007.

We also examine the evolution of managerial remuneration as a share of total worker compensation. As shown in Table 1, managerial remuneration accounts for approximately 10 percent of total worker compensation on average over the sample period. Notably, this share was around 2 percent in 1995 and rose consistently after China's accession to the WTO in 2001 as shown in Figure A6. This trend suggests a growing emphasis on rewarding

managerial roles, potentially as firms adapted to increasing global competition. We explore these dynamics further through our econometric analysis of firm-level data in Section 4.

3 Empirical Strategy

To examine the impact of increased import competition from China, we estimate the following empirical specification:

$$Y_{ijt} = \beta_1 \, \text{IMP}^{\text{China}}_{IN,jt-1} + Z_{jt-1} + X_{ijt-1} + \mu_j + \gamma_t + \nu_{ijt} \tag{1}$$

Here, i indexes firms, j denotes industries (defined at the 4-digit level of NIC 2004), and t represents years from 1995 to 2007. The dependent variable, Y_{ijt}, captures various firm-level expenditure on workers. The key explanatory variable is $IMP^{China}_{IN,jt-1}$, the Chinese import penetration ratio, measured at the 4-digit industry level. Our coefficient of interest is β_1, which identifies the effect of increased Chinese import competition on firm-level labor compensation.

The Chinese import penetration ratio is constructed as follows:

$$IMP^{China}_{IN,jt-1} = \frac{M^{China}_{jt-1}}{Y_{j,94} + M_{j,94} - X_{j,94}} \tag{2}$$

In equation 2, M^{China}_{jt-1} denotes the total imports of Chinese goods into India for industry j in year $t-1$. The denominator represents the size of the domestic market for industry j in 1994, calculated as the sum of domestic production ($Y_{j,94}$) and total imports ($M_{j,94}$) minus total exports ($X_{j,94}$). This formulation captures the intensity of Chinese import competition relative to the initial domestic market size prior to the study period.

To construct the import penetration index, we use product-level trade data at the HS 6-digit, detailing India's imports from China. For the denominator, we compile data on total imports to and total exports from India in 1994, along with firm-level production data

sourced from the PROWESS database for the same year.[6]

To analyze how firms respond to import competition, we use a one-year lag of the import penetration index as our key explanatory variable. This lag structure allows us to capture the effect of past trade shocks on current outcome variables. However, the lagged import penetration index cannot serve as a valid instrument for the contemporaneous index, as it does not adequately address endogeneity concerns such as simultaneity or omitted variable bias.

The dramatic increase in Chinese imports during the 1990s and 2000s was largely driven by supply-side reforms and China's accession to the WTO in 2001. However, sector-specific demand or productivity shocks in India-especially after 2001-may simultaneously affect Chinese import volumes and firm outcomes. Similar concerns are raised in Autor et al. (2013), who note that import growth may coincide with domestic shocks influencing outcomes. If such shocks are serially correlated, estimates based on lagged import values may still be biased.

To address this endogeneity concern, we use an instrumental variable (IV) for the Chinese import penetration ratio. Following Autor et al. (2013) and Acemoglu et al. (2016), we instrument Chinese imports to India (as defined in Equation 2) using Chinese exports to a group of developing countries. This instrument is constructed as:

$$IMP^{China}_{LA,jt-1} = \frac{M^{China}_{LA,jt-1}}{Y_{j,94} + M_{j,94} - X_{j,94}} \tag{3}$$

Here, $M^{China}_{LA,jt-1}$ represents Chinese exports to a set of Latin American countries in industry j at time $t-1$. Consistent with Chakraborty et al. (2024c), we include ten Latin American countries in this group: Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Paraguay, Peru, Uruguay, and Venezuela.

The validity of our instrumental variable relies on two key assumptions. First, for the instrument to be relevant, Chinese exports to the selected Latin American countries must be

[6]We match the product-level trade data and the firm level production data with the 4-digit NIC 2004 classification and create the Chinese import penetration index at the 4-digit NIC 2004 level.

strongly correlated with Chinese exports to India at the industry level. This condition would hold if the composition of Chinese exports to India is similar to the composition of exports to these countries, and if these countries experienced a similar rise in Chinese imports. Chakraborty et al. (2024c) provides evidence that the industry-wise Chinese import shares for the period 1998 to 2007 in India closely resemble those for the selected Latin American countries, supporting this relevance assumption.

Second, for the exclusion restriction to hold, Chinese exports to these countries should affect Indian firm outcomes only through their correlation with Chinese imports to India. Since these countries are not major trade partners of India, as noted in Chakraborty et al. (2024c), it is unlikely that Chinese trade with them directly influences firm behavior in India. This supports the assumption that the variation in Chinese exports to these countries reflects supply-side shocks from China-such as productivity growth, internal reforms, and WTO accession-rather than demand-side factors linked to Indian industry outcomes. Thus, the second condition for instrument validity is likely satisfied.

In the regression specification outlined in Equation 1, Z_{jt-1} captures alternative trade-related factors that may be correlated with both the Chinese import penetration index and the outcome variables of interest. One such factor is the competition faced by Indian exporters in third-country markets due to rising Chinese exports. If Chinese imports to India are correlated with China's exports to other major foreign markets, such as the United States, our estimates could inadvertently capture the effects of intensified competition abroad, rather than purely domestic import penetration.

To address this concern, we control for foreign market competition using Chinese import share in the United States, which serves as a proxy for the competition Indian firms may face in global markets. This control variable is defined as:

$$FComp^{China}_{IN,jt-1} = \frac{M^{China}_{US,jt-1}}{M^{World}_{US,jt-1}} \tag{4}$$

where $FComp^{China}_{IN,jt-1}$ denotes the share of Chinese imports in total U.S. imports in industry j at time $t-1$; $M^{China}_{US,jt-1}$ is the value of Chinese imports to the U.S. in industry j; and

$M^{World}_{US,jt-1}$ is the total U.S. imports from all countries in the same industry and time period.

In the regression specification outlined in Equation 1 , X_{ijt-1} is a vector of firm-level control variables that includes the value of assets, expenditure on royalties, R&D expenses, firm age, and the square of firm age. All empirical specifications also include industry fixed effects (μ_j)[7], and year fixed effects (γ_t) to account for unobserved industry-specific and time-specific heterogeneity. Standard errors are clustered at the industry level[8]. In the next section we discuss the results of the paper.

4 Results

This section comprises of three subsections. Sub-section 4.1 discusses the main results of the paper. Sub-section 4.2 discusses the heterogeneous impacts of Chinese import competition across firm characteristics. Sub-section 4.3 discusses the impact of Chinese import competition on managerial remuneration.

4.1 Main Results

Table 2 presents the OLS estimates of the impact of Chinese import competition on worker compensation, measured as the ratio of compensation to total firm expenditure. These results are based on the estimation of Equation 1. The key independent variable is lagged Chinese import penetration. To isolate its effect, we control for Chinese import competition faced by Indian firms in a third market (the U.S.), along with firm-level covariates, such as firm age, it's square, real (lagged) value of firm assets, and real (lagged) firm expenditures on royalties and R & D.

Column (1) include year fixed effects and 4-digit industry fixed effects, while Column (2) controls for interactions between industry fixed effects and year trends to account for industry-specific time trends. Column (3) incorporates firm and year fixed effects, Column (4) uses the logarithm of the dependent variable, while Column (5) replaces the real value of assets with the real value of sales as a control variable. Across all specifications, standard

[7]We report results using industry fixed effects at the 4-digit NIC 2004 level.
[8]Specifically, we cluster standard errors at the 4-digit NIC 2004 industry level.

Table 2—Chinese import competition and expenditure on compensation of workers as a share of total expenditure: OLS Results

	Expenditure on Compensation of Workers/ Total Expenditure				
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome Variable	Sales as control
	(1)	(2)	(3)	(4)	(5)
$IMP^{China}_{IN,jt-1}$	0.00453***	0.00427***	0.00544***	0.00325***	0.00380***
	(0.000608)	(0.000546)	(0.000884)	(0.000601)	(0.000753)
Estimation method	OLS	OLS	OLS	OLS	OLS
Foreign Competition in US($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes
Firm FE	No	No	Yes	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No
Mean of the dependent variable	0.09	0.09	0.09	0.09	0.09
Observations	28,444	28,445	27,692	28,442	28,363

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on compensation of workers as ratio of total expenditure of a firm except in column (4) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported. ***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

errors are clustered at the 4-digit industry level.

Columns (1) to (5) of Table 2 consistently show that Chinese import competition has a positive and statistically significant impact on worker compensation as a share of total firm expenditure. The estimated coefficients are stable across specifications, ranging from 0.00325 to 0.00544.

Table 3 presents instrumental variable (IV) estimates of the effect of Chinese import penetration on worker compensation as a share of total firm expenditure. Across all specifications, we instrument lagged Chinese import penetration in India ($IMP^{China}_{IN,jt-1}$) with lagged Chinese import penetration in a set of ten Latin American countries ($IMP^{China}_{LA,jt-1}$). The specifications in Columns (1) to (5) mirror those in Table 2, including the same sets of fixed effects and control variables. Column (6) restricts the sample to the pre-WTO period (1995-2001) and serves as a placebo test to verify that the observed relationship is driven by the substantial increase in Chinese imports to India following China's accession to the WTO in 2001.

The first stage Kleibergen-Paap F-statistics in Columns (1) to (5) exceed the conventional

Table 3—Chinese import competition and expenditure on compensation of workers as a share of total expenditure: IV Results

	Expenditure on Compensation of Workers/ Total Expenditure					
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome variable	Sales as control	Year 1995-2001
	(1)	(2)	(3)	(4)	(5)	(6)
$IMP^{China}_{IN,jt-1}$	0.00688***	0.00679***	0.00676***	0.00550***	0.00629***	0.0559*
	(0.00227)	(0.00213)	(0.00159)	(0.00185)	(0.00238)	(0.0295)
Estimation method	IV	IV	IV	IV	IV	IV
Kleibergen-Paap F-statistic	14.669	14.596	17.925	14.67	14.408	9.667
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes	Yes
Firm FE	No	No	Yes	No	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No	No
Mean of the dependent variable	0.09	0.09	0.09	0.09	0.09	0.09
Observations	28,444	28,445	27,692	28,442	28,363	12,190

Notes: Regressions are for the years 1995-2007 unless mentioned otherwise. The dependent variable is expenditure on compensation of workers as ratio of total expenditure of a firm except in column (4) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

threshold value of 10, indicating a strong instrument and a reliable first stage.[9] The IV estimates are notably larger than the corresponding OLS estimates and also remain stable across Columns (1) to (5) [10]. In column (1), a 1 percentage point increase in Chinese import penetration is associated with a 0.0069 percentage points (7.6 percent) increase in the ratio of compensation of workers to the total expenditure of firms. Column (6) presents the result for the placebo test when we restrict the sample to the pre-WTO period (1995-2001) and we find marginally significant results.

In Table A1 in Appendix A, we examine the robustness of our main findings to alternative model specifications. While our analysis focuses on the short-run effects-specifically the one-year lagged impact of Chinese import penetration on worker compensation- we extend our analysis to assess potential long-term effects as well. To do so, we estimate the following model:

[9]The first stage F stat is below 10 only for the last specification where we are restricting our sample to the period 1995-2001.

[10]The OLS regressions may understate the true effect due to endogeneity concerns.

$$Y_{ijt} = \beta_1 \, \text{IMP}^{\text{China}}_{IN,jt-n} + Z_{jt-1} + X_{ijt-1} + \mu_j + \gamma_t + \nu_{ijt} \tag{5}$$

where n=2 or 3. Equation 5 is similar in structure to Equation 1, but includes either a two-year lag (n=2) or a three-year lag (n=3) of Chinese import penetration which are presented in Columns (1) and (2) of Table A1 respectively. The estimated coefficients suggest that the impacts of the two- and three-year lagged values of Chinese import penetration are substantially larger than those observed in the one-year lag specification. These findings provide evidence that Chinese import competition affects worker compensation not only in the short term but also persists and intensifies in the longer run.

Following Chakraborty et al. (2024b), we also employ an alternative instrument to further validate our results. Specifically, we use Chinese import penetration in a set of comparable developing countries- Brazil, Indonesia, Malaysia, and Mexico- denoted as $IMP^{China}_{BIMM,jt-1}$, as an instrument for $IMP^{China}_{IN,jt-1}$. This alternative IV strategy helps ensure that our findings are not driven by instrument-specific biases. Results from this specification are reported in Column (3) of Table A1 and the point estimates are consistent with results in Table 3, further supporting the robustness of our findings.

In Table 3, we control for the share of Chinese imports in the U.S. as a proxy for foreign competition faced by Indian firms in a key export destination. However, this measure may not fully capture the broader competitive pressures from China that Indian firms encounter in global markets. To address this limitation, following Chakraborty et al. (2024b), we construct an alternative index of foreign competition by aggregating the shares of Chinese imports in the European Union (EU), the Association of Southeast Asian Nations (ASEAN), and the United States. This composite index is as follows:

$$FComp^{China}_{IN,jt-1} = \frac{M^{China}_{US,jt-1} + M^{China}_{EU,jt-1} + M^{China}_{ASEAN,jt-1}}{M^{World}_{US,jt-1} + M^{World}_{EU,jt-1} + M^{World}_{ASEAN,jt-1}} \tag{6}$$

We substitute this composite measure in place of the original U.S.-only index and re-

Table 4—Chinese import competition and expenditure on salary of workers as a share of their total compensation: OLS Results

	Expenditure on Salary of Workers/ Total Compensation				
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome Variable	Sales as control
	(1)	(2)	(3)	(4)	(5)
$IMP^{China}_{IN,jt-1}$	0.00216**	0.00234***	0.000220	0.00118**	0.00178**
	(0.000867)	(0.000832)	(0.000492)	(0.000483)	(0.000881)
Estimation method	OLS	OLS	OLS	OLS	OLS
Foreign Competition in US($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes
Firm FE	No	No	Yes	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No
Mean of the dependent variable	0.84	0.84	0.84	0.84	0.84
Observations	21,579	21,579	20,908	21,579	21,661

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on salary of workers as ratio of total compensation of a firm except in column (4) where we use the natural log of the variable.$IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported. ***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

estimate equation 1. The coefficient on Chinese import penetration remains positive and statistically significant as shown in column (4) of Table A1 and its magnitude is consistent with our IV estimates in Table 3. This reinforces the robustness of our findings to alternative measures of foreign competition.

Since our results indicate that Chinese import competition in India leads to an increase in the share of worker compensation in total firm expenditure, we further explore which components of compensation are driving this effect. The three key components of compensation of workers are: (i) salary expenses, (ii) welfare expenses, and (iii) contributions to worker's provident funds. We examine the impact of Chinese import penetration on each of these components separately.

Table 4 presents OLS estimates where the dependent variable is the share of salary expenses in total worker compensation. We estimate Equation 1 using this outcome, employing the same specifications as in Table 2. In most specifications, we find that lagged Chinese import penetration has a positive and statistically significant effect on the share of salary

Table 5—Chinese import competition and expenditure on salary of workers as a share of their total compensation: IV Results

	Expenditure on Salary of Workers/ Total Compensation					
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome variable	Sales as control	Year 1995-2001
	(1)	(2)	(3)	(4)	(5)	(6)
$IMP^{China}_{IN,jt-1}$	0.00433***	0.00440***	0.000634	0.00225**	0.00359**	0.0027
	(0.00156)	(0.00150)	(0.000945)	(0.000916)	(0.00165)	(0.05)
Estimation method	IV	IV	IV	IV	IV	IV
Kleibergen-Paap F-statistic	14.405	14.33	18.482	14.405	13.903	34.385
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes	Yes
Firm FE	No	No	Yes	No	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No	No
Mean of the dependent variable	0.84	0.84	0.84	0.84	0.84	0.84
Observations	21,579	21,579	20,908	21,579	21,661	5370

Notes: Regressions are for the years 1995-2007 unless mentioned otherwise. The dependent variable is expenditure on salary of workers as ratio of total compensation of a firm except in column (4) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

expenses within overall compensation[11].

Table 5 presents the IV estimates for the impact of Chinese import penetration on the share of salary expenses in total worker compensation. The specifications used here parallel those in Table 3. Across all specifications, the first-stage F-statistics indicates a strong correlation between the instrument- Chinese import penetration in Latin America ($IMP^{China}_{LA,jt-1}$) and the endogenous regressor ($IMP^{China}_{IN,jt-1}$).

In column (1), a 1 percentage point increase in Chinese import penetration leads to a 0.0043 percentage point (0.5 percent) increase in the ratio of salary expenses to total worker compensation. The estimates remain stable across most specifications, although in Column (3), the coefficient is not statistically significant. As expected, the placebo test in Column (6), which restricts the sample to the pre-WTO period, yields an insignificant result. This finding supports our identification strategy, suggesting that the observed effects are driven by the surge in Chinese imports following China's accession to the WTO, rather than by

[11]The exception is Column (3), where the coefficient remains positive but loses statistical significance.

pre-existing trends.

The results shown in columns (1) and (2) of Table A2 in Appendix A indicate that the effects of longer-term exposure to Chinese import competition are even larger than those observed in the one-year lag specification in case of expenses on salary. Further, our results remain robust when we use $IMP^{China}_{BIMM,jt-1}$ as an alternative instrument for Chinese import penetration, as shown in column (3) of Table A2. Additionally, when we replace the U.S.-only measure of foreign competition with the measure of foreign competition as stated in equation 6, the estimates in column (4) continue to be statistically significant and consistent with IV estimates in Table 5.

The second component of total worker compensation that we examine is expenditure on worker welfare. Table 6 presents the OLS estimates of the lagged (one-period) impact of Chinese import penetration on welfare expenditures as a share of total worker compensation. Across all specifications, we find that increased Chinese import penetration is associated with a statistically significant decline in welfare expenditures for workers.

We further estimate IV regressions, with the results presented in Table 7. In column (1), a 1 percentage point increase in Chinese import competition leads to a 0.004 percentage point reduction in welfare expenditures as a share of total worker compensation-equivalent to a 5.68 percent decrease- for Indian manufacturing firms. Restricting the sample to the pre-WTO period yields statistically insignificant results. Overall, our results suggest that welfare expenditures (typically more discretionary than direct wages) are particularly vulnerable to reduction under increased import competition. The estimates become stronger when we use two-year and three-year lagged measures of Chinese import competition, as shown in Columns (1) and (2) of Table A3 in Appendix A respectively. Furthermore, employing $IMP^{China}_{BIMM,jt-1}$ as an alternative instrument for Chinese import penetration yields result that are consistent with our IV estimates in Table 7. Finally, controlling for alternative measures of foreign competition, as given by equation 6, continues to produce robust and statistically significant results.

The third and final component of worker compensation that we examine is expenditure

Table 6—Chinese import competition and expenditure on welfare of workers as a share of their total compensation: OLS Results

	Expenditure on Welfare of Workers/ Total Compensation				
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome Variable	Sales as control
	(1)	(2)	(3)	(4)	(5)
$IMP^{China}_{IN,jt-1}$	-0.00289***	-0.00287***	-0.000829**	-0.00267***	-0.00261***
	(0.000370)	(0.000352)	(0.000364)	(0.00033)	(0.000387)
Estimation method	OLS	OLS	OLS	OLS	OLS
Foreign Competition in US($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes
Firm FE	No	No	Yes	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No
Mean of the dependent variable	0.07	0.07	0.07	0.07	0.07
Observations	17,526	17,526	16,909	17,526	17,771

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on welfare of workers as ratio of their total compensation of a firm except in column (4) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported. ***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table 7—Chinese import competition and expenditure on welfare of workers as a share of their total compensation: IV Results

	Expenditure on Welfare of Workers/ Total Compensation					
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome variable	Sales as control	Year 1995-2000
	(1)	(2)	(3)	(4)	(5)	(6)
$IMP^{China}_{IN,jt-1}$	-0.00398**	-0.00395**	-0.00192**	-0.00361**	-0.00378**	0.0269
	(0.00173)	(0.00167)	(0.000795)	(0.00152)	(0.00180)	(0.0269)
Estimation method	IV	IV	IV	IV	IV	IV
Kleibergen-Paap F-statistic	12.145	12.068	15.41	12.145	11.63	25.574
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes	Yes
Firm FE	No	No	Yes	No	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No	No
Mean of the dependent variable	0.07	0.07	0.07	0.07	0.07	0.07
Observations	17,526	17,526	16,909	17,526	17,771	4,483

Notes: Regressions are for the years 1995-2007 unless mentioned otherwise. The dependent variable is expenditure on welfare of workers as ratio of their total compensation of a firm except in column (IV) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table 8—Chinese import competition and expenditure on provident fund of workers as a share of their total compensation: OLS Results

	Expenditure on Provident Fund of Workers/ Total Compensation				
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome Variable	Sales as control
	(1)	(2)	(3)	(4)	(5)
$IMP^{China}_{IN,jt-1}$	-0.00248***	-0.00258***	-0.000230	-0.00180***	-0.00246***
	(0.00073)	(0.000673)	(0.000246)	(0.000523)	(0.00067)
Estimation method	OLS	OLS	OLS	OLS	OLS
Foreign Competition in US($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes
Firm FE	No	No	Yes	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No
Mean of the dependent variable	0.07	0.07	0.07	0.07	0.07
Observations	17,395	17,395	16,831	17,395	17,653

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on provident fund of workers as ratio of their total compensation of a firm except in column (4) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported. ***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

on provident funds. Accordingly, the outcome variable is defined as expenses on provident funds as a share of total worker compensation. The OLS estimates shown in Table 8 indicate a statistically significant negative impact of Chinese import penetration on provident fund expenditures, relative to total compensation, in almost all specifications. The IV point estimates presented in Table 9 are negative but not statistically significant. Table A4 in Appendix A presents the results of various robustness checks. Across all specifications, we do not find a statistically significant impact of Chinese import penetration on this component of worker compensation. These results reinforce the findings from our IV estimates in Table 9.

To summarize, we examine three major components of worker compensation: expenses on salaries, expenditures on welfare, and contributions to provident fund. Our results show that Chinese import penetration has a statistically significant positive impact on worker salaries, suggesting that firms may respond to competitive pressure by raising direct wages, possibly to retain skilled labor as we discuss in Section 4.3. In contrast, we find a significant negative effect on welfare-related expenditures, indicating that firms may reduce such benefits in

Table 9—Chinese import competition and expenditure on provident fund of workers as a share of their total compensation: IV Results

	Expenditure on Provident Fund of Workers/ Total Compensation					
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome variable	Sales as control	Year 1995-2000
	(1)	(2)	(3)	(4)	(5)	(6)
$IMP^{China}_{IN,jt-1}$	-0.00147	-0.00145	-0.000425	-0.00109	-0.00169	0.0107
	(0.00101)	(0.00109)	(0.000432)	(0.000803)	(0.00102)	(0.0363)
Estimation method	IV	IV	IV	IV	IV	IV
Kleibergen-Paap F-statistic	12.25	12.16	13.597	12.25	11.79	27.86
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes	Yes
Firm FE	No	No	Yes	No	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No	No
Mean of the dependent variable	0.07	0.07	0.07	0.07	0.07	0.07
Observations	17,395	17,395	16,831	17,395	17,653	4,279

Notes: Regressions are for the years 1995-2007 unless mentioned otherwise. The dependent variable is expenditure on provident fund of workers as ratio of their total compensation of a firm except in column (IV) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

response to rising import competition. However, we do not find any statistically significant impact on provident fund contributions, pointing to possible rigidity in legally mandated components of compensation.

4.2 Heterogeneous Impact

In this sub-section, we investigate whether the effects of Chinese import penetration vary with firm characteristics. First, we focus on firm size. Specifically, we examine whether the impact of import competition differs between firms having different sizes. To do this, we estimate the following equation:

$$Y_{ijt} = \beta_1 IMP^{China}_{IN,jt-1} + \beta_2 IMP^{China}_{IN,jt-1} X AboveMedianFirms_i + Z_{jt-1} + X_{ijt-1} + \mu_j + \gamma_t + \nu_{ijt} \tag{7}$$

where $AboveMedianFirms_i$ is a firm-level indicator equal to 1 if a firm's average sales value over the period of analysis is above the median, and 0 otherwise. All other variables are

Table 10—Heterogeneous impact of Chinese import competition: Interaction with firms above median sales

	Compensation of workers	Salary of workers	Welfare of workers	Provident Fund of workers
	Total Expenditure	Compensation of workers	Compensation of workers	Compensation of workers
	1	2	3	4
$IMP^{China}_{IN,jt-1}$	0.0106	-0.00147	-0.00147	-0.00164
	(0.00645)	(0.00395)	(0.00234)	(0.00109)
$IMP^{China}_{IN,jt-1}$ X $AboveMedianFirms_i$	0.00513**	0.00666***	-0.00466***	-0.00144
	(0.00254)	(0.00181)	(0.00159)	(0.00126)
Estimation Method	IV	IV	IV	IV
SW F-stat (IMP)	56.38	56.01	65.67	66.68
SW F-stat (IMP X $AboveMedianFirms_i$)	12.48	13.19	11.89	11.24
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Observations	28,434	21,570	17,526	17,395

Notes: Regressions are for the years 1995-2007. $AboveMedianFirms_i$ is a firm level indicator variable which is equal to 1 if a firm's average value of sales fall above the median value of the average sales of the entire sample. In Column (I), dependent variable is expenditure on compensation of workers as a share of total expenditure of firms. In Column (II), dependent variable is expenditure on salary of workers as a share of total compensation of firms. In Column (III), dependent variable is expenditure on welfare of workers as a share of total compensation of firms. In Column (IV), dependent variable is expenditure on provident fund of workers as a share of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

defined as in Equation 1. The coefficient of interest, β_2, captures the differential impact of Chinese import penetration on firms with above-median sales relative to those below the median. We present the IV regression results examining the heterogeneous impact of Chinese import penetration on total worker compensation and its components in Table 10.

Columns (1) and (2) show that the interaction term between Chinese import penetration and the above-median sales indicator is positive and significant, indicating that larger firms drive the increase in both total compensation share and salary share. Column (3) shows a negative and significant interaction for welfare expenses, suggesting a sharper decline among larger firms. In Column (4), the interaction is negative but insignificant, indicating no differential effect on provident fund contributions. The Sanderson-Windmeijer (SW) F-statistics exceed the conventional threshold for both endogenous regressors- $IMP^{China}_{IN,jt-1}$ and its interaction with $AboveMedianFirms_i$-across all outcome variables. This indicates that concerns about weak instruments are minimal in our IV regressions.[12]

[12]Unlike the conventional first-stage Kleibergen-Paap (KP) F-statistic, which is appropriate for models with a single endogenous regressor, the Sanderson-Windmeijer F-statistic (Sanderson and Windmeijer, 2016)

Table 11—Heterogeneous impact of Chinese import competition: Interaction with quartile of firms

	Compensation of workers	Salary of workers	Welfare of workers	Provident Fund of workers
	Total Expenditure	Compensation of workers	Compensation of workers	Compensation of workers
	1	2	3	4
$IMP^{China}_{IN,jt-1}$	0.0131	0.00146	-0.00395	-0.00126
	(0.0164)	(0.00573)	(0.00304)	(0.00484)
$IMP^{China}_{IN,jt-1}$ X Q_{r2}	0.0109	-0.00313	0.000155	-0.00197
	(0.0112)	(0.00442)	(0.00292)	(0.00157)
$IMP^{China}_{IN,jt-1}$ X Q_{r3}	0.0111***	0.00744	-0.00324	-0.00334***
	(0.0039)	(0.00473)	(0.00217)	(0.00104)
$IMP^{China}_{IN,jt-1}$ X Q_{r4}	-0.00134	0.00576***	-0.00596***	0.000245
	(0.00537)	(0.00213)	(0.00167)	(0.00249)
Estimation Method	IV	IV	IV	IV
SW F-stat (IMP)	89.34	94.34	112.7	101.36
SW F-stat (IMP X Q_{r2})	59.79	62.89	153.64	80.6
SW F-stat (IMP X Q_{r3})	32.3	52.51	80.36	87.95
SW F-stat (IMP X Q_{r4})	16.29	22.19	10.97	12.29
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Observations	28,434	21,570	17,526	17,395

Notes: Regressions are for the years 1995-2007. 'Q_{ri}' is a firm level indicator variable which is equal to 1 if a firm's average value of sales belongs to the ith quartile of the sales distribution. In Column (I), dependent variable is expenditure on compensation of workers as a share of total expenditure of firms. In Column (II), dependent variable is expenditure on salary of workers as a share of total compensation of firms. In Column (III), dependent variable is expenditure on welfare of workers as a share of total compensation of firms. In Column (IV), dependent variable is expenditure on provident fund of workers as a share of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$.Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

We further examine the differential impacts of Chinese import penetration across the firm size distribution by interacting the endogenous regressor with firm-size quartile indicators. The following equation is estimated:

$$Y_{ijt} = \beta_1 IMP^{China}_{IN,jt-1} + \sum_{k=2}^{4} \beta_k (IMP^{China}_{IN,jt-1} XQ_{rk}) + Z_{jt-1} + X_{ijt-1} + \mu_j + \gamma_t + \nu_{ijt} \quad (8)$$

where 'Q_{rk}' is a firm level indicator variable which is equal to 1 if a firm $i's$ average sales falls into the kth quartile (for k=2,3,4) of the sales distribution. Firms in the first quartile serve as the reference group. The coefficient of interest, β_k, capture the differential effect of Chinese import penetration on firms in higher quartiles relative to the smallest firms (first quartile).

Table 11, presents IV estimates of the heterogeneous effects of Chinese import penetration across firm size quartiles. Column (1) shows a positive and significant impact on compensation share for firms in the third quartile. Column (2) finds that the increase in salary share is concentrated among the largest firms (fourth quartile). In Column (3), welfare expenses decline significantly for top-quartile firms, while Column (4) shows a negative and significant effect on provident fund contributions for firms in the third quartile. Strong SW F-statistics across all specifications confirm the validity of the instruments.

It is well established in the literature (Melitz, 2003; Bernard et al., 2007) that exporting firms tend to be larger and more productive than their non-exporting counterparts. Building on this insight, we examine whether the impact of Chinese import penetration varies between exporting and non-exporting firms across different firm sizes. To capture this heterogeneity, we construct a firm-level indicator variable, $Exporter_i$, which equals 1 if a firm reports positive average export earnings over the period 1995-2000. We interact this export status variable with our main endogenous regressor, $IMP^{China}_{IN,jt-1}$. Also, we include a triple interaction term between $IMP^{China}_{IN,jt-1}$, $Exporter_i$, and $AboveMedianFirms_i$ to capture differential effects on large exporting firms.

allows for assessing the relevance of instruments in the presence of more than one endogenous variable.

Table 12—Heterogeneous impact of Chinese import competition: Interaction with export firms

	Compensation of workers	Salary of workers	Welfare of workers	Provident Fund of workers
	Total Expenditure	Compensation of workers	Compensation of workers	Compensation of workers
	1	2	3	4
$IMP^{China}_{IN,jt-1}$	0.0127	-0.00226	-0.00172	-0.00130
	(0.00827)	(0.00511)	(0.00199)	(0.00142)
$IMP^{China}_{IN,jt-1}$ X $Exporter_i$	0.00261	0.00154	-0.0000948	-0.00256
	(0.00753)	(0.00589)	(0.00618)	(0.00186)
$IMP^{China}_{IN,jt-1}$ X $AboveMedianFirms_i$	0.00767**	0.00585*	-0.00469***	-0.00197
	(0.0038)	(0.00302)	(0.00173)	(0.00168)
$IMP^{China}_{IN,jt-1}$ X $AboveMedianFirms_i$ X $Exporter_i$	0.00158	0.00787***	-0.00459**	-0.000729
	(0.00227)	(0.00250)	(0.00198)	(0.00115)
Estimation Method	IV	IV	IV	IV
SW F-stat (IMP)	62.67	57.07	69.71	60.7
SW F-stat (IMP X $Exporter_i$)	76.35	78.87	76.47	69.9
SW F-stat (IMP X $AboveMedianFirms_i$)	27.48	31.42	40.61	20
SW F-stat (IMP X $AboveMedianFirms_i$ X $Exporter_i$)	73.09	118.31	111.83	60.01
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Observations	28,434	21,570	17,526	17,395

Notes: Regressions are for the years 1995-2007. $Exporter_i$ is firm level indicator variable which equals 1 if a firm reports positive average export earnings over the period 1995-2000. $AboveMedianFirms_i$ is a firm level indicator variable which is equal to 1 if a firm's average value of sales fall above the median value of the average sales of the entire sample. In Column (I), dependent variable is expenditure on compensation of workers as a share of total expenditure of firms. In Column (II), dependent variable is expenditure on salary of workers as a share of total compensation of firms. In Column (III), dependent variable is expenditure on welfare of workers as a share of total compensation of firms. In Column (IV), dependent variable is expenditure on provident fund of workers as a share of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

We estimate the following specification:

$$Y_{ijt} = \beta_1 IMP^{China}_{IN,jt-1} + \beta_2 \left(IMP^{China}_{IN,jt-1} \times Exporter_i\right) + \beta_3 \left(IMP^{China}_{IN,jt-1} \times AboveMedianFirms_i\right) + \beta_4 \left(IMP^{China}_{IN,jt-1} \times Exporter_i \times AboveMedianFirms_i\right) + Z_{jt-1} + X_{ijt-1} + \mu_j + \gamma_t + \nu_{ijt} \quad (9)$$

In this specification, the base group is *small, domestic firms*. The coefficient β_2 captures the differential effect of Chinese import penetration on *small exporting firms* relative to the base group. The coefficient β_3 captures the effect on *large domestic firms*, while β_4 captures the effect on *large exporting firms*.

Column (1) of Table 12 shows that large domestic firms increased labor compensation relative to small domestic firms in response to Chinese import competition. In Column (2), both large domestic and large exporting firms significantly raised salary shares, with a stronger effect for large exporters. Columns (3) reveals that both large domestic firms and large exporting firms reduced welfare expenditures, while no significant effects are found for provident fund contributions.

Next, we examine whether firms with different product scopes respond differently to Chinese import competition. To this end, we construct a firm-level dummy variable, $MPFirm_i$, which takes the value 1 if a firm produces more than one product in a year (i.e., a multi-product firm), and 0 otherwise. We estimate the following regression specification:

$$Y_{ijt} = \beta_1 IMP^{China}_{IN,jt-1} + \beta_2 \left(IMP^{China}_{IN,jt-1} \times \text{MP Firms}_i\right) + Z_{jt-1} + X_{ijt-1} + \mu_j + \gamma_t + \nu_{ijt} \quad (10)$$

The coefficient of interest, β_2 , captures the differential impact of Chinese import penetration on multi-product firms relative to single-product firms. Table 13 presents the IV estimates for this specification, focusing on total worker compensation and its components.

Table 13 shows that Chinese import penetration increases worker compensation for both single- and multi-product firms, with a significantly stronger effect for multi-product firms (Column 1). A similar pattern is observed for salary shares (Column 2), likely reflecting the

Table 13—Heterogeneous impact of Chinese import competition: Interaction with multi-product firms

	Compensation of workers	Salary of workers	Welfare of workers	Provident Fund of workers
	Total Expenditure	Compensation of workers	Compensation of workers	Compensation of workers
	1	2	3	4
$IMP^{China}_{IN,jt-1}$	0.0102**	0.0100***	-0.00567***	0.000345
	(0.00424)	(0.00356)	(0.00174)	(0.00187)
$IMP^{China}_{IN,jt-1}$ X $MPFirm_i$	0.00546***	0.00235*	-0.00348*	-0.00160*
	(0.00207)	(0.00132)	(0.002)	(0.0008)
Estimation Method	IV	IV	IV	IV
SW F-stat (IMP)	22.34	23.26	20.55	19.73
SW F-stat (IMP X $MPFirm_i$)	15.36	16.04	13.92	13.77
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Observations	28,444	21,579	17,526	17,395

Notes: Regressions are for the years 1995-2007. $MPFirm_i$ is a firm level indicator variable which takes a value 1 if firm produces more than one product in a year. In Column (I), dependent variable is expenditure on compensation of workers as a share of total expenditure of firms. In Column (II), dependent variable is expenditure on salary of workers as a share of total compensation of firms. In Column (III), dependent variable is expenditure on welfare of workers as a share of total compensation of firms. In Column (IV), dependent variable is expenditure on provident fund of workers as a share of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries- Brazil(B), Indonesia(I), Malaysia(M) and Mexico(M) . Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

greater complexity of operations in multi-product firms and their need to attract workers who can help the firm adapt and compete effectively. Column (3) indicates that welfare expenditures decline in response to import competition, with a sharper reduction among multi-product firms, possibly as a cost-cutting response to heightened competitive pressure.

In Table 14, we examine whether the impact of Chinese import competition varies across states with different labor regimes. To do this, we construct a state-level indicator variable, $Pro-workerstates_s$, which takes a value of 1 for states classified as having either pro-worker labour laws (Gujarat, Maharashtra, Orissa, West Bengal) or neutral labor laws (Assam, Bihar, Haryana, Jammu and Kashmir, Punjab, Kerala, Madhya Pradesh), based on the classification in Gupta et al. (2009). The omitted category includes states with pro-employer labor laws.

Table 14—Heterogeneous impact of Chinese import competition: Interaction with Pro-worker states

	Compensation of workers	Salary of workers	Welfare of workers	Provident Fund of workers
	Total Expenditure	Compensation of workers	Compensation of workers	Compensation of workers
	I	II	III	IV
$IMP^{China}_{IN,jt-1}$	0.00731	0.0013	-0.00659*	-0.000812
	(0.00599)	(0.0091)	(0.00383)	(0.00161)
$IMP^{China}_{IN,jt-1}$ X $Pro-workerstates_s$	0.00681***	0.00488***	-0.00348	-0.0016
	(0.00207)	(0.00172)	(0.00232)	(0.00104)
Estimation Method	IV	IV	IV	IV
SW F-stat (IMP)	10.11	10.28	7.83	9.49
SW F-stat (IMP X $Pro-workerstates_s$)	16.73	16.6	15.4	13.45
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Observations	28,444	21,579	17,526	17,395

Notes: Regressions are for the years 1995-2007. $Pro-workerstates_s$ is a state level indicator variable which takes a value 1 if a state has pro-worker laws (Gujarat, Maharashtra, Orissa, West Bengal) and neutral laws (Assam, Bihar, Haryana, Jammu and Kashmir, Punjab, Kerela, Madhya Pradesh) as per Gupta et al. (2009). In Column (I), dependent variable is expenditure on compensation of workers as a share of total expenditure of firms. In Column (II), dependent variable is expenditure on salary of workers as a share of total compensation of firms. In Column (III), dependent variable is expenditure on welfare of workers as a share of total compensation of firms. In Column (IV), dependent variable is expenditure on provident fund of workers as a share of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

We estimate the following specification:

$$Y_{ijt} = \beta_1 IMP^{China}_{IN,jt-1} + \beta_2 \left(IMP^{China}_{IN,jt-1} \times \text{Pro-worker States}_s \right) + Z_{jt-1} + X_{ijt-1} + \mu_j + \gamma_t + \nu_{ijt} \tag{11}$$

In this formulation, β_2, represents the differential impact on firms in states with pro-worker or neutral labor laws relative to firms in states with pro-employer laws.

Table 14 shows that firms in pro-worker or neutral labor law states respond to Chinese import penetration by significantly increasing both total labor compensation and the salary component (columns 1 and 2), as indicated by positive and significant interaction terms. In contrast, column 3 shows that firms in pro-employer states reduce welfare expenditures in response to import competition, while firms in pro-worker states show no significant change. This suggests that in pro-employer states, firms are more likely to reduce flexible, non-statutory components of labor compensation, such as welfare expenditures. In contrast,

firms in pro-worker or neutral states, potentially due to more rigid labor regulations are less able to make downward adjustments in these benefits. No significant effects are observed for provident fund contributions (column 4).

4.3 Impact on managerial remuneration

In this sub-section, we discuss the impacts of Chinese import competition on expenditure of firms on managerial compensation. In a study, Cuñat and Guadalupe (2009) use panel data on U.S. executives to demonstrate that higher foreign competition doesn't always lead to a consistent decrease in pay across all executives. On the contrary, they find that compensation increased for the highest-paid executives as demand for talented executives increases. Higher foreign competition leads firms to strengthen the pay-performance link for executive compensation. In a related study, using Spanish firm level data, Chen and Steinwender (2021) examines how managers play a central role in determining how firms respond to competitive pressures.

There is a large existing literature on management practices which consistently finds that better-managed firms exhibit superior performance. Bloom and Van Reenen (2007) show that more structured management practices are strongly associated with improved firm-level outcomes, including higher productivity and profitability. Extending this line of inquiry to a developing country context, Bloom et al. (2013) demonstrate that firms with better management practices in India exhibited higher productivity through improved quality and efficiency and reduced inventory. Similarly, Bloom et al. (2016b) confirm the positive relationship between management quality and firm performance across multiple countries and industries.

Beyond management practices, individual managerial characteristics also matter. Bertrand and Schoar (2003) find that heterogeneity in managerial decision-making styles explain a substantial portion of the variation in firm performance. In a more recent study, Schoar et al. (2024) provides further evidence that managerial characteristics and decisions influence a firm's risk profile, reinforcing the importance of who is managing the firm, not just how it is managed.

Table 15—Chinese import competition and expenditure on managerial remuneration as a share of their total compensation: IV Results

	Expenditure on Managerial Remuneration/ Total Compensation					
	Industry (4-digit) FE and Year FE	Industry(4-digit) FE X Year Trends	Firm FE and Year FE	Log of Outcome variable	Sales as control	Year 1995-2001
	(1)	(2)	(3)	(4)	(5)	(6)
$IMP^{China}_{IN,jt-1}$	0.00460**	0.00456*	0.00266	0.00345**	0.00443*	0.0044
	(0.00228)	(0.00234)	(0.00323)	(0.00171)	(0.00237)	(0.206)
Estimation method	IV	IV	IV	IV	IV	IV
Kleibergen-Paap F-statistic	18.03	17.8	28.91	18.03	18.95	13.871
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	No	Yes	Yes	Yes
Firm FE	No	No	Yes	No	No	No
Industry (4-digit) FE X Year Trend	No	Yes	No	No	No	No
Mean of the dependent variable	0.1	0.1	0.1	0.1	0.1	0.1
Observations	13,137	13,137	12,455	13,137	13,239	3,471

Notes: Regressions are for the years 1995-2007 unless mentioned otherwise. The dependent variable is expenditure on managerial remuneration as ratio of total compensation of a firm except in column (4) where we use the natural log of the variable. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Column (5) controls for real value of sales instead of real value of assets. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Against this backdrop, we examine the impacts of Chinese import penetration on managerial remuneration as a share of total compensation of employees. Specifically, we use $IMP^{China}_{LA,jt-1}$ as an instrumental variable for $IMP^{China}_{IN,jt-1}$ and adopt the same regression specifications as in Table 3. The results are reported in Table 15.

The first stage Kleibergen-Paap (KP) F-statistics exceed the conventional threshold in all specifications. Across most specifications, we find a positive and statistically significant effect of Chinese import penetration on managerial remuneration. Notably, in column (1), a one percentage point increase in import penetration is associated with a 0.0046 percentage point (4.6 percent) increase in managerial remuneration as a share of total compensation. The point estimates are stable across specifications, further strengthening the robustness of the result.[13]

In Table A5 in Appendix A, the coefficients on the two-year and three-year lagged mea-

[13]However, in column (3), where we include firm and year fixed effects alongside the standard controls, we loose statistical significance.

sures of Chinese import penetration are positive, statistically significant, and larger in magnitude compared to the one-year lagged impact, as shown in columns (1) and (2). Furthermore, using $IMP^{China}_{BIMM,jt-1}$ as an alternative IV for $IMP^{China}_{IN,jt-1}$ the results remain robust, as presented in Column (3). Finally, Column (4) demonstrates that the coefficients continue to hold when controlling for foreign competition as specified in equation 6.

The results in Tables A6 and A7 show that Chinese import penetration leads to a greater increase in managerial remuneration in larger firms. This is evidenced by positive and significant interaction terms for above-median firms (column 1 of Table A6) and firms in the third sales quartile (column 1 of Table A7) . These findings are consistent with Helpman et al. (2010), who argue that larger firms have workforces of higher average ability than less productive firms. This might be the reason for the amplifying impact of competitive pressures on compensation of workers with managerial ability.

Column (3) of Table A6 shows that Chinese import penetration significantly increases managerial remuneration, with a stronger effect for multi-product firms. This suggests that, facing greater operational complexity, multi-product firms respond to import competition by investing more in managerial talent to effectively manage and allocate resources.

The positive and significant effect of Chinese import penetration on managerial remuneration suggests that a substantial portion of the increase in overall labor compensation-particularly in the salary component-is likely driven by higher payments to managerial or executive-level employees.

5 Conclusion

This paper explores how rising Chinese import competition has altered the internal structure of labor compensation in Indian manufacturing firms. We show that trade shocks lead firms to reallocate compensation toward salaries-especially for managerial and skilled employees-while reducing flexible, non-statutory benefits such as welfare expenditures. Statutory components, like provident fund contributions, remain largely unaffected, underscoring the limited flexibility firms have over mandated benefits.

Our findings also reveal significant heterogeneity across firms: larger and multi-product firms, as well as those in pro-worker regulatory environments, exhibit stronger shifts toward salary. These patterns highlight how firm characteristics and institutional constraints mediate the impact of globalization on labor outcomes.

By focusing on the composition of compensation, this paper contributes to a deeper understanding of how trade affects labor markets within firms. Our findings suggest that trade-induced inequality does not arise solely across firms or industries but also within firms, as different categories of workers-are affected in unequal ways.

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A Appendix

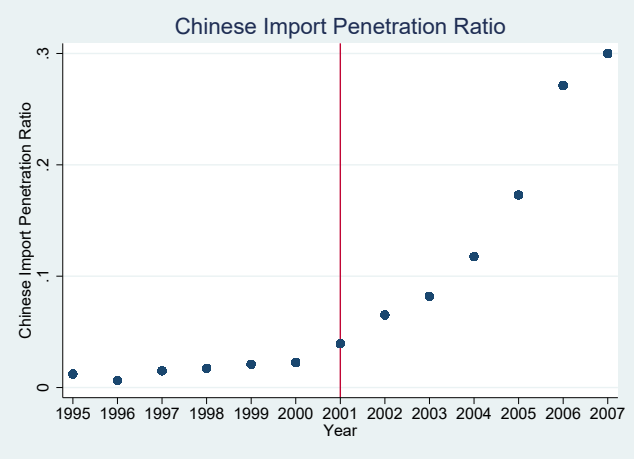

Figure A1. Chinese Import Penetration Ratio

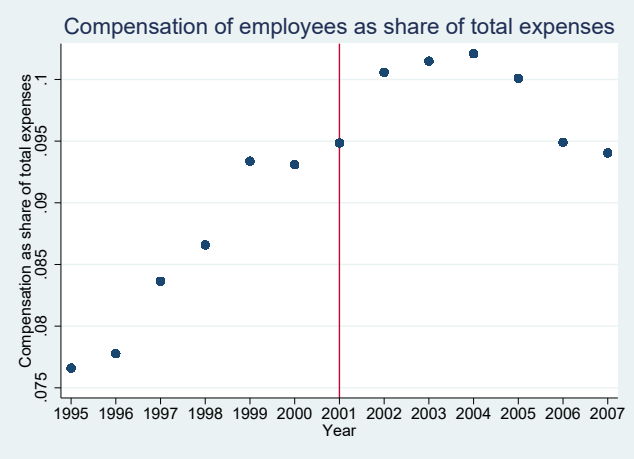

Figure A2. Expenditure on compensation of workers as a share of total expenditure

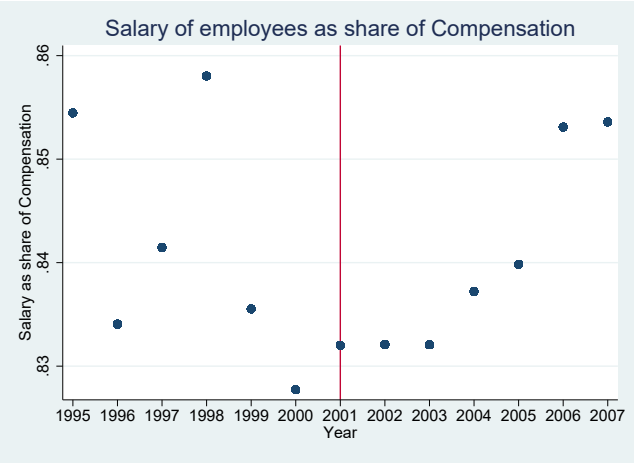

Figure A3. Expenditure on salary of workers as a share of total compensation

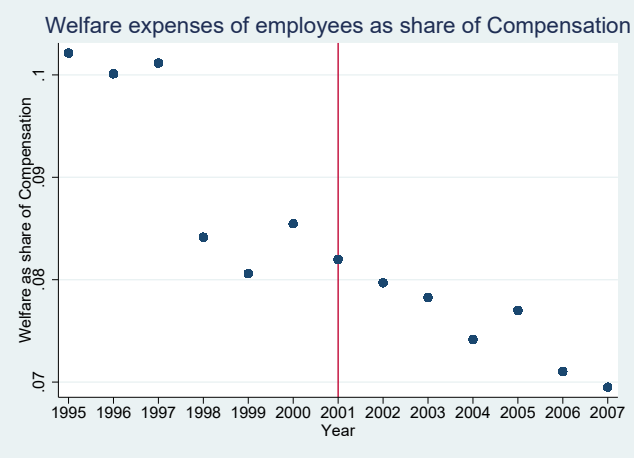

Figure A4. Expenditure on welfare of workers as a share of total compensation

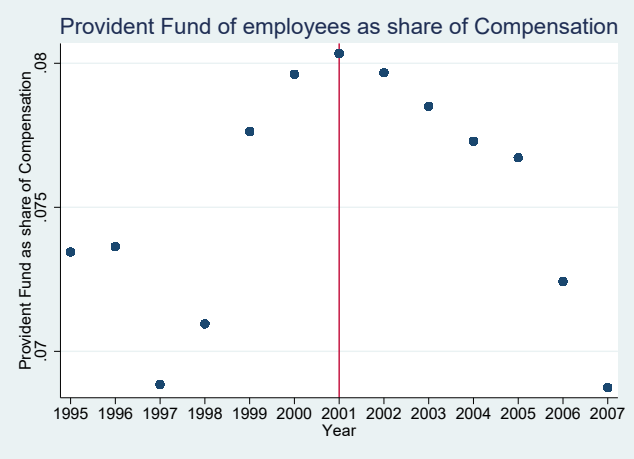

Figure A5. Expenditure on provident fund of workers as a share of total compensation

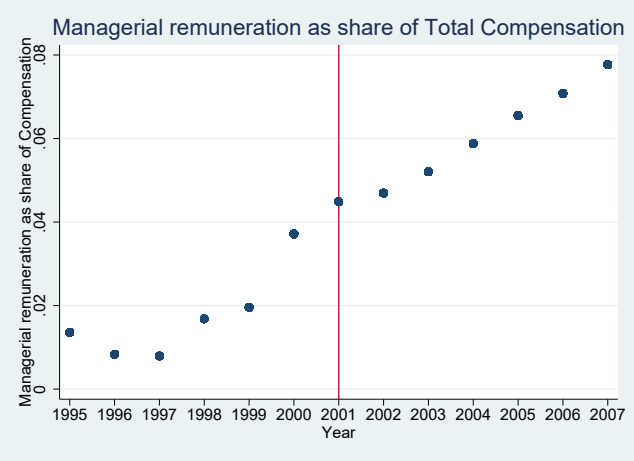

Figure A6. Expenditure on managerial remuneration as a share of total compensation

Table A1—Chinese import competition and expenditure on compensation of workers as a share of total expenditure: Robustness Results

	Expenditure on Compensation of Workers/ Total Expenditure			
	Long Term Effects			
	Two year lagged impact	Three year lagged impact	BIMM countries as IV	Foreign Competition US, EU, ASEAN
	(1)	(2)	(3)	(4)
$IMP^{China}_{IN,jt-1}$	0.0101**	0.0147**	0.00680***	0.00711***
	(0.00414)	(0.00589)	(0.00224)	(0.00231)
Estimation method	IV	IV	IV	IV
Kleibergen-Paap F-statistic	15.526	23.194	17.032	16.303
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	No
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Mean of the dependent variable	0.09	0.09	0.09	0.09
Observations	26,430	24,494	28,444	28,444

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on compensation of workers as ratio of total expenditure of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. We use this as our primary instrument for all columns except column (3). In Column (3), we use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries- Brazil(B), Indonesia (I), Malaysia (M) and Mexico (M). Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Column (4) controls for foreign competition faced by Indian firms in US and also in EU and ASEAN as third country markets. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table A2—Chinese import competition and expenditure on salary of workers as a share of their total compensation: Robustness Results

	Expenditure on Salary of Workers/ Total Compensation			
	Long Term Effects			
	Two year lagged impact	Three year lagged impact	BIMM countries as IV	Foreign Competition US, EU, ASEAN
	(1)	(2)	(3)	(4)
$IMP^{China}_{IN,jt-1}$	0.00766***	0.0105***	0.00494***	0.00431***
	(0.00261)	(0.00305)	(0.00154)	(0.00152)
Estimation method	IV	IV	IV	IV
Kleibergen-Paap F-statistic	13.96	19.33	17.189	15.996
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	No
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Mean of the dependent variable	0.84	0.84	0.84	0.84
Observations	21,367	21,149	21,579	21,579

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on salary of workers as ratio of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. We use this as our primary instrument for all columns except column (3). In Column (3), we use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries- Brazil(B), Indonesia (I), Malaysia (M) and Mexico (M). Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Column (4) controls for foreign competition faced by Indian firms in US and also in EU and ASEAN as third country markets. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table A3—Chinese import competition and expenditure on welfare of workers as a share of their total compensation: Robustness Results

	Expenditure on Welfare of Workers/ Total Compensation			
	Long Term Effects			
	Two year lagged impact	Three year lagged impact	BIMM countries as IV	Foreign Competition US, EU, ASEAN
	(1)	(2)	(3)	(4)
$IMP^{China}_{IN,jt-1}$	-0.00582**	-0.00801**	-0.00399**	-0.00427**
	(0.00288)	(0.00396)	(0.00192)	(0.00188)
Estimation method	IV	IV	IV	IV
Kleibergen-Paap F-statistic	12.46	16.35	14.44	13.49
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	No
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Mean of the dependent variable	0.07	0.07	0.07	0.07
Observations	17,350	17,163	17,526	17,526

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on welfare of workers as ratio of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. We use this as our primary instrument for all columns except column (3). In Column (3), we use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries- Brazil(B), Indonesia (I), Malaysia (M) and Mexico (M). Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Column (4) controls for foreign competition faced by Indian firms in US and also in EU and ASEAN as third country markets. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table A4—Chinese import competition and expenditure on provident fund of workers as a share of their total compensation: Robustness Results

	Expenditure on Provident Fund of Workers/ Total Compensation			
	Long Term Effects			
	Two year lagged impact	Three year lagged impact	BIMM countries as IV	Foreign Competition US, EU, ASEAN
	(1)	(2)	(3)	(4)
$IMP^{China}_{IN,jt-1}$	-0.00193	-0.00227	-0.00114	-0.00144
	(0.00182)	(0.00222)	(0.000958)	(0.0011)
Estimation method	IV	IV	IV	IV
Kleibergen-Paap F-statistic	11.493	16.582	14.62	13.64
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	No
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Mean of the dependent variable	0.07	0.07	0.07	0.07
Observations	17,242	17,083	17,395	17,395

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on provident fund of workers as ratio of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. We use this as our primary instrument for all columns except column (3). In Column (3), we use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries- Brazil(B), Indonesia (I), Malaysia (M) and Mexico (M). Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Column (4) controls for foreign competition faced by Indian firms in US and also in EU and ASEAN as third country markets. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table A5—Chinese import competition and expenditure on managerial remuneration as a share of total compensation: Robustness Results

	Expenditure on Managerial Remuneration/ Total Compensation			
	Long Term Effects			
	Two year lagged impact	Three year lagged impact	BIMM countries as IV	Foreign Competition US, EU, ASEAN
	(1)	(2)	(3)	(4)
$IMP^{China}_{IN,jt-1}$	0.0106**	0.0174**	0.00567**	0.00472**
	(0.00519)	(0.00761)	(0.00222)	(0.00228)
Estimation method	IV	IV	IV	IV
Kleibergen-Paap F-statistic	17.6	23.37	22.05	19.97
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	No
Firm Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Mean of the dependent variable	0.1	0.1	0.1	0.1
Observations	12,928	12,715	13,137	13,137

Notes: Regressions are for the years 1995-2007. The dependent variable is expenditure on managerial remuneration as ratio of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{LA,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{LA,jt-1}$ using Chinese imports into a set of ten Latin American countries- Argentina, Brazil, Mexico, Colombia, Peru, Chile, Costa Rica, Paraguay, Uruguay and Venezuela. We use this as our primary instrument for all columns except column (3). In Column (3), we use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries- Brazil(B), Indonesia (I), Malaysia (M) and Mexico (M). Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Column (4) controls for foreign competition faced by Indian firms in US and also in EU and ASEAN as third country markets. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table A6—Heterogeneous impact of Chinese import competition on managerial remuneration as a share of total compensation

	Expenditure on Managerial Remuneration/ Total Compensation			
	(1)	(2)	(3)	(4)
$IMP^{China}_{IN,jt-1}$	0.00889	0.00299	0.00957**	0.00793
	(0.00685)	(0.00534)	(0.00465)	(0.0088)
$IMP^{China}_{IN,jt-1}$ X $AboveMedianFirms_i$	0.00496**			
	(0.00225)			
$IMP^{China}_{IN,jt-1}$ X $Exporter_i$		0.00713*		
		(0.00409)		
$IMP^{China}_{IN,jt-1}$ X $MPFirm_i$			0.00419*	
			(0.00242)	
$IMP^{China}_{IN,jt-1}$ X $Pro-workerstates_s$				0.00513
				(0.00318)
Estimation Method	IV	IV	IV	IV
SW F-stat (IMP)	117.24	38.57	30.14	18.69
SW F-stat (IMP X $AboveMedianFirms_i$)	19.61			
SW F-stat (IMP X $Exporter_i$)		19.07		
SW F-stat (IMP X $MPFirm_i$)			19.97	
SW F-stat (IMP X $Pro-workerstates_s$)				24.82
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes	Yes	Yes	Yes
Firm level Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry (4-digit) FE	Yes	Yes	Yes	Yes
Observations	13,135	13,137	13,137	13,137

Notes: Regressions are for the years 1995-2007. $AboveMedianFirms_i$ is a firm level indicator variable which is equal to 1 if a firm's average value of sales fall above the median value of the average sales of the entire sample. $Exporter_i$ is firm level indicator variable which equals 1 if a firm reports positive average export earnings over the period 1995-2000. $MPFirm_i$ is a firm level indicator variable which takes a value 1 if firm produces more than one product in a year. $Pro-workerstates_s$ is a state level indicator variable which takes a value 1 if a state has pro-worker laws (Gujarat, Maharashtra, Orissa, West Bengal) and neutral laws (Assam, Bihar, Haryana, Jammu and Kashmir, Punjab, Kerela, Madhya Pradesh) as per Gupta et al. (2009). The dependent variable is expenditure on managerial remuneration as ratio of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries- Brazil(B), Indonesia (I), Malaysia (M) and Mexico (M). Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$. Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.

Table A7—Heterogeneous impact of Chinese import competition on managerial remuneration as share of total compensation: Interaction with quartile of firms

	Managerial Remuneration / Compensation of workers
	I
$IMP^{China}_{IN,jt-1}$	0.0193
	(0.0279)
$IMP^{China}_{IN,jt-1}$ X Q_{r2}	0.00312
	(0.0185)
$IMP^{China}_{IN,jt-1}$ X Q_{r3}	0.00785**
	(0.00348)
$IMP^{China}_{IN,jt-1}$ X Q_{r4}	0.00203
	(0.0071)
Estimation Method	IV
SW F-stat (IMP)	309.55
SW F-stat (IMP X Q_{r2})	176.45
SW F-stat (IMP X Q_{r3})	411.94
SW F-stat (IMP X Q_{r4})	31.43
Foreign Competition in US ($IS^{China}_{US,jt-1}$)	Yes
Firm Controls	Yes
Year FE	Yes
Industry (4-digit) FE	Yes
Observations	13,135

Notes: Regressions are for the years 1995-2007. 'Q_{ri}' is a firm level indicator variable which is equal to 1 if a firm's average value of sales belongs to the ith quartile of the sales distribution. The dependent variable is expenditure on managerial remuneration as ratio of total compensation of a firm. $IMP^{China}_{IN,jt-1}$ implies Chinese import penetration ratio in domestic market of India and used at time $t-1$. It is calculated as the share of imports from China in India in industry j at time t divided by total domestic production plus imports minus exports for industry j for India in 1994. We use $IMP^{China}_{BIMM,jt-1}$ as an instrument for $IMP^{China}_{IN,jt-1}$. We measure $IMP^{China}_{BIMM,jt-1}$ using Chinese imports from other developing countries-Brazil(B), Indonesia (I), Malaysia (M) and Mexico (M). Foreign competition in US ($FComp^{China}_{IN,jt-1}$) implies import competition faced by Indian firms from China in an export destination (US). This is measured at the NIC 2004 (4-digit industry) level and used at $t-1$.Firm controls are age, age squared of a firm, value of assets of a firm and expenditure on royalty and R&D. Assets, royalty and R&D are used at period $t-1$ and in real terms. Standard errors are clustered at the 4-digit industry level and reported in parentheses. Intercepts are not reported.***- statistical significance at 1 percent; **- statistical significance at 5 percent; *- statistical significance at 10 percent.