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Who bears the burden of employer compliance with social security contributions? Evidence from Chinese firm level data ☆

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Abstract

This article utilizes firm level audited data from Shanghai in 2002 and 2003 to examine the extent to which employers shift the burden of compliance with social security obligations back to employees in the form of lower wages. Results from a fixed effects panel model using data on a subset of the firms audited in both years found that 18.9% of the compliance cost was shifted back to employees in the form of lower wages. Separate two-stage least squares estimates with controls for firm size, ownership and industry type for 2002 and 2003 found that the incidence of social insurance contributions on employees increased across the two years. In 2002 the incidence of social insurance contributions on employees was 9.1% and in 2003 this increased to 33.8%. An explanation for the increase in the incidence on employees over the two years is that employer compliance improved in 2003 compared with 2002.

JEL classification: J32; K42
Keywords: Compliance; Incidence; Shanghai; Social insurance; Wage reduction

1. Introduction

China has reformed its social security system to increase employee coverage and equity across ownership forms. Whereas social security coverage had previously been the exclusive domain of employees in the public sector, social security coverage has now been afforded to employees in the non-state sector. For many non-state firms this has made workers more costly to employ. In many cities in China non-salary costs to employers are equivalent to 40–50% of an employee's salary. The comparable figure in other Asian countries is considerably lower; for example, 16% in India,

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12% in Malaysia and 10–15% in Indonesia (Fuller, 2005). An interesting issue is the extent to which employers have really had to bear the burden of the increased cost of social insurance or been able to push the cost back on to employees in the form of lower wages. The standard perspective on employer-provided benefits is that firms only nominally pay for social insurance, while the actual cost is borne by employees through lower wages. Summers (1989) outlines the standard theory of employer-provided social insurance. Mandated benefits cause shifts in both the demand and supply for labor, leading to an equilibrium wage that absorbs most, if not all, of the insurance benefit. A large empirical literature has emerged that examines the incidence of mandated social security benefits in other countries. Most of these studies have found that employers shift the incidence of mandated benefits back on to employees in the form of lower wages.

One issue that has not been examined is whether employer compliance with mandated benefits affects whether employers shift the incidence back on to employees. The reason is that most extant studies of the incidence of employer-funded social insurance have been for developed countries where it is assumed that employer compliance is high. However, employer compliance with social security obligations cannot be assumed in transitional economies such as China, where monitoring and enforcement is weak. Nyland, Smyth, and Zhu (2006) reported that in 2001 in Shanghai, the city from which the data for the current study comes, 71% of employers paid less than their mandated social insurance contributions. In the dataset employed in this study, 81% of employers paid less than the mandated social insurance contribution in 2002; and in 2003, 35% of employers paid less than the mandated social insurance contribution. One would expect that those employers who do in fact comply or over-comply with social insurance contributions that are mandated by the state would be more likely to shift the cost of compliance with regulations back on to employees in the form of lower wages.

The objective of the present study is to examine this issue through employing a unique dataset containing information from two successive audits in 2002 and 2003 conducted by the Bureau of Labor and Social Security (BOLSS) of the social security contributions of firms in Shanghai. The dataset contains information on the average annual wage in the firm, the firm's compliance with mandated social insurance and other firm level characteristics. The dataset also contains information on whether the firm was being reaudited (ie. whether firms in the 2002 audit had also been audited in 2001 and whether firms in the 2003 audit had also been audited in 2002). First, we estimate the extent to which firms shift the cost of compliance or over-compliance back on to employees in the form of lower wages for each of the years separately, utilizing the information on whether the firm was being reaudited to instrument the compliance rate. Second, for a subset of firms that were audited in both 2002 and 2003 we estimate the effect of compliance or over-compliance on the wage rate using a fixed effects panel model. Third, for each of 2002 and 2003, we estimate the effect of the level of compliance on the wage rate, treating firms that were under-compliant and over-compliant separately.

In addition to allowing us to examine the effect of the extent to which firms actually comply or over-comply with mandated benefits on the incidence of social security, the dataset has the advantage that it is for a single city. In order to obtain sufficient variation in employer contribution rates existing studies have (a) examined incidence across states where contribution rates differs across states at a single point in time (see eg. Gruber, 1994); (b) examined incidence within a given state or country where contribution rates have varied over time (see eg. Gruber, 1997; Gruber & Krueger, 1991); or (c) examined incidence across countries (see eg. Ooghe, Schokkaert, & Flechet, 2003). The advantage of having cross-sectional data for a single city is that it obviates the need to control for variations in labor market structure and government financing arrangements across space and time.

2. Theoretical framework

Summers (1989) claimed that introducing mandated benefits will shift the employers' labor demand curve to the left at each wage rate by the expected costs of the benefits, while it will cause the supply curve to shift to the right by a similar amount provided that the costs of the benefits to the employer are equal to their value to the employee. If the latter is lower than the former then the supply curve will shift by less than the demand curve. If wages are perfectly flexible and employees value wages at cost, the new labor market equilibrium will occur with no change in employment at a wage rate reduced by the cost of the benefits. However, if employees value the benefits by less than the cost to the employer, the wage will fall by less than the cost of the benefits and, at the same time, part of the cost to the employer will be reflected in the form of a decline in employment.