China Economic Review 27 (2013) 52–68

Contents lists available at ScienceDirect

China Economic Review

Labor market conditions and social insurance in China ☆

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ARTICLE INFO

Article history:
Received 5 September 2012
Received in revised form 13 July 2013
Accepted 15 July 2013
Available online 24 July 2013

JEL classification:
J64
J65
D21

Keywords:
Social insurance
Employer participation
Labor market tightness
People's Republic of China

ABSTRACT

This paper provides micro-level evidence on the relationship between labor market conditions and social insurance participation among Chinese industrial firms. I find that the increased scarcity of labor over this period was a quantitatively important driver of participation. Moreover, a comparison of the responses in different segments of the labor market shows that the response was relatively stronger in sectors with larger shares of uninsured workers, namely in private firms, those with a larger share of low-educated workers, and those without labor unions. The results suggest that a tighter labor market in the years ahead can aid policy makers to implement social insurance programs and combat insurance inequality.

1. Introduction

The dramatic overhaul of China's social insurance system is a major component of the country's ongoing economic transition. The endowment system for workers in the state-sector has been replaced with several different social insurances. Industrial firms based in urban areas are required to make large payments to these programs. Adding up the benchmark payment rates, the overall level is among the highest in the world. It constitutes 30% of the firm's payroll expenses, which can be compared to 10% of payroll in the U.S., 20% in Germany and 23% in Sweden (SSA, various country reports).

High payment levels coupled with weak regulatory enforcement and a fragmented administration of the programs have combined to make evasion of payments a serious concern (Dorfman et al., 2013; Feng & He, 2012; Mao, Zhang, & Zhao, 2012). Yet, little is known about the determinants of evasion, in particular regarding the interplay between contextual economic factors and firm behavior.

This paper investigates the relationship between labor market tightness and industrial firms' participation in the three largest social insurance programs: pensions, medical insurance, and unemployment insurance. In a simple theoretical framework I show that a tighter labor market incentivizes employers to participate. The intuition is that when there are fewer unemployed workers for each vacant position, firms may offer social insurances as a way to compete more successfully in attracting labor and lower their recruitment costs.

☆ The author gratefully acknowledges the helpful comments from Bertil Holmlund, Lina Song, Björn Gustavsson, Per-Anders Edin, Fredrik Sjöholm, Johan Lyhagen, Olle Folke, Tor Eriksson and seminar participants at SNEE Conference 2010, Uppsala University, Stockholm School of Economics China Center (CERC), CEA (Europe/UK), and two anonymous referees. Dang Rui and Yulian Xu provided excellent research assistance, and Dina Neiman provided excellent editorial support. Financial support from the Marianne and Marcus Wallenberg Foundation, and the Ragnar Söderberg Foundation, is gratefully acknowledged.

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1043-951X/$ – see front matter
http://dx.doi.org/10.1016/j.chieco.2013.07.003

To empirically test this hypothesis I draw upon panel data for industrial firms observed in 2000–2007. The firms within the dataset together make up nearly 90% of China's industrial output and account for two thirds of industrial employment. Although the data does not cover the most recent years, the conclusions we can draw remain relevant. The broader question of how the non-wage compensation of firms changes in response to labor market conditions is relevant for understanding the development of the labor market and the welfare state. In particular, it is relevant for the ongoing discussions of the impacts of the joint processes of an aging population and changing patterns of rural–urban migration (see, for example, the insightful discussions provided by Cai, 2010, or Meng, 2012). In this context, firms' provision of social insurance coverage is understudied, yet it has a great impact on production costs, worker welfare, and the functioning of the labor market.

After conducting benchmark tests on the full sample of firms, I examine the question of heterogeneous responses. I divide the firms into two segments based on previous scholarly work on both regulatory compliance and labor market segmentation in China. In the upper segment I include state-owned and foreign-owned firms, firms that have an in-house branch of China's only legal union, and firms with more highly educated workforces. The lower segment is delineated as collective-owned and private domestic firms, those that lack unions and those with higher shares of low-educated workers.

The results of the empirical analysis confirm the hypothesis that firms respond to tighter regional[1] labor markets by offering social insurance, a behavior that is captured by a firm moving from zero to non-zero social insurance expenditures. This response is found for both the pension and the medical insurances, as well as for the unemployment insurance. Relating the size of the estimated effects to the trends of increased tightness over the study period, almost half of the increase in participation could be accounted for by this factor. This result suggests that the increase in labor market tightness aided policy makers in the process of implementing social insurance reforms in the urban industrial sector. Moreover, future periods of labor scarcity can be expected to aid – rather than hinder – the development of the welfare state.

The heterogeneity analysis offers some additional and interesting findings. First, and not surprisingly, the descriptive evidence shows that firms in the upper segment of the labor market are substantially more likely to participate in the programs compared to firms in the lower segment. A more surprising finding is that the response to labor market tightness is stronger in the lower segment. In other words, tightness had the largest impact on the sectors with the largest share of uninsured workers, triggering a convergence in regulatory compliance and a narrower gap in non-wage compensation between sectors. Instead of mainly reallocating production to avoid worker shortages and higher labor standards, it appears that a substantial number of private domestic firms and firms with a larger share of low-educated workers improved their work conditions.

The paper is organized as follows: Section 2 outlines social insurance reforms in China's urban areas. Section 3 surveys the theoretical and empirical literatures that have focused on employer provision of social insurance, in particular the literatures related to regulatory compliance and social corporatism. Based on insights from these literatures I formulate a simple theoretical model in which social insurance is a recruitment tool that firms are incentivized to use when the labor market becomes tighter. Section 4 gives details about the data and variables used to test this conjecture, with special attention to the measures of labor market tightness and insurance participation. Section 5 describes the estimation method and the baseline results. It also shows that the results are robust to, among other things, various sample restrictions, estimation method, and to controls for measurement error in both the dependent and independent variables. Section 6 diversifies the analysis across the dimensions of firm ownership, workforce education level, and firm unionization. Section 7 concludes.

2. Social insurance reform in urban China

Shortly after the proclamation of the People's Republic of China in 1949, the country formulated an ambitious set of entitlements for the urban workforce. The so-called "iron rice bowl" consisted of a number of non-wage benefits under the umbrella term *Labor Insurance Scheme* (LIS).[2] Besides its three main components of health insurance, injured-worker insurance, and old-age insurance, many workers also benefitted from insurance for sickness, invalidity, maternity and death (Tang & Ngan, 2001).

In recent decades, two key factors propelled policy makers to engage in a dramatic overhaul of the workplace-based entitlement system. As the private sector grew, an increasing number of workers were excluded from social insurance coverage because the LIS only applied to the state-controlled sector. At the same time, State-owned Enterprises (SOEs) faced growing difficulties in competing with the private firms that were exempt from insurance costs. To overcome these problems, the LIS was decomposed into several different social insurance schemes and these schemes were applied equally to all ownership sectors. At the same time, the financial responsibility was moved from the individual firm to a system that pooled funds across numerous firms. These reforms improved the competitiveness of the SOEs by transferring liabilities that had accumulated under the LIS, especially in the case of pension payments, to the pooled funds of the new system.

Table 1 lists the current social insurance programs for urban industrial employees. Also listed are the years in which the main regulatory frameworks for these schemes were introduced, as well as benchmark contribution rates for employers and employees. Full compliance with the benchmark case amounts to the equivalent of a 30% payroll tax. Eligibility for benefits also requires payments to be made over a number of years, at a minimum 15 years for pensions and one year for unemployment insurance.

[1] The term region is used for China's 22 provinces, 5 Autonomous Regions, and 4 self-governing municipalities.

[2] From its setup in 1951, rural areas were excluded from the LIS (Hussain, 1994).