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An evaluation of the 1994 tax reform in China using a general equilibrium model

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Abstract

This paper applies a computable general equilibrium model to analyze the effects of the 1994 tax reform in China. The result of the simulations shows that small aggregate welfare gains are obtained from the 1994 tax reform. However, household groups are worse off because of the redistribution of resources from household to government sectors. There will be a substantial increase in the government revenue and the prudent and productive use of the increased revenue could improve the welfare of the households. This result also suggests that the statutory rates introduced in 1994 may be too high from the equal yield standpoint. It is suggested that further improvements in the tax system can be made by extending a consumption-type VAT to other sectors currently not included in the reform.

JEL classification: F1; F02; C68
Keywords: CGE model; China; Tax reform; VAT; Income inequality

1. Introduction

In 1994 China implemented an extensive reform of its tax system with the objective of promoting a market-oriented economic development. This reform mainly involves the transition from turnover taxes to value-added taxes and the integration of income tax rates

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for different types of enterprises. This paper provides a quantitative assessment of the economic consequences of the 1994 tax reform. To this end, we adopt a computable general equilibrium (CGE) approach. In contrast to the partial equilibrium approach, which is usually used to make assessment of the impacts of taxes, the CGE model has the main advantage of combining detailed and consistent real-world databases with a theoretically sound framework (Shoven & Whalley, 1972)[1]. It captures the interactions among different sectors and agents, and these are important for analyzing the incidence, distributional and welfare implications of the tax policy changes. We also attempt to explore alternative measures that can be added to the 1994 reform package, which may improve the efficacy of the tax system.

The rest of the paper is organized as follows. Section 2 outlines the weakness of the pre-reform tax system and the tax changes introduced in the 1994 reform. Section 3 presents the salient features of the CGE tax model for China. Section 4 discusses the data used for model calibration, and Sections 5 and 6 present our results of a number of tax reform simulations. Section 7 concludes the paper.

2. Overview of taxation system in China

China's tax system before 1994 has evolved through various tax changes designed to complement China's well known economic reform initiated in 1978. All these tax changes involved a move from a centralized system towards a more market-oriented system. Table 1 outlines the major changes of China's taxation system since 1979. Before 1979 state-owned enterprises (SOEs) remitted all profits to the state. In the early 1980s, this system was replaced by the taxation of enterprise income in an attempt to provide SOEs with greater incentives for increasing efficiency. This system featured a statutory 55% enterprise tax rate (there was a separate tax for non-state and small scale enterprise) and an adjustment tax which was introduced to extract 'excess' profits accruing to an enterprise as a result of price controls. Meanwhile, indirect taxes were also restructured. The previous turnover tax named 'consolidated industrial and commercial tax' (CICT) in 1984 was divided into three separate indirect taxes: the value-added tax, VAT (applied to industrial sectors), and two turnover taxes—business tax (applied to services sectors) and product tax (applied to industrial sectors). However, foreign enterprises and joint ventures are not exempted from the CICT.

Since 1986, the 'contract system' for enterprise income taxation had been introduced nationwide. This system aimed to inculcate the practice of business performance evaluation in the enterprises by establishing clear criteria for profitability measurement. Under this system, a contract was established between government and enterprise to assess the profits or taxes to be remitted by the enterprise to the government. Regarding indirect taxation, the coverage of VAT had been broadened gradually. A number of minor taxes

[1] The pioneering effort in using CGE for tax analysis is that of Shoven and Whalley (1972). Other notable examples of using CGE models to analyze economic issues relating to the Chinese economy include Wang (2003) on China's accession to WTO; Zhang (1998b) on macroeconomic effects of CO_2 emission; Xu (1996) and Zhang (1998a) on Chinese economic reform.