



# Trading market access for technology? Tax incentives, foreign direct investment and productivity spillovers in China<sup>☆</sup>

Ziliang Deng<sup>a,\*</sup>, Rod Falvey<sup>b</sup>, Adam Blake<sup>c</sup>

<sup>a</sup> School of Business, Renmin University of China, China

<sup>b</sup> School of Business, Bond University, Australia

<sup>c</sup> School of Tourism, Bournemouth University, UK

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## Abstract

Tax incentives have been adopted worldwide to attract foreign direct investment (FDI) and its superior technology. However whether tax incentives can promote FDI productivity spillovers remains unknown. We develop a static computable general equilibrium (CGE) model of China to explore it. The results suggest that abolishing differential tax system leads to weaker FDI spillovers in the short term. Nonetheless, the reform lifts up the productivity entry threshold for foreign firms, and the surviving domestic firms become more productive and thus more capable of absorbing productivity spillover.

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\* Corresponding author at: School of Business, Renmin University of China, Haidian District, Beijing 100872, China. Tel.: +86 10 8250 0498; fax: +86 10 8250 9169.

*E-mail address:* [ziliang.deng@ruc.edu.cn](mailto:ziliang.deng@ruc.edu.cn) (Z. Deng).

## 1. Introduction

Corporate tax incentive has been a policy instrument widely adopted by many countries to attract foreign direct investment (FDI), as FDI may arguably enhance productivity and economic growth in host countries.

In a global survey covering 40 developing and transition economies and 5 developed economies from all regions of the world (with North America excluded), almost 85 per cent of the countries surveyed offer tax holidays or statutory corporate tax reductions for specific types of foreign investment (United Nations Conference on Trade and Development, 2000). Tax competition over statutory profit tax rates for mobile profit has also been widely existing among the OECD countries in the last twenty years (Devereux, Lockwood, & Redoano, 2008), and differential taxes are observed in the vast population of industrialized economies. Devereux, Griffith, and Klemm (2002) find that the governments of the EU and G7 countries have been particularly keen to attract highly profitable investment projects carried out by multinational firms that may ‘generate positive externalities’ through technological spillovers (pp. 483–484).

The widely observed FDI tax incentives in part reflect the desire of policy makers to benefit the host economies with foreign capital and its potential technology and productivity spillovers. However it has not been empirically scrutinized in the literature whether discriminative tax incentives can really promote the technology transfer and productivity spillovers in host countries. This research offers insights into this intriguing issue using a computable general equilibrium (CGE) model. Specifically, it assesses if harmonizing profit taxes over foreign and domestic firms has a negative impact over FDI productivity spillover effects. This research takes the Chinese economy as a case study and assesses the impact of the 2008 corporate income tax reform on FDI productivity spillover effects. A CGE framework under perfect competition is developed and further extended to incorporate two alternative market structures, namely monopolistic competition with homogeneous firms (Dixit & Stiglitz, 1977) and with heterogeneous firms (Melitz, 2003), so that we can not only cast a light on how the interplay between foreign and domestic firms affects the episodes, but also test the robustness of the results. Studying FDI spillovers under three market structures within a CGE framework is methodologically novel in the literature. More importantly it provides us a unique leverage, enabling us to look into this economy-wide phenomenon more comprehensively.

We chose China as the case for study as its FDI incentives offer us an ideal sample. During the last three decades of ‘reform and opening-up’ policy implementation, China has become an attractive FDI destination because of its enormous labor supply and low labor cost, relatively stable political and economic environment, and pro-FDI policies (Deng, Guo, & Zheng, 2007). As a result, FDI inflows to China increased dramatically from 0.9 billion dollars in 1983 to 105.7 billion dollars in 2010. Since 1993, China has been the largest FDI host among the developing countries. The centerpiece of Chinese FDI policies was to attract foreign capital, promote export, accumulate foreign reserves, and very importantly, to enhance technology transfer and spillovers, that is, ‘trading market access for technology’ (Long, 2005). Most foreign-invested enterprises (FIEs)<sup>1</sup> needed to pay profit tax at a *de facto* rate of only 15 per cent in the first seven years of operation. In contrast, the statutory corporate income tax rate of domestic firms was as high as 33 per cent. Although the benefits accompanying the influx of foreign capital have been enormous,

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<sup>1</sup> Foreign-invested enterprises (FIEs) include all types of enterprises invested by foreign capital, for example solely foreign owned enterprises, joint ventures, co-operative enterprises.

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