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Spatial agglomeration, FDI, and regional growth in China: Locality of local and foreign manufacturing investments

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Abstract

While China remains as the largest foreign direct investment (FDI) host country among all developing nations, the nearby Hong Kong and Taiwan are the two dominating sources of manufacturing FDI among all FDI origins. FDI absorption in the case of China could be well explained by Krugman [Krugman, P. (1991a). Increasing returns and economic geography. *Journal of Political Economy*, *99*, 483–499] core (Hong Kong)–periphery (Guangdong, China) system and the critical role of spatial agglomeration in directing foreign investments. This paper aims at understanding the ''spatial dimension'' of firm concentration and its economic interactions with growth in China as well as how firm locality is related to institutional factors, such as regional policy on FDI, investment source, gravity of the core city, and natural geographic aspects. The effects of spatial agglomeration and FDI on regional output growth and their structural relations with endogenous FDI are addressed. Using a micro-(firm) level data consisting of 55,348 local Chinese and foreign manufacturing firms investing in Guangdong, China, research results show that other than institutional forces, spatial agglomeration and their synergies as well as gravity have directed the patterns of inward FDI and further, induced regional GDP growth.

Keywords: FDI; Spatial agglomeration; Firm locality; Institutional factors; Economic growth

JEL classification: F21; O19; R12; R11

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1. Background

After China's accession to WTO, China remains hosting the largest share of foreign direct investment (FDI) receipts and has also become the top FDI destination among all developing countries. Among various sources of FDI flowing into China, the two nearby overseas Asian Chinese economies, Hong Kong and Taiwan, have represented the two largest FDI sources to be followed by USA and other OECD countries. After China's economic reform in 1979 and her implementations of the preferential FDI policies in Guangdong, other coastal regions in China were further opened up stepwise to receive FDI via carefully designed FDI promotion policies.[1]

Guangdong which contains three of the four Special Economic Zones (SEZs) and the Pearl River Delta region (PRD) has been able to attract ample inward FDI from other Asian economies, especially from the nearby Hong Kong and Taiwan. It remained as the largest FDI recipient sharing at least one-third of the national total FDI as of 2000 and more than a quarter (25.7%) of the total in 2003.[2] Both PRD in Guangdong in southern China and Yangtze River Delta region (YRD) in eastern China represented only 1.4% (or 4% at the provincial level) of the total area in China were, respectively, recorded to account for, 26.27 and 26.05%, on an average, of the total national FDI receipts, or in sum, more than one-half of the national total FDI during the period of 1985–2003.

The continuous huge influx of manufacturing FDI during the past two decades has made PRD in Guangdong distinctively known as the ''world's largest manufacturing base''. The dominance of the inward FDI in Guangdong by Hong Kong and Taiwan, despite of the vigorous competition arising from other regions in China and with the rapid rise of YRD, in particular,[3] posted a significant question: ''why has this region (PRD) in China, other than being FDI preferential policy-led, been able to attract and mobilize continuously the largest share of inward FDI and particularly from these two overseas Chinese economies?''

This paper aims at investigating the critical roles of spatial agglomeration that have directed the FDI patterns in China with particular reference to manufacturing in Guangdong and based on Krugman's (1991a) view of core–periphery (CP) system. Until recently, very limited efforts have been devoted to study how spatial agglomeration, FDI, and regional output growth are related and how these effects would interact. In this paper, theoretical perspectives regarding the critical roles of spatial agglomeration (that is, the ''critical masses'' phenomenon) in terms of firms' physical

[1] Guangdong province, located at the southern coast of China and immediately north of Hong Kong, was first designed as a showroom to receive FDI via the establishments of Special Economics Zones (SEZs) in 1979. Subsequent steady and rapid FDI growth were induced via the economic opening of its Pearl River Delta (PRD) region in 1987 and the reconfirmation of China's commitment to economic reform by Deng Xiaoping's speech in early 1992. A brief review of China's FDI promotion policy and assessment of its effectiveness on FDI absorption were performed by Ng and Tuan (2001).

[2] In terms of FDI receipts, Guangdong (PRD) was surpassed by the Yangtze Delta region (YRD) in 2002 both in terms of volume and growth rates. For the period of 1985–2003, the three coastal regions, PRD (Guangdong), YRD, and Bohai, respectively, shared 26, 26, and 13%, on the average, of the total realized FDI representing about two-third of the total national FDI receipts.

[3] The competition between PRD in south China and YRD in east China in FDI and the critical importance of the institutional perspective on regional growth in China were investigated by Tuan and Ng (2004b). Shanghai together with other 28 cities and eight areas along the Yangtze River were, respectively, opened up in 1984 and 1992 to receive FDI (Ng & Tuan, 2001). The subsequent development of YRD (recently known as 15 + 1) to consist of Shanghai and its nearby 15 cities/counties owing to their outstanding record in FDI attraction posted YRD another vivid case, after PRD, in demonstrating the power of a core–periphery economy (Tuan and Ng, 2004b). Visual comparisons and examinations of PRD and YRD of their fundamental economic and investment environments depicted by Geographic Information System (GIS) maps using basic economic indicators at the municipality and city/county/district levels can be viewed and studied via the following website: www.jlgis.cuhk.edu.hk/business (Tuan, Ng, & Lin, 2006).