

Abstract

In this thesis I write about four aspects of China's domestic post-reform economy: (i) The dynamic relationship between state fixed investment and non-state sector inputs and industrial output; (ii) The impact of environmental policy on foreign direct investment location decisions; (iii) The relationship between exports and economic growth, and (iv) Economic spillover effects between a core and a periphery region. The thesis consists of an introduction and four separate papers.

The first paper, "State Fixed Investment and Non-State Sector Growth: China under Reform, 1978-2000," draws on the theoretical concepts of complementarity and substitution between public expenditure and private inputs as developed by Aschauer (1989 a, b). The objective is to examine the extent to which state fixed investment contributes to the performance of the non-state industrial sector. This is done by: (i) identifying whether state fixed capital is a complement to or a substitute for non-state sector inputs, i.e. capital and labor, and (ii) quantifying the marginal contribution of state fixed capital to non-state industrial production. Using both national level data and data for 25 of China's 31 provinces and autonomous regions, unit root and co-integration analysis are performed and traditional impulse response functions to trace the effects of exogenous shocks are used. The results indicate that state fixed capital formation crowds in non-state sector inputs and positively affects industrial production at both national and provincial levels.

The second paper, "Foreign Direct Investment, Development and Environmental Policy in China," draws on a number of theories on geographic location of foreign direct investment, including Dunning's (1977) OLI-paradigm (ownership, location, internalization) and "new location theory", which focuses on agglomeration effects associated with demand and supply linkages. We argue that less developed regions are more inclined to sacrifice environmental quality for growth and to use environmental policies as instruments to attract foreign direct investment. Based on panel data for 28 provinces and autonomous regions over the 1987 to 1998 period, the results show that environmental policies have significant impact on foreign direct investors' location decision.

The third paper, "Export-Led Growth: Application to China's Provinces 1978-2001," tests the Export-Led Growth hypothesis on China. Although the positive impact of China's outward-orientation is obvious, the question of whether economic growth in China

is driven by exports continues to be controversial. Indeed, a clear-cut link between export expansion and GDP growth has not yet been confirmed in China, nor has it been consistently confirmed for other transition or developing countries. The dynamic interaction between export expansion and GDP growth is examined on both aggregate and provincial levels for the 1978 to 2001 period. Unit root and co-integration analysis of the data are performed and is followed by *Granger*-causality tests, using vector error-correction models, between the integrated variables. The results provide empirical support for the Export-Led Growth hypothesis at the national level and for 13 of the 27 provinces and autonomous regions in the sample.

The fourth paper, "Guangdong – A Catalyst for Economic Growth and Exports in Hunan Province," draws on the theory of spillover effects between a core and a periphery region developed by Hirschman (1958), and on more recent models of industrial location and backward linkages. The objective of this paper is to examine a core region's economic spillover effects on an adjacent peripheral region in China. These economic linkages are inextricably related to China's regional development strategy, which granted special economic privileges to some of China's coastal provinces at an early stage of reform. A key question is, therefore, how successful these policy-targeted regions have been in creating positive 'trickle-down' effects, presumably generated by demand and supply linkages, to their adjacent westward provinces. Unit root and co-integration analysis of the data are performed followed by *Granger*-causality tests, using a vector error-correction model, to examine potential causal effects of export expansion in the rapidly growing Guangdong province on the growth of GDP and exports in Hunan, its westward neighboring province. The results point at long-run positive causality from export expansion in Guangdong to growth of GDP and exports in Hunan. Hence, the results partly support the central government's unbalanced regional development policy of the late 1970s and early 1980s.

Keywords: Fixed investment; Industrial growth; Impulse responses; Foreign direct investment; Environmental policy; Export-led growth; Error-correction; Causality; Spillover effects; Backward Linkages; China

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