Regional agricultural labour productivity convergence in China

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Abstract

This paper tests for regional agricultural labour productivity (ALP) convergence in China. The analysis indicates that ALP diverges between 1985 and 1992, but converges between 1992 and 2000. Further analysis shows that these findings can be explained by the different rates of agricultural out-migration in these two periods. We argue that these different rates of regional agricultural out-migration can be attributed to the different government policies and economic conditions before and after 1992. In particular, migrants from rural to urban areas found it easier to obtain both food and work in the post-1992 era.
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Introduction

The last 10 years have seen an enormous increase in research on economic growth. The impetus for much of this research has been the theoretical contributions of Romer (1986, 1990) and Lucas (1988) as well as the empirical work of Barro and Sala-i-Martin (1991, 1992). Much of this research addresses the question of whether per capita income and labour productivity has been converging among regional or national economies. China has experienced considerable economic growth, particularly in coastal provinces, over the last two decades. Policy reforms in the early 1980s provided the initial impetus for this growth. There has been a great deal of

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discussion about whether this growth can be associated with converging or diverging levels of output per worker across regions.

Several different theoretical perspectives, including both neo-classical and endogenous[2] growth theories, underpin the convergence hypothesis. Neo-classical growth theory (see Solow, 1956), based on the assumption of diminishing returns to capital, predicts that economies with a lower capital–labour ratio enjoy a higher marginal product of capital and thus will grow at a faster rate, converging to a steady state with those with a higher capital–labour ratio. This is known as the absolute convergence hypothesis, which is not always fully supported by the empirical evidence. A weaker form of convergence known as conditional convergence has also been proposed (Barro and Sala-i-Martin, 1992; Mankiw et al., 1992). In this case it is accepted that economies may be heterogeneous, but that convergence still holds among groups of economies with certain characteristics in common. While steady states may differ, an economy grows faster the further it is from its own steady state value. In other words, economies may converge to different (but, parallel) labour productivity steady states. This conditional convergence may be observed once the determinants of steady state labour productivity are controlled for. Empirical evidence in support of the conditional convergence hypothesis is more widespread.

Empirical studies of income per capita and labour productivity convergence in China are not all in agreement. However, in general, cross-sectional studies suggest that while there is no evidence of convergence before 1978, evidence of mild conditional convergence can be found after this period, although the rate of convergence may have slowed during the 1990s (Chen and Fleisher, 1996; Gundlach, 1997; Jian et al., 1996; Raiser, 1998). Two recent time series studies (Yao and Zhang, 2001; Zhang et al., 2001) find evidence of convergence within geo-economic clubs[3] or so-called economic zones in China, but evidence of divergence between these clubs.

Despite the importance of agriculture in China, few studies have tested for agricultural output and labour productivity convergence. An exception is Peng (1999), who finds that agricultural output per capita (rural residents only) converges between 1985 and 1991 based on an analysis of cross-sectional county data. Wu (1995) provides some evidence suggesting that agricultural efficiency levels have diverged across China between 1985 and 1991.

Two important components that underpin all theories of economic convergence are factor mobility (including innovation diffusion) and free trade. In the presence of these two components, agricultural labour productivity (ALP) convergence between economies (including regional economies) is likely to become a more powerful force. Factor mobility in China has long been subject to restrictions. In particular, there have been restrictions on labour movements since the 1950s. Although these restrictions have not yet been completely removed, government policies with regard to

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[2] Some endogenous growth models predict divergence, while others predict convergence. These outcomes are partly dependent on whether constant or increasing returns are assumed.

[3] Geo-economic clubs are spatially adjacent regions that share similar important economic characteristics. In previous studies three geo-economic clubs have been identified (see Appendix A).