

Dynamic Externalities and Regional Productivity Growth: Evidence from Manufacturing Industries of India and China

Authors : Veerpal Kaur

Abstract : The present paper aims at investigating the role of dynamic externalities of agglomeration in the regional productivity growth of manufacturing sector in India and China. Taking 2-digit level manufacturing sector data of states and provinces of India and China respectively for the period of 1998-99 to 2011-12, this paper examines the effect of dynamic externalities namely – Marshall-Arrow-Romer (MAR) specialization externalities, Jacobs's diversity externalities, and Porter's competition externalities on regional total factor productivity growth (TFPG) of manufacturing sector in both economies. Regressions have been carried on pooled data for all 2-digit manufacturing industries for India and China separately. The estimation of Panel has been based on a fixed effect by sector model. The results of econometric exercise show that labour-intensive industries in Indian regional manufacturing benefit from diversity externalities and capital intensive industries gain more from specialization in terms of TFPG. In China, diversity externalities and competition externalities hold better prospectus for regional TFPG in both labour intensive and capital intensive industries. But if we look at results for coastal and non-coastal region separately, specialization tends to assert a positive effect on TFPG in coastal regions whereas it has a negative effect on TFPG of coastal regions. Competition externalities put a negative effect on TFPG of non-coastal regions whereas it has a positive effect on TFPG of coastal regions. Diversity externalities made a positive contribution to TFPG in both coastal and non-coastal regions. So the results of the study postulate that the importance of dynamic externalities should not be examined by pooling all industries and all regions together. This could hold differential implications for region specific and industry-specific policy formulation. Other important variables explaining regional level TFPG in both India and China have been the availability of infrastructure, level of competitiveness, foreign direct investment, exports and geographical location of the region (especially in China).

Keywords : China, dynamic externalities, India, manufacturing, productivity

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