Economics Research Seminar

Presenter: Prof Jianxin Wu, Jinan University and UWA Business School BHP Visitor

Topic Title: Convergence of Carbon Dioxide Emissions in Chinese Cities: A Continuous Dynamic Distribution Approach

Abstract: This paper investigates the spatial dynamics of per capita carbon dioxide (CO₂) emissions in China. The analyses are conducted by employing a continuous dynamic distribution approach and panel data of 286 prefectural and above cities during the period 2002-2011. The results show that per capita CO₂ emissions tend to converge during our sample period. However, multimodality is found in the ergodic distribution of all cities analyses. It is found that there is more persistence in cities with low per capita CO₂ emissions, and more mobility in cities with high per capita CO₂ emissions. The analyses also show that the dynamics of per capita CO₂ emissions are significantly different among various geographical, income and environmental policy groups. The conditional distribution analyses indicate that the multimodality cannot be explained independently by any one of the two factors, namely geographical locations and income levels. The findings in this study may have important policy implications for CO₂ abatement in China.

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