

## **China's Structural Adjustment of Economy and Investment for carbon emissions reduction: a turnpike in environment-input-output system**

Topic: Methodological aspects of input-output analysis I

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China promises to decrease carbon intensity by 40% -45% of its 2005 level by 2020. Effective growth path to this goal needs to restructure production and investment, to arrange reasonable consumption and accumulated ratio. Within an environment Input-Output system, a new consumption turnpike is developed with the aim of maximizing accumulated consumptions under carbon constraints; its solution requires dynamic programming resolved by reverse algorithm. Considering technology advance (i.e. the input-output and capital coefficients) and energy mix change, a turnpike gives effectively economy performance on aspect of structure adjustment in production and investment. China's economy can effective grow if adjustment of industry structure through increasing in the service 5% without penalty of manufacture growth, annual increase in the consumption by about ten point percentage than actual economy performance.