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Interregional Price Transmission and Household Incidence of Carbon Taxation in China: A Multi-Regional Input-Output Analysis

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Abstract: A carbon tax raises fossil-fuel costs, but how these price effects spread across provinces and reach households is less understood. Using the 2020 China MRIO table (31 regions, 42 sectors), we apply a Miller–Round-type decomposition to the price model, separating tax-induced price changes into local, spillover, and higher-order interregional components. Producer-price effects concentrate in energy-producing provinces such as Inner Mongolia and Shanxi, whereas consumer-price effects are smaller and broadly dispersed. The burden is regressive: low-income and rural households face higher effective tax rates. Differentiated rates change its level but not its structure; targeted rebates bring incidence close to neutrality at modest fiscal cost.

Keywords: Carbon Tax, Multi-Regional Input–Output Model, Interregional Price Transmission, Tax Incidence, Suits Index

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