Why there is large energy consumption variations between China and other countries: perspective from the final demand side

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Different countries follow various energy consumption patterns, directly due to such scale factors as economic scale and population size, but also on a deeper level, the underlying variation of the economic structure, including industrial structure and final demand structure. Different from most of existing researches, this study focuses on the final demand side and analyzes the energy consumption variation across the world, aiming to explore China's heightening status in energy consumption as well as its increment compared to that of other countries. This study employs a multiregional input-output model to calculate energy consumption embodied in various types of final demand and energy consumption multiplier for 40 economic entities between 1995 and 2009. Our findings are: i) in terms of the structure of energy consumption embodied in final demand, China was mainly driven by gross capital formation rather than residential consumption as other countries; ii) in terms of the trend of energy consumption embodied in final demand, China presented an increasing growth trend, while other countries, especially developed countries began to stabilize or decrease; iii) however, China had a lower level of final demand and energy consumption per capita than other countries; iv) China's energy consumption multiplier was higher than that of other countries, but China has made great efforts in energy conservation and emissions mitigation to narrow the gap.