

Assessment of CO2 Emissions Change in Eastern Asia: A Multi-Regional Structural Decomposition Approach

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Due to the unstable political situation in Middle East, and large-scale exploitation of shale gas in United States, fossil fuel prices fluctuate dramatically. Besides, the continuous deterioration of global climate also awakes authorities to seriously concern various ways such as promoting renewable energy, taking several CO2 emissions reduction policies and improving energy efficiency to mitigate the impacts. So, observing CO2 emissions trends now become to be an important work. This paper aims to identify the driving forces of change in CO2 emissions, we use structural decomposition approach (SDA) and World Input-Output Database (WIOD) to uncover the disparities in Eastern Asia and trace the change of embodied CO2 emissions during 1999 to 2009 by the effects of emission intensity, primary energy intensity, and energy efficiency. This study provides a broad overview of the magnitude and distribution of the drivers for embodied CO2 emissions across countries, and offers insights for policy makers to formulate a comprehensive and sector-specific energy policy to sustain economic growth.