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THE ROLE OF FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH IN REDUCING CO_2 EMISSIONS: EVIDENCE FROM CHINA

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Abstract

Based on the dynamic panel data from 29 administrative regions in China over the period of 2003-2013, we apply system GMM method to the analysis of the relationship between financial development, economic growth and CO_2 emissions. Empirical analysis indicates that economic growth is usually accompanied by higher CO_2 emissions, while the increasing level of final development is associated with a reduction in CO_2 emissions. Further analysis shows that the relationship between financial development and CO_2 emissions presents an inverted-U shape pattern. Only after the economic development has reached a threshold value will the promoting effect of financial development to the reduction of CO_2 emissions manifest. Moreover, industrial structure optimization and upgrading contribute to the reduction of CO_2 emissions. In other words, the increasing proportion of the secondary sector will weaken the promoting effect of financial development to the reduction of CO_2 emissions and intensify the negative impact of economic growth on CO_2 emissions. On the contrary, the increasing proportion of the tertiary sector will greatly facilitate the reduction of CO_2 emissions and mitigate the increase of CO_2 emissions due to economic growth. For less financially developed countries, market-oriented reform can reduce carbon emissions by promoting financial development. Moreover, industrial structure optimization and upgrading will contribute significantly to the reduction of CO_2 emissions.

Key words: CO_2 emissions, economic growth, financial development, industrial structure

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