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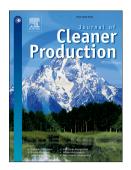
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What drives the carbon emission in the Chinese cities?—A case of

pilot low carbon city of Beijing

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Abstract: With China's rapid urbanization and industrialization, carbon emission in

Chinese cities deserve special attention, and promoting low-carbon city (LCC) is

considered essential for China. However, different cities present different

development stages and carbon emission scenarios. This study presents the factors

affecting carbon emission by introducing a city development-stage framework. The

method of logarithmic mean Divisia index (LMDI) is adopted to decompose emission

factors into energy structure, energy intensity, industrial structure, economic output

and population scale. Beijing is chosen as the case city in this study, and four

development stages for the city are identified by using the Environmental Kuznets

Curve (EKC) theory, namely, S_1 (-1991), S_2 (1991-2004), S_3 (2004-2022) and S_4

(2022-). As the data collected for analysis are only available for the period of

1995-2014, this study focuses on the factor analysis for the stage S₂ and S₃. The

results show that the main driving factor for carbon emission increase in the stage S₂

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