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DIFFERENCES IN CARBON EMISSION LEVELS AND INFLUENCING FACTORS IN THE LOGISTICS INDUSTRY OF BEIJING-TIANJIN-HEBEI REGION

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Abstract

As one of China's fastest growing regions, Beijing–Tianjin–Hebei (B-T-H), which contains one of the most intensive logistics networks in China, developed rapidly from 2005 to 2016. However, such growth also led to increases in energy consumption and carbon emissions. From 2005 to 2011, the growth rate of logistics carbon emissions in the B-T-H was maintained at 8%–10%. Subsequently, owing to policies and technological progress related to energy saving and emission reduction, a positive decrease in carbon emissions was observed. The statistical research revealed that the absolute difference in the logistics carbon emission level in B-T-H fluctuated greatly, the level of logistics carbon emissions was unbalanced. Use of the logarithmic mean Divisia index decomposition method revealed that the industrial scale and population scale were promoting factors of logistics carbon emissions in B-T-H, whereas energy intensity was the main inhibiting factor. The effect of the energy structure was not significant. Differences in the influencing factors of the three B-T-H areas were observed. Some suggestions are proposed: The population of B-T-H should be strictly controlled, energy intensity should be reduced, the energy structure and traffic structure should be adjusted, and a cooperation mechanism should be established.

Key words: Beijing-Tianjin-Hebei, carbon emission, energy consumption, logistics industry, logarithmic mean Divisia index

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