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Carbon emission performance in logistics in the Yellow River Basin

Zhao-Xian Su[a], Guo-Xing Zhang[a,*], Long Xu[b], Gong-Han Geng[c], Yi-Cun Wang[d], Irfan Ali[e]

[a]*School of Management and Economics, North China University of Water Resources and Electric Power, Zhengzhou 450046, China, email: glyjjzgx@163.com (G.-X. Zhang)*
[b]*School of Emergency Management and Safety Engineering, China University of Mining and Technology, Beijing 100830, China*
[c]*Department of Geography, King's College London, London WC2B 4BG, UK*
[d]*Henan Transportation Development Group Co., Ltd., Zhengzhou 450000, China*
[e]*University of Agriculture Faisalabad, Faisalabad 38000, Pakistan*

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ABSTRACT

With increasingly serious environmental pressure, carbon emission and the development of logistics industry are constrained by each other. The chief objective of this study is to reveal the relationship between input–output activities in logistics and carbon emissions, to evaluate the carbon emission performance in logistics in the Yellow River Basin based on DEA–Tobit model, and to analyze the factors affecting the environmental performance. The results indicate the following: (1) Ningxia, Inner Mongolia, Henan, Qinghai, Shandong achieved good carbon emission performance in logistics, while the logistics environmental performance of Shanxi, Gansu, Shaanxi and Sichuan is bad, which needs to be adjusted in time to avoid further aggravating unreasonable carbon emissions. (2) The intensity of environmental regulation and energy consumption have a positive and negative correlation, respectively, with the carbon emission performance in logistics, and the industrial aggregation and the government intervention have no significant impact on the carbon emission performance in logistics in the Yellow River Basin. Based on the research results, this paper discusses some principles applicable to improve the logistics environmental performance, which can provide reference for logistics enterprises in the micro-scale and logistics departments in the macro-scale to reduce energy consumption and to eliminate unreasonable pollution factors in the Yellow River Basin.

Keywords: Climate change; Logistics; The Yellow River Basin; DEA–Tobit; Carbon emission

* Corresponding author.

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