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SPATIAL EFFECT OF GREEN-TECHNOLOGY INNOVATION AND AIR-POLLUTION-INTENSIVE-INDUSTRY TRANSFER ON $PM_{2.5}$ POLLUTION

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Abstract

Air-pollution-intensive industries have gradually shifted from the eastern and central regions to the western regions where the atmospheric environmental self-cleaning ability is strong, each region also corresponding policies and measures for strengthening environmental governance, but the $PM_{2.5}$ prevention and control work is still serious. This paper selects the air pollution intensive industries by using the pollution intensive index, and calculates the spatial-temporal characteristics of industrial transfer by calculating the industrial spatial correlation test and the distribution change index; The panel data of 30 provinces from 2000 to 2016 were used to construct the spatial Dubin model, etc., to explore the spatial effect of the transfer of air pollution-intensive industries. The results show that the weight-based detection method for smog pollution has demonstrated significant inaccuracies, substantially compromising China's pollution control measures. China's smog formation primarily stems from emissions of water vapor and ultrafine particles generated by desulfurization, denitrification, and dust removal technologies in heavily polluting industries, where cost-cutting measures prevail. Green process innovation is significantly negatively related to $PM_{2.5}$ pollutions, and the transfer of air pollution intensive industries will lead to the corresponding $PM_{2.5}$ pollutant transfer. Industry, especially air pollution intensive industries, is an important source of $PM_{2.5}$ pollutant emissions in the air. The paper also gives some policy suggestions, such as making a scientific plan of air pollution intensive industry, advancing desulfurization, denitrification, and particulate removal technologies for highly polluting industries, gradient transfer of air pollution intensive industry and promoting the coordinated development of economy, population, industry and environment.

Key words: air pollution, intensive, industrial transfer, $PM_{2.5}$ pollutions, spatial effect

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