

Selection of alternative industries in resource-based cities: A case study of Jiaozuo, China

Long Ruyin Li Huijuan

(China University of Mining and Technology, XuZhou, JiangSu, China, 221116)

Abstract

Resource-based cities in China have had momentous contributions to the development of the national economy. In recent years, with the depletion of natural resources, sustainable development of resource-based cities has become a focus and the selection of alternative industries is in urgent need. Considering complex influential factors on selection of alternative industries, including economy, technology, resource, and management, we point out that alternative industries in resource-based cities should have both intraregional and interregional comparative advantages. With the entropy weight - gray relational TOPSIS, a comparative advantage matrix model is built to select alternative industries for resource-based cities. We use this model to select alternative industries for Jiaozuo, which is a representative resource-based city mainly producing coal located in the middle of China. In addition, three different basic values of interregional comparative advantage degree of industry are used to carry out sensitivity analysis. The results demonstrate that the comparative advantage matrix model provides a new concept and feasible method to select alternative industries for resource-based cities.

Keywords: Resource-based cities; Selection of alternative industries; Comparative advantage matrix model; Sensitivity analysis; Jiaozuo city