

## ANALYSIS OF INNOVATION PERFORMANCE OF CHINESE HIGH-TECH ZONES BASED ON IMPROVED K-MEANS AND DOMINANCE ROUGH SET

*Zhao Xiaoyu*

*Research Scholar, Department of Economics and Management, Nanjing University of Aeronautics and Astronautics,  
Jiangsu, China*

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### **ABSTRACT**

*As an important platform for innovation, the Chinese High-tech Zone undertakes the important responsibility of using innovation to drive industry and economic progress. Starting from the multiple stages of innovation in the high-tech zone, we will examine the impact of innovation resources input, output of achievement and transformation of results on innovation performance. Relying on the cross-section data of 115 national key parks, we will select indicators for innovation performance analysis from the perspective of input, output, and transformation. The discrete method based on improved K-Means is used to discretize the data, and the dominance rough set is introduced to reduce the information system and explore the relationship between the various links of the innovation of the high-tech zone and the final innovation performance. The results show that the output and transformation stages are the main stages affecting the innovation performance of the high-tech zone. The R&D results and the level of conversion services invested in the transformation phase are important factors influencing the innovation performance of the high-tech zone. If the results and service levels of the high-tech zones are low, their innovation performance is generally at a relatively backward level in the country otherwise, the level of innovation performance is higher.*

**KEYWORDS:** *Chinese High-Tech Zone, Innovation Performance, Dominance Rough Set, K-Means*