

The Coupling Coordination Relationship and Spatial Spillover Effect Between Patient Capital and New Energy Industry Development

Lili Ding*

School of Economics and Management, China University of Petroleum (East China), Qingdao, China

Email address:

1327753504@qq.com (Lili Ding)

*Corresponding author

Abstract

The relationship between patient capital and the new energy industry is not simply causal, but constitutes a complex interactive system. From the perspective of synergetics, exploring their coupling coordination can better reveal their interdependent mechanism. The economic effects generated by such coupling coordination go beyond a single general promotion or inhibition. For provincial economic growth in China, the development of the new energy industry is mainly driven by the internal creation effect of factor inputs and the spatial spillover effect from neighboring regions. Decomposing the total economic effects into direct and spillover effects to investigate regional growth disparities represents an important innovation of this study. This paper includes six chapters with Chapters 2–5 as the core. Chapter 2 illustrates the coupling mechanism, regional characteristics, driving factors, vulnerability, current status and risks. Chapter 3 measures the coupling coordination degree and analyzes its national spatial pattern and differences. Chapter 4 theoretically examines the spatial spillover effects, while Chapter 5 provides empirical evidence. Based on provincial-level data, the results show that: (1) Coordination degree performs better than coupling degree in reflecting the interactive relationship. (2) Provinces can be divided into four types of zones with distinctly different economic structures. (3) The coupling coordination degree presents significant positive spatial correlation and agglomeration. (4) There is a significant two-way positive effect between patient capital and the new energy industry. (5) Both systems show significantly positive local spatial spillover effects. Finally, this paper proposes policy recommendations: strengthening spatial correlation effects, expanding R&D human capital, and advancing new-type urbanization.

Keywords

Patient Capital, New Energy Industry, Coupling Coordination Degree, Spatial Spillover Effect