

DECOMPOSITION OF THE FACTORS INFLUENCING EXPORT FLUCTUATION IN CHINA'S NEW ENERGY INDUSTRY BASED ON A CONSTANT MARKET SHARE MODEL

Zhengxin Wang, Zhejiang University of Finance & Economics, Phone +8618969093396, E-mail: jenkin226@163.com

Honghao Zheng, Zhejiang University of Finance & Economics, Phone +8657186735886, E-mail: 64583609@qq.com

Tong Jin, Zhejiang University of Finance & Economics, Phone +8657186735886, E-mail: masterjt@sina.com

Yiqin Hu, Zhejiang University of Finance & Economics, Phone +8657186735886, E-mail: hyq@zufe.edu.cn

Lingling Pei, Zhejiang University of Finance & Economics, Phone +8657186735886, E-mail: alex_done@163.com

Overview

The new energy industry in China exhibits overcapacity problems due to the disordered expansion of the industry and shrinkage in the international market. Hence, developing the new energy industry in a reasonable and healthy way can be expected to solve the problem of overcapacity and be of great significance in maintaining long-term stability and rapid economic growth. Previous studies highlighted the internal production and development of the new energy industry. At present, scholars are paying more attention to studying foreign trading of new energy industries as the industries gradually develop. However, the existing research on the export trade of the new energy industry is mainly confined to the industry overall. In addition, empirical studies do not investigate the products of subdivision industries in great depth. As is well known, compared with some other new energy subdivisions (e.g. the biomass energy industry), the solar and wind energy industries have developed so rapidly that they are experiencing overcapacity problems. Therefore, it is insufficient to give policy suggestions on the basis of studying the new energy industry as a whole. Based on the above considerations, this study tries to make up for the shortages identified in the existing research.

The paper is organized as follows: Section 2 presents the current situation of the export trade of China's new energy industry. Section 3 presents a constant market share (CMS) model. Section 4 shows empirical results and Section 5 draws conclusions and gives policy implications.

Methods

Constant market share (CMS) model

Results

First, the study reveals that the import demands of the international market for China's new energy industry dominate the fluctuations in the export trade of the industry.

Second, the various industries involved (e.g. the nuclear power technology, wind energy, solar energy, and biomass energy industries) cause fluctuations in export trade for different reasons.

Conclusions

Structure effects appear to be the leading factor influencing the fluctuation of the export trade volume of the industry, followed by competitiveness, and then second-order effects. Therefore, the import demand of the world market for China's new energy products primarily affected the fluctuation in the export trade of the industry.

References

Xiong, Y., Yang, X., 2016. Government subsidies for the Chinese photovoltaic industry. *Energy Policy* 99, 111-119.

Roula, I., 2015. The impact of renewable energy consumption to economic growth: A panel data application. *Energy Economics* 53, 58-63.

Liu, Y., Ari, K., 2010. Wind power in China: Policy and development challenges. *Energy Policy* 38, 5520-5529.

Luo, L., Zhu, S., Zou, Z., 2015. Key technical challenges of China's new energy strategy and its countermeasures. *The Journal of Quantitative and Technical Economics* 2, 113-128. (Chinese language)

Chen, L., Tu, X., 2013. A study on U.S. bipartite system of countervailing strategy against China in new energy industry. *Journal of International Trade* 5, 67-77. (Chinese language)