

Accepted Manuscript

Hierarchy in industrial structure: The cases of China and the USA

Fei Hu, Shangmei Zhao, Tao Bing, Yiming Chang

PII: S0378-4371(16)30889-5

DOI: <http://dx.doi.org/10.1016/j.physa.2016.11.083>

Reference: PHYSA 17739

To appear in: *Physica A*

Received date: 18 August 2016

Please cite this article as: F. Hu, S. Zhao, T. Bing, Y. Chang, Hierarchy in industrial structure: The cases of China and the USA, *Physica A* (2016), <http://dx.doi.org/10.1016/j.physa.2016.11.083>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Hierarchy in industrial structure: The cases of China and the USA

Fei Hu*, Shangmei Zhao, Tao Bing and Yiming Chang

School of Economics and Management, Beihang University, Beijing, 100191, China

* Corresponding author. Tel.: +86 13426072508.

E-mail address: hufei@buaa.edu.cn (F. Hu).

Highlights

- We compare the evolution of industrial structures of China and the USA.
- We visualize the hierarchy structure of industrial structure.
- We investigate the original of hierarchy in industrial structure, as well as its
- economic performance.
- Empirical analysis suggests that industrial structure with a moderate
- hierarchy might be better for economic growth.

Abstract: Although several studies have investigated the industrial structure from the perspective of network, the focus is mainly on the identification of key sectors, and little is known about the hierarchical structure, and its impact on economic performance. Using the World Input-Output Dataset (WIOD), this paper performs a comparative study of the hierarchy in industrial structures of China and the USA. Specifically, the hierarchy is generally confirmed in the networks of industrial structure, although in different levels for China and the USA: the level of hierarchy in industrial structure of the USA is much higher than that of China. To intuitively comprehend the evolution over time in a much visualized way, the backbone network of industrial structure is also presented, leading to interesting insights. Further, the impact of the hierarchy in network on economic performance is also explored, and the result suggests that a hierarchy within a moderate range might be better for economic growth.

Keywords: Hierarchy; Industrial structure; Minimum spanning tree; Key sector

Download English Version:

<https://daneshyari.com/en/article/5103396>

Download Persian Version:

<https://daneshyari.com/article/5103396>

[Daneshyari.com](https://daneshyari.com)