

Specialization, Variety and Urban Economic Growth: An Empirical Study Based on Panel Data of Chinese Prefecture-level city

Abstract:

The relationship between variety and economic growth has been paid much attention in the academic. This paper uses Gini specialization index and entropy measurement method to measure the level of specialization and variety of Chinese cities, and use the concept of "proximity" proposed by Hidalgo to divide the related variety and unrelated variety.

As a whole in 2011, the level of urban specialization in China shows a spatial characteristic of "low in the west and high in the west", while the index of variety is just the opposite of specialization, the spatial characteristics of "high in the east and low in the west" are presented. The overall characteristics of related variety and unrelated variety are consistent with the level of variety, showing the spatial distribution characteristics of "high in the east and low in the west". In order to further characterize the spatial distribution characteristics of related variety and unrelated variety, the paper divides it into four types: **RV high-UV high** (mainly concentrated in the eastern coastal areas, a small amount of distribution in central Anhui, Hunan and western capital cities), **RV low-UV high** (scattered in the central and western regions, mainly small and medium-sized cities), **RV low-UV low** (concentrated in the southwest and northwest regions) and **RV High-UV low** (scattered in the Midwest).

During 2000-2011, the overall level of urban specialization in China showed a downward trend,. In contrast with specialization, the level of variety shows an overall upward trend. In terms of regional differences, the extent and speed of changes in the level of specialization and variety of cities in the central and western regions are both higher than those in the eastern cities. Relevant variety and unrelated variety all showed an upward trend. According to the change of relevant variety and unrelated variety in 2000 and 2011, this paper classifies cities into four types: **RV increases -UV increases** (mainly concentrated in the central and western regions of Hunan, Henan, Sichuan and Gansu provinces), **RV reduction -UV increase** (sparsely distributed in the central and western regions), **RV reduction -UV reduction** (sparsely distributed in the central and western regions) and **RV increase -UV reduction** (mainly concentrated in the eastern coastal region).

Using the panel data of 252 prefecture-level cities in China from 2001 to 2011, we attempt to explore the relationship between specialization, variety and urban economic growth. The empirical results show that the specialization has a negative effect on the urban economic growth, while the variety has an obvious positive influence. Related variety has a positive correlation with urban economic growth, while unrelated variety is not conducive to urban economic growth. Specifically, the impact of specialization and variety on urban economic growth has obvious regional differences. Variety only contributes to the economic growth of the eastern and central cities; related variety and unrelated variety both have an impact on the urban economic growth in the eastern, central and western cities, but the promotion on the eastern cities is stronger than that on the central and western cities.

Key words: Specialization; Variety; Related variety; Unrelated variety; Urban economic growth

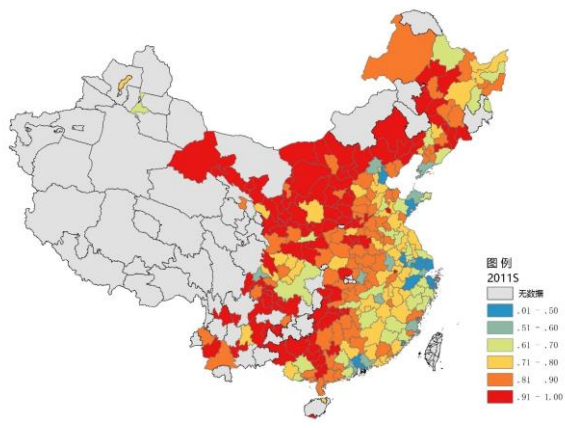


Fig. Spatial distribution of specialization index in Chinese cities in 2011

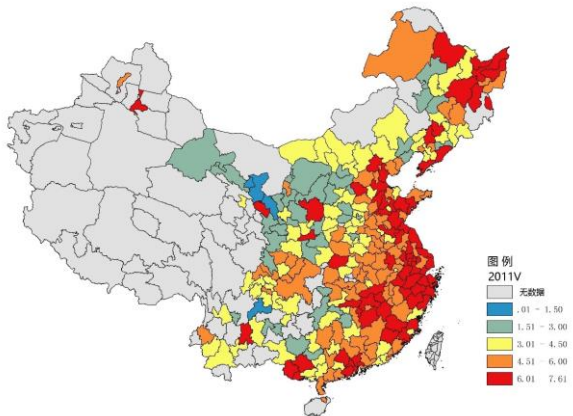


Fig. Spatial distribution of variety index in Chinese cities in 2011

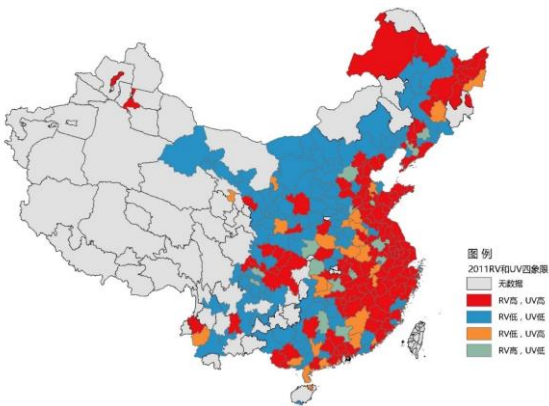


Fig. Spatial distribution of the related variety and unrelated variety in Chinese cities in 2011

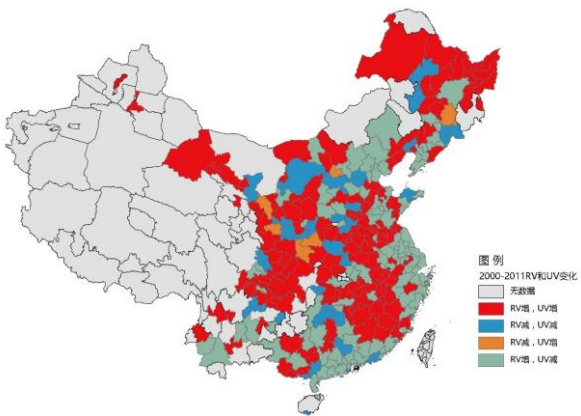


Fig. Spatial distribution of the related variety and unrelated variety in Chinese cities 2000-2011

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