Abstract

With the rapid development of smart cities all over the world, the evaluation of the smart city has become a new research hotspot in the academic circles. Nevertheless, there still exist a series of common problems in current smart city evaluation, including the cognitive deprivation, lack of experience in planning, low coordination level, etc. Therefore, it is critical to establish a new hierarchy for smart city evaluation indicators, especially in the 5G era. Based on literature review, expert consensus, and the fuzzy analytic hierarchy process, this study developed an innovative smart city evaluation framework. In the framework, an index comprising three dimensions, i.e., smart economy, smart society, and smart environmental protection, as well as several attributes for these dimensions for smart city evaluation were established. Then, taking Jiangsu Province, the fastest-growing province in China, as the research area, the development level of smart city for the cities in Jiangsu was calculated. The results have verified the effectiveness of the framework, which can provide suggestions for sustainable urbanization, and help urban decision-makers to promote the efficient development of smart cities.

Keyword: smart city; evaluation index; fuzzy analytic hierarchy process; Jiangsu