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# Guest editorial: Trends in the digital economy: theory and application

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Our society is undergoing a gradual transition from an industrial economy to a digital economy. It has been established that socio-economic development is not solely influenced by material inputs but rather by the application of digital technology and the development and utilization of information resources. In other words, the digital economy and digital technology have become the primary driving forces behind economic and social progress. According to the United Nations Conference on Trade and Development (UNCTAD) *Digital Economy Report 2019*, the global digital economy and the wealth generated by its activities are accelerating rapidly, with the digital economy estimated at 4.5%–15.5% of the world's GDP and continuing to grow. Compared with the traditional economy, the digital economy exhibits very different characteristics and evolutionary patterns. Digital economies have been identified as economic activities in which digital information is viewed as the key resource, the Internet platform as the primary information carrier and new business models as the expression. There are unique advantages to the digital economy, including improving information transmission speed, reducing transaction costs and allocating resources precisely; however, it also challenges traditional economic theories in terms of defining concepts, assumptions and premises, as well as research methodologies. Therefore, in order to adequately respond to the development trend of the digital economy, we need to reconsider the applicability of existing traditional economic theories to digital economy scenarios and the application of the digital economy.

Theoretically, although the digital economy has received considerable attention from scholars and has improved significantly, the theoretical research on the digital economy is still in the mapping stages. For example, digital technology promotes economic growth by reducing labor input, promoting capital accumulation and increasing total factor productivity. However, we do not fully understand how digital technology improves production efficiency and production mode innovation. Furthermore, traditional economic theory regards economic factors as the core input for analyzing economic development and takes this logic as the basis for analyzing growth paths. It is important to note, however, that the economic development process driven by digital technologies involves not merely economic factors but also non-economic factors (historical information), which are often overlooked. In terms of application, the digital economy's driving mechanism, economic impact and government governance also need to be explored, validated and improved further. For example, although digital technology has been verified as an internal driver of the digital economy, market factors have not been given adequate attention as a significant driving force for the development of the digital economy. Moreover, there has also been little research on digital governance, despite scholars' growing recognition of the monopoly problem caused by excessive concentration of digital capital; at the same time, current research on policy regulation of digital economy development primarily focuses on qualitative descriptions and policy recommendations rather than quantitative effect assessment. Therefore, this gives us an excellent opportunity to understand the theory and application of the digital economy more comprehensively and fill the research gaps through cross-fertilization among multiple disciplines.



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This special issue not only seeks high-quality submissions that provide significant contributions, whether theoretical or empirical, to favor a better understanding of the theory and application of the digital economy through a multidimensional, multidisciplinary and multilevel perspective but also encourages authors to provide policymakers and entrepreneurs with more practical implications and suggestions.

This special issue has great repercussions and success. We thank all authors for their participation.

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