

Is Digital Growth Wage-led or Profit-Led? Evidence from China's Structural Input-Output Table

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With the diffusion of digital technologies and the widespread application of data as a production factor, the digital economy has become a major force driving economic growth and industrial upgrading. However, while improving efficiency, the digital economy may also reshape income distribution through technological substitution, capital deepening, and platform-based organizational structures, thereby generating structural tensions between growth dynamics and distributive equity. In this context, identifying the comprehensive effects of the digital economy on economic growth and income distribution within a unified analytical framework has become a central issue in contemporary research on macroeconomic structure.

Based on input-output analysis, this study examines the transmission mechanisms through which the digital economy affects economic growth and income distribution. Using China's time-series input-output data, the study first decomposes and restructures existing industrial sectors by identifying and isolating core digital economy industries from related sectors. This procedure yields an extended input-output table that distinguishes among non-digital traditional industries, digitally transformed traditional industries, and digital industries. On this basis, the input-output table is further aggregated according to product use and factor utilization into a six-department structure consisting of non-digital fixed capital investment, non-digital circulating constant capital, non-digital consumption goods, digital fixed capital investment, digital circulating constant capital, and digital consumption goods. This framework provides a structural analytical system for examining the interactions between the digital economy and traditional industries.

From a theoretical perspective, the study employs the Marx-Kaleckian framework to analyze the relationship between efficiency and equity in China's digital economy. The core insight of this framework is that the wage-profit distribution influences aggregate demand and economic growth through two opposing mechanisms. On the one hand, when the propensity to consume out of wages exceeds that out of profits, an increase in wages directly stimulates consumption demand, improves the realization of value, raises capacity utilization, and indirectly promotes investment, thereby expanding aggregate demand. On the other hand, higher wages compress the profit share and reduce capitalists' incentives to invest, which may dampen aggregate demand. If the former effect dominates, the economy exhibits a wage-led growth regime; if the latter dominates, growth is profit-led. By introducing a digital economy sector into this framework, the study develops a multi-sector growth model to address three key questions: (1) What type of growth regime characterizes China's digital economy—wage-led or profit-led? (2) How does digital economic development affect efficiency and equity, and how does the expansion of the digital sector influence growth and income distribution across other sectors? (3) How can improvements in economic efficiency be coordinated with distributive equity in the digital era?

The contributions of this study are threefold. First, it extends the analytical scope of Marxian reproduction schemes by distinguishing the digital economy from traditional industries and examining its independent effects on growth and distribution. Second, it broadens the research frontier of input-output analysis by integrating classical propositions of Marxist political economy with structural input-output methodology. Third, by constructing a set of indicators that capture both aggregate and structural dimensions, the study provides a systematic framework for measuring and evaluating the development of China's digital economy and its macroeconomic implications.