

Accelerated Depreciation and Investment-driven Growth: An Approach of Marx-Okishio Model

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Abstract

Accelerated depreciation of fixed assets is a representative tax reduction policy. While existing empirical studies have primarily focused on the micro perspective, a lack of literature systematically quantifies its macro-level economic impact. Drawing on the theory of Marxist political economy, we propose an alternative "Depreciation-Growth" analytical framework, which integrates the reproduction of fixed capital into the overall reproduction of aggregate social capital. This paper aims to examine whether and to what extent accelerated depreciation can promote economic growth. The findings reveal that accelerated depreciation positively impacts economic growth, primarily driven by new investments. This impact becomes more significant as the depreciation period shortens. However, it is essential to note that the shortening of the depreciation period also leads to a negative adjustment effect due to increased costs. A depreciation turning point exists, corresponding to the minimum depreciation period for accelerated depreciation, where the rate of change surges. These empirical results of this paper can be further discussed in terms of the depreciation period, reproduction sector, and economic cycle to obtain more specific policy insights. During economic downturns, particularly in sectors dominated by general means of production and means of consumption, it is recommended to implement accelerated depreciation on a broader scale and to a greater extent, within the minimum depreciation period. This suggestion is expected to optimize investment structure and maintain reasonable investment growth. Additionally, it can provide enhanced support for developing modernized economic systems, such as constructing the digital economy infrastructure.