

Structural Changes and Economic Growth in a Three-Sector Dynamic Model à la Marx-Okishio

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Abstract: The mainstream macroeconomic growth models neglect the impact of production structure on economic growth. The classical linear production theory emphasizes the important role of production structure, but only discusses the scale expansion under a given production structure. This paper draws inspiration from Pasinetti's (1981, 1993) idea of dynamic parameter and constructs a linear production model that includes structural dynamics. We derive the dynamic equilibrium growth path and its existence conditions, explain the unsustainability of equilibrium growth under structural dynamics through numerical simulation, and explore the feasible relatively stable growth path and its implementation conditions. The results indicate that a balanced economic growth path is almost impossible when considering the dynamics of economic structure. The existence conditions of dynamic equilibrium growth paths have extremely strict requirements for structural parameters, and dynamic price equilibrium also requires additional parameter conditions. Due to the exogenous nature of structural parameters, if the policy goal is to pursue dynamic and balanced growth, it is necessary to guide the direction of technological progress through cultivating technological innovation, and guide consumption tendencies and labor market adjustments through social security systems and fertility policies. However, these policies require a long cycle from formulation to implementation and then to effectiveness. Therefore, guiding parameter changes through policies can only play a role in the long term, and in the short term, relative balanced growth can only be achieved through the trade-off of policy objectives.

Keywords: Economic Growth, Structural Changes, Dynamic Equilibrium, Policy Goal