

A Structural Growth Model and its Applications to Sraffa's System

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This paper presents a discrete-time growth model based on the classical growth framework to describe the disequilibrium dynamics of an m -agent, n -good economy. An exchange function is formulated to describe the exchange process among agents, which serves as the exchange part of the growth model. For concreteness a system of Sraffa (1960) is utilized to exemplify the growth model and simulations are performed. First, business cycles in the growth model are discussed, which are found to be limit cycles in some sense. Then a method is presented to compute the equilibrium land rent in a Sraffian system including homogeneous land, and the fluctuation of land rent is also simulated. Finally, the system of Sraffa is extended to a two-country economy, and the dynamic economic effects of free trade and trade protectionism are investigated.