

Mechanization and Economic Growth

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April 21, 2014

Abstract

In this paper, we propose a mechanization model where there are unbounded tasks, then the economy endogenously grows permanently by the replacement of labor with machines. The economic growth can be achieved in a manner of Harrod neutral (labor-augmenting, labor-saving), while the aggregate production function shows the feature of constant elasticity of substitution(CES), therefore the labor cost share is constant in the steady state. Furthermore, considering the steady cost of organizational change, the model can exclude strong scale effect quantitatively. The result of this paper indicates the importance of investigation of the tasks in production process and their mechanization for further understandings of economic growth.