Abstract

This article offers an updated review of the theoretical arguments that over four decades ago questioned the notion of aggregate production function. One is the so-called Cambridge-Cambridge debates. The other one is the literature on aggregation. Using different arguments, both reached the conclusion that the notion of an aggregate production function did not have solid theoretical foundations. Defenders of the concept of aggregate production function accepted the theoretical arguments. However, they argued that this was essentially an empirical question, in the sense that as long as the production function yielded sensible results (e.g., that the elasticities estimated were close to the factor shares), then it was a useful tool and there was no reason to give it up. This argument, however, faces an unsurmountable difficulty. This is that it was also shown long ago that the reason why aggregate production functions tend to yield the alleged good results when estimated econometrically is that all they do is to reproduce the income accounting identity according to which output equals the sum of the wage bill plus total profits. A series of examples shows why and how this happens. It is concluded that the aggregate production function is a tool that should be abandoned for theoretical and empirical analyses of growth. It is proposed that other approaches be considered.