

The “aggregate production function” for an economy exists only if the *total* output that the economy can produce depends *only* on the *total* amounts of labor input, capital input, and technological knowledge used. This implies that the distribution of inputs (and output) among firms *does not matter*. For each of the following conditions, explain why violation of the condition would mean that no valid aggregate production function would exist.

- a. All firms have identical production functions
- b. These individual-firm production functions have constant returns to scale