

Textwork: „The Growth of Growth Theory“

1. From the perspective of the Solow model, why are “the efforts of policymakers to raise the rate of growth per head” ultimately futile?”

Policymakers' choice to increase economic growth by savings drives, investment subsidies, tax cuts, and population control are only able to increase per capita capital (which can ultimately be used to produce “consumption”) up to a certain point because of diminishing returns of capital. Economic growth can be influenced by these policies but is ultimately bounded.

2. Which trick did Mr. Solow use to overcome the deficiency in his model that capital deepening, having diminishing returns, does not yield continuous economic growth?

Mr Solow introduced the concept of technological progress which adds to output without influencing population or capital growth.

3. What is meant with the phrase coined with respect to the Solow model “What it illuminated did not ultimately matter; and what really mattered it did little to illuminate”?

Using the Solow model, economic policy can ultimately not be used for continuous economic progress because of the boundedness through diminishing returns of capital. In his model continuous economic progress is only possible through technological progress. Technological progress, however, is exogenous to the model, it is not explained. Thus the endogenous model parts do ultimately not matter (policy as regards population and investment/savings), and the thing that really matters (TP) is not explained.

4. Tricky question for students with some knowledge in mathematical optimization: Why is the “topology of diminishing returns easy for economists to navigate”?

In order to find unique, global solutions to a mathematical maximization problem one needs declining gradients and single peaks (example concave function).

5. Which are the three points Mr Romer used to endogenize technological progress in his model?

1. Ideas are goods and “non-rival”: everybody can make use of a blueprint at the same time.
2. Fabrication of ideas (“goods”) enjoys increasing returns to scale.
3. Manufacturing of ideas needs to be protected by patents and copyrights in order to make invention profitable.

6. What is meant with the last paragraph of the text?

Mr Romer did not discover anything new with his approach to endogenize technological progress in the growth literature (→ it should be self-understood that subsidizing research will produce technological progress). He just elegantly wrapped already known things into a model, thus the comparison to poetry.