

Week 6 Homework: Economic Growth and Income Disparity

1. Use the Solow growth model to demonstrate how differences in access to technology can cause highly-developed countries and lesser-developed countries to both grow at low rates and never converge. Include in your answer a description of the differences in access to technology and illustrations of the consequences for long-run capital stock per worker, long-run output per worker, and the time paths of output per worker from the short-run to the long-run.

2. Use the Solow growth model to demonstrate how differences in population growth rates can cause highly-developed countries and lesser-developed countries to both grow at low rates and never converge. Include in your answer a description of the differences in population growth rates and illustrations of the consequences for long-run capital stock per worker, long-run output per worker, and the time paths of output per worker from the short-run to the long-run.

3. Use the Solow growth model with increasing returns at low levels of capital to demonstrate how highly-developed countries and lesser-developed countries converge to very different long-run steady state levels. Include in your answer a description of the marginal product of capital and illustrations of the consequences for long-run capital stock per worker, long-run output per worker, and the time paths of output per worker from the short-run to the long-run.

4. Use the human capital growth model to demonstrate how differences in investment in education and training can cause highly-developed countries and lesser-developed countries to grow at different rates and never converge. Include in your answer a description of the differences in education/training and illustrations of the differences in the paths for human capital accumulation and output-per worker.