

Macro Module 4 Solow growth model growth rate of capital practice exam questions

(The attached PDF file has better formatting.)

Question 4.1: Growth rate of capital per worker

An economy follows a Solow growth model with no technological progress. In 20XX (not the steady state)

s = savings rate = 25.63%

y = income per worker = 224 units per worker per annum

k = capital per worker = 830 units per worker

n = population growth rate = 1.62% per annum

δ = annual depreciation rate of capital = 4.60%

What is the annual growth rate of capital per worker for 20XX?

Answer 4.1: $25.63\% \times (224 / 830 - 4.60\%) - 1.62\% = 4.12\%$

annual growth rate of capital per worker = savings rate \times (ratio to income per worker to capital per worker – annual depreciation rate of capital) – population growth rate