0.3   Symbols and notation

Symbols used

Y = Output

Y_d= Households' disposable income

T = Land

N = Labour, population

y = Per-capita output

C = Private consumption

c = Private consumption per capita

β = Physical capital-output elasticity

α = Human capital-output elasticity

K = Physical Capital

I = Gross investment in Physical Capital

k = Capital per worker

π = Profits

L = Labour measured in efficiency units

λ = Effective labour input per worker.

$\tilde{k}$ = Capital per unit of efficiency labour

$\tilde{y}$ = Output per unit of efficiency labour

H = Human Capital

I^H = Gross investment in Human Capital

h = Human Capital per worker

$\tilde{h}$ = Human capital per unit of efficiency labour

s = Fraction of disposable income devoted to physical capital accumulation

s_H = Fraction of disposable income devoted to human capital accumulation

$\breve{k}$ = Physical capital per unit of Human Capital

$\breve{y}$ = Output per unit of Human Capital

ν = Speed of adjustment to the steady state in the neoclassical growth model

δ = Depreciation rate

γ = Growth rate of per capita income/Growth rate of Harrod Neutral TFP

g = Hick Neutral rate of technological progress

$\varepsilon =$ Externality

$\eta =$ External effect of public inputs

$\rho =$ Subjective discount rate

$\psi =$ Fraction of working time devoted to rent-seeking

b = productivity of research, effectiveness of the rent seeking

$\phi =$ Fraction of public expenditures which are unproductive

μ = Fraction of the labour force devoted to R&D

r = Real Interest rate

w = Real wage-rate

G = Productive government expenditures

τ = Production tax / income tax

$\tau_H =$ Tax on human capital income

$\tau_K =$ Tax on physical capital income

x_j = Production of intermediate input j

X = Composite measure of intermediate inputs

N_j = Raw labour used in production of intermediate input j

N_Y = Labour used in the production of Y

F = Fixed cost

t = Time index

0.4   Mathematical notation

A dot over a variable denotes time variation:

$$\dot{X} = \partial X / \partial t \,.$$

The time variation divided by the level is the growth rate:

$$\hat{X} = \dot{X}/X$$

When a variable grows at a constant rate – say g – over time, the relationship between the value of X at time zero and at time t, is:

$$X_t = X_0 e^{gt} \,.$$

https://mlebredefreitas.wordpress.com/teaching-materials/economic-growth-models-a-primer/

In logs, a linear equation arises:

$$\ln X_t = \ln X_0 + gt$$

In many figures, economic variables are represented in logs, so that we can read the growth rate in the slope of a linear regression.