

Piketty's fundamental laws mapped into Growth theory

Lecture Notes, ECON 6470

Economic Growth and Development

Spring 2016

Piketty's Capital in the 21st Century

- ❑ Compares wealth concentration & inequality in 19th Century with 20th and 21st (forecast)
- ❑ Growth of middle class reduced income and wealth inequality, but mainly related to World Wars...
- ❑ Kuznets U curve a artifact of the WWII, inequality now rising again and may continue aggravated by

Piketty's *Capital in the 21st Century*: First fundamental law of capitalism

$$\alpha \equiv r * \beta$$

This is a basic accounting identity

or

$$r = \alpha / \beta$$

- α is the share of profit in income
- β is the capital/output ratio
- r is the rate of return on capital

Piketty's 2nd Fundamental law of Capitalism

$$\beta = s/g$$

- β is the capital/output ratio
(or in HD or AK notation $Y = AK$ where $K/Y = 1/A$)
- s is the saving rate
- g is the growth rate

2nd Fundamental law of Capitalism

$$\beta = \frac{s}{g}$$

The First Fundamental Law of Capitalism:

$$\alpha = r \times \beta$$

Where r is the rate of return on capital, β is the capital to income (output) ratio α is the share of income earned by capital

1st Fundamental Law of Capitalism:

$$\alpha = r \times \beta$$

Where r is the rate of return on capital, β is the capital to income (output) ratio α is the share of income earned by capital owners (capitalists?)

2nd Fundamental law of Capitalism

$$\beta = \frac{s}{g}$$

Mapping into Harrod-Domar Growth model

In AK model: $Y=AK$, This implies that $A=Y/K$ (or the inverse of capital income ratio)

That is, $1/A = \beta$ or $\beta = 1/A$

From the second fundamental law, we know that: $g = s / \beta$

This implies that: $g = sA = s^*A = s \times A$ $\beta = s/g$ $1/A = s/g$ $g = s/\beta$

The First Fundamental Law of Capitalism:

$$\alpha = r \times \beta$$

Where r is the rate of return on capital, β is the capital to income (output) ratio α is the share of income earned by capital

Piketty, Thomas (2014). Capital in the Twenty-First Century (p. 52). Harvard University Press. Kindle Edition