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BA Economics Honours | Semester V | Calicut University

Human Capital and Economic Development

Course Code: ECO5EJ306 • Module 2

Module II: Theoretical Aspects of Human Capital

Theoretical modeling incorporates human capital directly into macroeconomic aggregate production functions, resolving empirical anomalies of the basic Solow model.

Unit 6, 7 & 8: Augmented Solow Model and Mankiw-Romer-Weil (MRW)

- **The Solow Model Limitation:** The standard Solow growth model ($Y = K^{\alpha}(AL)^{1-\alpha}$) predicts rapid convergence between poor and rich nations and implies enormous international interest rate differentials that are empirically contradicted.
- **Mankiw-Romer-Weil (MRW) Augmented Neoclassical Model (1992):** Augments the production function with human capital (H):

  $$Y = K^{\alpha}H^{\beta}(AL)^{1-\alpha-\beta}, \quad \alpha + \beta < 1$$

  The capital accumulation intensive equations show that human capital investment (s_h) directly boosts steady-state per capita income. The MRW model accounts for ~80% of cross-country variance in per capita income and demonstrates **Conditional β-Convergence** once human capital accumulation rates are controlled.
- **The Solow Residual:** The residual portion of economic growth not accounted for by physical capital accumulation and labor hours growth ($TFP = \frac{\dot{Y}}{Y} - \alpha\frac{\dot{K}}{K} - (1-\alpha)\frac{\dot{L}}{L}$). Human capital quality improvements explain a substantial share of what early economists misattributed to exogenous technical progress.

Unit 9 & 10: India's Historical Experience

India's post-independence educational policy historically favored elite higher education (IITs, IIMs, central universities) while underfunding universal primary schooling. While this catalyzed India's global ICT and software export boom, it created deep educational dualism and large informal sector productivity deficits, an asymmetry addressed in the National Education Policy (NEP) 2020.

Advanced Theoretical Formulations and Empirical Frameworks (Analytical Division 1)

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Empirical Methodology, Identification Strategies, and Econometric Estimation

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Comparative Institutional Analysis, Market Failures, and Policy Governance

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Behavioral Motivation	Hyper-rational agents maximizing expected utility with complete cognitive computational capacity.	Bounded rationality, behavioral heuristics, loss aversion, and institutional anchoring effects.	Choice architecture, behavioral nudges (NITI Aayog initiatives), and consumer financial protection mandates.
State Intervention	State role restricted to core public goods, contract enforcement, and national defense (minimalist state).	State acts as developmental catalyst, risk-absorber of last resort, and promoter of equitable distribution.	Strategic industrial policy (PLI schemes), counter-cyclical fiscal intervention, and universal public services.
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Comprehensive Empirical Analysis: The Kerala Model and Sub-National Development

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universal adult literacy, high life expectancy, and low infant mortality rates comparable to advanced Western economies—achieved despite historically modest per capita state domestic product, Kerala demonstrates the transformative power of public social expenditure, agrarian land reforms, and decentralized local governance (Panchayati Raj institutions).

However, contemporary economic analysis also highlights structural challenges confronting this development paradigm: high educated unemployment, fiscal constraints stemming from escalating public debt servicing and pension obligations, and heavy reliance on external remittance inflows from migrant workers in the Persian Gulf. Sustaining this high-welfare equilibrium necessitates transitioning toward a knowledge-driven economy, incentivizing high-tech manufacturing, and mobilizing sustainable sub-national fiscal resources.

Policy Synthesis and Analytical Evaluation

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