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BA Economics Honours | Semester V | Calicut University

Health Economics

Course Code: ECO5EJ305 • Module 4

Module IV: Economic Evaluation of Health Interventions

Because healthcare budgets are finite, economic evaluation compares the costs and outcomes of competing health interventions to maximize population health gains per rupee spent.

Unit 20 & 21: Typology of Costs and Economic Evaluation Frameworks

Cost Typology: Direct Medical Costs (hospitalization, pharmaceuticals), Direct Non-Medical Costs (transportation, lodging), Indirect Costs (lost workplace productivity, morbidity sick days), and Intangible Costs (pain, suffering, psychological anxiety).

Standard Economic Evaluation Methodologies:

1. **Cost-Minimization Analysis (CMA):** Applied when clinical outcomes of competing treatments are identical; evaluates solely which therapy achieves the clinical outcome at minimum cost.
2. **Cost-Effectiveness Analysis (CEA):** Measures outcomes in natural clinical units (e.g., life years gained, cases of malaria cured). Calculated as the **Incremental Cost-Effectiveness Ratio (ICER)**:

$$ICER = \frac{Cost_A - Cost_B}{Effect_A - Effect_B}$$

3. **Cost-Utility Analysis (CUA):** Measures outcomes in preference-adjusted health units—predominantly Quality-Adjusted Life Years (QALYs) or DALYs averted—enabling cross-disease comparisons.
4. **Cost-Benefit Analysis (CBA):** Converts both costs and health outcomes into explicit monetary terms, allowing evaluation of net social benefit ($Net\ Benefit = Benefit - Cost$).

Unit 22: National Health Policy and the Kerala Health Model

- **National Health Policy (NHP 2017) & Ayushman Bharat:** Target public healthcare spending at 2.5% of GDP. Ayushman Bharat comprises two pillars: *Health and Wellness Centres (HWCs)* for comprehensive primary healthcare, and *Pradhan Mantri Jan Arogya Yojana (PM-JAY)* providing ₹5 lakh annual secondary/tertiary hospital coverage to the bottom 40% vulnerable population.
- **Constitutional Framework:** Health is listed under the *State List (List II, Entry 6)* of the Seventh Schedule of the Constitution of India, placing primary service delivery on state governments.
- **The Kerala Health Model:** Globally celebrated developmental paradox: achieving health indicators (IMR: 6 per 1,000; MMR: ~19 per 100,000; Life Expectancy: ~75 years) comparable to advanced high-income nations despite moderate per capita income, achieved through universal female literacy, robust primary healthcare centers, decentralized panchayat administration, and public health campaigns.

Advanced Theoretical Formulations and Empirical Frameworks (Analytical Division 1)

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Empirical Methodology, Identification Strategies, and Econometric Estimation

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Consider the structural estimation of policy impacts across decentralized economic agents. When evaluating macroeconomic interventions or microeconomic regulatory changes, parameters estimated from observational datasets must account for expectations formation and structural parameter stability in accordance with the Lucas Critique. Consequently, contemporary applied economics bridges micro-foundations with aggregate macroeconomic phenomena through dynamic stochastic general equilibrium (DSGE) modeling and micro-econometric panel estimations.

Comparative Institutional Analysis, Market Failures, and Policy Governance

Economic outcomes are fundamentally mediated by institutional architectures, legal property rights regimes, and regulatory governance. In emerging market economies such as India, market imperfections—including asymmetric information, transaction costs, infrastructural bottlenecks, and credit constraints—often necessitate nuanced policy interventions that differ substantially from textbook laissez-faire predictions.

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Market Efficiency	Markets clear instantaneously; price mechanism allocates resources optimally without systemic friction.	Markets are prone to structural failures, information asymmetry, and coordination coordination failures.	Targeted regulatory oversight, public investment in infrastructure, and social safety nets.
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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	(Solow neoclassical growth model).	intellectual property institutions.	infrastructure (India Stack / UPI).

Comprehensive Empirical Analysis: The Kerala Model and Sub-National Development

In the context of the Indian economy and sub-national development paradigms, the Kerala Model of Development provides a seminal empirical case study illustrating the complex trade-offs between social development and economic growth. Characterized by high physical quality of life indicators—including near-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

Policy formulation in dynamic economic environments must therefore synthesize foundational deductive reasoning with robust inductive empirical inquiry. Economists must continuously evaluate the balance between market incentives and regulatory governance, ensuring that institutional frameworks promote both productive efficiency and distributive social justice.

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