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BA Economics Honours | Semester V | Calicut University

Health Economics

Course Code: ECO5EJ305 • Module 2

Module II: Supply and Demand for Health Care

Michael Grossman (1972) revolutionized health economics by formulating the **Human Capital Model of the Demand for Health**, viewing health not as an immediate consumption good, but as a durable capital stock.

Unit 8, 9, 10 & 11: Grossman Model: Health Demand vs. Medical Care Demand

- **Grossman Demand for Health Model:**
  - Individuals inherit an initial stock of health capital H_0, which depreciates with biological age at rate δ_t and can be replenished through gross investments I_t (utilizing medical care, nutritious diet, exercise, and personal time):

> **Grossman Health Capital Model**
>
> $$H_{t+1} = H_t(1 - \delta_t) + I_t$$
>
> Where: H_{t+1} = Health capital stock at period t+1, H_t = Current health stock, δ_t = Age-dependent depreciation rate of biological health, and I_t = Gross medical and lifestyle health investments.

  - Health enters the utility function directly as a *consumption good* (individuals enjoy feeling healthy) and indirectly as an *investment good* (health capital expands total healthy days available for market labor and leisure).
  - **Derived Demand for Medical Care:** Consumers do not desire medical consultations, injections, or surgeries for their own sake; medical care is demanded as an intermediate input to produce health capital.
  - **Role of Education:** Grossman demonstrated that educated individuals are more efficient producers of health capital (allocative and technical efficiency in health production).

Unit 12, 13 & 14: Supplier-Induced Demand and Healthcare Supply & Pricing

- **Supplier-Induced Demand (SID):** Arises when the physician leverages information asymmetry to alter the patient's demand curve, prescribing unnecessary diagnostic tests, expensive brand-name medications, or elective surgeries beyond clinical necessity to maximize clinical fee-for-service revenue.
- **Supply Side and Pricing Mechanisms:**
  - Healthcare supply is characterized by substantial barriers to entry (lengthy medical education, hospital accreditation, specialized medical technology).
  - *Payment Systems:* Fee-for-Service (creates incentives for over-treatment), Capitation (fixed payment per enrolled patient per year, incentivizing preventive care), and Diagnosis-Related Groups (DRGs - prospective bundle payments per illness episode).

Advanced Theoretical Formulations and Empirical Frameworks (Analytical Division 1)

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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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	distribution is secondary to allocative efficiency.	historical wealth accumulation shape distribution.	human capital investments.
Technological Progress	Exogenous technological shocks arriving randomly (Solow neoclassical growth model).	Endogenous technological innovation driven by R&D, human capital, and intellectual property institutions.	National Innovation Foundation, Startup India, and public digital 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.

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