# Health, Development, and Health System

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# ROAD MAP

1. Determinants of Wealth/Economic Development
2. Equity in Health Care and Health
3. Health System
4. Development of Health Systems in High-Income Countries
5. Convergence or Divergence
6. What is Different about Health Systems in Asia

# I. Determinants of Wealth/Economic Development

Income or Wealth is affected by health (micro-level)

- Lower treatment cost
- Lower lost work time and decreased wage loss
- Cognitive development and education achievement

Childhood health & nutrition has long-term effects on

- physical development and wage
- extent and severity of chronic conditions

## ➢ **Health Capital** (M. Grossman, 1972)

Health as a capital good: inherit initial stock, depreciation with age, random shock of illness and injury

Investment in health (e.g., medical treatment, healthy behavior and lifestyle, other inputs) slows down the rate of depreciation of health or restores health

Benefits of health

- direct consumption benefit: health itself
- investment benefit: for productive activities

Economic Growth (macro-level)

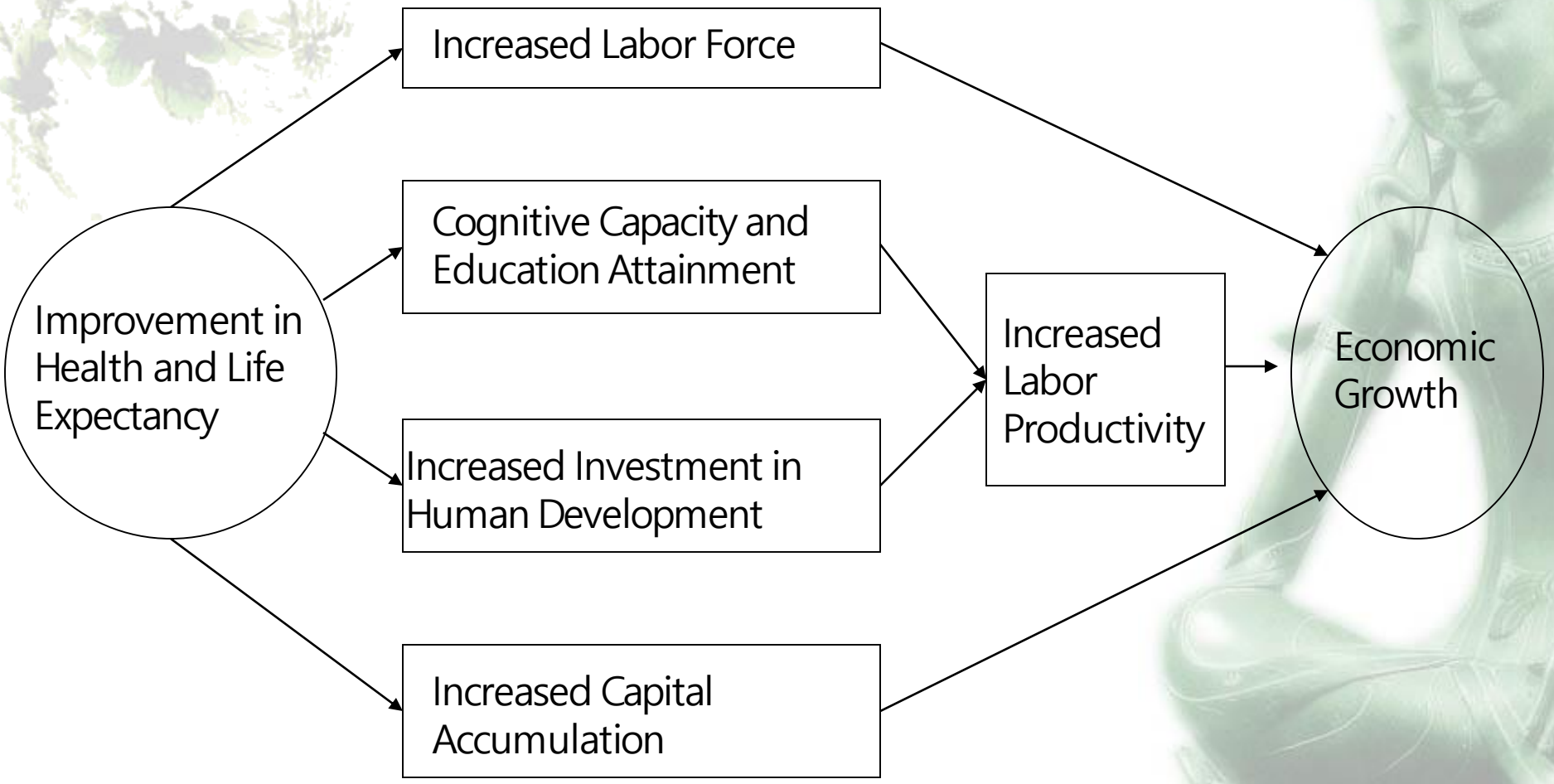
= f (Labor, Capital, …)

An extra year of life expectancy increases the per capita GDP by 4% (Bloom, Canning and Sevilla, 2003)

Impact of health on

- Quantity of labor (size of labor force)
- Quality of labor (labor productivity)
- Capital accumulation

# Health and Wealth

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# 1. Impact of Health on Quantity of Labor

Improvement in health

-> decrease in productivity loss due to ill health

(of the laborer him/herself and of family members)

Reduced mortality or increased life expectancy

-> Increased labor force

e.g., Healthy childhood mature to economically productive age (labor force)

# 2. Impact of Health on Quality of Labor

- Health has a positive effect on cognitive capability and education attainment

HEALTH
-> Education and human development
-> Skill mix (more skilled labor)
-> Increased labor productivity
-> Economic development

# 2. Impact of Health on Quality of Labor (continued)

- Increased life expectancy and better health

-> increased returns to human development

-> more investment in education and training

- Fertility is affected by a need to ensure a given number of survivors -> Increased life expectancy usually leads to decreased fertility

-> decreased waste of resources on children who do not survive

-> more resources available for human development and education

# 3. Impact of Health on Capital Accumulation

Worse health, higher dependency

-> more consumption than production

-> negative effects on saving and capital investment

# 3. Impact of Health on Capital Accumulation (continued)

Increased life expectancy and better health

-> need for saving for retirement period

-> increased saving and investment

e.g., East Asia

Can be one-generation effect

-> Before population aging, more savings than spending.
But, aging will result in increased expenditure later

# 4. Issues in the relation between Health and Wealth (in Macro-level)

## 1) Stages of Economic Development

Effect of health on wealth is smaller in developed countries than in developing countries

a. Diminishing marginal contributions of health to economic development

b. Increase in life expectancy leads to population aging:

Controversy over expansion of morbidity or compression of morbidity: live longer in ill health or in good health?

# c. Health indicators/measures

Differential determinants of economic growth

Mortality/life expectancy (affecting the size of labor force) more important at lower levels of GDP

<- contribution of labor in prime years

Lifestyle (e.g., obesity, smoking, alcohol), education/training (affecting labor productivity), age-specific disease patterns (e.g., cardiovascular disease), functional status, etc. more important at high levels of GDP

# 2) Reverse Causality?

Virtuous Circle or Vicious Circle

e.g., former Soviet Union, Sub-Saharan Africa

Ill health -> catastrophic payment -> poverty
-> ill health, low investment in education

Women's education
-> Lower fertility and lower infant mortality
-> better nutrition and more education
-> Economic growth

# 3) Facilitating Factors

Government/governance, Economic policy
Human development/Education policy
Labor policy

-> Healthy Public Policy
(accelerating the impact of health on wealth)
Critic: Political rhetoric?

Need advocacy, coalition building
e.g., Health promotion program should work with
Ministry of Education and Ministry of Labor

# II. Equity in Health

## Why EQUITY Matters?

Inequity: failure to avoid or overcome inequalities in health that infringes human rights norms or is otherwise unfair (WHO, 2005)

Philosophy, social justice, human right, political reality, power, social stratification

Role of 'just' government: provides the *enabling conditions* that make it possible for citizens to freely choose from desirable options of life

-> equality in the chances for health (health opportunity) (WHO, 2005)

Health

- Valuable component of well-being
- Enables a person to function as an agent

Inequality in health

-> inequality in people's capacity to function

-> inequity in earnings, well-being… (feedback effect)

**Role of government policy**

- Tackle preventable, remediable inequality
  -> Not the equalization of health outcomes
- Tackle inequity in the *determinants of health*
  -> Tackle unequal distribution of health determinants
- Tough questions: inequality by free choice?
  informed choice of risky behavior?

**Policy Goal**: Overall health improvement and reducing the health *gap*

If the effectiveness of government intervention is greater for higher socioeconomic groups, then government intervention may increase the health gap, e.g., smoking cessation program

Government policy should achieve overall improvement in health determinants with a *faster* rate of improvement in the disadvantaged groups

-> Then health gap can decrease

Government policy should put priority on disadvantaged groups

# III. Health Care System

Health Care System: Resources and Organizations
(Input, Throughput and Output)

1) Health care financing: different types of financial resource mobilization
- public (tax, social insurance) vs. private (private insurance, out-of-pocket payment)
- coverage, benefits, resource allocation
- health expenditure

2) Health care delivery: facilities, human resource, technology, governance/policy, etc.

3) Health outcomes: life expectancy, mortality, morbidity, etc.

Example: World Health Report
Health Systems: Improving Performance

- Level (achievement) of health outcomes
- Distribution of health outcome across people
- Responsiveness of health systems
- Distribution of responsiveness
- Fairness of financial contribution

- Level vs. distribution (efficiency vs. equity)

Health outcomes:

life expectancy at birth, probability of dying before five, DALE (Disability Adjusted Life Expectancy)

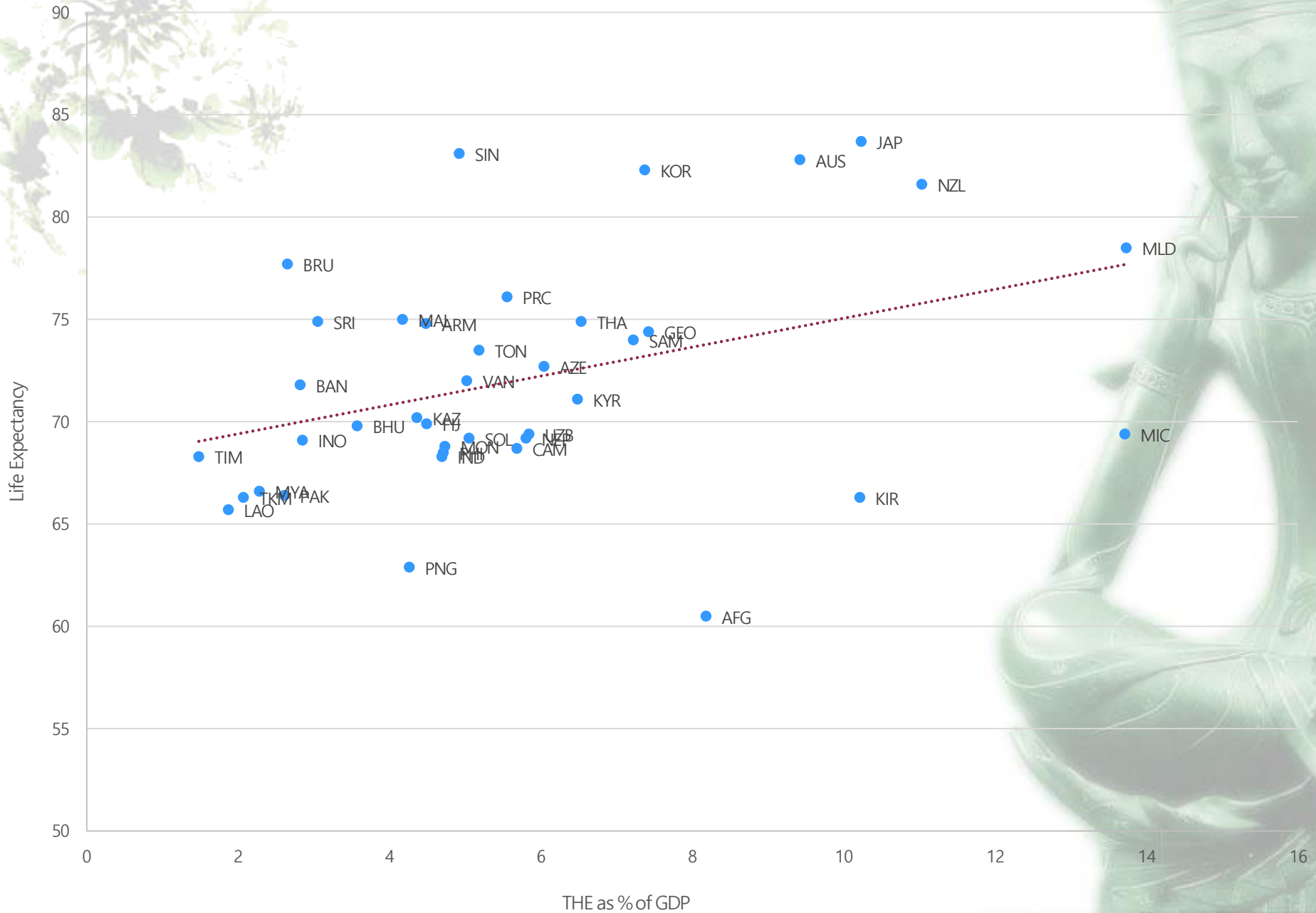
Responsiveness of health systems:

how a health care system responds to a population's expectation on health care (e.g., respect for dignity, confidentiality, provider autonomy, prompt attention, amenities, choice of providers)

Fairness of financial contribution:

ratio of healthcare payment to earnings (or non-food expenditure) across socioeconomic groups

# Life Expectancy and Health Expenditure



# IV. Development of Health Systems in High-income Countries (Cutler, 2002)

- Stage 1: Universal coverage and equal access
- Stage 2: Cost controls, regulation of payment to providers, rationing of care, and expenditure Caps
- Stage 3: Emphasis on efficiency, introducing incentives and competition

Limitations

- institutional stickiness: difficult to change policy
- controversy over the role and effect of competition in health care

# 1. Universal Coverage and Equal Access

Development of medicine and technology-> importance of the access to medical care and health institutions

- Little concern on efficiency
- Focus on social solidarity, right, specific egalitarianism
- Governments had willingness (labor government) and fiscal capacity to expand health programs

- Extensive benefit coverage
- Minimum cost sharing for patients, freedom of choice
- Minimum cost sharing for providers, FFS, capitation covering only physician services (low risk)
- Generous budget for hospitals, soft cap (when cost exceeded budget, government provided subsidy)

# 2. Controls, Rationing and Expenditure Caps

Health care system designed based on equity rather than efficiency principle can be vulnerable to external (financial) shocks and sustainability

Environmental change

- technology diffusion, income, demand for medical care
- oil shock, government fiscal capacity limited

Regulatory policy was adopted for cost containment

- Rationing, reduce quantity of services
- Cut payment for providers, tight budget
- DRG (Diagnosis Related Group)-based PPS (Prospective Payment System) in the US

# ➢ Effects of Regulation

Slow down cost escalation (e.g., UK, Canada)

Physician income squeezed

Little negative impact on patient outcome. Why?

- cost-effective utilization (high-technology care are often provided to marginal patients, i.e., limited value of services to health improvement)
- substitute low cost alternatives (use low technology, evaluative and management care)

Key: what is rationed by regulation? If nonessential care is rationed, then negative effect on patient outcome is minimal

## ➢ **Long-term effect on cost containment**?

Volume effect (increase in quantity as a response to price control under fee-for-service)

Dissatisfaction with regulation, fiscal control, and waiting lines led to political pressure to ease the limits

Some people opted out to private insurance

Cost-increasing technology innovation continued

Long-term effect on health care cost may not be that big

Not a fundamental effect on the trend of cost escalation

# 3. Incentives and Competition

## 1) Increased cost sharing for patients

Positive effect: control moral hazard (reduce the excessive utilization of medical care, or reduce the utilization of cost-ineffective medical care)

Negative effect: Patients have imperfect information on the benefits and costs of different types of medical care, and following the increased copayment, they can reduce not only *cost-ineffective* medical care but also *cost-effective* medical care, which can result in the reduce access to medical care

# 2) U.S. Managed Care

- HMO (Health Maintenance Organization): the insured cannot use the services of health care providers who are not in the provider (network) list
- PPO (Preferred Provider Organization): when the insured use the services of providers not in the list, patients should pay high copayment
- Limited choice of providers (provider networks) because managed care plan selects providers who are willing to comply with the control mechanism of the insurer
- Employee incentive to choose cheaper options because the employer pays only the premium of the least expensive (or average premium) health insurance
- Insurer in managed care has a tight control on provider practice and aggressive bargaining on fees

# 2) U.S. Managed Care (continued)

Effect of US Managed Care

- Health cost control to some extent, with little negative impact on quality measured by patient outcomes
- Cream skimming (preferred risk selection): HMOs try to recruit low risks (younger and healthier enrollees) in order to reduce costs
- No major effect on health technology innovation, which is often regarded as the major driver of health cost escalation
- No major effect on population coverage (still non-universal in the U.S.)

# 3) Competition among Sickness Funds (Germany)

Competition in financing only: no selective contracting with regard to providers, and payment to providers are still uniform (corporatistic bargaining)

People can choose among various statutory sickness funds. But in a *statutory* health insurance system, sickness funds need to be treated fairly, which requests *risk adjustment* across sickness funds based on age, sex, income, and the number of dependents of the insured

Sickness funds facing competition has a perverse incentive for cream skimming because risk adjustment cannot perfectly adjust for health cost

# 4) Internal Market in the UK NHS

Separation of purchasing from the provision of health care in the tax-based health care system:

Competition and market mechanism in health care (hospital) delivery only, by relying on competition/contracting in the relationship between GPs (General Practitioners) and hospitals

Before the reform: (public) hospitals got budgets from the government, and had weak incentive to increase productivity and respond to GPs who refer their patients to hospitals

- Both purchasing and provision in the hospital sector were done by government

# 4) UK NHS Internal Market (continued)

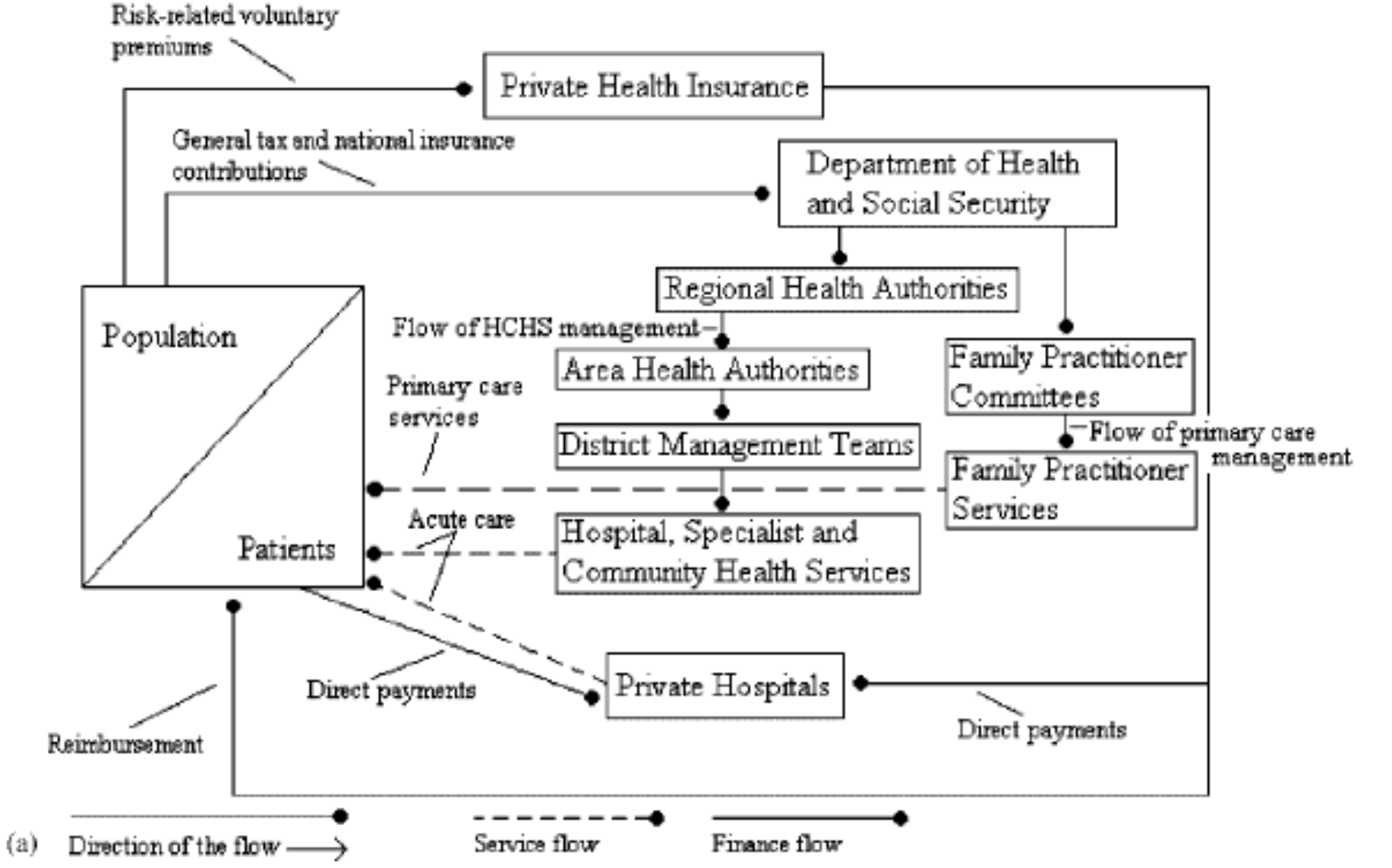
After the reform, (public) hospitals became NHS (National Health Service) Trust, and GPs formed into GP fundholders.

- Government budget is allocated to GP fundholders, who as the purchaser pay hospitals when referring patients
- With the purchaser-provider split, money follows patients, and the purchaser (GP fundholders) empowered

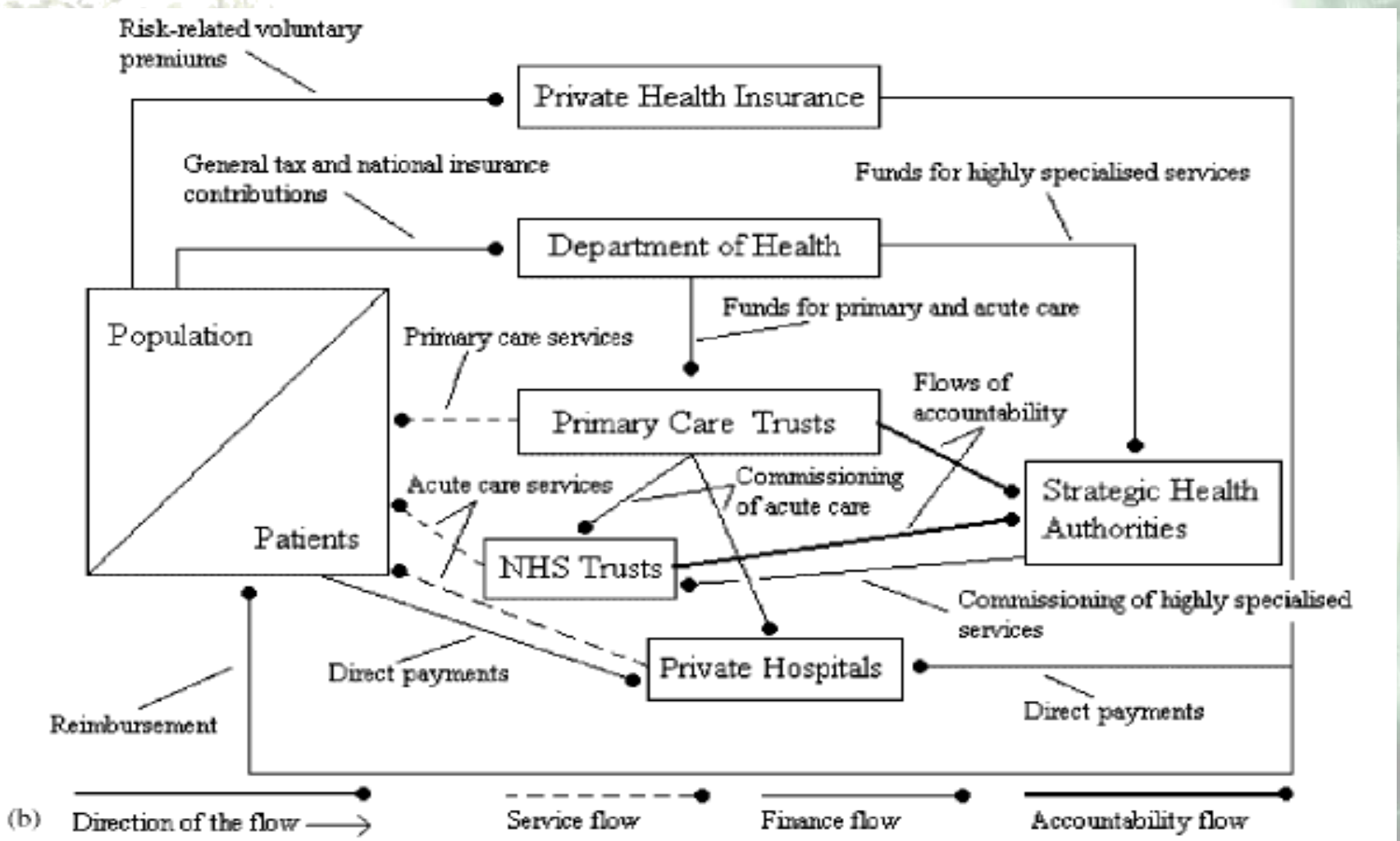
Contract between GP fundholders and hospitals became very important because it determined the revenue of public hospitals

- Hospitals now have stronger incentives to improve quality, respond to patient needs, and reduce costs

# Overview: NHS structure in 1979 (Oliver, 2005)



# Overview: NHS structure in 2005 (Oliver, 2005)

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# V. Convergence or Divergence

## 1. Convergence

- Attempts to introduce incentives and competition for system efficiency, increased attention on managerial and clinical accountability
- UK internal market: change in service delivery/fund flow
  (GP fundholders purchase hospital services)
- Competition among sickness funds in Germany: change in financing (Consumers choose from sickness funds)
- US Managed care: change in financing and delivery (insurer builds provider networks for better control on cost and quality, and consumers choose among health plans with different types of provider networks)

# 1. **Convergence** (continued)

- Common Challenges:

a. Cream skimming: Pressure of competition and cot reduction can lead insurers or medical providers to choose better risks

b. Transaction cost: New mechanisms of incentives and contracting request increased cost of implementation

c. Wasteful competition?: Consumers have limited information for effective choice in health care, and competitive pressure can distort the behavior of providers

-> To avoid wasteful competition, policymakers should closely monitor the effect of introducing competition in health care

# 2. Divergence: Institutional Stickiness

A major differences in the institutional arrangement for health policy remain

- UK: Public (tax) financing and public delivery

- Germany: Public (SHI) financing and private delivery

- U.S.: Private (private health insurance) financing and private delivery

# **DIVERGENCE** (continued)

- UK: Social right to health care
- universality; comprehensiveness of benefits packages
- centralization (role of central government is crucial)
- health budget allocation from general revenue

- Germany: Contributory SHI
- subsidiarity (family should provide support first before government intervention)
- corporatism (decision making by the representatives of peak organizations)
- regulated/managed competition among sickness funds, with risk adjustment mechanism

- US: Fragmentation, residualism, private fringe benefits offered by the employer, unmanaged competition

# VI. What is Different About Health System/Policy in Asia?

## 1. European Welfare State

History of European Welfare State:

Universal coverage and equal access (free or very low copayment) -> Oil shock, government budget deficit, cost containment and regulation -> Globalization, incentives & system efficiency

Different regimes of welfare state (Esping-Andersen , 1990), but still more homogeneous than Asian countries

- Social democratic: Sweden, Denmark, Norway, Finland
- Conservative: Germany, France, Spain, Italy
- Liberal: U.S.

# 2. East Asian Welfare State

- Asian countries: very heterogeneous

- Developed Countries

- Health and social policy under a strong constraint of economic development
- Role of family still important in welfare provision
- Near-universal coverage and cost containment (high copayment, fee regulation)

-> "productivism" (welfare developmentalism)

- Developing countries

Only employed (or public) sector is covered

# 2. East Asian Welfare State (continued)

## Welfare Developmentalism (Productivism)

- Idea of PRODUCTIVISM (Holliday, 2000)

- Social welfare subordinated to and defined by economic objectives

  -> Social policy as instruments for economic growth

- Discourage dependence on the state

  -> Encourage private source of welfare (important role of family, legitimizing the insufficient welfare benefits) -> *welfare society* rather than *welfare state*?

# 3. Characteristics of Asian Health Care System

- (Un)organization of health care delivery and dependence on the private sector:
  no gate-keeping, dominance of FFS payment

- Health care expenditure
- High copayment and high % private health expenditure
- Low percentage of GDP spent on health care
  <- low income, not severe aging, fee regulation

- Culture of professional dominance (authoritarian),
  popularity of traditional medicine,
  heavy reliance on pharmaceuticals