Comprehensive Exam Study Guide

ECC3670 Economics of Developing Countries

Monash University

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Topic 1: Economic Development: Overview

1.1 Definition and Measurement of Economic Development

Economic Development

- ***Seeks to move to a society where people are well fed, well clothed, possess access to a variety of commodities, have the luxury of some leisure and entertainment and live in a healthy environment***
- Should lead to:
  - removal of poverty and undernutrition
  - increase in life expectancy
  - access to sanitation
  - clean drinking water and health services
  - reduction of infant mortality
  - increased schooling and literacy
- NOT just about income or wealth per capita!

Money-metric

- ***Something that can be quantified in dollar terms***

Problems with Cross-country Income Comparisons

1. Underreporting of income in developing countries
   - tax system is not good so high incentive to under-report
   - people don't know how to report (eg. bartering for farmers- no money involved)
2. High proportion of income generated for self-consumption in developing countries (eg. farmers)
3. Prices of goods are not appropriately reflected in developing countries
4. Problems with using Exchange Rates

Problem with using Exchange Rates for Cross-country Income Comparisons

- Exchange rates are based on tradeable items only
  - goods/services moving between countries
- Many items in developing countries are non-tradeable (eg. taxi rides, haircuts)
- Exchange rates therefore underestimate the true PPP of a developing country
- Exchange rates determined by demand and supply of a currency

1.2 Purchasing Power Parity

Using Purchasing Power Parity (PPP) for Cross-country Income Comparisons

- ***PPP: Compares different countries' currencies through a 'basket of goods' approach. Two currencies are in equilibrium when a basket of goods is priced the same in both countries, converted at prevailing exchange rates.***
- ***= Ratio of the number of units of country A's currency needed to purchase in country A the same quantity of a specific good/service as one unit of country B's currency will purchase in country B***

- Basket of goods includes: Consumption + Investment + Government Spending (C+I+G)
- can be expressed in terms of either currency
- PPPs are measured by the International Comparison Project (ICP)
  - 1975, 1985, 1993, 2005, 2008, 2011

Example: Big Mac Index as a PPP

- *Big Mac costs US$4 in the USA and 4.8 Euros in Europe*
- *PPP = $4/4.8Euros*
  - *$1:1.2 Euros, or*
  - *$0.83:1 Euro*

PPP Measurement Approach: 8 Steps

1. ICP gathers data on prices of 400-700 items in each country
2. Price of each item is divided by its corresponding price in the US → Relative price
3. Items are classified into 150 expenditure categories
4. Average relative price of each category is obtained
5. National currency expenditure on each of the 150 categories is obtained for each country
6. Dividing the expenditure for each category by its relative price yields an estimate of the quantity in each category valued at its US price
7. **Geary's Method**: The international relative price of an item is the weighted average of the relative price of that items in all countries
8. Quantities obtained earlier from expenditure data are now valued at international prices

Global PPP

- ***The ratio of domestic currency expenditure to the international price value of a country's output***
- Above definition was for comparison between 2 countries only, whereas this definition compares country A to the whole world

Exchange Rates vs. PPP for Cross-country Income Comparison

Exchange Rates	PPP
Based on tradeable items only	Based on tradeable & non-tradeable items
Comparison of capital inflows and international trade	Comparison of standard of living (real variables)
Asia performs weakly: 7% of global output	Asia performs strongly: 18% of global output
Does not account for differences in price level	Accounts for differences in price level
Underestimates PPP for developing country's currency; Overestimates value for developed countries' output	Correctly estimates value of countries' output
Can change quickly between two countries	Change slowly between two countries

Note: Exchange rate approach should be used for (since they look at tradeable items only):

1. International trade
2. Capital flows

3. Value of foreign debt

Belassa Samuelson Hypothesis

1. Explains why Exchange Rates underestimate PPP of a developing country's currency
   - International productivity differences (and therefore differences in production/ income) are greater in the production of traded goods than in the production of non-traded goods, so the currency of the country with the higher productivity levels will appear to be overvalued in terms of purchasing power parity
2. Penn Effect: When incomes are high, average price levels are high
   → PLI moves towards 1 as a country develops

Price Level Index (PLI)

- ***PLI = (PPP / ER)*100***
- Unit free: PPP and ER are in the same units
- Used to compare price levels across countries
- A PLI of 100 indicates that the price levels in that country are the same as those in the base country or the world's average

Example: What does a PLI of 179 mean in France with US as a base?

- *Good costs 79 percent more in France than in the US*

PLI for developing/developed countries

- PLI < 100 for developing country
- PLI > 100 for developed country
- Why?
  - PPP < ER for developing country, because the currency is undervalued by the ER
  - Smaller value of PPP or ER means the currency is stronger

Shortcomings of PPPs

- PPPs provide a measure of the overall price level of an economy but may not reflect the expenditure patterns of the poor
- Do not capture differences in price level within an economy, only between economies
- Reflect consumption patterns of urban areas

1.3 Features of Economic Development

Features of Development

- 1960-1985: Per capita income of richest 5% was about 29 times that of poorest 5%
- 1960-1990: Meteoric rise of East Asian Economies
- 1980-1993: Uneven growth rates in developing countries
- 1996: 20% of world's income came from low and middle income countries that are home to 65% of world's population
- Tremendous disparities between countries
- Multiple explanations for uneven growth rates:
  - debt
  - unstable governments

- civil wars
- high population growth rates

Income Mobility

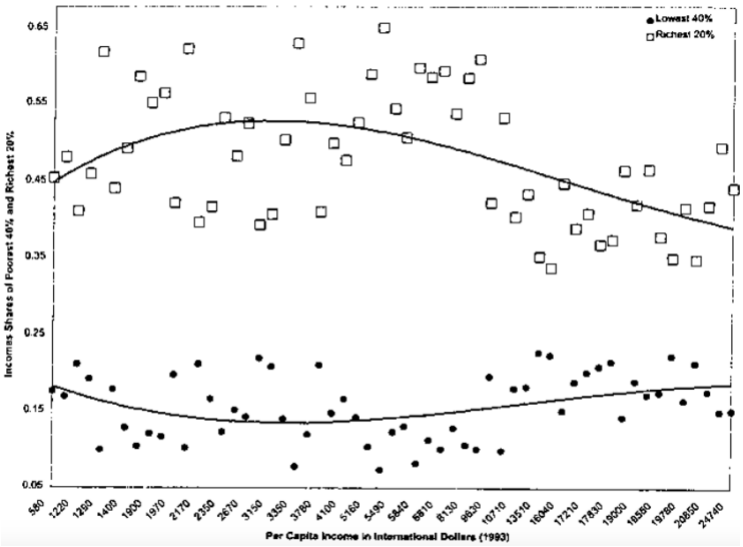
- **Middle income countries have much greater mobility than either the richest or poorest countries**
- Middle income countries can most easily change their economic position
- This suggests that a history of underdevelopment or extreme poverty puts a country at a tremendous disadvantage
- Income Mobility Matrix:
  - Axis: Income of a country in terms of average global income
  - 2 points in time
  - A country starts at vertical column and finishes at horizontal column
  - Very poor countries stay poor, very rich countries stay rich

	1/4	1/2	1	2	∞
1/4	76	12	12	0	0
1/2	52	31	10	7	0
1	9	20	46	26	0
2	0	0	24	53	24
∞	0	0	0	5	95

Figure 2.5. The income mobility of countries, 1962–84. Source: Quah [1993].

Kuznets Hypothesis

- ***As per capita income increases, the share of the richest 20% tends to increase initially, then declines; The reverse occurs for the poorest 40%***
- Used to explain difference between developing and developed countries (process a country goes through as it develops)
- As countries become richer, inequality rises and then falls → Inverted U
- As economic growth proceeds, it initially benefits the richest groups
- At higher income levels, economic gains are distributed more equally
- Redistributive policies can ensure that the benefits of economic growth are shared by all
- Kuznets found that developing countries, in general, tended to have higher degrees of inequality than their developed counterparts
- This relationship is unlikely to always be true
  - Many other factors affect the difference in income levels across people, such as structure of the economy, governance, history, institutions.
  - Countries that pursue a broad-based access to infrastructure and resources such as health services and education will find that economic growth is distributed relatively equally.



New ways of looking at old issues: Inequality and Growth – *Deringer & Squire*

Method

- Uses cross-country data on income and asset (land) distribution

Results

1. There is a strong negative relationship between initial inequality in the asset distribution and long-term growth
   - Initial inequality in income is not a robust determinant of future growth
   - Policies should focus on increasing aggregate investment and facilitating acquisition of assets by the poor
2. Inequality reduces income growth for the poor, but not for the rich
3. Available longitudinal data provide little support for the Kuznets hypothesis
   - structural differences across countries may create the illusion of an inverted U when there is no such relationship in reality

Possible explanations behind inverted U

- Economic development is a sequential and uneven process
  - pull up certain groups first and leaves the other groups until later

1. As people transfer from poor to advanced sectors, initially only few people get access to the modern sector
2. Technical progress initially benefits small industrial sector only
3. Technical progress is initially biased against unskilled labour
4. Industrialisation initially brings enormous benefit to a minority, including those with financial endowments and entrepreneurial drive

Testing Kuznets hypothesis

- Ideally, we would like to track an individual country over time and note the resulting changes in equality
- In practice, very few countries have the necessary long time series data required
- Nearly all tests of Kuznets' hypothesis are hence conducted on cross sections of countries

Redistributive Policies

- Poor country
  - may bring down rate of savings and therefore the rate of growth
- Medium income country
  - may generate a surge of savings by creating a large and ambitious middle class

Measuring Underdevelopment

- Exclusive reliance on GDP/capita as a development indicator is not wise
- Human Development Index (HDI)
  = (Life expectancy at birth$^{1/3}$ + Literacy rate$^{1/3}$ + Per capita income$^{1/3}$)
  - first introduced in Human Development Report (1990)
  - extended to Multidimensional Poverty Index (MDPI) in Human Development Report (2010)

HDI vs MDPI

- HDI is based on country averages; unable to identify deprived individuals/groups
- MDPI measured on individual level and then aggregated over household by using household surveys

Human Development Report (2010) – *United Nations*

- The past 20 years have seen substantial progress in many aspects of human development, yet not all sides of the story are positive
- The relationship between economic growth and health and education is weak in low and medium HDI countries
- HDRs have expanded recognition of the environment and sustainability
- Signal that intra-generational equity is as important as intergenerational equity

Structural Features of Developing Countries: Comparing Developing & Developed Country

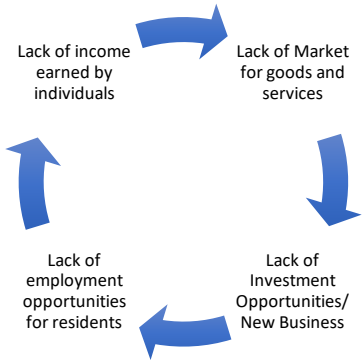
- Demographic Characteristics
  - high death and birth rates
  - high population growth rate (remains high as country develops, since death rates decline but birth rates remain high)
  - young population
- Occupational and Production Structure
  - agriculture accounts for a large share of production
  - rural share of labour force > 70%
  - agriculture has lower productivity than other economic activities
  - rapid rural-urban migration: 'pull' of urban sector and 'push' from growing landlessness
- International Trade
  - differences in composition rather than volume compared to developed country
  - exporters of primary products (eg. raw materials)
  - likely to face declining terms of trade (decrease in ratio export price/import price)

1.4 Poverty Cycle

Vicious Cycle of Poverty

- Underdevelopment is a **state of equilibrium** and there are forces at work that tend to restore the equilibrium every time there is a small disturbance
- **Basu**: Endogenous theory of population growth
  - A rise in per capita income causes the population to grow
  - A fall in per capita income causes the population to fall
  - Convergence on the same per capita income → Equilibrium
- With a **critical minimum effort**, the economy can escape this vicious circle

Vicious Cycle Components



Murphy-Schleifer-Vishny Model

- Model of multiple sectors, each comprising of competitive firms and one modern firm that can invest to industrialise to produce better output
- Two possible equilibriums:
  1. No sectors industrialise
     - No firm individually has the incentive to do so
  2. All sectors industrialise
     - all modern firms earn positive profit
- Economy can get stuck in either unless a critical minimum effort push is given to the economy to move it from one equilibrium to another

Conflicting strategies to break out of vicious cycle

1. Balanced Growth
   - Synchronised expansion in many sectors
   - It is not profitable for a single producer to increase production, but if all producers increase production they would all profit
2. Unbalanced Growth
   - A large investment in one sector generates though 'linkages' expansion in other sectors
   - Focus on growing key sectors that will cause other sectors to grow

1.5 Important Literature

Report by the Commission on the Measurement of Economic Performance and Social Progress – *Stiglitz, Sen & Fitoussi*

- Goal: identify the limits of GDP as an indicator of economic performance
- Overall objective of report: Ongoing research into development of better metrics that will enable us to assess better economic performance and social progress
- Report written for: political leaders, policy-makers, academic communities, statistics users/producers
- Commission formed by French president in 2008, due to dissatisfaction with the present state of statistical information about the economy (global financial crisis was not predicted)
- Statistical indicators are important for designing and assessing policies
- Good policies depend on good data
- Shortcomings of statistical indicators
  - things aren't always as they seem
  - if inequality increases enough relative to the increase in average per capita GDP, most people can be worse off even though average income is increasing
  - standard measures don't measure impact on the environment
- GDP is an inadequate metric to gauge well-being over time

Recommendations:

1. When evaluating material well-being, look at income and consumption rather than production
2. Emphasize the household perspective
3. Steps should be taken to improve measures of people's health, education, personal activities, environmental conditions
4. Statistical offices should incorporate questions to capture people's life evaluations, hedonic experiences and priorities in surveys
5. There is a need for a clear indicator of our proximity to dangerous levels of environmental damage

International Comparison Project (2005) – *World Bank*

- A worldwide statistical initiative to collect comparative price data and estimate PPPs of the world's economies
- PPP calculated by geographic region and then linked up on a global level
  - products to be priced are more homogeneous within regions
  - expenditure patterns are likely to be more similar
  - language differences are reduced
- OECD also calculated PPPs, these were combined with ICP PPPs for a global estimate
- Common use of PPP: Calculation of widely used "dollar-a-day" international poverty threshold

International Comparison Project (2011) – *World Bank*

- Improvements to methodology between 2005 and 2011 ICP round
  - larger number of countries covered
  - survey framework better aligned with ICP framework
  - development of an ICP national accounts framework
  - a research agenda was established