Introduction

- Last time discussed the measurement of inequality.
- Today we will look how inequality can influence how an economy works.
- Chapter 7 explores the interconnections of inequality and other features of economic development.
Inverted–U Hypothesis

- The inverted–U hypothesis is sometimes also called the Kuznets curve after Noble Laureate Simon Kuznets.

- Economic progress measured by per capita income, is initially accompanied by rising inequality; these disparities ultimately go away as the benefits of development diffuse more widely.

- Kind of an early trickle–down hypothesis.
Kuznets Curve
Early adopters of new technology (firms and individuals) benefit most and accrue profits and income gains (and probably rents).

This group accrues wealth and their consumption and savings increase (marginal propensity to consume is less than one).

More saving generates greater investment. As we seen with Solow and other growth models per capita output and income rises.

A rising tide lifts all boats.

Others in society catch-up and eventually inequality declines.
Empirical Evidence on Kuznets Curve
Western Europe

- Decidely mixed.

- Historical investigations of Western European countries tend to support Kuznets’ conjecture.

- For example, in England Gini coefficient of income inequality rose from 0.4 in 1823 to 0.63 in 1871 and fell to 0.44 in 1901.

- Evidence from France, Germany, and Sweden follows the same pattern.

- Yet, evidence from Norway and the Netherlands does not (each experienced monotonically declining inequality from the mid-19th century.)
Evidence on Kuznets Curve
Latin America and East Asia

- Evidence from more recent experience is possibly less supportive.

- Evidence from Latin America countries (e.g., Columbia and Brazil) are consistent with the Kuznets curve.

- Evidence from East Asian countries (e.g., S. Korea, Japan and Taiwan) have experienced monotonically falling inequality.
Most recent work

- Trying to understand why some countries follow the Kuznets curve while other do not.

- Re-frame question: What is it about a country’s institutions or historical context that leads to one path versus another.

- We should not be too surprised that the evidence is mixed following discussion of Chapter 5. History matters.

- Extremely remarkable if there was substantial evidence in support of the Kuznets curve.
Investigating Kuznets Curve with cross sectional data

- The results mentioned above uses *longitudinal* data; observations over time for the same countries.

- Kuznets conjecture about what happens during the process of development.

- Thus, most appropriate to track the Gini Coefficient (or other measure of inequality) over time.

- Yet, this is not what most empirical studies of the Kuznets curve do.

- Most studies use *cross sectional* data; which is to say observations at a point in time across a number of countries.

- Why? Use cross sectional data because of data limitations.
Limitations of Cross Sectional Data

- Use of cross sectional data requires that countries vary in their level of development.
- **And** that countries follow the same development process.
- So that observations taken at the same calendar time yield multiple observations on the same process.
- **RAY:** Unless we take the view that absolutely nothing can be learned about one country from studying another, there is something to be obtained from the analysis. Page 202. *DE*
I am less sanguine about the use of cross-sectional data.

Harder to control for cross country differences to ensure learning about “same process.”

Some comparisons possible; e.g., regional — Nordic countries; USA, Canada.

Role of history influences subjective expectations; same policy can have different effects.
Uneven and Compensatory Changes

Types of Income Growth

1. Everyday basis: people accumulate wealth, acquire skills, steady gains in productivity.

2. Some sectors may take off – high demand for people with these skills (e.g., engineering, accounting, software development). Hirshman’s tunnel.

3. Compensatory — high incomes spread through the economy as demands for all sorts of other goods and services rise.
Basic feature of development: large transfer of people from relatively poor to relatively advanced sectors of the society.

This suggests that change is at first uneven then compensatory.

Or technical progress initially benefits (relatively) small industrial sector. Likely to have more uneven character at low levels of income.

Industrialization brings enormous profits to a minority that possess the financial endowments and entrepreneurial drive to take advantage of new opportunities.

This too argues for an uneven development process, with gains concentrated among a few, with little benefits accruing to others. Gains may ultimately be transferred to most. But transition likely to be varied and perhaps for some long.
The relationship between inequality and savings creates an additional channel through which inequality interacts income growth.

Concentrate wealth among those willing to save, accumulate, and invest, thereby boosting the growth rate.

Shades of this argument heard in every policy debate about tax policy.

DE offers a useful thought experiment.
Alternative 1  Have two people, one is rich (income $y_r$) and one is poor ($y_p$).

Alternative 2  Have two people, both earn moderate income $y_m$, s.t.

$$2y_m = y_r + y_p$$

Which alternative yields greater savings?

Total income must be the same for comparison to be meaningful.
Marginal Savings Rate

- Answer depends on **marginal** saving rate behavior.

- If marginal savings rate increases with income – the relationship between income and savings is as in Figure 7-2a.

- If marginal savings rate decreases with income – the relationship between income and savings is as in Figure 7-2b.
Increasing Marginal Savings Rate
Decreasing Marginal Savings Rate
Role of Theory

- Useful to point out as does Ray that while we have not answered the question on the relationship between savings and inequality, we have at least identified the critical property.

- It is not total but marginal savings that matter. And whether savings increases with inequality depends on whether marginal savings is increasing or decreasing.
Simple question to pose, not so simple to answer.

Depends on:

1. Subsistence Needs. Poor may not be able to save.
2. Conspicuous consumption (Veblen)
3. Aspirations and Savings

Considerations (2) and (3) seem to be more about psychology than economics. Does not mean they are wrong.
Conjectured Relationship Between Income and Savings
Implications

- Several comments on the conjectured relationship.

- At low incomes, redistribution policies could lower savings (convex portion).

- With low incomes and extreme inequality, may seek redistributive policies. Such policies could easily have growth consequences.

- Middle income countries — redistribution policies may generate a surge of savings. Create a large and ambitious middle class with international aspirations.

- Redistribution policies may have little consequence among high income countries (according to the picture).
Assume people aspire to standards set by society.

But society’s standards also evolve.

History and initial conditions may generate different growth profiles.

If we start with a low level of inequality, may be sustainable with growth.

Little heterogeneity among people, and their behavior. Savings behavior similar keep economic groups relatively close together over time.
Initial Conditions with High level of inequality

- Key feature: for many groups in society big difference between the desired standard of living and actual standard of living.
- Conjures that savings depends not only on income but on income and aspirations.
- And aspirations depend on inequalities in income and in wealth.
- Once again (as in chapter 5) History matters.
Inequality, political redistribution and growth

- Discussion to now considered the relationship between income and savings.

- Ray presents a political economy argument for why economic inequality may retard economic growth.

- Economic growth may generate Political demands for redistribution.

- Education increases, a middle–class may develop. Per capita income increases some individuals will have time for political activity.

- People become aware of how little the have–nots have.
Redistribution

- Two major types of redistribution.
  
  1. Redistribute *existing wealth*. Example: Land reform.
  
  2. Tax *increments* to stock of wealth. Example: progressive taxation of income.

- Difficult to redistribute existing wealth.

- Requires knowing who has the wealth. Easy to evade detection: parcel out titles among family members.

- The rich and powerful are the net losers of the reform.
Incremental Taxation

- Have high rates of taxation on high level of income.
- Common to have excise taxes on particular goods (e.g., luxuries).
- High taxes on business profits.
- Inheritance taxes.

**Problem**: these taxes affect margins of choice and thus distort (i.e., lower) incentives ⇒ tend to lower savings and investment and will lower the rate of economic growth.
Inequality and Growth: Evidence

- Ray Discusses a couple of studies, most notably by Alesina and Rodrick.
- Conclusion: Gini coefficient on land is negatively related to economic growth—the more concentrated the land holdings the lower the rate of economic growth.
- Finding robust to structural differences between democratic and nondemocratic political systems.
- Little doubt “there is a strong and negative relationship between initial wealth inequality (as measured by land) and subsequent economic growth.”
Inequality and Demand Composition

Pattern of consumption changes as income rise (for individual and economy). **Engel Curve**: the share of household income (expenditure) on a good varies with income.

- **Normal**: Expenditure on commodity increases as income increases. (most goods)

- **Inferior**: Expenditure on commodity decreases as income increases (potatoes).

- **Luxury**: % chg of expenditure on good increases more than % increase of income. (yachts)
Engel Curve in a two good world
Engel Curve

- May be nonlinear.

- Can also plot with income on x–axis and expenditure on good on y–axis.

- Engel curve illustrates we expect the basket of goods consumed varies with income, and hence with economic development.
Derived demand for factors

- As demand for goods changes with economic development the derived demand for factor of production also changes.
- Recall that in perfectly competitive markets a factor is paid the value of its marginal product.

\[ w = VMP = p \times MP_L \]

Where \( p \) is the price of the final product, and \( w \) is the factor price.
Changes in the demand for goods impacts the distribution of income through the derived demand for factors.

A shift from agricultural products to manufacturing products will increase the price of factors used to make the mfg product.

Thus we expect to see changes in the functional distribution of income (wages, profits, rents) as an economy develops.

Clear, unambiguous predictions are hard to find as results depend on income and price elasticities of demand for the consumer good as well as scale and substitution elasticities of supply. (Economics 450)
Approach: Commodity Bundles

- With many products: study commodity bundles consumed by different income groups and then see if the implied demands for factors lead to greater equality or not.

- Again historical differences yield the possibility of different development experiences, not because of intrinsically different characteristics of a country’s citizens, but because they react differently to different economic contexts.

- Thought experiment: same consumers with fixed preferences. Via history opportunity sets are evolve differently and so choices are different.
Example: England vs. US 19th Century

- England: had aristocracy and demand for high quality products produced by (a few) skilled artisans.

- U.S.: large middle class could not afford the high quality products; purchased the mass domestically produced “sturdy” goods.

- Yet the mass production possibly ensured the existence of a large group of individuals who could afford the sturdy goods.

- Production by skilled–artisans in England did not generate a middle class.
You may benefit from reading the summary first. Chapter summaries are detailed and informative. True for Chapter 7 and most subsequent chapters.