

# Lectures on Economic Growth

## Topics: Government & Inequality

an upper intermediate course offered at the 7th semester at the

Department of Economics, University of Piraeus, Greece



## Previously in this course:

- We have looked at production levels in different countries and explained them using
  - factors,
  - technology,
  - and efficiency.
- There is plenty variation in each of these explanations.

Now have we explained the differences in productivity?

Well, we could still ask why these differences occur?

- For factors, the country may simply be in transition.
- Last week, we saw that the economic environment also matters: whether or not the economy is open.
- Today, we take this further and look at the role of the government in the economy and at the distribution of income.

## Today (part A)

Government (chapter 12 of Weil)

We tend to take a large government for granted; the CIA world factbook (1990) writes about our country:

“This highly developed and affluent economy is based on private enterprise. The government makes its presence felt, however, through many regulations, permit requirements, and welfare programs affecting most aspects of economic activity.”

Questions arise:

- What should governments do?
- What do governments do?
- How do governments influence growth?
- What causes government behavior?
- Poor countries / bad government: which came first?

# Today (part B)

Inequality (chapter 13 of Weil)

Who benefits from economic growth?

- Is it just the rich people?
- Does that matter?
- Is there a tradeoff between equality and efficiency?

## Functions of government

Most of what governments are necessary for was known by Adam Smith:

- 1 Protecting against common threats (foreign invasion, disasters)
- 2 Guaranteeing the rights of individual citizens, protecting them from each other (violence monopoly)
- 3 Provision of public goods (non-excludable goods other than protection)

Some other arguments for government intervention:

- 1 Market failure / externalities. In general, the market knows best:
  - intervention is unnecessary
  - intervention makes things worse

but in cases of market failure the government may regulate.

Possible failures:

- externalities (pollution etc.)
- moral hazard (financial standards for pension funds etc.)

## Functions of government

- ⑤ Antitrust. Stepping in when one party abuses market power, or when several suppliers collude.
  - Monopoly power (Microsoft)
  - Cartels (Dutch construction companies)
- ⑥ Fixing coordination failures. What side of the road to drive on, or what sectors to develop.
- ⑦ Income redistribution. Taking from the rich to give to the poor, or insuring against uninsurable risks.

There are arguments against government overreach:

- Government operations tend to be inefficient (for lack of market pressure). Sometimes even government failure.
- Redistribution leads to inefficiency: costs of redistribution.

# Providing public goods

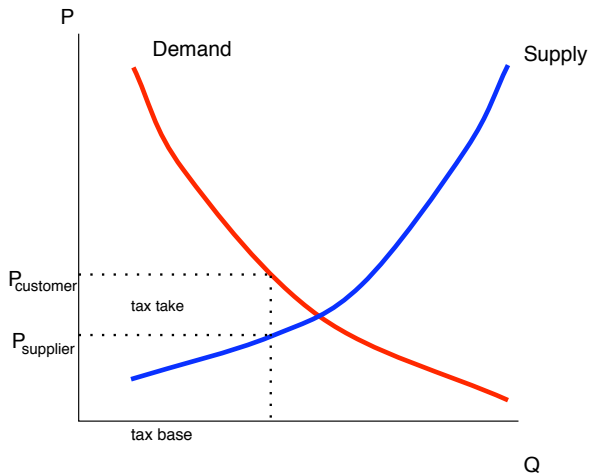
For bona fide government activities, money must be raised through taxation. Taxation on the margin distorts the economy.

- Ideally, lump-sum taxation would leave incentives alone
- but it is a regressive form of taxation

Public economics: tax the activity with the lowest price elasticity.  
Dutch politics: check income group effects. Getting the lowest price elasticity minimizes distortion due to taxes.

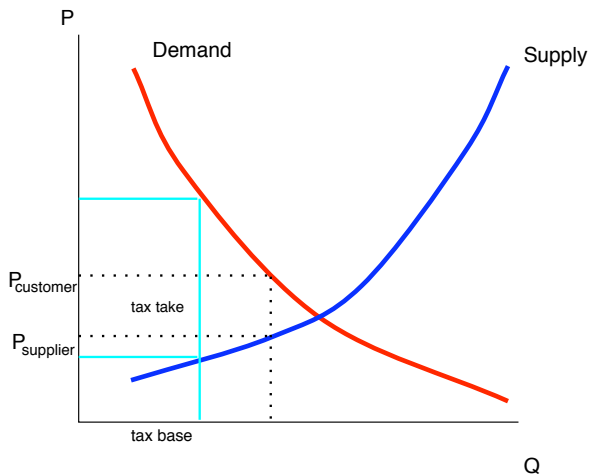
# Tax distortion

Levying a tax generally moves the market away from equilibrium.



# Tax distortion

Generally, the efficiency loss varies with the square of the tax rate.



# Tax distortion

How much does taxing distort? Broer (2004):

Tabel 1: Marginal costs  
of funds

Tax	mcf
capital tax	1.46
labor income tax	1.14
consumption tax	1.20
corporate tax	1.30

Marginal costs of funds: you raise a euro in taxes, how much must you compensate citizens to raise them back to the ex ante level of utility?

# Government influence over growth

Governments tax and provide public goods, but also

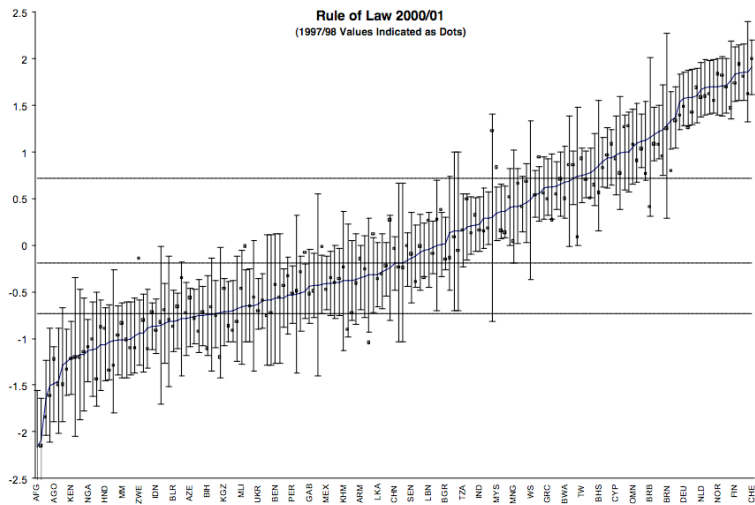
- provide rule of law by enforcing contracts and punishing criminal behavior. This guides people into productive, rather than redistributive, activities.
- engages in economic management by running state enterprises, planning development, drawing up the rules for economic transactions.

Rule of law is generally good for growth; the result of management depends very much on the execution.

As a rule, the lack of market pressure leads to disappointing results.

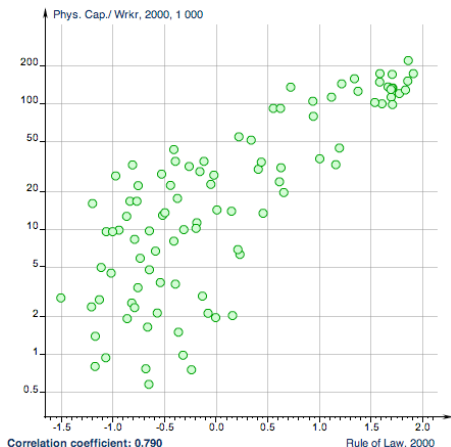
# Rule of law

The World Bank keeps a database with rule of law indicators.



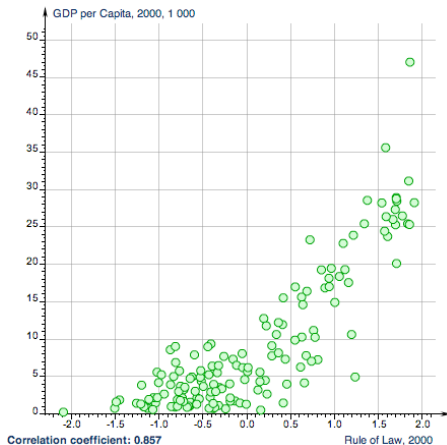
## Rule of law

We can look at the correlation between rule of law and (physical capital) factor accumulation, assuming that absence of laws inhibits investment.



## Rule of law

Same thing is possible with regard to GDP per capita.

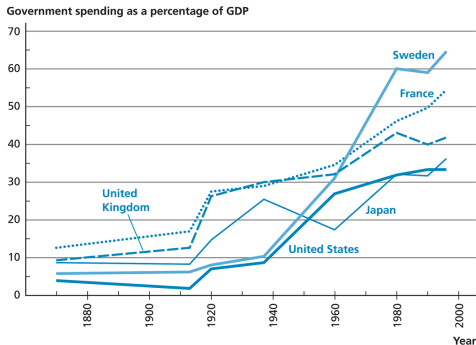


Here too, correlation is not causation.

# Size of government

Wagner's law says that government must grow with prosperity, as complexity and preference for public goods goes up.

**FIGURE 12.3**  
Growth of Government Spending, 1870–1996



Source: "The Future of the State," *The Economist*, September 20, 1997.

## Government motivation

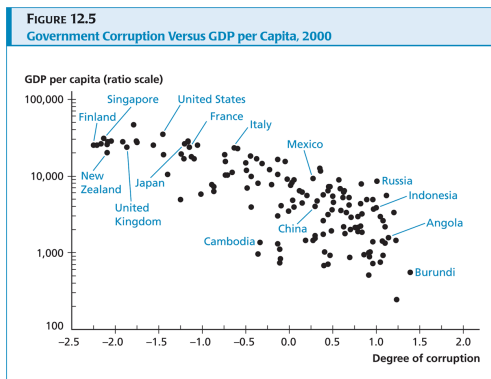
We take for granted that a government will maximize growth, but often they do not. Why?

- 1 Another goal is pursued, such as arts, aid, defense, environment, equity.
- 2 Officials are after own gain, there is corruption, or you live in a kleptocracy. Corruption is harmful as it acts like a tax, without the benefits.
- 3 Officials fear ousting, the object is to stay in power, and then to maximize wealth.

Looking at the government as a maximizer can be illuminating.

# Corruption

Corruption was once thought as greasing the wheels, but turns out to be very detrimental.



Source: Kaufmann, Kray, and Zoido-Lobaton (2002).

Here too, correlation is not causation. We now look at that.

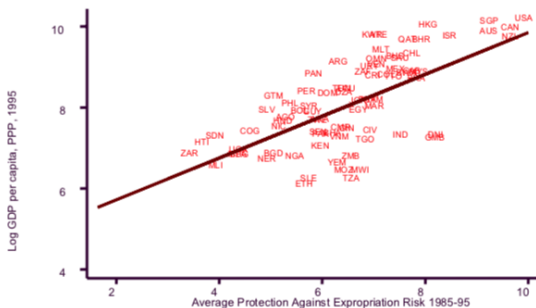
## Poor countries, poor governance

It appears that poor governance and low GDP per capita go hand in hand. What is causing what? Two hypotheses:

- 1 Low income causes poor governance, but not the other way.
  - Many examples of bad government with growth.
  - Rich countries pay civil servants better, have more to share.
- 2 Poor governance causes low income, but not the other way.
  - The influence of the government is very large.
  - Government quality comes from colonial heritage, not from income.

# Government through colonization

Acemoglu, Johnson and Robinson (2001) note that GDP per capita varies with protection of property rights.



Source: Acemoglu, Johnson and Robinson (2001). "The Colonial Origins of Comparative Development: An Empirical Investigation". American Economic Review, Vol. 91, No. 5, pp. 1369-1401.



## Government: conclusions

- Government has a large influence over growth.
- Economists have long focused on what governments should do, but are now looking at why governments act the way they do.
- Looking at officials as self-interested explains a lot of things.
- The chain of causation between growth and government is complicated.

# Governance Quality: Greece

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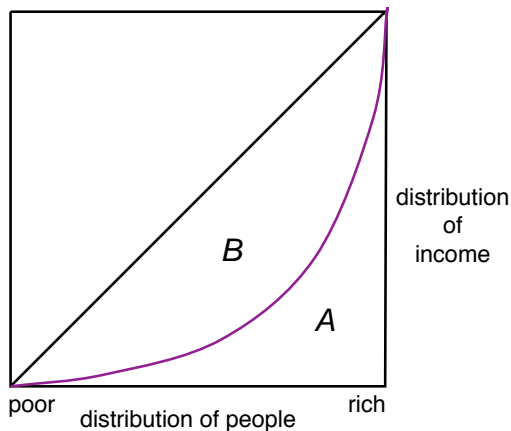
Source: The World Governance Indicators, World Bank.

## Income distribution

Who benefits from economic growth? We have looked at average GDP per capita, but should also consider how income is divided.

“in 1970 the top 0.01 percent of taxpayers had 0.7 percent of total income – that is, they earned ‘only’ 70 times as much as the average, not enough to buy or maintain a mega-residence. But in 1998 the top 0.01 percent received more than 3 percent of all income. That meant that the 13,000 richest families in America had almost as much income as the 20 million poorest households; those 13,000 families had incomes 300 times that of average families.” (Paul Krugman, NYT, 2002)

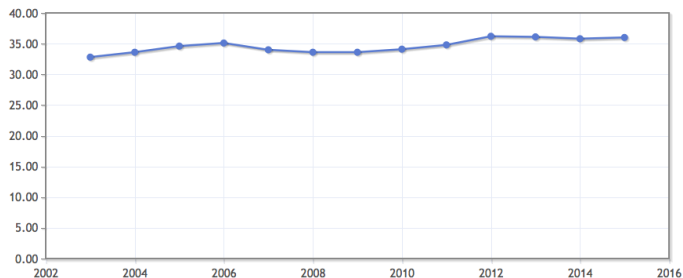
# Measuring inequality



Use the Lorenz curve (purple) to find the Gini coefficient:  $B/(A + B)$ .

## Inequality in Greece

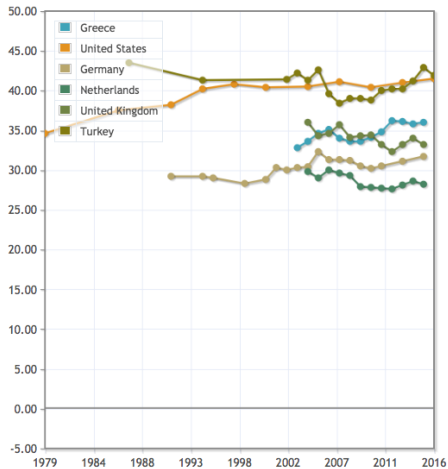
This is the Gini coefficient for Greece, 2012-2016. As the graph below shows, over the past years this indicator reached a maximum value of 36.20 in 2012 and a minimum value of 32.80 in 2003.



Source: World Bank, World Development Indicators, 2020.

# Inequality compared over time

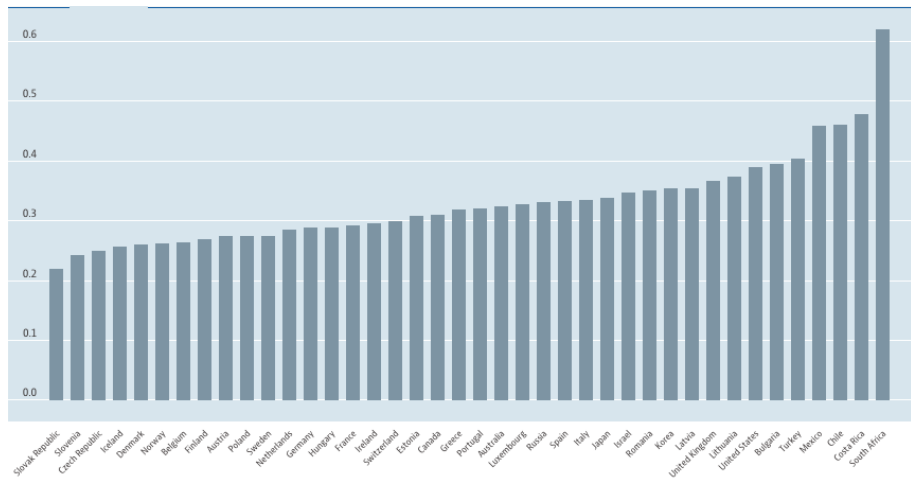
Recent trends across selective economies:



Source: World Bank, World Development Indicators, 2020

# Inequality across OECD

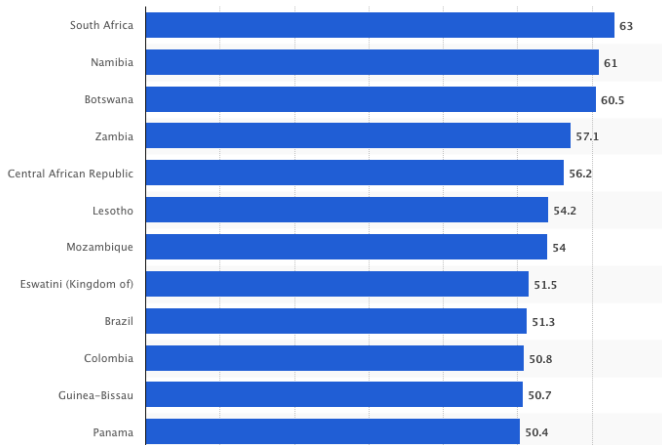
Gini Index in 2015 for OECD countries:



Source: OECD, Gini Index, 2020

# Most Unequal countries based on Gini (2015)

Gini Index in 2015 for OECD countries:



Source: Source: World Bank, 2020

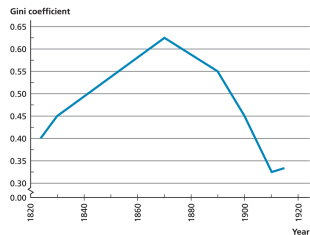
## Causes of inequality

Income is the product of factor ownership and factor reward. If either changes, the distribution of income changes.

Kuznets hypothesis:

- Technological breakthroughs place a premium on skill and education.
- Initially, this rewards a small group.
- The premium acts as an incentive to educate.
- Over time, inequality declines.

FIGURE 13.4  
The Kuznets Curve in England and Wales, 1823–1915



# Inequality in the USA

In the United States, inequality has gone up. Some possible causes:

- Kuznets: there has been a technological breakthrough in IT.
- International trade: this makes educated labor relatively scarce, unskilled labor relatively abundant (idem immigration).
- Superstar dynamics: by their nature, in some professions there are huge returns to scale (artists, law, management).

## Effects of inequality

Is inequality good or bad for growth? Growth regressions say: Gini has a small, negative sign. The relationship is complicated, depends on the reason for inequality

- Government attempts to achieve equality usually hurt growth
- Innovations pay off when demand is large: a large middle class is necessary
- Unequal distribution leads to instability

Also note: inequality is not static

- Inequality is not tragic as long as there is mobility across income groups
- Income is partly a matter of preferences

Equality in opportunity (ex ante) is important; it does not imply equality of outcome (lots depends on your view of social security: transfer or insurance).

## Inequality and accumulation

How does inequality interact with physical and human capital accumulation?

- Physical capital: the saving rate of richer people is higher. More inequality leads to higher (average) saving rates.
- Human capital: the return to investing in your own HC declines rapidly. Inequality therefore leads to lower average HC. (Why not invest in other people's HC? No collateral.)

The current economy is more centered around human capital than physical capital: this means inequality has different effects this time around.

## Data & References:

### Data

- Trading Economics
- The World Bank
- The Global Economy
- FRED economic data | St. Luis, FED
- World Governance Indicators, World Bank

### References

Acemoglu, D., S. Johnson and J. Robinson (2001). "The Colonial Origins of Comparative Development: An Empirical Investigation". American Economic Review, Vol. 91, No. 5, pp. 1369-1401.