

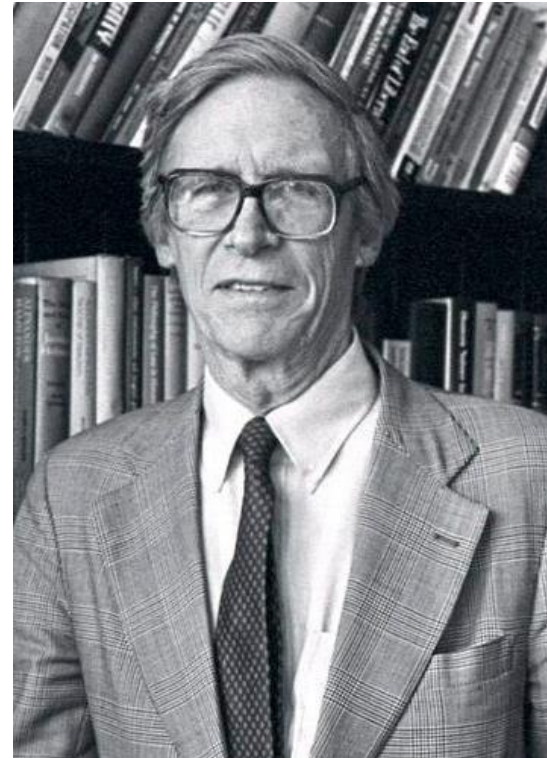
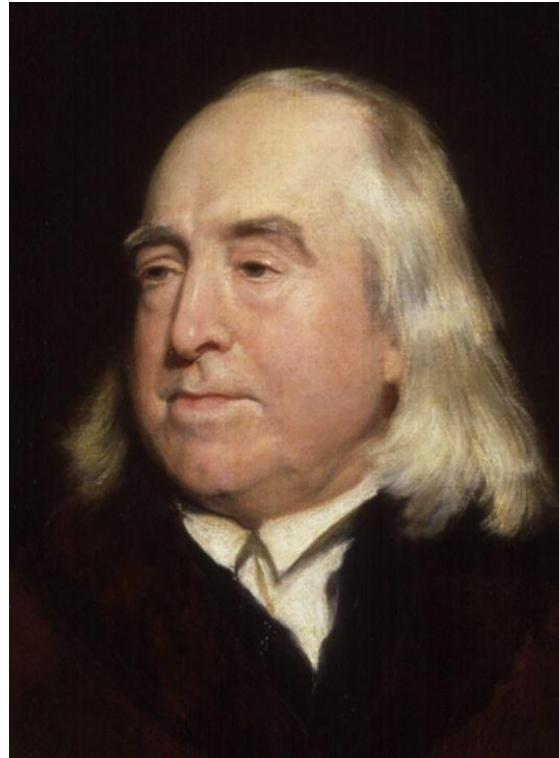
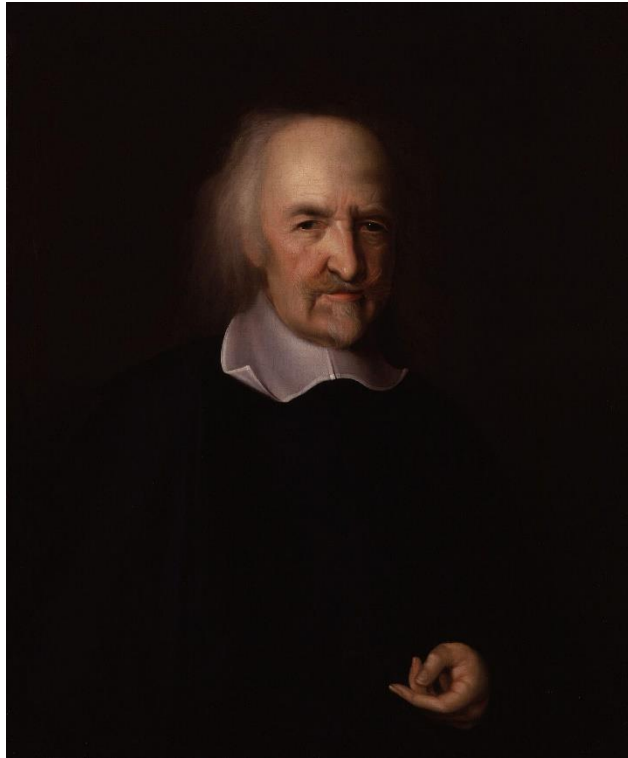
Governments and the market

Economic and Fiscal Policy

Introduction

- Why do governments carry out economic policy?

Justice



National interest

- Defence budgets (for example, DE 1.4% to 2% of GDP)
- Trade sanctions (for example, Oil imports in the US and CAN, export controls – hardware)
- Financial sanctions
 - Against individuals
 - Banks (for example, SWIFT exclusion)
 - Central Bank (freezing of international reserves)



Growth and efficiency



Ecology



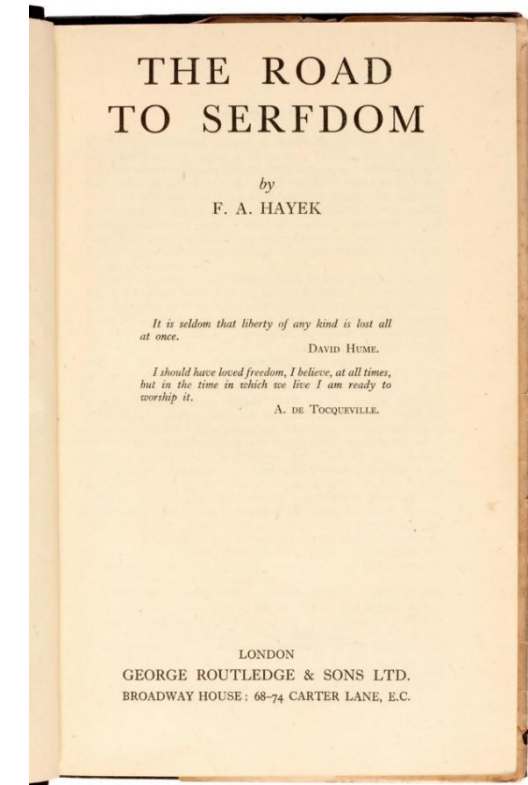
Social contract theory

- Legitimacy of state authority over individual
- State of nature absent political order
- Rational individuals will engage in social contract to trade some freedoms against more security
- Law and state not natural and only legitimate to the extent it fulfills such tasks.



Social contract theory

- Combined with libertarian thought
- Government intervention beyond the necessary minimum is not legitimate
 - Assumption: everybody is happy with the basic functions
 - State does the least minimum to sustain market economy
 - Law and order, in particular property rights
 - Defense
 - Infrastructure



Market failure

- Conditions for allocative efficiency in welfare economics
 - Complete markets
 - Competition
- Deviations from those assumptions lead to outcomes that are not pareto efficient (idle resources, waste, ...)
- Market failure can assume many forms and can happen cumulatively

THE ANATOMY OF MARKET FAILURE

By FRANCIS M. BATOR*

Introduction, 351. — I. The conditions of market efficiency, 353. — II. Neoclassical external economies: a digression, 356. — III. Static externalities: an ordering, 363. — IV. Comments, 371. — V. Efficiency, markets and choice of institutions, 377.

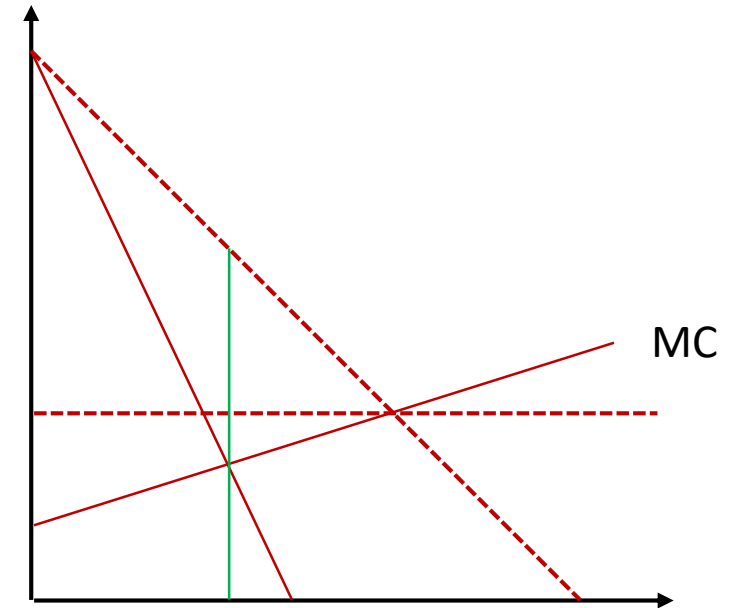
What is it we mean by “market failure”? Typically, at least in allocation theory, we mean the failure of a more or less idealized system of price-market institutions to sustain “desirable” activities or to estop “undesirable” activities.¹ The desirability of an activity, in turn, is evaluated relative to the solution values of some explicit or implied maximum-welfare problem. ‡

It is the central theorem of modern welfare economics that under certain strong assumptions about technology, tastes, and producers’ motivations, the equilibrium conditions which characterize a system of competitive markets will exactly correspond to the requirements of

Market failure

Monopoly, oligopoly, monopolistic competition

- firm would not lose all customers upon price increase
 - Natural monopoly, Transport
 - Strategic behaviour
 - Patents
- As opposed to perfect competition, firms set price such that marginal revenue equals marginal cost



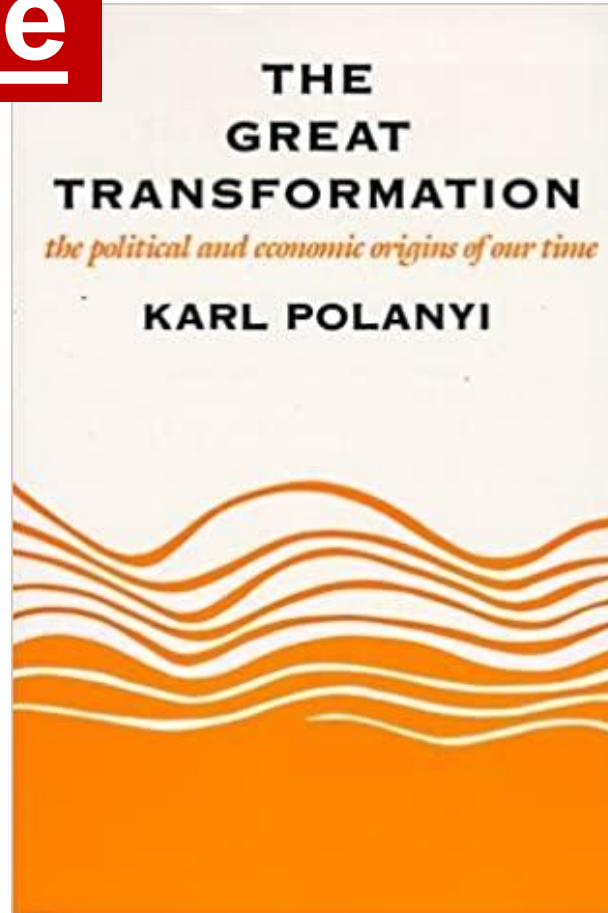
Market failure

Public goods:

- Non-rivalrous
- Non-excludable
- Free riding: People continue to use something without necessarily paying for it
 - difficult to privately provide
 - Underproduction
- Examples?



Public Purpose

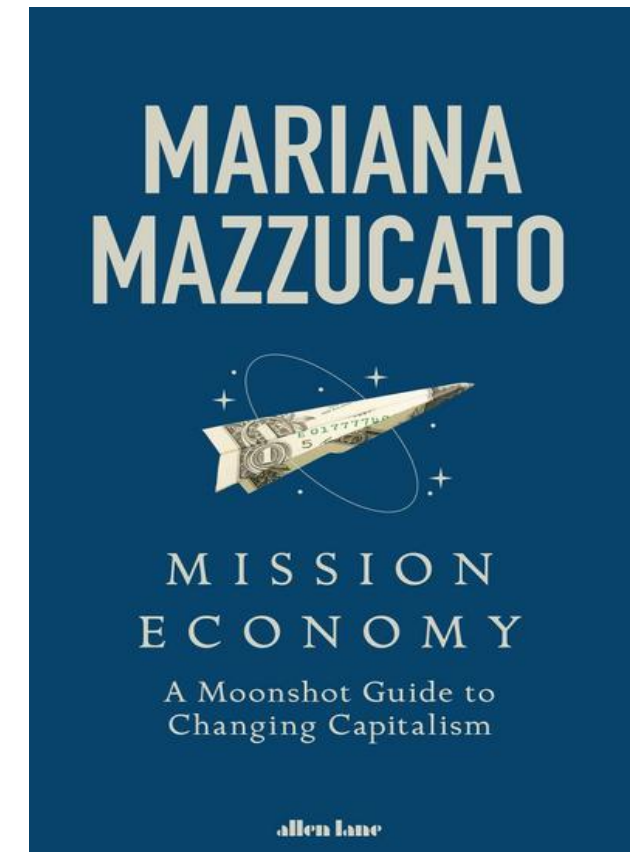


Public Purpose

- Chang: Most successful economic development to be observed in countries without “Laissez-faire” capitalism
 - Building up industries with subsidies, taxation and regulation
 - UK 18th century: Technological progress emerges behind high and long-lasting trade barriers
 - High tariffs on manufactured goods imports, low tariffs for raw material imports, export subsidies
 - Corn laws: Export Imperialism. “Kicking away the ladder” argument
- USA: Infant industry protection – protection for new firms until they reach international competitiveness
 - Between 1816 and the end of the second world war, US tariffs on imported were among the highest in the world on manufactured goods imports
 - International lobbying for free trade not before end of WWII.

Public Purpose

- Economic policy is supposed to promote development towards certain social goals – environmental goals
- Directed technological change: not necessarily the deficiencies of model market:
„Transformational growth trajectories“
- Interaction of public and private agents
- Example: Appollo mission



Public Purpose



Camera Phones

In the 1990s a team at the Jet Propulsion Laboratory (JPL) worked to create cameras small enough to fit on spacecraft and with scientific quality. 1/3 of all cameras contain this technology.



Scratch-resistant Lenses

The Lewis Research Centre attempted to develop diamond-hard coatings for aerospace systems, later creating a technique that was developed and patented for just that purpose.



CAT Scans

A space programme needs a good digital image. The JPL played a lead role in developing this technology, which in turn helped create CAT scanners.



LEDs

Red LEDs are being used in space to grow plants and heal humans on earth. LED technology used by NASA has contributed to the development of medical devices such as WARP 10.



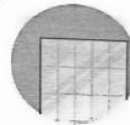
Land Mine Removal

Thiokol Propulsion uses NASA surplus rocket fuel to produce a flare that can safely destroy landmines. It works by burning a hole through the mine without detonation.



Athletic Shoes

Nike Air Trainers wouldn't exist if it weren't for suit construction technology developed by NASA. It was a former NASA engineer that first pitched the idea.



Foil Blankets

These metallic sheets, which are now used on earth in extreme temperatures, evolved from a lightweight insulator NASA developed to protect spacecraft and people in space.



Water Purification Systems

In the 1960s, NASA created an electrolytic silver iodizer to purify astronauts' drinking water. This technology is now widely used to kill bacteria in recreational pools.



Dust Busters

NASA approached Black & Decker to develop a lightweight device to collect samples on the moon. The company then used this technology to create the Dustbuster in 1979.



Ear Thermometers

NASA and Diatek developed an 8-ounce aural thermometer, which uses infrared astronomy technology to measure the amount of energy emitted by the ear drum.



Home Insulation

Space is a place of extreme temperatures, knowing this NASA developed insulation from aluminised polyester called Radiant Barrier, used today in most home insulations.



The Jaws of Life

An extrication tool to free people from mangled vehicles, the Jaws of Life applies a miniature version of the explosive charge used to separate devices on the space shuttle.



Wireless Headsets

NASA, being one of the forerunners for advancing communication technology, developed these headsets to allow astronauts to be hands-free.



Memory Foam

Memory foam mattresses are the result of an incredible foam developed by NASA in the 1970s to help make airline pilots' seats more comfortable. They were later installed in space shuttles.



Freeze-dried Food

NASA conducted extensive research into space food; one technique they developed was freeze drying, which retains 98% of the nutrients and weighs only 20% of the original weight.



Adjustable Smoke Detector

While NASA didn't actually invent the first smoke detector, it did come up with a more modern version, creating the most sophisticated alarm system ever.



Baby Formula

Infant formulas now contain a nutritional enrichment ingredient, the origins of which can be traced back to NASA-sponsored research that explored the use of algae for long-duration space travel.



Artificial Limbs

NASA's innovations into shock-absorption materials, coupled with robotic and extra-vehicular activities are being adapted to create more functionally dynamic artificial limbs.



Computer Mouse

In the 1960s a NASA researcher was trying to make computers more interactive when an idea was suggested about how best to manipulate data on a computer screen, leading to the mouse.



Portable Computer

The SPOC was created by adapting the GRiD Compass, the first portable laptop. In its creation hardware had to be modified and new software developed, which propelled the commercial market.

Public Purpose

OD THEORY, GOOD PRACTICE

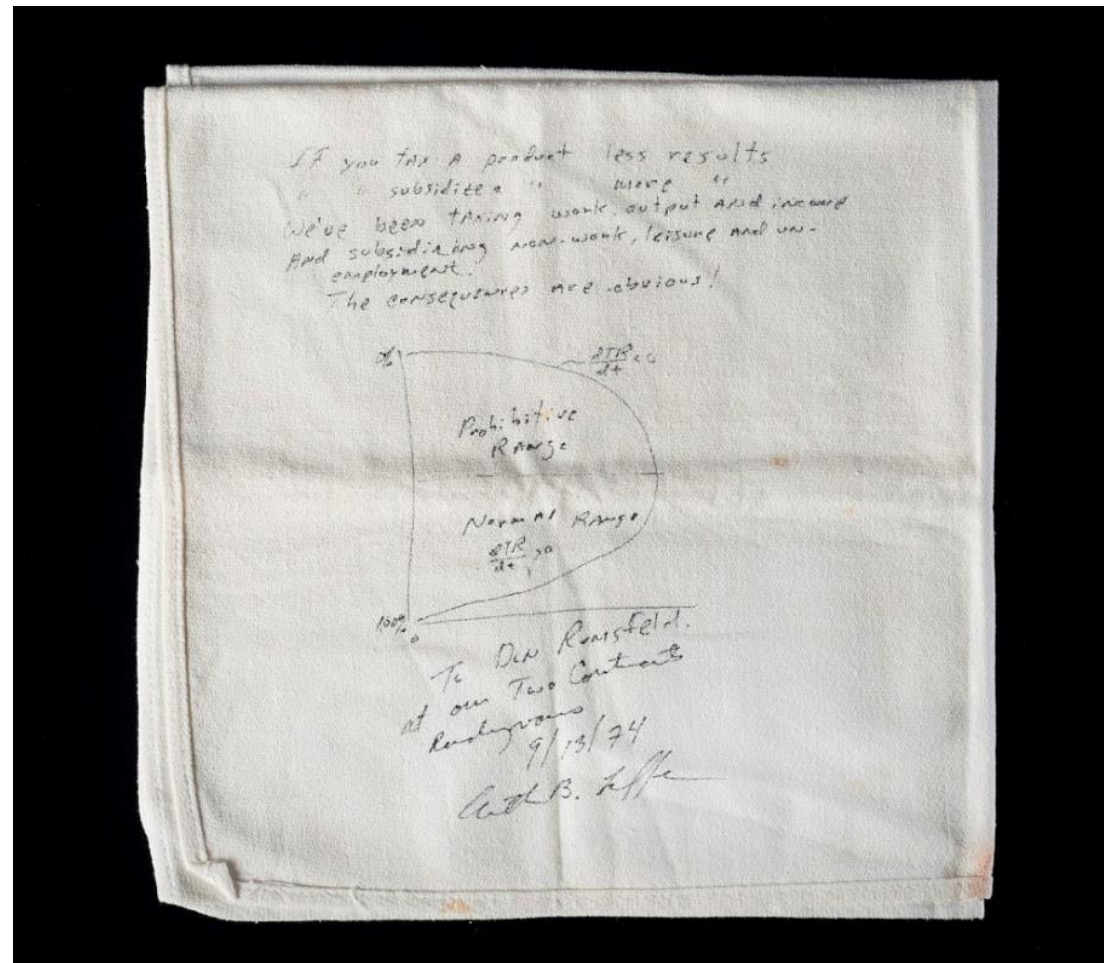
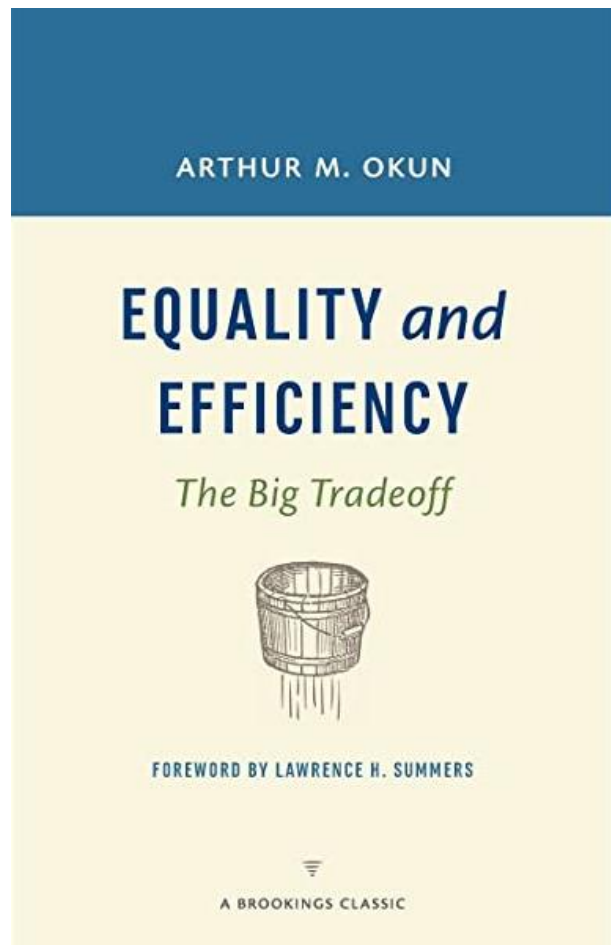
	Market fixing	Market shaping
<i>Justification for the role of government</i>	Market or co-ordination failures: <ul style="list-style-type: none"> • Public goods • Negative externalities • Imperfect competition/information 	All markets and institutions are co-created by public, private and third sectors. Role of government is to ensure markets support public purpose, by involving users in co-creation of policy
<i>Business case appraisal</i>	Ex-ante cost-benefit analysis (CBA) – allocative efficiency assuming static general relationships, prices etc.	Focused on systematic change to achieve mission-dynamic efficiency (including innovation, spillover effects and systematic change)
<i>Underlying assumptions</i>	Possible to estimate reliable future value using discounting. System is characterized by equilibrium behaviour	Future is uncertain because of potential for novelty and structural change; system is characterized by complex behaviour
<i>Evaluation</i>	Focus on whether specific policy solves market failure and whether government failure avoided (Pareto efficient)	Ongoing and reflexive evaluation of whether system is moving in direction of mission via achievement of intermediate milestones and user engagement. Focus on portfolio of policies and interventions, and their interaction
<i>Approach to risk</i>	Highly risk averse; optimum bias assumed	Failure is accepted and encouraged as a learning device

Table 4: Dynamic evaluation of public investment: a market-shaping view

Trade-offs

- Harmony: Approaching one goal also contributes to approaching another goal
- Conflict: Goals are contradictory
- Neutrality: Approaching one goal does not affect the others
- Exercise:
 - Groups of 3
 - All three minutes get rid of one goal

Trade-offs



“efficiency is bought at the cost of inequalities in income and wealth”

Trade-offs

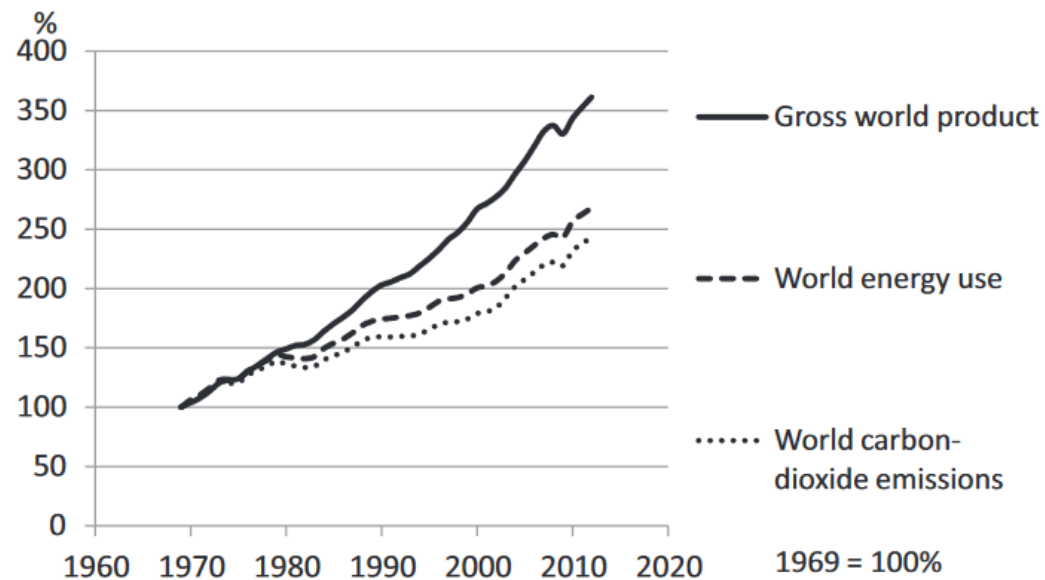


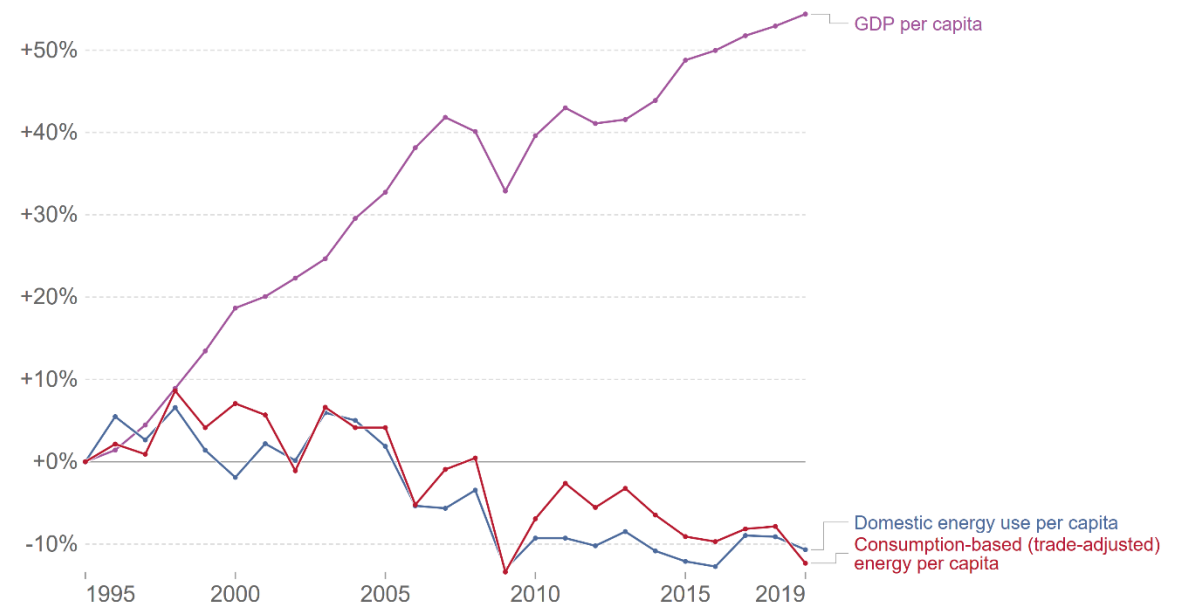
Fig. 1. GWP, world primary energy use and world carbon-dioxide emissions (through the consumption of oil gas and coal) from 1969 to 2012.

Source: BP (2013).

Changes in energy use vs. changes in GDP per capita, Sweden

Consumption-based (trade-adjusted) energy use measures domestic energy use minus energy used to produce exported goods, plus energy used to produce imported goods.

Our World
in Data



Source: Our World in Data based on BP; Shift Energy; UN Population & The World Bank

Note: Energy refers to primary energy, the energy input before the transformation to forms of energy for end-use (such as electricity or petrol for transport).

OurWorldInData.org/energy • CC BY

Next session

- Klein, Michael. „How People Form, and Change Their Opinions on Economics (Re-Broadcast) | Econofact Chats“. Econofact. Zugriffen 6. Oktober 2022. <https://econofact.org/podcast/how-people-form-and-change-their-opinions-on-economics>
- Task: See online.
- Reading the text, you should think particularly about:
 - What would be a rational agent benchmark in voting behavior?
 - What is polarized reality?