Course: Economic Policy with an Emphasis on Tax Policy

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Economic theory and economic policy

Introductory notes

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Economic policy

- Economic policy analyses government economic intervention
  - The use of taxes, expenditures, regulations, etc.
- It studies *how* decisions are made
  - The processes through which government decisions are reached
- It analyses *what* decisions should be made
  - The decisions that would be in the best interest of society

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The 4 Questions of Economic Policy Analysis

1. Why should government intervene?
2. How should government intervene?
3. What are the effects of government intervention?
4. Why is government acting this way?

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Economic Policies are Everywhere

- **Economic policies constantly affect our everyday life**:
  - ***Through price interventions***: taxes (sales tax on what we buy, sin taxes on cigarettes or alcohol, income tax on what we earn, property taxes, etc.), transfers (Pensions, Unemployment benefits, etc.), public provision of private goods (schools & education, security, etc.),...
  - ***Through regulation***: on what we eat and consume (food regulations, environmental regulation), on the way we drive ,, on the labor market (minimum wage, labor laws, etc.), on how we educate our children (minimum education laws, etc.)...
- **Economic policies may be very broad in scope:**
  - E.g. tax reforms, employment in public sector, health care programs, etc.

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When should the government intervene in the economy?

- **1) Market Failures**: Market economy sometimes fails to deliver an outcome that is efficient and government intervention may improve the situation
- **2) Redistribution**: Market economy generates substantial inequality in economic resources across individuals and government intervention may help reduce inequality, by redistributing resources through taxes and transfers
- Part of our lectures focuses on Market Failures,
- Another part of the class focuses on Redistribution

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Main Market Failures

- 1) Public good provision and externalities:
The provision of some goods (example: national defense, greenhouse carbon emissions) require government interventions (Pigouvian taxes and subsidies)
- 2) Imperfect competition: (example: monopoly)) requires regulation (typically studied in Industrial Organization)
- 3) Imperfect or Asymmetric Information: (example: adverse selection in health insurance) may require mandatory insurance.
- 4) Individual failures: People are not always rational. This is analyzed in behavioral economics, field in expansion (example: myopic people may not save enough for retirement)

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Inequality and Redistribution

- Even if a market outcome is Pareto efficient, society might not be happy with the market outcome because market equilibrium might generate very high economic disparity across individuals
- Governments use taxes and transfers to redistribute from rich to poor and reduce inequality
- Redistribution through taxes and transfers might reduce incentives to work (efficiency costs). So, redistribution may create an equity-efficiency trade-off.
- It has been observed in recent years that pre-tax, pre-transfer income inequality has increased significantly in many countries and it has become an important issue in policy debates.

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How does Government Intervene

1. Public Provision: The government can provide the good directly, in order to potentially attain the level of consumption that maximizes social welfare (for example, national defense)
2. Tax or Subsidize Private Sale or Purchase: Tax goods that are overproduced (e.g. carbon tax) and subsidized goods underproduced (e.g., subsidies for flu vaccines)
3. Restrict or Mandate Private Sale or Purchase: Restrict the private sale or purchase of overproduced goods (e.g. fuel efficiency requirements), or mandate the private purchase of underproduced goods (e.g., auto insurance)
4. Public Financing of Private Provision: Governments pay for the good that is supplied by the private sector (e.g., privately provided health insurance paid for by government)

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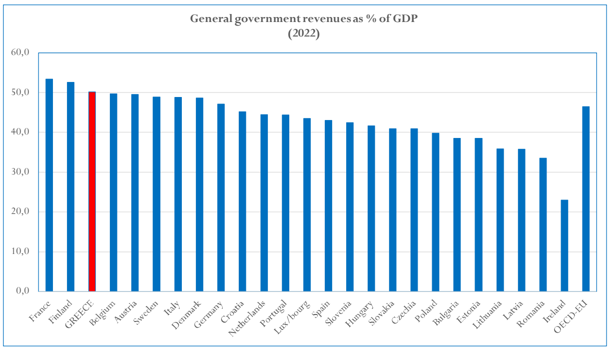

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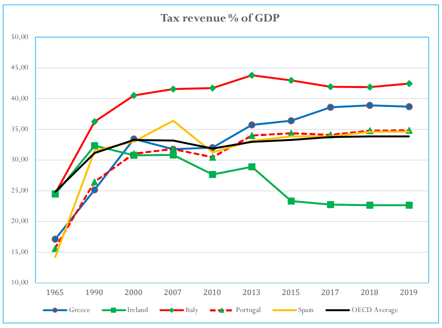

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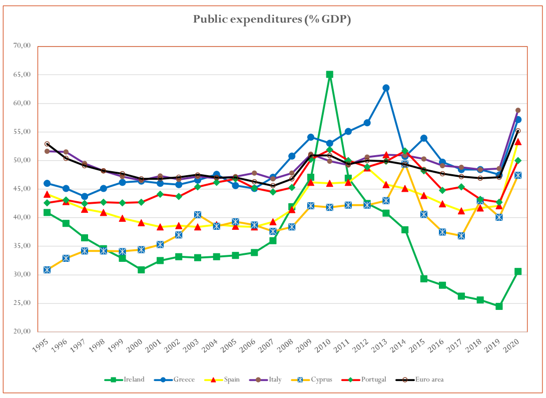

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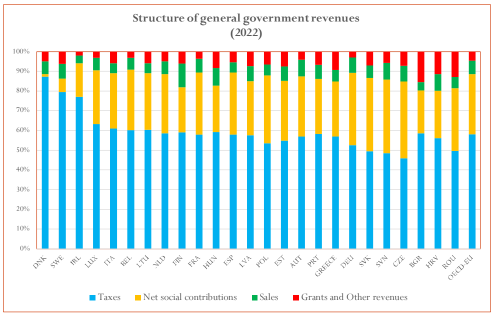

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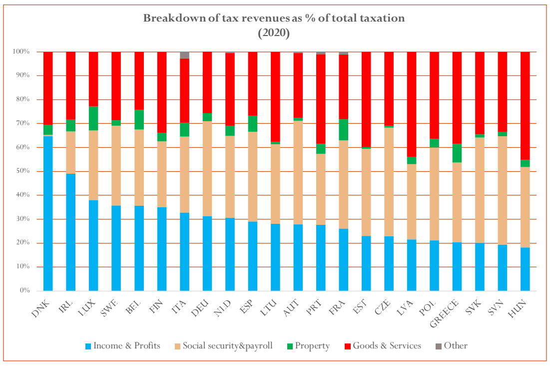

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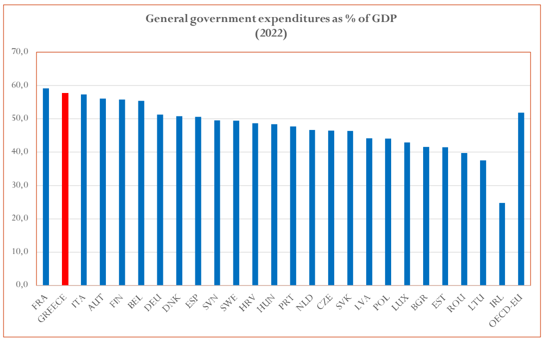

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General government expenditures by function as a percentage of GDP,
(2021)

	General public services	Defence	Public order and safety	Economic affairs	Environmental protection	Housing and community amenities	Health	Recreation, culture and religion	Education	Social protection
Austria	5,8	0,6	1,4	9,3	0,4	0,3	10,1	1,2	4,9	21,9
Belgium	7,0	0,9	1,8	7,1	1,3	0,4	8,6	1,2	6,3	21,0
Czechia	4,6	1,0	2,0	7,5	0,9	0,6	9,8	1,3	5,1	13,6
Denmark	6,0	1,2	1,0	4,1	0,4	0,1	9,2	1,6	6,0	21,1
Estonia	3,8	2,0	1,8	4,8	0,6	0,5	6,5	2,1	5,9	13,5
Finland	8,1	1,2	1,2	5,1	0,2	0,4	7,7	1,5	5,7	24,7
France	5,8	1,8	1,7	6,9	1,0	1,3	9,2	1,4	5,2	24,8
Germany	6,2	1,1	1,7	6,0	0,6	0,5	8,6	1,1	4,5	20,9
Greece	***7,9***	***2,8***	***2,2***	***10,7***	***1,2***	***0,3***	***6,7***	***1,1***	***4,1***	***20,6***
Hungary	8,0	1,1	1,8	9,2	0,7	0,8	5,6	3,0	5,0	13,1
Ireland	2,3	0,2	0,8	3,1	0,3	0,6	5,3	0,5	3,0	8,7
Italy	8,1	1,4	1,9	6,5	0,9	0,5	7,6	0,8	4,1	23,3
Latvia	3,7	2,3	2,2	7,2	0,6	1,0	6,3	1,4	5,6	13,8
Lithuania	3,1	1,8	1,3	4,0	0,5	0,6	5,9	1,2	4,8	14,3
Luxembourg	4,7	0,4	1,2	5,4	0,9	0,6	5,4	1,2	4,7	18,3
Netherlands	3,9	1,3	2,0	5,9	1,4	0,4	8,7	1,3	5,1	16,7
Poland	4,1	1,6	2,2	6,0	0,6	0,5	5,8	1,2	4,9	17,3
Portugal	6,8	0,8	1,8	5,5	0,8	0,6	7,6	1,0	4,6	18,3
Slovakia	5,9	1,3	2,3	6,8	0,9	0,5	7,0	1,0	4,3	16,2
Slovenia	5,2	1,2	1,8	6,8	0,7	0,5	8,1	1,4	5,7	17,9
Spain	5,9	1,0	2,0	6,5	1,0	0,5	7,3	1,2	4,6	20,6
Sweden	6,6	1,3	1,3	4,8	0,6	0,7	7,5	1,4	6,7	18,6
Bulgaria	3,5	1,6	2,7	6,7	0,8	1,0	5,8	0,9	4,3	13,4
Croatia	4,8	1,0	2,4	8,5	1,5	1,3	8,3	1,6	5,2	14,1
Romania	5,0	1,9	2,3	5,8	0,7	1,1	5,5	0,9	3,2	13,4

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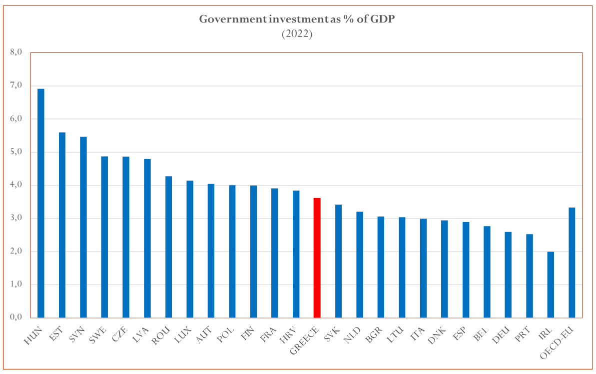

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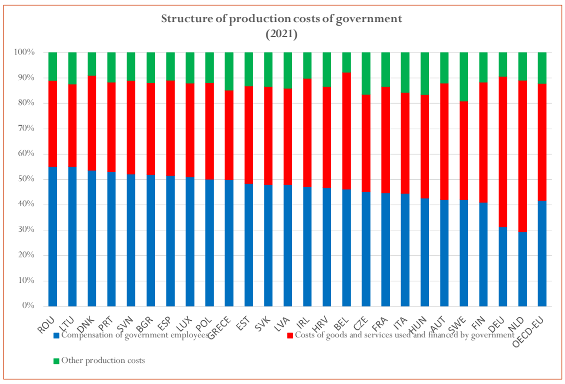

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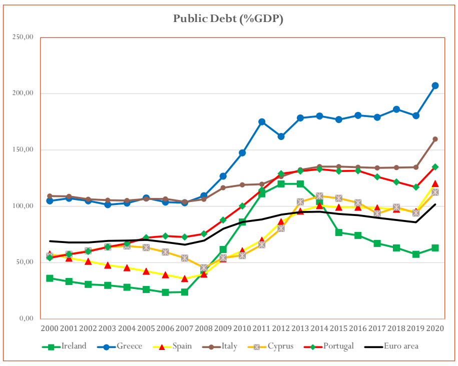

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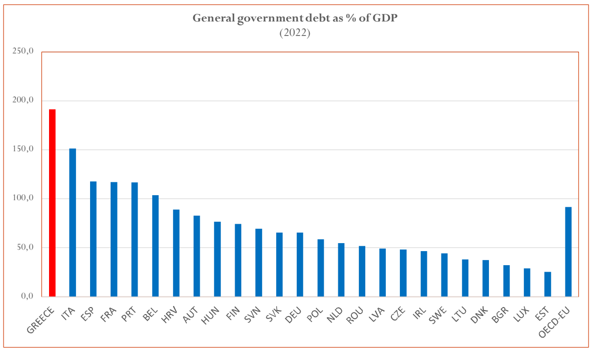

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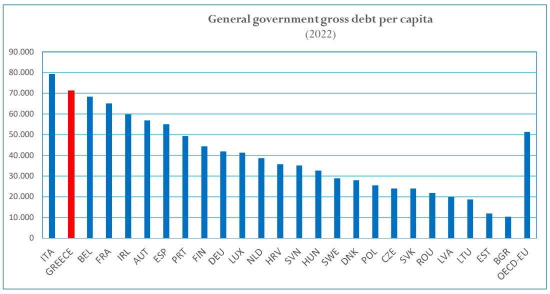

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Methods of analysis of government intervention

- Economic policy analysis uses ***models*** to investigate policy
  - The possibilities for experimentation are limited
  - Past experience cannot always be relied upon
- Models can take two forms
  - ***Partial equilibrium*** models focus only on one or two markets taking behaviour elsewhere in the economy as given
  - ***General equilibrium*** models describe a complete economic system with prices equilibrating supply and demand on all markets simultaneously

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Methods of analysis of government intervention

- Actions of economic agents
  - Consumers maximize private welfare
  - Firms maximize profits
- The government chooses policy instruments
- Reactions to a policy change
  - The reactions of economic agents are predicted through the solutions to the optimizations
  - The independent decision-making of agents distinguishes economic models
  - Agents do not respond mechanically

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Methods of analysis of government intervention

- Once a model is constructed its implications are derived
  - Logical reasoning is used to derive formally correct conclusions
  - These conclusions are interpreted in terms of the initial policy question
- The institutional setting is invariably the *mixed economy*
  - Individual decisions are respected but the government intervenes
  - A range of objectives can be assigned to the government

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Analyzing Policy

- The effect of a policy is determined by contrasting the equilibrium with the policy to equilibrium without
- Policy can be analyzed from a ***positive*** or a ***normative*** perspective
- **Positive** analysis is about explaining why there is a public sector, how government policies are chosen and how these policies affect the economy
  - An example is analyzing the effect of a corporate tax on inward investment

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Analyzing Policy

- **Normative** analysis investigates what the best policy is, and aims to provide a guide to good government
  - An example would be an assessment of whether the level of pensions should be indexed to average wages
- Normative analysis assumes the government has an objective and chooses its actions to best achieve the objective
- Positive and normative analysis are not distinct
  - To evaluate a policy (normative), its effect must be determined (positive)

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Analyzing Policy

- The government's objective is often taken to be the aggregate level of welfare
- This raises questions about welfare measurement
- Any aggregate measure assumes some degree of comparability of individual utility
- It is possible to proceed assuming utility is comparable and to derive general principles that apply for any degree of comparability

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Basic concepts of welfare economics

- Determination of economic criteria for public policy evaluation has been a subject of great debate.
- The difficulty stems from the inability to decide on purely economic grounds how the goods and services produced in an economy should be distributed among individuals.
- Issues of distribution and equity are political and moral as well as economic in nature.

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Social welfare function

- Classical philosophers such as Bentham long ago developed the concept of a **social welfare function** to measure the welfare of society as a function of the utilities of all individuals.
- Because use of a social welfare function is clouded by controversy, many economists have tried to maintain objectivity and the claim of their professional practice as a science by avoiding *value judgments*.
- ***A value judgment*** is simply a subjective statement about what is of value to society that helps to determine the social ordering of alternative states of the world.
- It is subjective in the sense that it cannot be totally supported by evidence. It is not a judgment of fact.
- The attempt to avoid value judgments led to development of
- the ***Pareto principle***.

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The Pareto criterion

- The Pareto criterion was introduced in the nineteenth century by the eminent Italian economist, Vilfredo Pareto (1896).
- Its potential for application to public policy choices, however, is still very much discussed.
- By this criterion, a policy change is socially desirable if, by the change, everyone can be made better off, or at least some are made better off, while no one is made worse off.
- If there are any who lose, the criterion is not met.

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The Pareto criterion

- The ***Pareto criterion*** is a technique for comparing or ranking alternative states of the economy.
- By this criterion, if it is possible to make at least one person better off when moving from state A to state B, without making anyone else worse off, state B is ranked higher by society than state A.
- If this is the case, a movement from state A to state B represents a ***Pareto improvement***, or state B is ***Pareto superior*** to state A.

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The Pareto criterion

- If society finds itself in a position from which there is no feasible Pareto improvement, such a state is called a *Pareto optimum.*
- That is, ***a Pareto-optimal state is defined as a state from which it is impossible to make one person better off without making another person worse off.***

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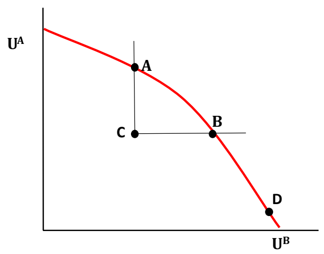
The Pareto criterion

- Pareto efficiency (optimality) means that the economy is on the utility possibilities frontier.



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The Pareto criterion

- Moving from C to any point between A and B is Pareto improvement, and we move to a Pareto efficient point.
- Moving from C to D is a movement to a Pareto efficient point, but it is not Pareto improvement.
- Thus, moving to a higher utility possibilities frontier does not always imply Pareto improvement.
- To overcome this difficulty Nicholas Kaldor and John Hicks proposed some alternative to Pareto criteria.

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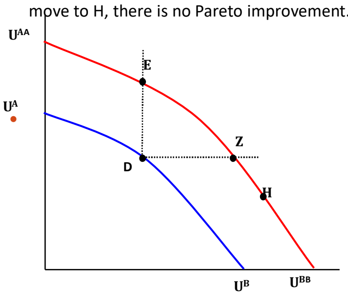
The Pareto criterion and compensation

- If we move to a higher utility possibilities frontier fro **U^AU^B** to **$U^{AA}U^{BB}$** there is Pareto improvement only if we move between E and Z. If we move to H, there is no Pareto improvement.



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The Pareto criterion and Kaldor's and Hicks' compensation

- ***Kaldo***r proposed that even if we move from D to H the change could be an improvement as long as there is the possibility to compensate those who lose to accept the change and those who gain are as well as or better than before the change.
- ***Hicks*** proposed that a change could be accepted as improving social welfare, if the losers could not compensate the gainers not to accept the new situation.

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The Pareto criterion and Kaldor's and Hicks' compensation

- In effect Kaldor proposed that there is social improvement if the gainers can fully compensate the losers and still be better off (Kaldor referred to improvement from the point of view of production, not necessarily all-round social improvement. But the term 'Kaldor criterion' is usually used with reference to a social improvement).
- Hicks supported the criterion (The Kaldor or Kaldor–Hicks criterion) and also proposed a sister criterion, the Hicks criterion, which states that there is social improvement if the losers cannot profitably bribe the gainers to oppose a change (Hicks, 1940).

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The Pareto criterion and Kaldor's and Hicks' compensation

- Both criteria are satisfied when utility possibilities frontiers do not cross each other.
- If, however, the two frontiers cross each other, then as Scitovsky showed there is no clear answer.
- Scitovsky showed that the Kaldor (and the Hicks) criterion could lead to a contradiction. According to the Kaldor criterion a certain change can be proposed, but the reverse change (that is, changing the situation after the first change back to the original situation) can also be proposed by the same criterion.
- A logical inconsistency is therefore involved. This inconsistency is illustrated in the Figure below.

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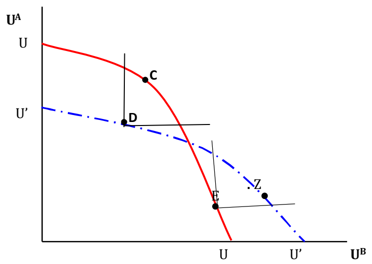
The Scitovsky paradox

We have two individuals A and B, and two utility possibilities frontiers.



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The Scitovsky paradox

- Let the original situation be at *E* on the utility possibility curve UU. What matters in this analysis is that movement along the curve is caused only by costless lump-sum transfers.
- Consider a change that will carry us from *E* to *D*.
- This change passes the Kaldor criterion as it is possible, after the change, to redistribute income to reach point *Z* where everyone is better off than at *E*.
- Starting from *D*, transferring income from A to B will enable us to move along the curve *U'U'* to point *Z*. Since *Z* is north-east of *E*, both *individuals* will be better off at *Z* than at *E*.

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The Scitovsky paradox

- According to the Kaldor criterion, therefore, the change from *E* to *D* is a social improvement. However, by exactly the same reasoning the change from *D* back to *E* fulfils the same Kaldor criterion.
- This is because we can also redistribute income from *E* to *C*, which is north-east of *D*. Since the same criterion dictates that *D* is socially preferable to *E* and that *E* is socially preferable to *D*, a logical inconsistency is involved.

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The Scitovsky paradox

- To avoid contradiction Scitovsky proposes that a change should be regarded as unambiguously favourable only if it satisfies both the Kaldor criterion and the Hicks criterion (or, equivalently, the Scitovsky reversal test).
- In terms of UPFs this means that, for the change from *E* to *D* to be unambiguously desirable, not only must the UPF through *D* pass over (north-east of) *E*, but also the UPF through *E* must pass under (south-west of) *D*.

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