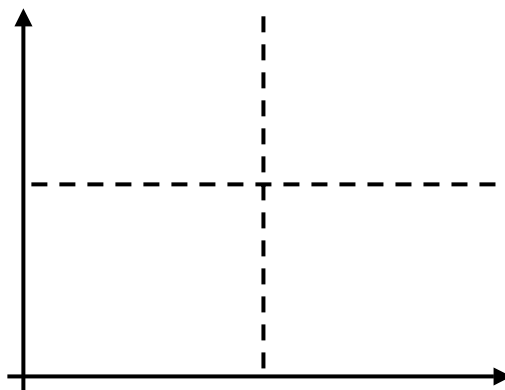


Bab 4: Prinsip Gantirugi & Fungsi Kebajikan Sosial

- 4.1 Prinsip Gantirugi (compensation principle)
- 4.2 Fungsi Kebajikan Sosial (social welfare function)
- 4.3 Teori Kemungkinan Arrow

1

Lihat sekali lagi Kriteria Pareto...



- Mengikut Kriteria Pareto, polisi mana lebih disukai?
- Susunan Pareto adalah tidak lengkap
- Dunia sbr – polisi – yg untung dan rugi

2

- Maka, kriteria Pareto bermasalah
- Sbg alternatif, prinsip gantirugi dan SWF dicadangkan

4.1 Prinsip Gantirugi

- Kaldor Criterion
 - Nicholas Kaldor (1931)
- Hicks Criterion
 - John Hicks (1931)
- Scitovsky or Kaldor-Hicks Criterion
 - T. Scitovsky (1941)

3

Prinsip Grantirugi oleh Kaldor

- Assumptions:
 - A project moves the economy from state A to state B.
 - Incomes can be costlessly redistributed across individuals.
 - MU of \$ is the same for all individuals.
- “A project is desirable if, with the project, it is *hypothetically* possible to redistribute income so that everyone becomes better off than without the project.”

4

Kaldor Criterion

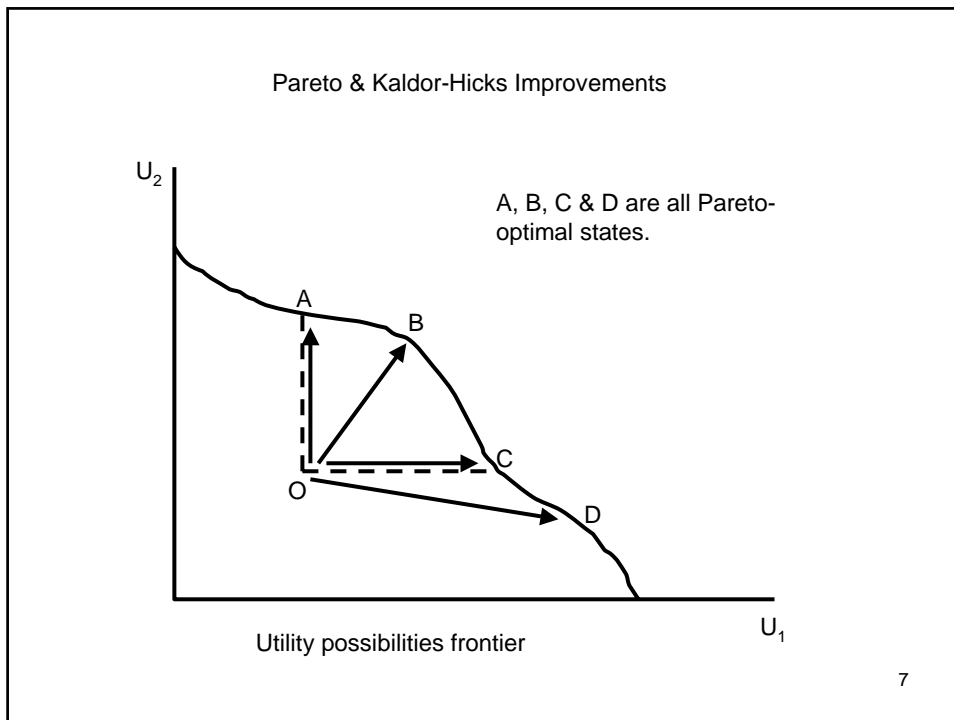
- Gainers should be able to compensate losers
- Kaldor Criterion looks from the gainers' side.

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Hicks Criterion

- Same assumptions as before.
- “A project is desirable if, in state A, it is impossible to *hypothetically* redistribute income so that everyone is made as well off as in state B.”
- Losers are unable to bribe gainers to refrain from undertaking the considered project.
- Hicks Criterion looks from the losers' side.

6



Pareto & Kaldor-Hicks Improvements

- O to A, O to B & O to C are all Pareto improvements and Kaldor-Hicks improvements BUT O to D is not Pareto improvement. It is, however, a Kaldor-Hicks improvement if after reaching state D, individual 2 can be hypothetically compensated so that both individuals could reach a new state between and including states A & C.

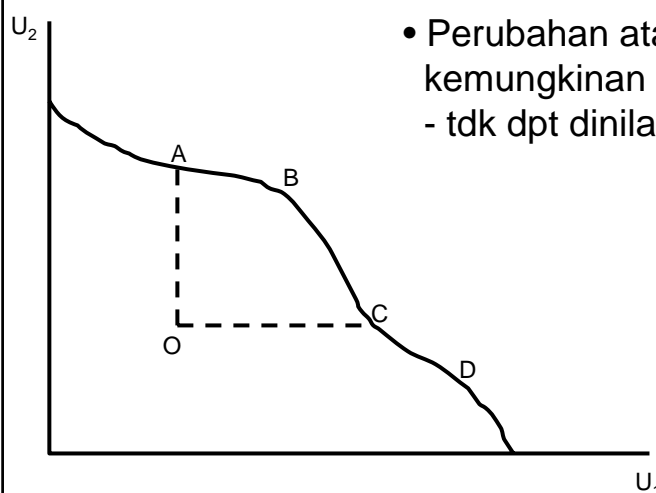
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Pareto & Kaldor-Hicks Improvements

- While every Pareto improvement is a Kaldor-Hicks improvement, most Kaldor-Hicks improvements are not Pareto improvements.

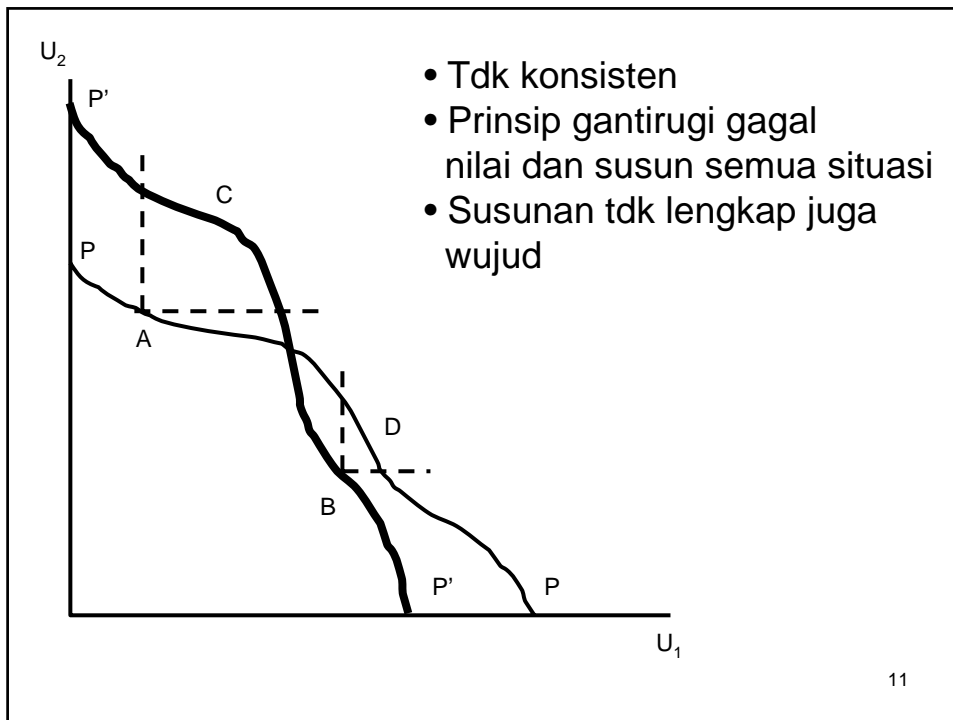
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Kelemahan Prinsip Gantirugi



- Perubahan atas keluk kemungkinan utiliti
- tdk dpt dinilai dan disusun

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- Kelemahan “susunan tdk lengkap” (incomplete ranking)
 - Kita perlu buat andaian yg lebih kuat (dr mana yg dibuat oleh Kriteria Pareto dan Prinsip Gantirugi)
 - Ini membawa kita kepada:
- 4.2 Fungsi kebajikan sosial
- 12

4.2 Fungsi Kebajikan Sosial

- Abram Bergson & Paul Samuelson
- We need more than Pareto Principle to be able to rank social states.
- SWF is derived from individuals utility functions.
- $W = W(U^1, U^2, \dots, U^H)$, W is merely a function of the utilities of its constituent members, U^h , $h = 1, 2, \dots, H$, where H are the number of households in society. Society's welfare is dependent wholly on the utility of households.
- SWF embodies value-judgment.

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Social Welfare Functions

- Weights are often applied to individual's utility to determine what is socially desirable.
 - How these weights are applied comes from the social welfare functions
- The **utilitarian function** weights everyone's utility to maximize utility for the whole society

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Social Welfare Functions

- Each social welfare function is associated with a particular view of equity
- Some views of equity do not assign weights and cannot be represented by a welfare function
 - Competitive market process is equitable because it rewards those who are most able and work hardest
 - Believes competitive equilibrium would be most equitable

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Four Views of Equity

Egalitarian	All members of society receive equal amount of goods
Rawlsian	Maximize the utility of the least-well-off person
Utilitarian	Maximize the total utility of all members of society
Market - Oriented	The market outcome is the most equitable

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Social Welfare Functions

- The Rawlsian view individuals don't know what their endowment will be
- Rawls argues that if you don't know your own fate, you will opt for the system in which the least well-off person is treated reasonably well.
- *The most equitable allocation maximizes the utility of the least well-off person in society*

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Social Welfare Functions

- An egalitarian view believes that goods should be equally shared by all individuals in society
- Could have situation where reward more productive people thereby producing more goods and then having more to reallocate to all of society

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Assumptions on SWF

1. SWF satisfies welfarism.
 - SW depends only on the utility levels of the households.
2. SW is assumed to be increasing in each household's utility level.
 - An increase in the utility of any household increases SW.
 - The SW indifference curves are negatively sloped.

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Assumptions on SWF

3. The intensity of trade-off among households depends on the degree of inequality.
 - The SW indifference curves are convex to the origin.

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Contoh pengiraan fungsi kebajikan sosial
(Table 3.1, buku teks, ms 30)

	Situasi A		Situasi B	
	IR1	IR2	IR1	IR2
Penggunaan (x1, x2)	2, 2	3, 2	1, 1	3, 3
Utiliti:				
U=				
u=				
Kebajikan sosial				
W=U+U				
W=u+U				

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- Lihat bagaimana msl susunan wujud jika tiada “measurability and comparability”
- Pengukuran kardinal – konsisten SWF
- Bentuk fungsi SWF?

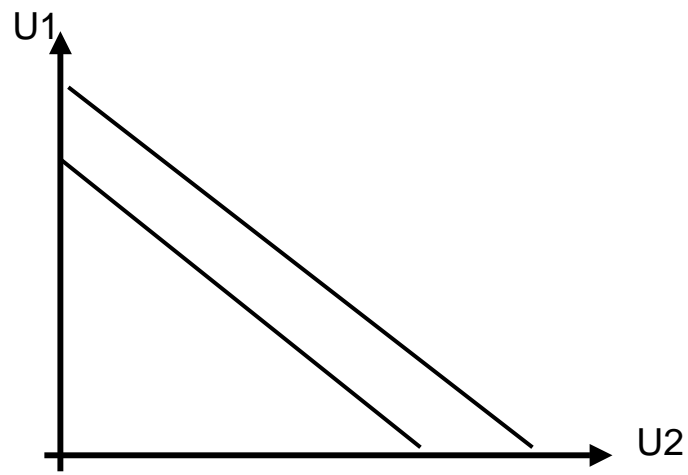
$$\text{SWF} = f (U_1, U_2, \dots, U_h)$$

Apakah btk f(.)?

Andai dua isi rumah. $\text{SWF} = f (U_1, U_2)$.

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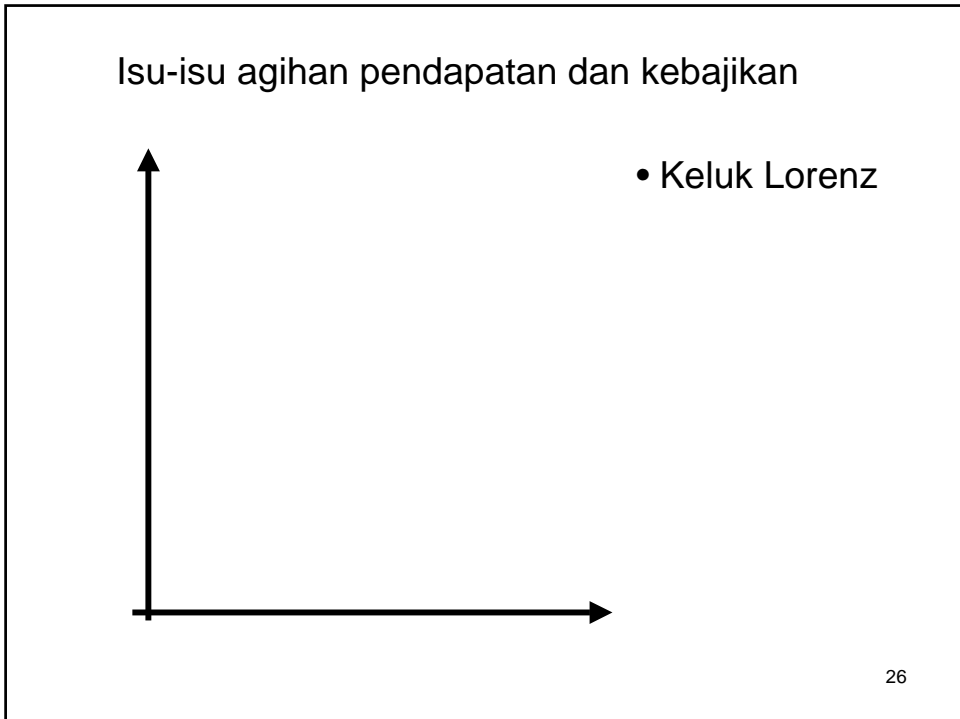
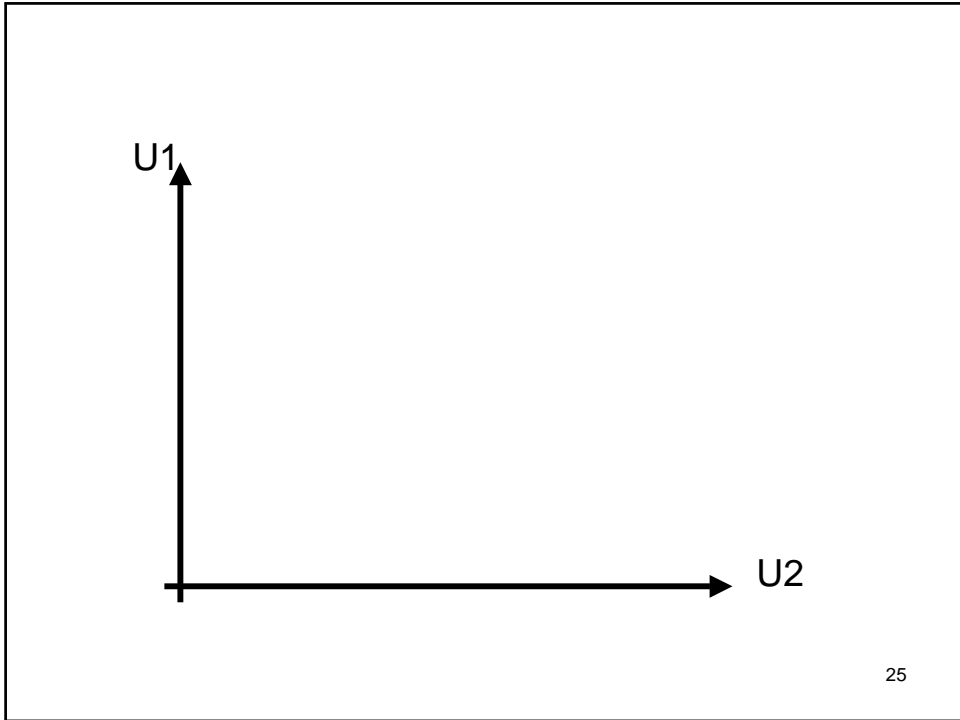
Keluk Puas Sama Kebajikan Sosial



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- Marginal utiliti pendapatan dan titik max kebajikan



- Berhati: Dis-insentif dlm agihan semula pendapatan

4.3 Teori Kemungkinan Arrow

- Dgn andaian ordinal, tiada SWF yg konsisten
- individu 1: $xPyPz$
individu 2: $zPxPy$
individu 3: $yPzPx$

majority: xPy and yPz
and hence, xPz .

Tetapi, dr atas, juga didapati majority juga zPx .

- “Dictorship” – penyelesaian?