

Economic Policy and Business Activity



LISBON
SCHOOL OF
ECONOMICS &
MANAGEMENT
UNIVERSIDADE DE LISBOA

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2nd Semester

Theory Lecture 4

1. Introduction to economic policy

1.1. A primer on economic policy

1.2. The whys and hows of public intervention

1.3. Economic Policy Evaluation: Decision Criteria

1.4. Conclusion

Learning outcomes for lecture 4 (today)

- Explain the main decision criteria principles in economic policy evaluation
- Explain why the instantaneous or static utility criterion is insufficient
- Explain why the inter-temporal utility criterion can be used to assess the desirability of structural reforms
- Explain the meaning of discount rate used in the inter-temporal utility criterion
- Explain and compare the two main social welfare functions
- Explain the main reasons for disagreement in economic policy decision making

1.3 Evaluation of economic policy: decision criteria

- We need precise evaluation criteria to evaluate economic policy choices and compare alternative policies
- Can a single criterion be used for efficiency, stabilisation, and equity?
- Although in theory this may be conceivable, in practice (and as we have been discussing) **economic policy choices are generally represented as implying trade-offs**

1.3 Evaluation of economic policy: decision criteria

- The general purpose of economic policy is the satisfaction (**utility**) of households
- Typically, the utility of each household includes:
 - consumption of goods and services
 - amount of leisure
 - working hours (ie, labour supplied)
 - working conditions
 - social relations
 - quality of the environment
 - etc.

1.3 Evaluation of economic policy: decision criteria

- For consumer i utility U can be written in a very general formulation:

$$U_i^t = U(C_{i1}^t, C_{i2}^t, \dots, C_{in}^t; N_i^t; E_i^t; \emptyset^t)$$

Where:

- C_{ik}^t ($k = 1 \dots n$) is the amount of good k consumed by household i at time t ,
- N_i^t is the quantity of labour supplied by household i in period t ,
- E_i^t is a vector of variables for working conditions (intensity of effort, etc),
- \emptyset^t is a vector of variables representative of the quality of the environment

1.3 Evaluation of economic policy: decision criteria

- **Instantaneous or static utility** is insufficient: there would be no reason to invest since **investment** increases the quantity of goods and services available for future consumption but **reduces** current consumption
- An **inter-temporal utility criterion** is therefore needed, which requires defining a **discount rate** ρ in order to aggregate utility over-time:

$$U_i = \sum_{t=0}^{\infty} U_i^t / (1 + \rho)^t$$

The inter-temporal utility U_i of consumer i is the **present value of future utilities discounted at rate ρ** . It allows addressing the trade-off between present and future consumption

1.3 Evaluation of economic policy: decision criteria

- The **inter-temporal utility criterion** brings into play the **future availability** of goods and services (and resources more generally)
- Thus, it can be used to assess:
 - the **desirability of structural reforms** which imply trading off short-term negative effects with medium- to long-term positive ones
 - the cost of policies that fail to keep the economy at long-term balance

1.3 Evaluation of economic policy: decision criteria

- The **inter-temporal decision criterion** should be the **present value of the net benefits from the reform**. Thus, if V_t is the net increase in utility in period t of a reform carried out in period 0, a **criterion** for undertaking this **reform** is:

$$V = E\left(\sum_0^{\infty} V_t / (1 + \rho)^t\right) \geq 0$$

where E is the expectation operator and ρ is the discount rate.

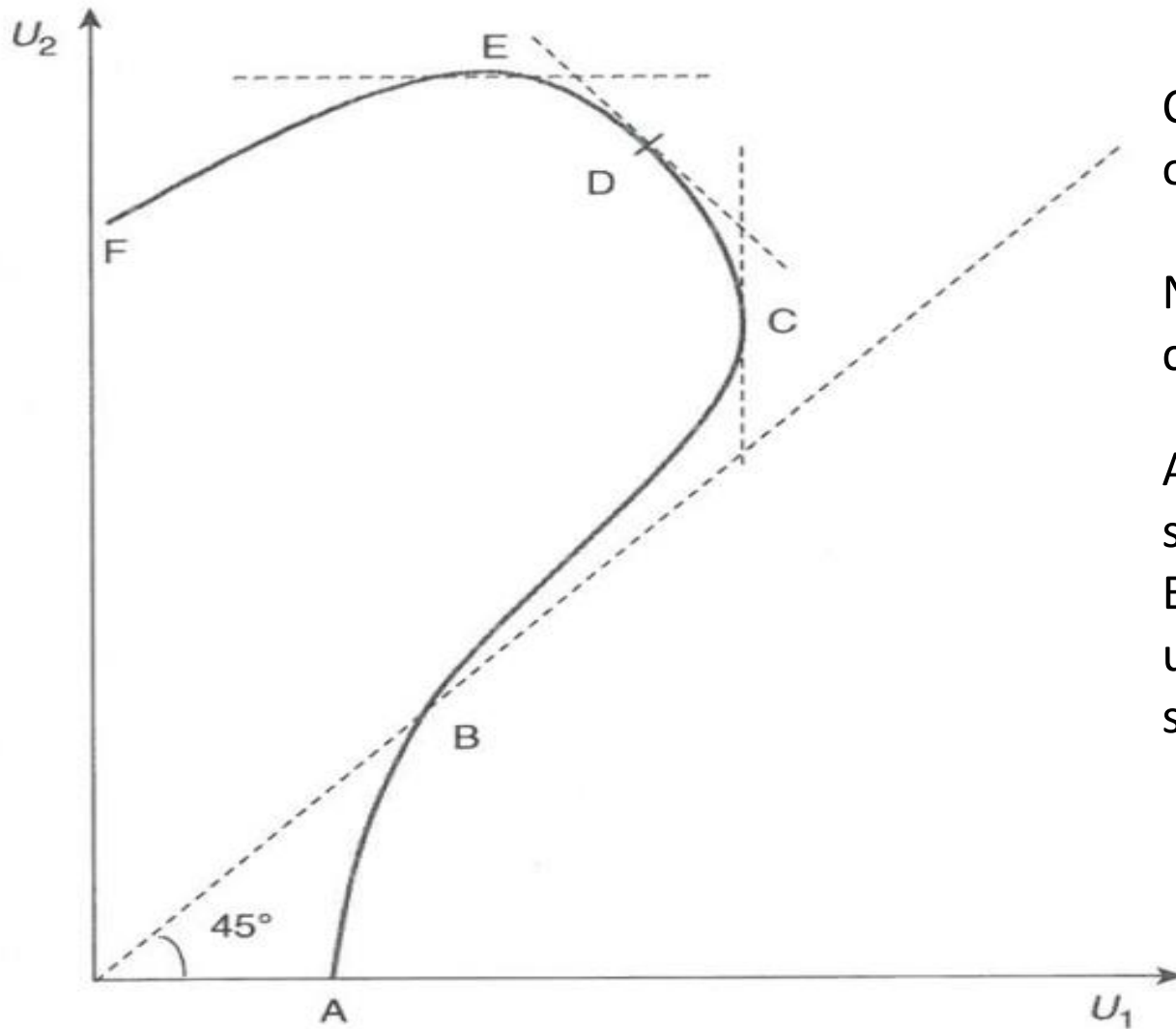
- From the decision criterion principle, it must be noted that much depends on the **choice of the discount rate ρ** :
 - high discount rate increases short-term and immediate consumption
 - low discount rate gives more value to the welfare of future generations

1.3 Evaluation of economic policy: decision criteria

- The utility functions seen so far refer to **only one individual or household, assumed to be representative**
- Problem: **How do we aggregate the utilities of heterogeneous individuals?**
- Must the utility of all agents be equally weighted? Can the well-being of some be reduced to increase that of others?
- These questions have a long history in **normative economics and welfare economics**

1.3 Evaluation of economic policy: decision criteria

- The Pareto criterion, according to which a policy improves upon the status quo if it increases the utility of at least one individual and does not reduce the utility of any other individual, only allows comparing a limited set of situations and policies.
- Figure 1.7 (next slide) explains why.



Consider individuals 1 and 2 with utilities U_1 and U_2 on X and Y axes.

Now suppose that the AF locus gives all possible combinations of their respective utilities.

According to Pareto criterion, C is superior to any situation on AC, and E is superior to any situation on EF, because moving to the North-East improves both utilities simultaneously. But there is nothing we can say about the points located on EC.

Figure 1.7 Individual utility and social choices: An illustration.

Source: Taken from Atkinson and Stiglitz (1980).

1.3 Evaluation of economic policy: decision criteria

- The choice then requires a **social welfare function** which allows aggregating individual preferences.

$$\Gamma(U_1, U_2, \dots, U_m)$$

where 1 ... m represent the individuals or households.

- This makes it possible to compare two utility distributions and to decide which one is more desirable.

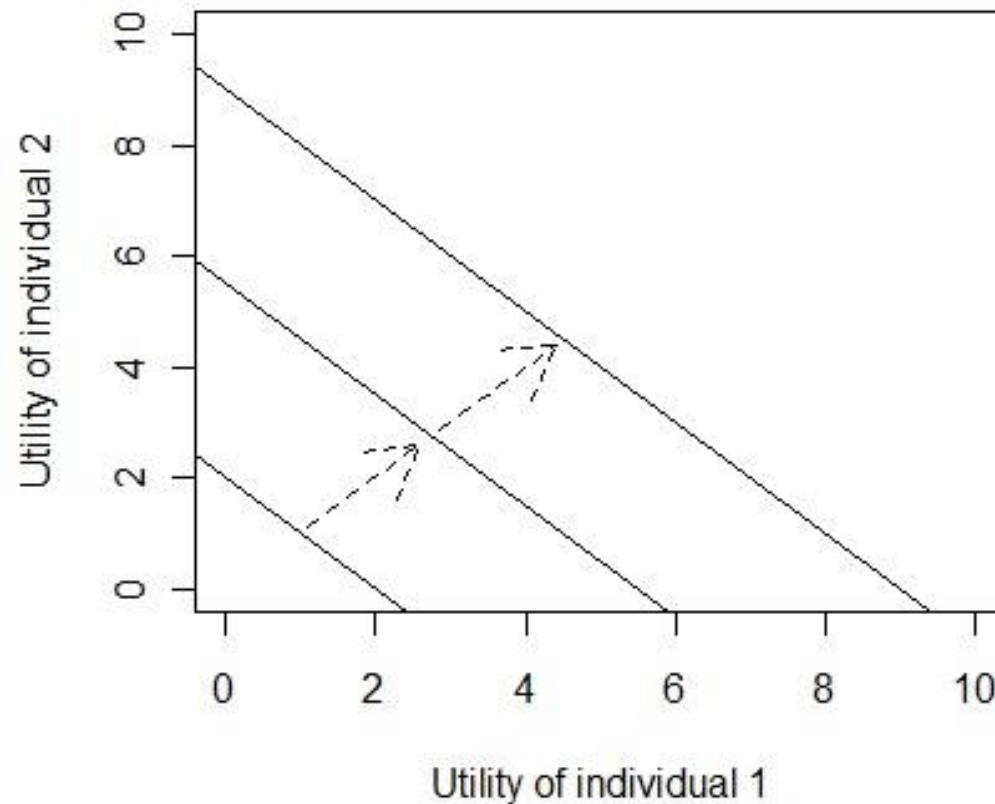
1.3 Evaluation of economic policy: decision criteria

- There are different social welfare functions, the most usual **social welfare functions** are:
- **Benthamian function:** $\Gamma = U_1 + U_2 + \dots + U_m$. Assumes that the distribution of utilities across individuals has no importance and only the aggregate utility matters.
- **Rawlsian function:** $\Gamma = \text{Min} (U_1, U_2, \dots, U_m)$. Maximises the utility of the poorest (Maximin).

1.3 Evaluation of economic policy: decision criteria

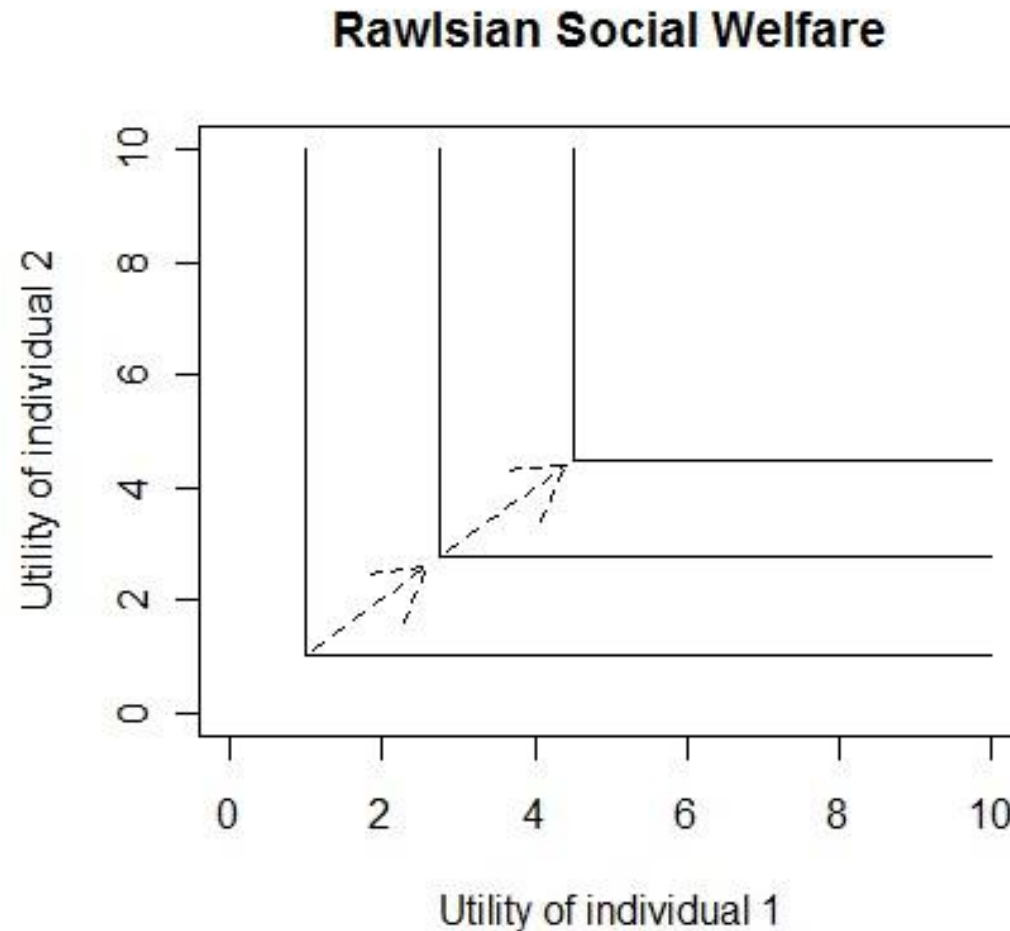
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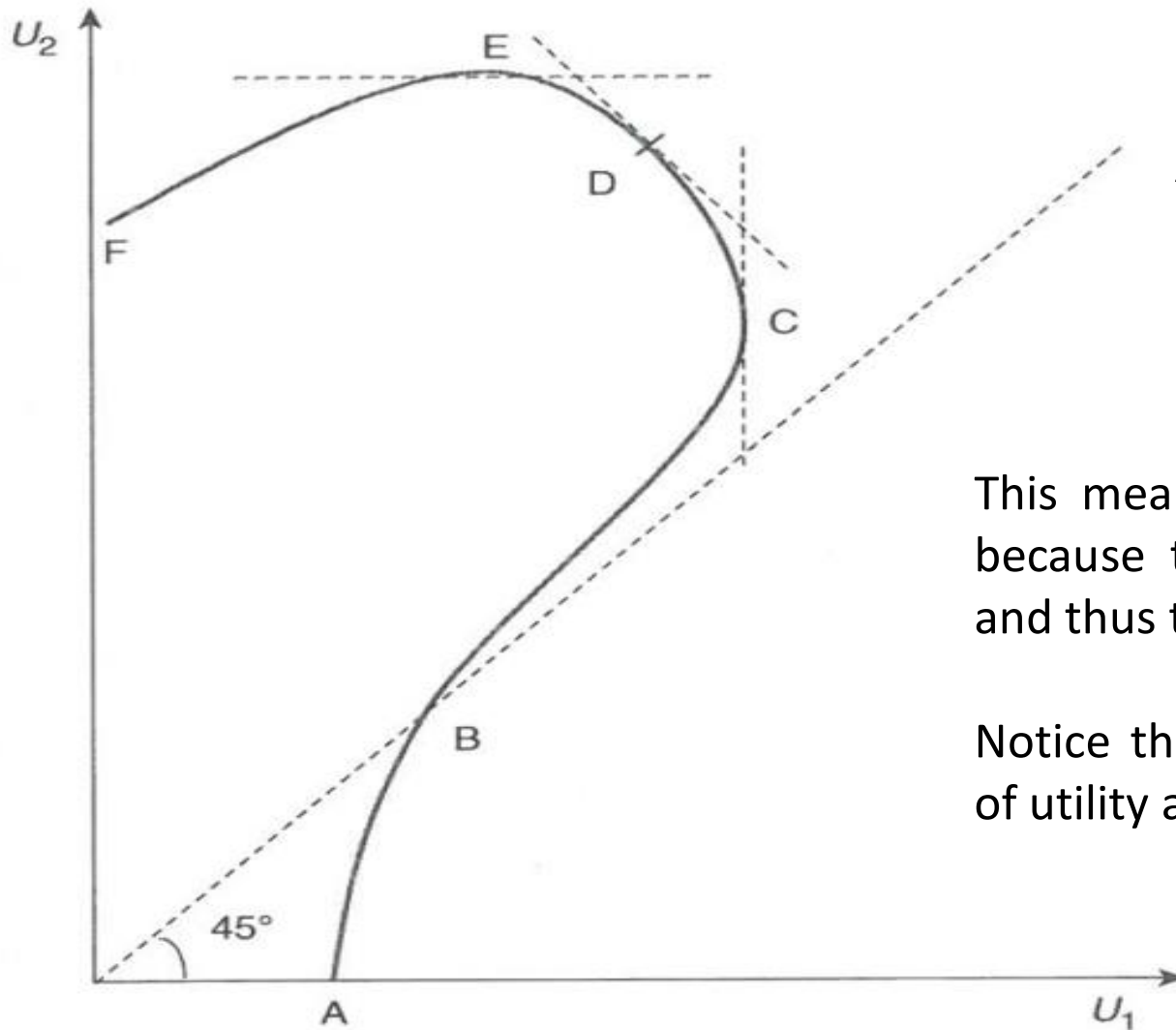
Utilitarian Social Welfare



1.3 Evaluation of economic policy: decision criteria

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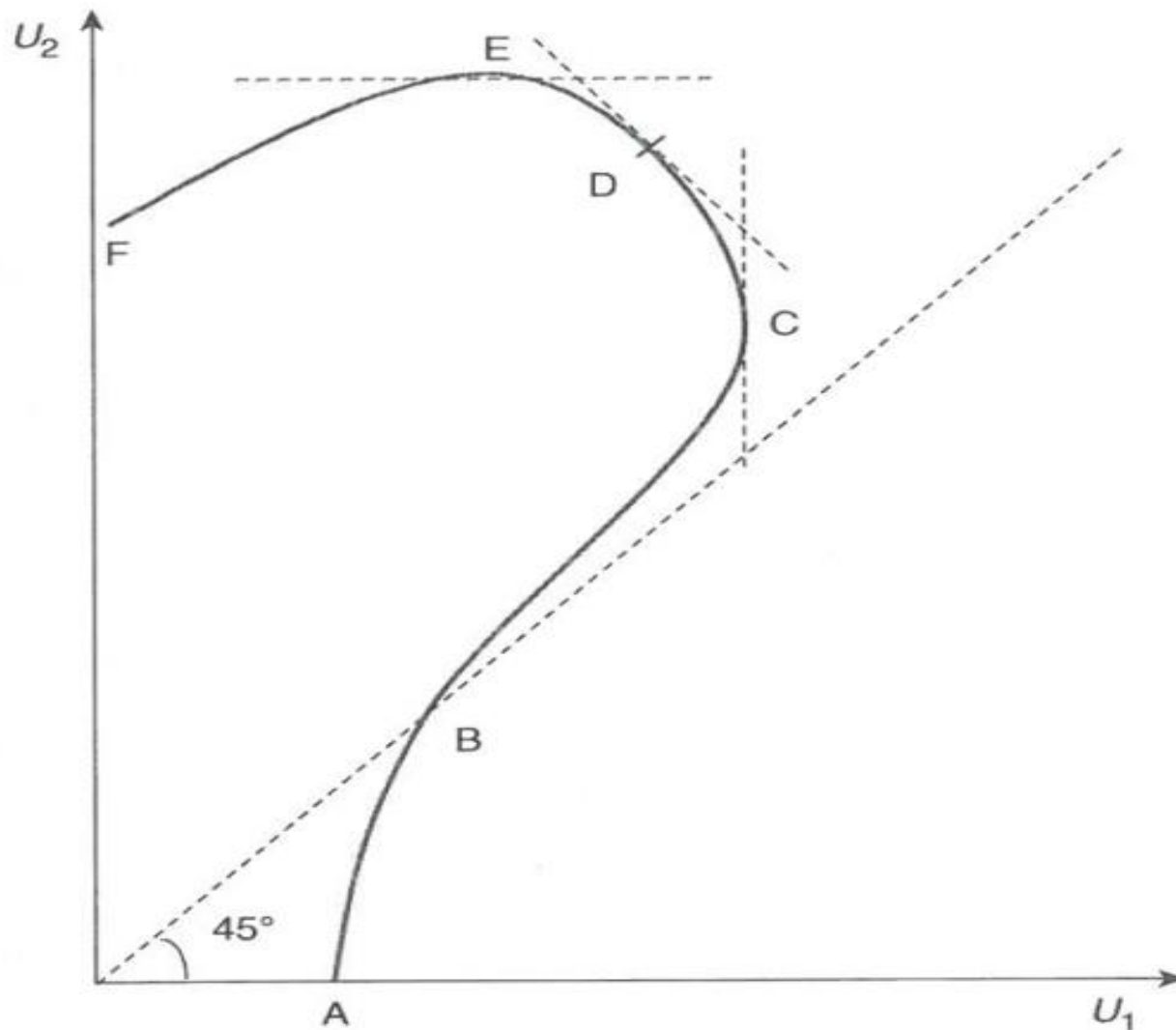
Benthamian function: $\Gamma = U_1 + U_2 + \dots + U_m$
 Assumes that the distribution of utilities across individuals has no importance and only the aggregate utility matters.

This means that the best point in the Figure 1.7 is D because the marginal utilities of individuals are equal and thus the maximum aggregate utility is reached.

Notice that at this point the corresponding distribution of utility across individuals is uneven.

Figure 1.7 Individual utility and social choices: An illustration.

Source: Taken from Atkinson and Stiglitz (1980).



Rawlsian function: $\Gamma = \text{Min} (U_1, U_2, \dots, U_m)$
 Maximises the utility of the poorest (Maximin).

The Maximin principle leads to choosing point C where utility of the least-favoured individual is maximum.

Note that strict equality implies choosing point B, which is not Pareto-optimum. Should simultaneous increases in the utility of both individuals be rejected only because they would not be equally distributed? The Maximin principle clearly says no.

Figure 1.7 Individual utility and social choices: An illustration.

Source: Taken from Atkinson and Stiglitz (1980).

1.4 Conclusion

- So far we have outlined economic policy aims and which instruments it relies on. We have not explained why it is a matter for disagreements
- **Why do policymakers and politicians disagree on economic policy?**
 - They may pursue different social welfare functions and hold contrasting views about the desired distribution of income
 - They may respond differently to trade-offs between equality and efficiency
 - They may discount differently tomorrow's welfare, that is, they may have different time preferences
- These three dimensions explain the familiar disputes between left-wing and right-wings parties

1.4 Conclusion

- Disagreements also remain among academics and economists on the nature of economic policy. They can arise from differences in:
 - the level of aggregation adopted,
 - the time horizons considered, and
 - assumptions made on market structure and power.
- In concluding, it is worth mentioning that politicians remain free to ignore what economists think is true

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