

Neoclassical environment

An economy with complete markets, no externalities or public goods, and no policy measures other than (lump sum) transfers and profit taxation.

Strong neoclassical environment

A neoclassical environment where, in addition, equilibria exist for all transfers.

First welfare theorem

In a neoclassical environment, any equilibrium is efficient.

Second welfare theorem

In a strong neoclassical environment, any efficient allocation of resources obtains as an equilibrium with transfers.

(problems with multiplicity of equilibria)

Third welfare Theorem

In a neoclassical environment, policy measures that force different players to face different relative prices are inefficient.

These policy measures are called distortive, such as taxes/subsidies per unit of activity.

Compensatory distortions theorem

Lipsey-Lancaster second best theorem

Defects or distortions may be offset by other defects or distortions.

Examples

1. overproduction by a polluting company in a neoclassical environment may be offset by monopolistic behavior somewhere in its supply chain.

2. underproduction of public goods in a neoclassical environment may be offset by subsidizing their production or use.

3. nonexistence of equilibrium due to large nonconvexities relative to market size for some good, may be offset by subsidizing its production or use.

4. nonexistence of equilibrium due to survival constraints of some consumers may be offset by subsidizing consumers or their potential employers/customers.

Coase theorem

Externalities are a special case of incomplete markets, i.e., in an otherwise neoclassical environment, the creation of property rights that transform the externality into a commodity leads to efficient equilibria.

The theorem applies only in the case of bilateral externalities (one player produces the externality, and another suffers it), provided that there is an equilibrium after the creation of property rights.

In the case of multilateral externalities, the theorem does not apply, because property rights create a new externality (institutional externality according to Peter Hammond), and players refuse to contribute enough (free-rider problem).

In the case of negative production externalities, the theorem does not apply, because after the creation of property rights equilibria might not exist (fundamental nonconvexities according to David Starrett).

Radner's cost-benefit theorem

In a neoclassical environment without production, equilibrium prices measure the social benefit of small changes according to the Kaldor criterion, i.e. a small change in the allocation of resources is socially beneficial according to the Kaldor criterion if and only if it increases the national product (GNP) at the pre-change equilibrium prices.