Do we really need a Public Sector?

Theocharis Papadopoulos ©

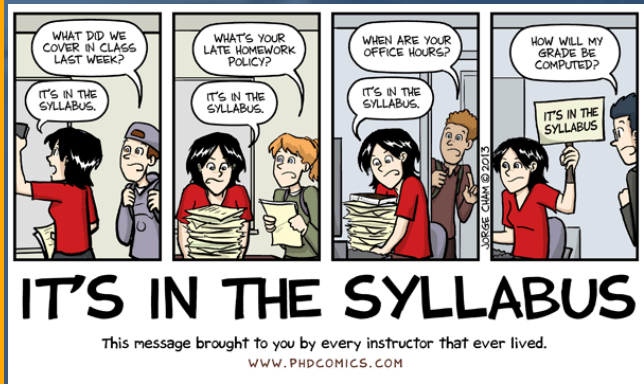
WHAT ARE WE TALKING ABOUT TODAY

MARKET EFFICIENCY

PARETO EFFICIENCY

WELFARE ECONOMICS

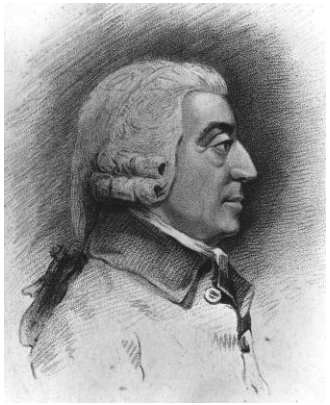
Don’t forget!



Market Efficiency

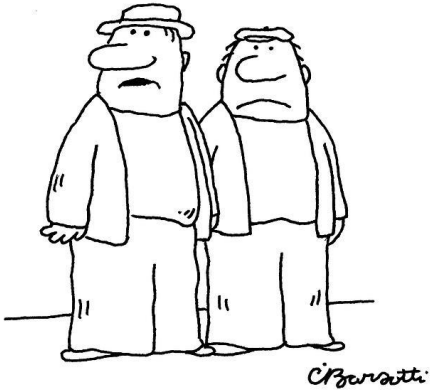
Invisible hand and Pareto Improvements

The Invisible Hand



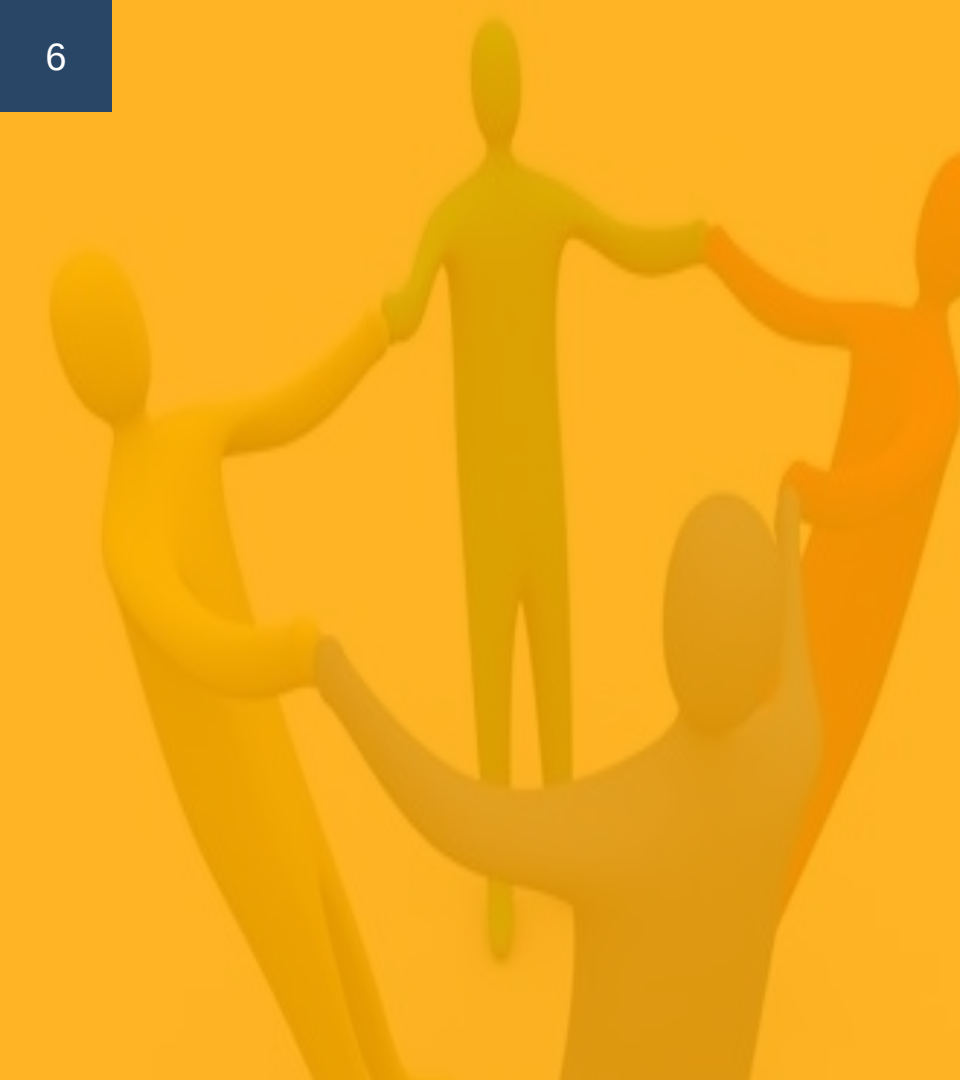
Self-interest, according to Adam Smith is a much more persistent characteristic of human nature than a concern to do good. Therefore self-interest provides a more reliable basis for the organisation of the society.

Market efficiency



"There, there it is again—the invisible hand of the marketplace giving us the finger."

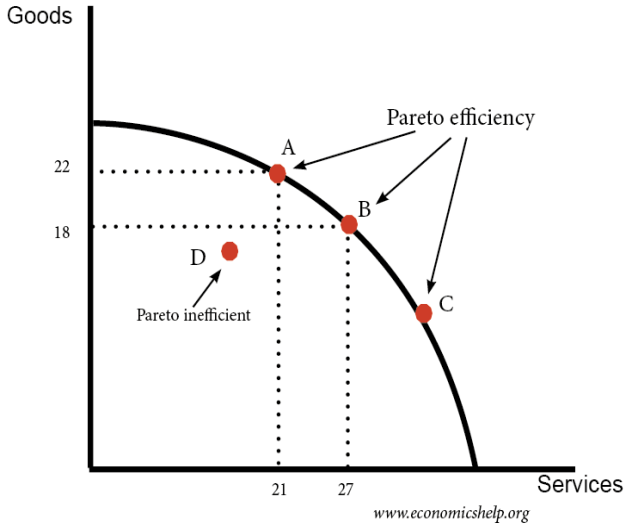
- The intuition behind Smith's insight: if there is some commodity or service that individuals value but is not produced, then they will be willing to pay something for it. If the value to a consumer exceeds the cost of production, there is a potential for profit and an entrepreneur will produce.
- If there is a cheaper way of production an entrepreneur will be able to make more profit by adopting it.
- No government intervention is needed at any point.



Welfare Economics

Pareto efficiency

Welfare Economics



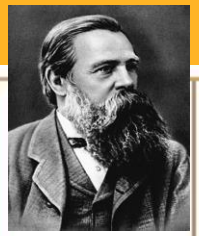
Welfare economics is the branch of economics that focuses on the *normative* issues – what should be produced, how it should be produced, for whom and who should make this decisions.

How can we evaluate the different mixes in the mixed economies around the world?

Most economists embrace a criterion called **Pareto Efficiency**

Resource allocations, when no one can be made better off without someone being made worse off are said to be *Pareto efficient* or *Pareto optimal*

Moving to such an equilibrium is known as *Pareto Improvement. Pareto Principle* refers to the need of instituting such improvements.



Wilfredo Pareto (1848-1923

The option of both players hunting a stag is considered *Pareto optimal* because players can not switch to any other outcome and make at least one party better off without making anyone worse off.

John Nash (1928-2015)

Nash equilibrium is an outcome in which every player is doing the best he possibly can given other players' choices. So, no player can benefit from unilaterally changing his choice.

The criterion of Pareto is individualistic in two senses:

- It is concerned with each individual's welfare, not with the relative well-being of different individuals.
- It is each individual's perception of his/her own welfare that counts (consumer sovereignty)

Two fundamental theorems of welfare economics

1st Theorem

Every competitive economy is Pareto efficient.

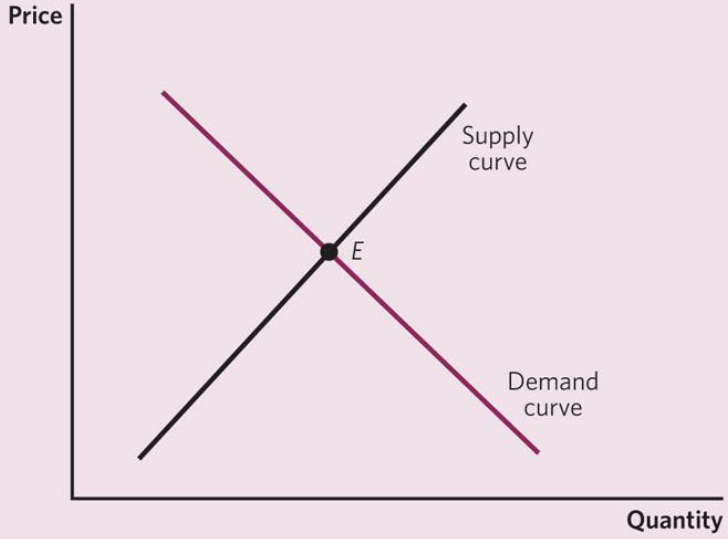
2nd Theorem

Every Pareto efficient resource allocation can be obtained through a competitive market process with an initial redistribution of wealth.

Note that: The second theorem says that the only thing government needs to do is to redistribute initial wealth. In other words, Pareto efficient allocation can be attained by means if a *decentralized market mechanism*.

Efficiency in a market

FIGURE 3.1



In deciding how much to demand, consumers equate the marginal benefit they receive from an extra unit with the marginal cost, the price.

In deciding how much to supply, firms equate the marginal benefit they receive, the price with the marginal cost

→ At the market equilibrium, where supply equals demand, the marginal benefit (to consumers) is equal to the marginal cost (to firms) – and each equals the price.

Three types of efficiency

Economists consider three aspects of efficiency, all of which are required for Pareto efficiency.

Exchange efficiency

Whatever goods are produced have to go to the individuals who value them most.

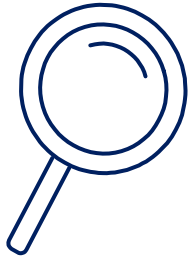
Production efficiency

Given the society's resources, the production of one good cannot be increased without decreasing the production of another.

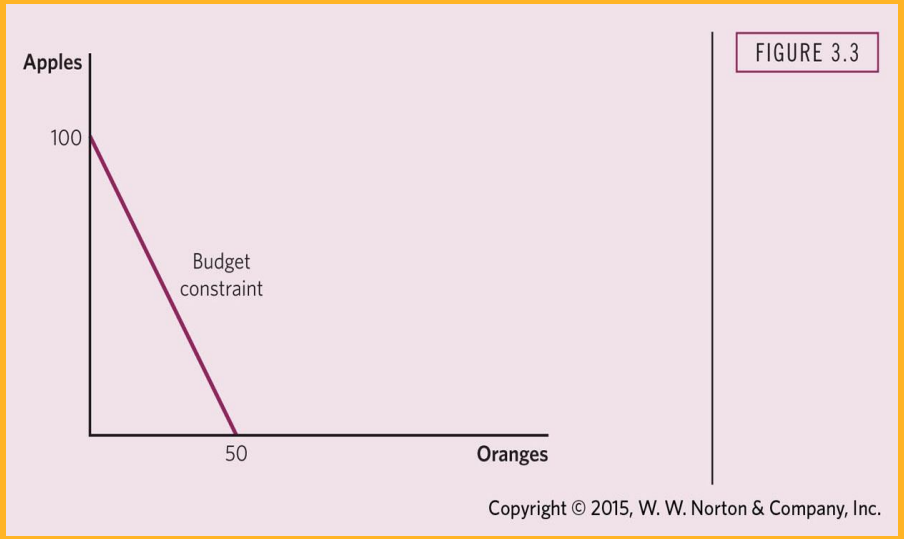
Product Mix efficiency

The goods produced correspond to those desired by individuals.

Let’s see if a competitive market has all three types of efficiency



Budget Constraint



Given income £100, P_O = £2 and P_A = £1, an individual can purchase any combination of apples and oranges along or to the left of the budget constraint.

Any combination to the right is unaffordable.

The slope of the budget constraint is based on the relative price of goods

Indifference curve

An indifference curve (I_0, I_1, I_2, I_3, I_4) gives the combinations of apples and oranges among which a consumer is indifferent. The amount of one commodity that an individual is willing to give up in exchange for a unit of another commodity is called ***marginal rate of* substitution.**

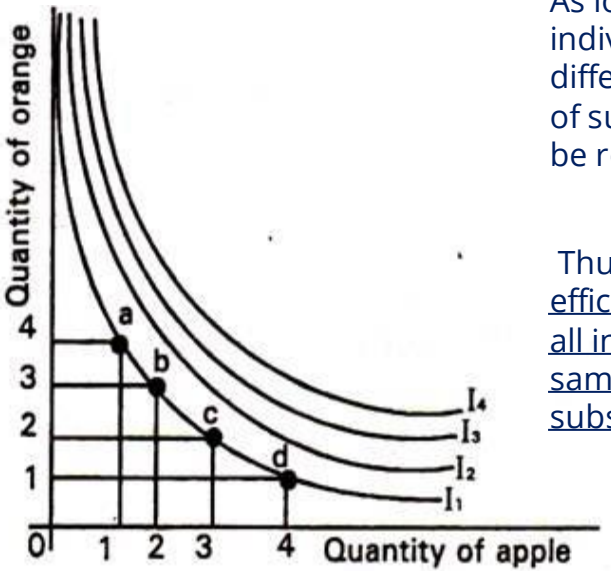


Fig. 4.7. An Indifference Map

As long as different individuals have different marginal rates of substitution there will be room for a deal.

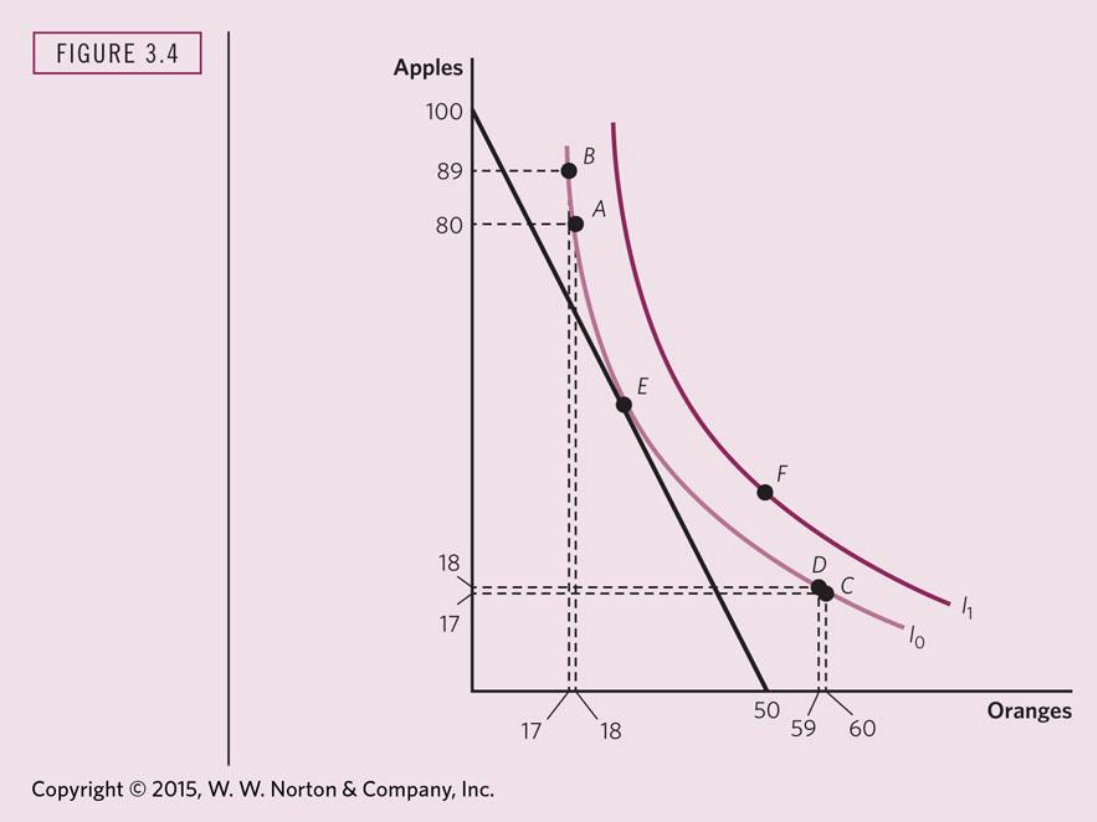
Thus, exchange efficiency requires that all individuals have the same marginal rate of substitution.

Consumer's choice problem

Because all consumers face the same prices in a competitive economy, and each sets his/her marginal rate of substitution equal to the price ratio, they all have the same marginal rate of substitution.

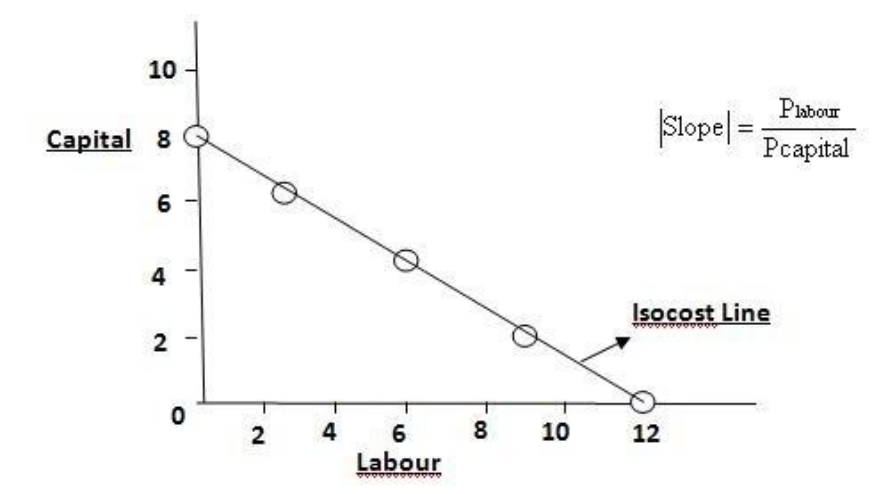
In the previous slide we showed that the condition for exchange efficiency was that all individuals have the same marginal rate of substation.

Thus, competitive markets have exchange efficiency.



Consumer chooses the point along the budget constraint that most prefers; that is the point at which the indifference curve I_0 is tangent to the budget constraint (point E) . At that point the marginal rate of substitution equals the relative price of the commodities.

Isocost Line



An isocost line shows the different combinations of inputs that cost a firm the same amount.

The slope of the isocost line is the relative price of the two production factors.

Isoquants

Isoquants trace the different combination of inputs that produce the same quantities of outputs.

The slope of an isoquant is called **marginal rate of technical substitution**.

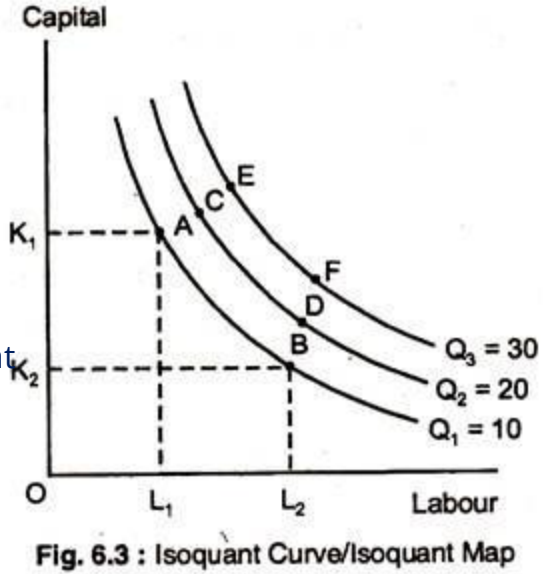


Fig. 6.3 : Isoquant Curve/Isoquant Map

Whenever marginal rates of technical substitution differ, we can switch resources around to increase production.

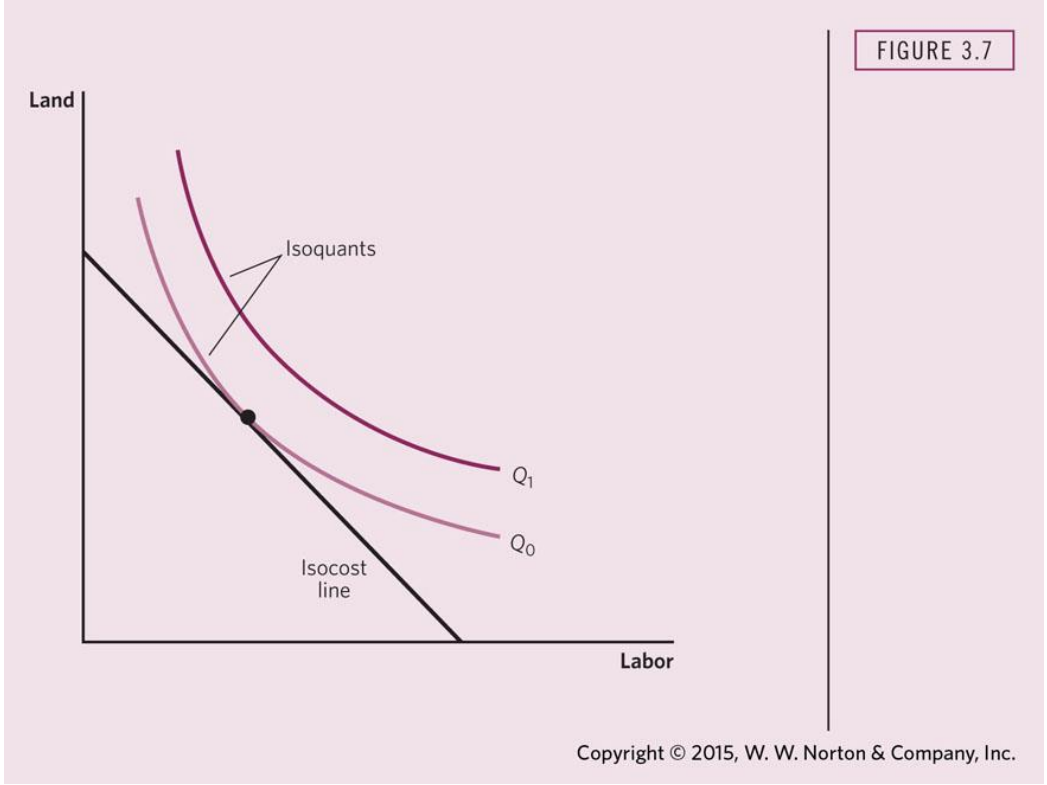
Thus, production efficiency requires that all firms have the same marginal rate of technical substitution.

Isoquants and Isocost lines

In a competitive economy all firms face the same prices, so all firms will set their marginal rate of technical substitution equal to the same price ratio. Hence, they all have the same marginal rate of technical substitution.

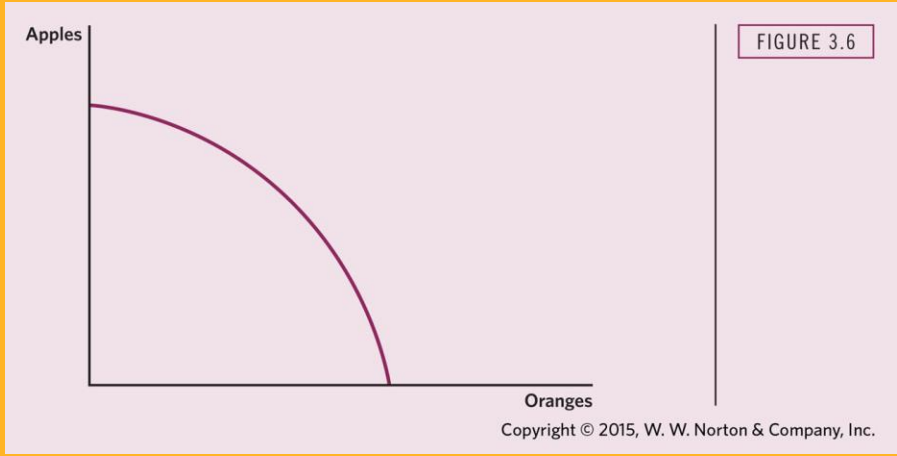
In the previous slide we showed that the condition for production efficiency was that all firms have the same marginal rate of technical substation.

Thus, competitive markets have production efficiency.



A firm maximizes its output, given a particular level of expenditure on inputs, at the point where the isoquant is tangent to the isocost line. At that point the marginal rate of technical substitution equals the relative price of the inputs.

Production Possibilities Schedule



For each level of output of one commodity, we can determine from the technology the maximum feasible level of output of the other commodity.

This generates the *Production Possibilities Schedule.* The slope of the production possibilities schedule is called **marginal rate of transformation**.

Indifference curve

An indifference curve (I_0, I_1, I_2, I_3, I_4) gives the combinations of apples and oranges among which a consumer is indifferent. The amount of one commodity that an individual is willing to give up in exchange for a unit of another commodity is called ***marginal rate of* substitution.**

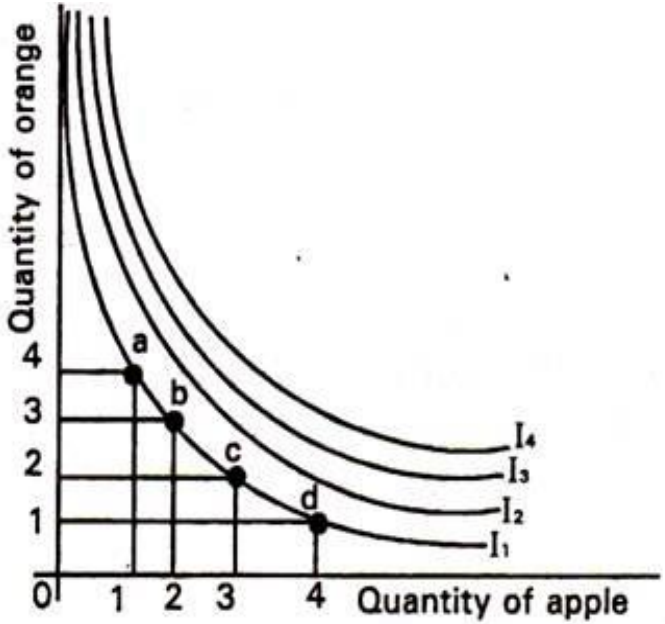


Fig. 4.7. An Indifference Map

Production Possibilities Schedule and Indifference Curves

Under competition, the marginal rate of transformation will equal the relative price of the commodities.

We have already shown that, under competition, consumers' marginal rate of substitution will equal the price ratio.

Because both the marginal rates of substitution and the marginal rate of transformation equal price ratio, the marginal rate of transformation must equal the marginal rate of substitution.

Thus, competitive markets have product mix efficiency.

Product mix efficiency requires that the marginal rate of transformation equals consumers' marginal rate of substitution

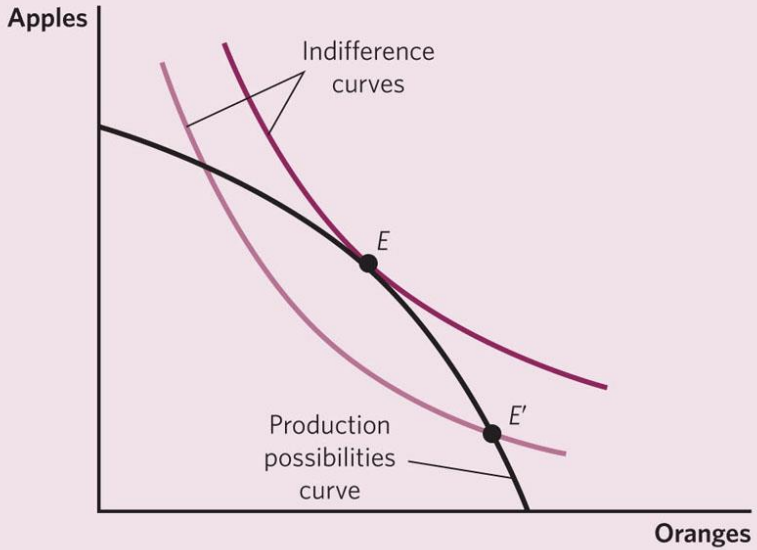
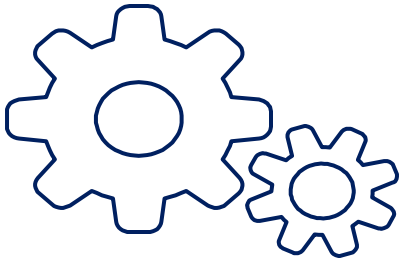


FIGURE 3.9

To reach the highest level of consumers' utility, the indifference curve and the production possibilities schedule must be tangent (point E). At any other point, such E', consumer utility is lower than E.

Market seems to be really efficient!



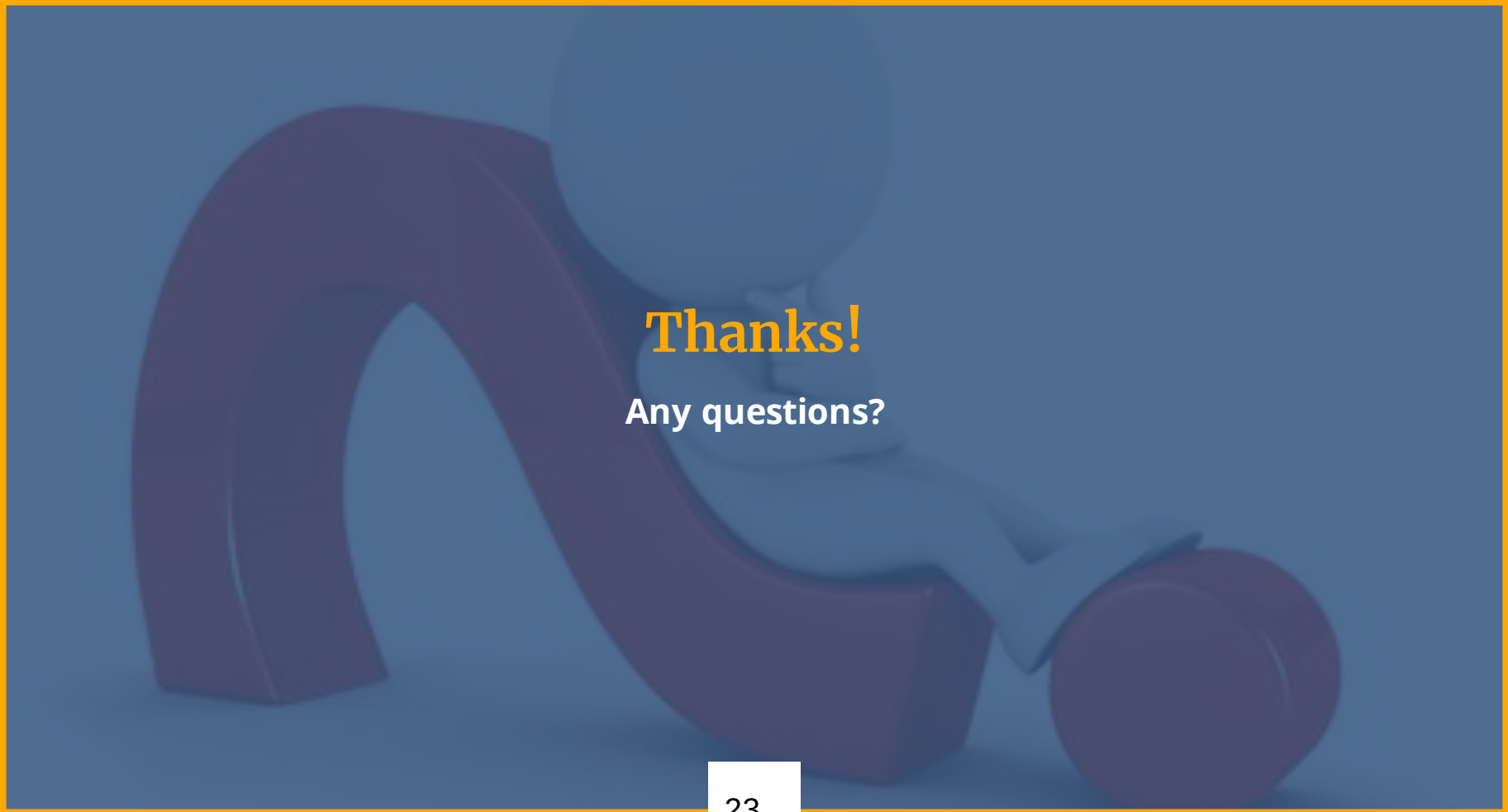
Then why do we need a Public Sector (and this course)?

Have you started doing research on your chosen country?

Have you prepared an outline for your individual report?

Done it?

Great! Keep up...



Thanks!

Any questions?