

## **Finance and the Economy**

### **Seminar 1 Suggested Answers**

#### **Question 1:**

When operating on the production possibility frontier, an economy's finite resources are all employed, true or false?

**Answer:** The answer to this question needs to draw a distinction between available and unavailable resources. The definition of the production possibility frontier is that it shows the maximum combinations of output that the economy can produce using all available resources. Some resources, such as child labour, may not be available because legislation may prevent their use (or for other reasons). Also, some resources may not be known to exist, or are currently too expensive to gain access to. So, whilst resources are finite, this does not mean that an economy has exhausted all sources of such resources.

#### **Question 2:**

What is the opportunity cost of undertaking an undergraduate degree? What is the opportunity cost of undertaking a PhD?

**Answer:** The opportunity cost of undertaking an undergraduate degree is the earnings foregone, from non-graduate employment, plus any additional living expenses, travel and books associated with being at university, and tuition fees. The opportunity cost of undertaking a PhD is the immediate loss of earnings from graduate employment, plus any additional expenses associated with studying for a PhD (such as travel, books, computing expenses) plus any fees that need to be paid.

#### **Question 3:**

What is the difference between a command and a free market economy?

**Answer:** In a command economy, decisions on what, how and for whom to produce are made in a central planning office. No economy relies entirely on command. A free-market economy has no government intervention. Resources are allocated entirely through markets in which individuals pursue their own self-interest. Adam Smith argued that an 'invisible hand' would nevertheless allocate resources efficiently. Modern economies are mixed, relying mainly on the market but with a large dose of government intervention. The optimal level of intervention is hotly debated.

**Question 4:**

Identify products in the economy where there is both planned and market provision.

**Answer:** Health care, education, and social security, such as pensions.

**Question 5:**

What is the difference between positive and normative economics?

**Answer:** Positive economics studies how the economy actually behaves. Normative economics recommends what should be done.

**Question 6:**

Which of the following statements are positive and which are normative?

- (a) The annual inflation target is below 2 per cent.
- (b) Because inflation is low, the government should cut taxes.
- (c) Income is higher in the UK than in Poland.
- (d) Brits are happier than Poles.

**Answer:** (a) Positive; (b) Normative; (c) Positive; (d) Normative.

**Question 7:**

Which of the following statements refer to microeconomics and which to macroeconomics?

- (a) Inflation is lower than in the 1980s.
- (b) The new iPhone costs 10 per cent more than the previous version.
- (c) Coffee production decreased due to bad weather in Brazil.
- (d) Unemployment in London is above the UK average.

**Answer:** (a) Macroeconomics; (b) Microeconomics; (c) Microeconomics; (d) Macroeconomics.

**Question 8:**

**Common fallacies:** Why are these statements wrong?

- (a) Since economists, like everybody else, have particular political views, economics can be used to justify anything.
- (b) Efficiency gains cannot increase the production of some commodities without sacrificing others.
- (c) Economics is about people, and thus cannot be a science.

**Answer:** (a) Positive economics can be tested against evidence.  
 (b) Beginning from an inefficient point below the production possibility frontier, efficiency gains can increase the production of some commodities without sacrificing others and thus yield a “free lunch”.  
 (c) Economics is a social science with all the limitations which that classification implies. Scientific method can be used to study human behaviour, but it is often more useful to refer to economic tendencies rather than economic laws.

### Question 9:

What will happen to the price of petrol in the next two years?

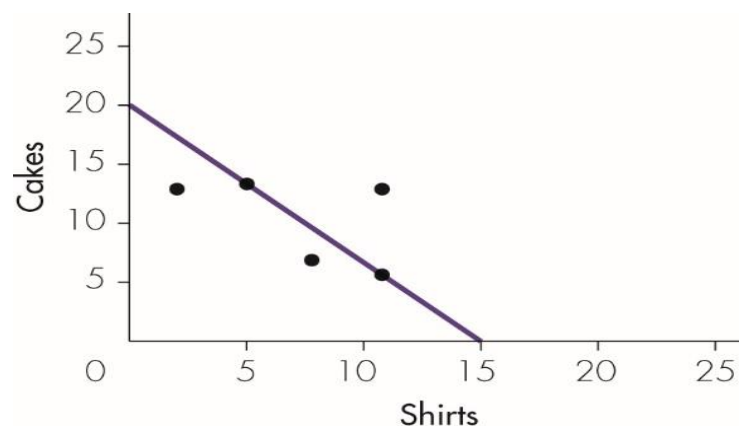
**Answer:** This seems likely to be a question of interest for several years. Prices are likely to rise or at least remain at a high level, a key reason being the Russia invasion of Ukraine. Although new oil reserves are being discovered, supply in decline. The tax on petrol is also quite high, partially as it is a convenient source of revenue and partly because of environmental concerns.

### Question 10:

An economy has 5 workers. Each worker can make 4 cakes or 3 shirts.

- Draw the production possibility frontier.
- How many cakes can society get if it does without shirts?
- What points in your diagram are inefficient?
- Can the economy produce an output combination which lies above the production possibility frontier?
- What is the opportunity cost of making a shirt and making a cake?
- Does the law of diminishing returns hold in this economy?

**Answer:** (a) Put cakes on the vertical axis and shirts on the horizontal axis (you can also do the other way around). The PPF is a straight-line downward sloping joining 15 shirts with 20 cakes. This is shown below:



- 20 cakes.
- All points below the PPF.

- (d) No, unless new resources (i.e., workers) can enter the economy (on top of the existing ones) or technological progress shifts the PPF outward.
- (e) The opportunity cost of shirts is 1.33 cakes. The opportunity cost of cakes is 0.75 shirts. 1 extra worker produces 3 shirts, while the same worker could have produced 4 cakes. So, to produce an extra shirt we need to give up 1.33 cakes (i.e.,  $4/3=1.33$ ). The same reasoning applies for the opportunity cost of cakes in terms of shirt. To make an extra cake we need to sacrifice 0.75 shirts (i.e.,  $3/4=0.75$ ).
- f) No, the PPG is a straight line and so it has constant slope (i.e. constant opportunity cost).

### Question 11:

Suppose a farmer is planning to grow cabbages on their land. The cost of growing cabbages is £50 per acre, and they earn £100 from the produce in the market. There is another option for them, to grow pumpkins, which could yield them £110 if they spent £70 on it.

- (a) What is the opportunity cost of growing cabbages?
- (b) Is it rational for the farmer to grow cabbages instead of pumpkins?
- (c) Suppose the only other option for them to earn from their farmland is to rent it to another farmer. How will the farmer arrive at a rational decision?

**Answer:** (a) The opportunity cost is the value of the best alternative. In this case that value is £40.

(b) Yes, the benefit is £100, the costs (including the opportunity cost) are £50 + £40 = £90. The net benefit is positive and £10, which is larger than the net benefit of producing pumpkins (which is negative and equal to - £10).

(c) If the rental rate the farmer can get is above £50 then, renting the land is a rational decision.