

Questions and Answers

BCPM 0058: Economics

Dr. Kumar Aniket

Lecture 2: Technology, population, and growth

Question from a student

- Why was coal relatively cheaper and wages relatively higher in the UK and subsequently the rest of Europe and the world? I understand this is the reason that caused the Industrial Revolution, to occur in the UK but am unsure as to why this was the case.
- Why does the diminishing average product of labour occur? Would it not be possible for workers to come together and use the benefits of the division of labour, in order to increase productivity and efficiency when the number of workers rise and land available stays constant?

Answer

Interesting questions. I like the way you are engaging with the course material. :-)

The answers briefly are:

1. Things are usually cheaper if they are abundant. The word “usually” is very important because as you will see later in the course there are certain exceptions to this. In the case of coal and labour, it is relatively straightforward. Coal was relatively abundant in Britain and labour relatively scarce and that explains their prices. Chapter 2 in the book has more detail on it.

2. *Diminishing average product of labour* is not set in stone. It is simply a descriptive property of the production function. Not all production functions have that property. Further, we start by looking at simple production functions where each worker works as individuals with the help of some capital.

You raise interesting questions about *team production*. Things get far more complicated with team production and you would need to apply game theory to determine conditions under which teams work cooperatively and conditions under which in-fighting and the phenomenon of free-riding occurs. Teams work under very specific conditions. The popularity of line-management systems in firms suggests that it is not easy to make teams work on their own. We will briefly look at game theory soon and happy to return back to this conversation once we do.

Division of labour is a different phenomenon where workers specialise in different tasks. It is related to the notion of comparative advantage. While these terms are used colloquially in an imprecise manner, to understand how society works we have to be very precise about their meanings. It would be useful for you to go back to the definition of division of labour and cogitate on exactly the channel through which division of labour can increase productivity. You will find that you will then have to define productivity. I will leave you to find the definition of *productivity* for now. We will get to productivity later in the course. We are going to extremely precise in terms of defining the concept we use and most students get used to this process within weeks.

Going back to diminishing average product of labour, it would be good to think of actually simple production processes which have these properties others that don't. For instance, think of all the things that you produce for yourself in the course of the day and think whether they are diminishing the average product of labour. Making coffee, making lunch, studying etc. Keep it simple and just think of one worker production functions. Just like Robinson Crusoe. There are lots of interesting cases where the diminishing average product of labour does not hold. Thinking about when the property holds and when it doesn't will get you under the skin of the production function.

Hope that helps!

With best wishes,
Dr. Aniket