

Production possibilities curve case studies example

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Production Possibilities Frontier

The production possibilities curve is a geometric representation of production combinations of two products that can be achieved with an economy using the available resources efficiently. The resources are fixed and the technological condition in the economy constant. Any production along production possibility curve represents an efficient and full employment of the available limited resources (Fte. org, 2014).

The diagram above shows a PPC in a nation's economy. The above economy can only produce product Y and X. If the economy uses all its resources and technological conditions efficiently, it will produce along the PPC curve (Krugman & Wells, 2006). Different points along the PPC represent different amounts of product Y and product X. It implies that in order for the economy to increase or reduce the quantity of one of the products while producing along the PPC, it must reduce or increase the quantity of the other.

Inward Shift in PPC

It is possible for a nation's possibilities curve to shift inward. The position of a nation's PPC only remains constant if the nation's production resources remain the same. A decline in a nation's production capacity is a factor that can cause the PPC to shift inwards. The productive potential of a nation can decline due to various reasons. Labor is a key element of production (Dolan, 2004). A decline in the quality of labor force in a nation can cause the PPC to shift inwards since the low quality labor force will not be able produce at the original position of PPC. The economy will produce less of both goods than it was producing before hence resulting in a shift in the PPC inwards.

A reduction in population of a country can also cause an inward shift in PPC. A decrease in population implies a decrease in the labor force of a country and thus, a reduction in the country's production capacity. Consequently, reduced production capacity shifts the PPC inwards (Dolan, 2004). The population of a country can reduce due to several reasons that include lifestyle changes. In the recent past, it has been common for many families around the globe to practice family planning. Families are limiting the number of children they can have, and it affects population of a country. Another factor that can cause an inward shift in PPC is the use of outdated or obsolete technology (Krugman & Wells, 2006). When a nation is unable to invest in new technology, and the available one is worn out, it may be forced to buy cheaper technology from other nations that may be facing their out. The cheaper technology may be of low quality than the previous one and, therefore, less productive. There are cases where developed countries have been exporting their obsolete technology to other countries. That kind of technology is likely to have an effect that causes an inward shift in PPC.

Achieving Points outside the PPC

Points outside the PPC are points of production that are beyond the economy's production capacity. The economy cannot reach them unless its production capacity increases (Mankiw, 2014). Production capacity can be increased in several ways. One of them is by improving labor productivity. The productive capacity of labor can be improved through training the semi-trained to make them more professional and effective. Once labor is improved, the economy will produce more than it was producing before

provided that workers work at their full capacity (Mankiw, 2014). Labor productivity can also be improved if workers commit to more than they normally do. For example, during crises such as war, workers in a nation commit to working overtime in which case productivity increases. In such situations, the economy achieves points outside the PPC.

An economy also achieves points outside the PPC if it changes its technology with a more efficient one than the previous (O'Connor, 2004). Consider a secretary who uses a typewriter. When the typewriter is replaced with a computer and the secretary fully trained to work on the computer, his/her production more than doubles. In addition, the economy can produce outside the PPC if it discovers some new valuable resources such as oil or gold. Such resources provide more capital for the economy to invest more and produce more than it was producing in the first place. Such an economy can purchase a new technology that it could not afford before, and it can also motivate its workers to produce more by paying them better. Furthermore, increased resources help countries to create more job opportunities and reduce unemployment (Dolan, 2004). Reduced unemployment leads increased productivity provided that workers produced at their full capacity.

Opportunity Cost

Movement along the PPC

In order to produce ten more tons of farm goods from point b to point c, the alternative foregone is 50 tons of factory goods. On the other hand, the opportunity cost of producing ten more tons of farm goods from point e to point f is 280 tons of factory goods. The opportunity cost of farm goods is

higher when moving from point e to f than it is when moving from point b to c. The reason for this is that in moving from b to c, the economy may just have to invest in a few inputs such as seeds, fertilizer and probably a few units of additional labor (Dolan, 2004). In this case, only 50 tons of factory goods will be sacrificed to produce the 10 additional tons of farms goods. However, as economy continues to more farm goods, the cost of doing so rises and so does the opportunity. The rise in cost and opportunity cost is because it is necessary that the economy invests in more farm inputs than it was doing before. For example, purchase of tractors, earthmovers, and other capital inputs. It might be necessary to break more virgin land which is costly than using land that was being used before.

References

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