Title page

Principles of macroeconomics

The fixed production technology indicates that the level remains unchanged irrespective to the changes in sales or production. The association between output and generation of externality is used for defining this rate. Changing the production process minimizes the externality. Output-variable production is reduced in this process, which indicates that a firm cannot produce beyond a certain level. Variable production technology does not restrict the level of production and firms are free to integrate technology (McEachern, 2009).

The government must set the goal of reducing the marginal social cost of pollution to zero in industries with fixed production technology. This is because pollution is a negative externality that imposes adverse consequences for society. These firms on third parties who are not part of the production process incur private costs. The idea states that the companies must bear the cost of pollution because they are involved in the production process and avail maximum benefit (Batrancea, Batrancea, Nichita, Gaban, Masca, & Morar, 2019). The society does not benefit from the production process so it is unfair to impose costs on them. This reflects the incentive of the state to minimize the release of pollutants by the firms. Chemicals are a source of pollution that is dumped in the lands and water. This threatens the sewerage, quality of water and causes greenhouse gas generation. The involvement of organizations in these practices undermines the quality of air by generating pollution that is further linked to global warming. The society bears the cost in the form of health issues, lack of access to safe drinking water and pollution-free environment. Fixed production technology can be used as a goal for minimizing the possible threats of negative externalities. The goals of the state are to take financial support from society for mitigating the negative externalities.

The Lorenz curve is a method used for representing the distribution of wealth or income in an economy. Max O Lorenz developed the curve in 1905 for understanding the distribution of wealth. This is a graphical representation of the amount of wealth acquired by different classes in a society. The graph is created based on the assumptions that there is perfect equality in society and everyone earns the same salary. Under these conditions, the poor population would acquire 20% of the total income. Total 5% of national income would be earned by the 20% poor. While 55% of the total income will be held by 90% of the poor population (Rycroft, 2003). This also indicates that 45% of the national wealth will be acquired by the 10% richest of the society. The wealth can be estimated by considering a given percentage of wealth and percentage of the household.

The purpose of the Lorenz curve is to portray the distinction between the rich and poor population and identify methods that can be used for attaining equality. It highlights the representation of attaining equal distribution of wealth. Lorenz curve in Exhibit 2 shows the income distribution changes with the cumulative percentage of households. The figure depicts that 20% of household receive income below 20% while 60% of the household receives income slightly above 20%. The curve also states that 80% of households receive 50% of income (Moskowitz, Seshan, Riedel, & Begg, 2008). The points a-b on the graph indicates that in 2010 the income was distributed evenly among the households. At this point, the Lorenzo curve is a straight line because it represents equal distribution. During the 1980s the national income was more evenly distributed across households.

References

Batrancea, I., Batrancea, L., Nichita, A., Gaban, L., Masca, E., & Morar, I.-D. (2019). An econometric approach on production, costs and profit in Romanian coal mining enterprises . *Economic Research-Ekonomska Istraživanja , 32* (1), 1019-1036 .

McEachern, W. A. (2009). *Economics: A Contemporary Introduction.* Cengage Learning.

Moskowitz, C. S., Seshan, V. E., Riedel, E. R., & Begg, C. B. (2008). Estimating the empirical Lorenz curve and Gini coefficient in the presence of error with nested data. *Stat Med, 27* (16), 3191–3208.

Rycroft, R. (2003). The Lorenz Curve and the Gini Coefficient. *The Journal of Economic Education, 34* (3).