Answer on Question #61241 -Economics - Microeconomics

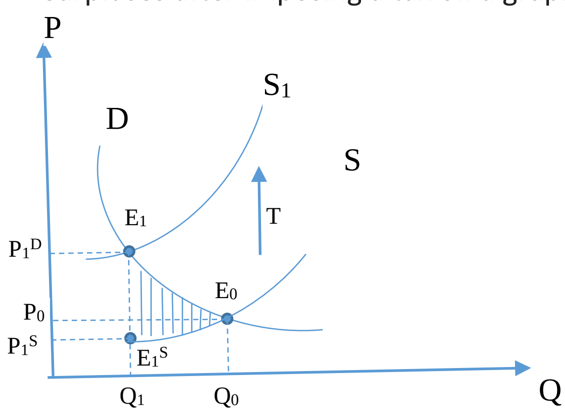
Explain what will happen to consumer and producer surplus and deadweight loss if the government imposes a tax on sellers for each radio they produce in order to raise government income? Include in your answer an explanation of the three concepts – consumer surplus, producer surplus and deadweight loss.

Answer.

Consumer surplus is the difference between the sum of the money that a consumer was willing to pay for the goods, and that sum of money which he actually paid.

Producer surplus is the difference between the sum of money that the manufacturer actually received for the goods, and that sum of money, which he expected to get.

We illustrate changes of equilibrium price and quantity, consumer and producer surpluses after imposing a tax on a graph.



Suppose that the government established a tax T.

Curve S (supply curve before the introduction of the tax) relates the volume of the supply with the price remaining the seller after tax. The S1 is a curve that establishes a connection between the volume of supply and the price paid by the buyer (the supply curve after the tax). Curve S1 derived from curve S for displacement upward price axis of T units.

The introduction of the tax has caused displacement of the equilibrium point E0 to the point E1; the volume of sales decreased from Q0 to Q1, the price paid by the buyer, increased from P0 to PD1, and received by the seller - decreased from P0 to PS1.

The benefits of buying and selling decreased for the buyer and for the seller. Consumer surplus has decreased due to the fact that for each unit of purchased goods, he is forced to pay more, and because at the same time he had to reduce consumption, and some consumers may generally refuse to buy this product. Using the geometric representation of consumers' surplus, we can say that the reduction in its value is represented $P_0PD_1E_1E_0$ figure area.

The seller receives for each unit of goods less money than before the introduction of the tax, and also reduces the volume of sales; some sellers may be forced to leave this market. The reduction of the surplus is shown in square $P_1SP_0E_0E_1S$.

Total reduction of surplus of buyers and sellers shows area of the figure $PS_1PD_1E_1E_0ES_1$.

The same figure shows that tax revenues in the state budget do not match the size of the tax burden - a decrease in the consumer and producer surplus. Budget revenues are equal to the product of the TQ1 and portrayed the area $PS_1PD_1E_1ES_1$. This value is smaller than the total reduction of surpluses: the triangular region $ES_1E_1E_0$ area (shaded it on the picture) is not covered by the value of the tax collection. This is the deadweight loss of the society, due to the introduction of the tax.