

Effect of tax on the market equilibrium



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As we know, there is a negative slope in demand curve and as for the supply curve, it has a positive slope. This is drawn in figure 1.0 to illustrate the equilibrium level in quantity supply and quantity demand of the fuel before the war break out. At point E, whereby both curve intersect, the point E is called as equilibrium point, while P_e and Q_e symbolize the equilibrium price and equilibrium quantity.

When a war strike in Country A, it is a definite that there will be a changes in the supply curve. War is one of the supply determinants that will shift the supply curve to the left. Determinant of supply is said to occur when there is a rise or fall in the supply because of a non-price determinant. If a war strikes, there surely will cause a rise in some kind of disturbance in the order of the political structure, thus this will disrupt the production channel of the country's export. As the result, certain goods which in this case will be the fuel, the supply curve will shift to the left. Figure 2.0 illustrate the shift of the supply graph from S_0 to S_1 . As u can see in the graph, there is no change in the price of the goods, thus the price here is not the cause of the changes.

Now let us look the market equilibrium of the fuel when there is change of supply curve. As the war strike, the supply curve of the fuel shift to the left. And when this happen, the supply of fuel decrease, but at the same time the demand of the curve will still remain at the same level. Due to the decrease of the fuel supply and the demand of fuel remain unchanged, the equilibrium price will increase and the equilibrium quantity will decrease. This is illustrated in Figure 3.0.

Supply curve S_0 shift to S_1 and the demand curve D remain the same , equilibrium point E_0 shift to E_1 . Thus this resulting of increase in price of fuel and decrease in fuel supply.

Due to the decrease in the fuel supply from Country A , demand of fuel remain the same , thus it create a situation called shortage. This occur when there is excess of demand. Table 1 describe the condition of demand and supply of fuel before the war strike and after the war strike. The positive sign denote surplus condition due to excess supply of fuel and negative sign denote the shortage condition due to excess of demand of fuel after the war strike and zero denote the equilibrium condition.

At the price above the equilibrium price, the supplied quantity of fuel is greater than the demand of fuel. This create surplus in the market of fuel. This will force the price of fuel to go down. As in table 1 , at the price of USD 100 the quantity supplied of fuel is 3 million barrel and the demand of fuel is 1 million barrel. There is a surplus of 2 million barrel . Thus in order to get rid of the unwanted inventory , country A decrease the price. At lower price Country A produce less quantity , thus the World demand more until more fuel until it reach equilibrium price of USD 60. The quantity supply is then is the same as the quantity demand. Thus all inventories is cleared. It occurs at equilibrium point. In order to reduce surplus, price of fuel have to have to be decrease.

At equilibrium , there is no shortage nor surplus. Thus price have no pressure to change. This occur at price USD 60 per barrel and 2 million barrel demanded and supplied.

At the event of war break out in country A , the occurrence of disturbance in political structure in country A , the interruption in channel of production of fuel for export , there will be a decrease in the supply of fuel. Demand of fuel will be greater than the supply of fuel. This will create shortage in the fuel market. As shown in table 1 , at the price of USD 20 per barrel to USD 50 per barrel. As the price increase , shortage will reduce until the market reach its equilibrium level again

Illustration of the condition of shortage, surplus, equilibrium and pressure on price

When the war break out in country A , there will be a disruption in the production of fuel. Thus in the event of the decrease in the supply of fuel by Country A, the price of fuel increase . The demand of fuel remains the same because fuel is the main source of energy to run a car. It does not have many goods to replace the fuel. Car user will only buy fuel. Therefore , due to the shortage of fuel in the market and the increase of fuel price , this definitely will be effecting the car market.

Car and fuel is a complementary good. A complementary goods is define as when a price reduction in one goods will force the demand of the other goods to increase. It's a type of goods that usually consume together , thus without fuel, diesel or petrol engine car will not move because there is no energy source. Therefore , car market and fuel market is said to have a negative cross elasticity , whereby the increase in fuel price , will leads to the decrease in the demand quantity of car.

As the occurrence of the war, the government have decided to impose tax RMx on cars. When the government impose tax, this will reduce the incentives for customer to buy car and also the incentive of seller to sell a car. As the incentive for customer and buyer is reduced, this will lead to unattractiveness in the car market and will cause a reduction in out and sale of the car. It will also cause decrease in the use of input.

As the exercise of tax will lead to burdening the seller and customer by reducing the goods attractiveness. For each and every unit that is sold by the seller is put a tax burden by the government, there will be a price different and this price different is an income to the government. As for the seller, the price different will cause decrease in the profit in every unit sold and also decrease in quantity of unit sold because there will be an increase in the selling price for every unit.

The exercise of tax by government will also lead to suffering to the customer. Due to the implementation of the tax, there will be an increase in the price of the goods, thus customer will have to pay more than they use to pay. The burden with the increase in the price will lead the customer to buy and use less of the goods.

In a normal cases, tax burden is put on the shoulder of both, customer and also the seller. The different will only be seen in the ratio of the tax imposed on the goods. The ratio of tax burden is influence by the elasticity of both supply and demand curve.

As mentioned earlier, the implementation of tax on goods will burden the seller. The imposed tax will add more cost to seller thus increase seller's cost

in producing and selling the goods. Thus the imposed tax will shift the supply curve to the left. This is shown in figure 5.0. The supply curve S_0 moves to supply curve S_1 . Without the implementation of the tax, the equilibrium point is at point A and the equilibrium price is at P_0 and the equilibrium quantity is at Q_0 . In the condition where government imposed tax on the goods, the equilibrium point shifts to point B thus increasing the equilibrium price to P_2 and decreasing the equilibrium quantity to Q_2 . Assuming that government imposed tax, t to seller on every unit sold, the supply curve will shift vertically at the value of t at every quantity level. Meanwhile, the demand curve remains at the same level.