**Question 13**

**2010 marked a trying time for the airline business. The eruption of the Icelandic volcano caused cancellations of 95,000 flights over Europe. One week later, the BP oil well exploded in the Gulf of Mexico, resulting in the worst oil spill in US history.**

**Using economic analysis, discuss the likely impact of the above events on the airline industry and related markets. [25]**

Introduction

The impact of the eruption of the Icelandic volcano and the BP oil well explosion will contribute to changes in demand and supply for the airline industry. This will affect the market equilibrium which will create changes in the price and output level of the airline industry. Consequently, this will affect other related markets which can be observed through the understanding of the different types of demand and supply.

Main Body

In the airline market, the eruption of the Icelandic volcano will lead to a fall in demand as seen from the cancellations of 95,000 flights over Europe while the explosion in the BP oil well will indicate a reduction in the supply of the airline flight due to higher cost of production when the cost of oil increases as a result of the reduction in the supply of oil which is a critical resource for the production of air flights. The reduction in demand for the air flights will be greater than the reduction in supply of air flight as the fall in demand is based on the whole industry while the cost of oil is only part of the cost of production, implying that the rise in cost of production may reduce supply extensively.

Price of air flights

S0

S1

Diagram 1 – Fall in demand and Fall in supply for air flights

SS is price-inelastic

DD is price-elastic

P0

P1

D0

D1

Qty of air flights

Q0

Q1

As seen from the diagram, the reduction in demand from D0 to D1 is greater than the reduction in supply of aircrafts, creating an excess supply condition. Consequently, there will be a reduction in price of air flight from P0 to P1 and a fall in quantity from Q0 to Q1. The fall in price of air flight is quite extensive as the supply is price-inelastic as it is not easy to reduce flights due to lengthy administrative procedure and strong competition for flight routes. At the same time, the fall in quantity is extensive as the demand is price-elastic, given that air flight is a normal good since the proportion of income spent on the good is large for average consumers

As for related market like hotel accommodation abroad, the reduction in demand for air flight will contribute to the fall in demand for hotel accommodation aboard as the demand for air flights and the demand for hotel accommodation are joint demand or complementary goods. This will imply that there will be a fall in quantity for hotel accommodation abroad due to the fall in demand for air flight.

Price of hotel accommodation abroad

S0

Q1

P1

Diagram 2 – Fall in demand for hotel accommodation abroad

SS is price-inelastic

P0

D0

D1

Qty of hotel accommodation abroad

Q0

As seen from the diagram, the decrease in demand for hotel accommodation abroad will contribute to an excess supply condition, which will contribute to the fall in price of hotel accommodation from P0 to P1 and a fall in quantity for the market of hotel accommodation abroad. The fall in price will be quite extensive when there is a fall in demand for hotel accommodation in this industry as the price-elasticity of supply for hotel accommodation abroad is price-inelastic, given that there is limited supply in the supply of land to build hotels.

As for related markets like other modes of transportation like rail transport, the fall in demand for air flight will induce an increase in demand for rail transport as demand for rail transport and demand for air flight are competitive demand or substitutes. This will then contribute to a rise in the price of the rail transport and increase in the quantity for the market of rail transport as there is an excess demand condition.

Price of rail transport

S0

P1

Q1

D1

D0

Q0

P0

Diagram 3 – Increase in demand for rail transport

SS is price-inelastic

Qty of rail transport

As seen from the diagram, the increase in demand for rail transport due to the decrease in demand for air travel will contribute to an excess demand condition which will lead to an increase in price from P0 to P1. The rise in price from P0 to P1 is quite extensive, given that the supply will be price-inelastic as the supply of rail transport needs long duration of planning and administration and thus, there is limited quantity supply in the short run.

Lastly, the impact of the above events which affect the air aviation industry will also create an impact on the aircraft manufacturing industry as the demand for aircraft manufacturing is a derived demand for air flight. This implies that there will be a reduction in demand for aircrafts when there is a fall in demands for air flights, creating an excess supply condition which will lead to a fall in the price of the aircraft.

S0

P0

Q0

D0

D1

Q1

P1

Price of aircraft

Diagram 4 – Increase in demand in demand for aircraft

SS is price-inelastic

Qty of aircraft

As seen from the diagram, the decrease in demand for aircraft due to the decrease in demand for air flight will contribute to an excess supply condition which will cause the price of aircraft to fall from P0 to P1 and the quantity to fall from Q0 to Q1. The fall in price for aircraft is extensive as the supply is price-inelastic, given that there is a long production period which will make the adjustment of production in short run rigid.

Conclusion

In sum, it can be observed that the above events will affect the market for air aviation industry and related markets through the demand and supply analysis. The understanding of the impact must also consider the concepts of price elasticity of demand and supply.