**Essay Question 52**

**Demand for the Olympic tickets was so high that more than 50,000 people were waiting in queue at one ticketing office selling part of the last batch 250,000 tickets that was released. Beijing police have already detained 60 touts accused of selling tickets for up to 100 times their face value.**

***Times Online, 25th July 2008***

**(a) Using demand and supply analysis, account for the emergence of the black market for Olympics tickets. [10]**

Introduction

Market equilibrium is achieved at the intersection of demand and supply curve for Olympic tickets. Black market refers to the emergence of illegal sale of certain goods at high prices as a result of the lack of supply. Black market for Olympic emerged as the market demand for tickets exceeds the supply for the tickets at the price level which is fixed by the government.

Main body

**1. Explain how market equilibrium occurs**

Market equilibrium is attained when the market demand is equal to market supply whereby the demand curve intersects the supply curve. At market equilibrium, it will reflect the level of quantity and price level set by the market forces. Any changes in demand and supply will lead to a change in market equilibrium, indicating the new price and output level.

**2. Explain how the price level is determined by the organising committee**

Due to the presence of a fixed capacity of production for the Olympic events, the supply curve is fixed a particular level of quantity of supply and thus the supply curve is vertically sloped. As for the demand curve, it is horizontally sloped or is a perfectly-elastic demand since the consumer can only purchase from the organiser at a prevailing price which means that there is a perfect market condition about the price level. Any price below this level, the producer will not sell the tickets and any price above this level, the consumer will not buy it.

As seen from the diagram, the price and quantity level at market equilibrium will be at P0 and Q0­ where the horizontal demand curve intersects the vertical demand curve.

Price

P0

P1

Q0

D0

D1

S0

Quantity

**3. Explain how the black market will emerge**

As the demand for the Olympic ticket is much higher than the official level determined by the official price level, the black market will emerge as a result of the excess demand. When this occurs, the demand curve will be downward-sloping, reflecting the law of demand that shows an inverse relationship between the price and quantity demand of the tickets. It will also intersect the supply curve at a higher price level than the official price level due to a large consumer market which has the purchasing power to pay at a higher price level.

As the individuals who bought the tickets from the organiser can resell these tickets to the larger consumer market, the price level for the black market will be determined at P1 where the black market demand curve D1 intersects with the supply curve S0. This will allow the resellers to gain extra revenue as indicated by the shaded portion.

In conclusion, it can be observed that the price level set by the official committee will be lower than the black market price level. This black market price level will exist as long as there is a greater demand for the Olympic tickets and there is control of the re-sale of the ticket.

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**b) Discuss the usefulness of the concepts of price elasticity demand and income elasticity of demand to a supplier of Olympic merchandise. [15]**

Elasticity of demand refers to the responsiveness of quantity demanded in relation to the variables related to it. These variables include price of concerned good and income of consumer group. A supplier of Olympic merchandise can use the concepts of elasticity of demand to increase the revenue of Olympic merchandise sold.

PED measures the degree of responsiveness of the quantity demanded of a good to a change in its price, ceteris paribus. Based on PED, the supplier can determine the price strategy to be used to increase total revenue. The demand for the Olympic merchandise is price inelastic which means that the increase in price for the tickets will lead to less than proportionate decrease in quantity demanded of the merchandise. As a result of the increase in price of the merchandise, there will be an increase in total revenue because the gain in revenue due to increase in price is greater than the loss in revenue due to decrease in quantity demanded of the good. This is illustrated in the diagram below whereby the increase in price from P0 to P1 will lead to less than proportional fall in quantity demanded from Q0 to Q1, and the total revenue will increase as shown by the shaded portion.

Diagram: Price inelastic in demand

gain in revenue due to ↑price

loss in revenue due to ↓quantity demanded

PX

Qty X

PED<-1

Q0

Q1

P1

P0

The Olympic merchandise is considered to be price-inelastic because the availability of substitutes are limited, degree of necessity is high, proportion of income spent on purchasing the products is small and time period for consideration of purchase is short.

The availability of substitutes for Olympic merchandise is limited as this is a first time China is hosting the Olympics. This is a very rare occasion for such merchandise to be made and there was no Olympic merchandise produced in the past before by China, reducing number of choices to purchase the merchandise from little.

The degree of necessity is high for both the locals and tourists. As it is a milestone for China to host the Olympics, this occasion is very prestigious, Olympic merchandise which captures this prestige event proves iconic to the locals. As a result, they will purchase and keep Olympic merchandise as a souvenir to symbolise this prestigious event. For the tourists, they would also want to purchase and keep Olympic merchandise as souvenirs to symbolise the Beijing Olympics. After all, the Beijing Olympics has an iconic status as it recognises the rise of China in modern world.

The proportion of income spent on purchasing the Olympic merchandise is low as the target consumers of these merchandise are the tourists who are well-to-do and are able to afford to purchase the Olympic merchandise since they can afford to travel to other countries.

Finally, the time period of consideration of purchase is also short as the Olympic merchandise do not require the consumers to think for a long time to purchase the goods. In fact, most tourists visit China with the intention to buy these goods.

Secondly, a supplier of Olympic merchandise can use the concepts of income elasticity of demand (YED) to increase the total revenue. YED measures the degree of responsiveness of quantity demanded of a good to a change in consumers’ income, ceteris paribus.

The YED is helpful in determining how the consumer will view the good in relation to his income level. As the proportion of income spent on the good is small, the value of the YED is negative which means that it is an inferior good to the consumer whereby the consumer is price insensitive since the expenditure on this good is insignificant to him. Therefore, this will influence the value of PED which will then determine the price strategy.

(how the value of YED will affect the value of PED)

Under the impact of an increase in price, there will be a substitution effect whereby the consumer will reduce the quantity demanded of purchase for the good concerned and an income effect whereby the consumer will increase the quantity demanded since the relative income has decreased and the good is an inferior good. Subsequently, the increase in price of the Olympic merchandise which is classified as an inferior good will not have a larger percentage reduction in quantity demand as the reduction in quantity demanded due to the substitution effect is dampened by the negative income effect which will increase quantity demanded in the price effect when price decreases, implying that it is price-inelastic demand. Hence, it justifies the rationality to increase price for the Olympic merchandise which will have a price-inelastic demand as determined by the income effect as indicated by YED.

In sum, it is observed that the YED and PED are useful to help the supplier of Olympic merchandise in the determination of the price strategy to ensure revenue maximisation. However, it is important to take note of other factors such as time period will affect the estimation of the value of elasticity of demand and cost of production which will affect the pricing strategy.