**May Revision – Class Work – Lesson 2 – Essay Outline**

**Topic: Demand and Supply, Elasticity of Demand and Supply, Government Regulation**

**Essay Question 1**

**“Certificate of Entitlement (COE) supply for the fiscal year starting April 2009 will be cut by 24 per cent. A smaller COE quota will mean that overall sales of cars will be affected across the board since the supply of new cars will be restricted by the smaller quota. On the other hand, SMRT has decided to reduce bus and train fares and to increase the number of train trips given the severe economic crisis. “**

 Adapted from the Straits Times, Feb 2009

(a) Using a diagram, explain how the recession and fall in the supply of COEs will affect the market for new cars. [10]

(recession – decrease in income / fall in supply of COEs – reduce in supply of new cars)

**Introduction (set the requirements of the question, state the economics principles)**

 The market for cars will depict the market equilibrium for car which will set the price and output level of the car market which is determined by the forces and demand supply of cars. The world recession and a reduction in the COE will affect the demand and supply conditions that will affect the market equilibrium, contributing to change in price and output level.

**Main body**

**1. Explain how the market equilibrium of car is attained and the price and quantity of car is determined**

- State that the market demand for car is downward sloping from left to right.

(inverse relationship of the price of cars and quantity demanded of cars – sub and income effect)

- State that the market SS of car is vertically sloped, implying that there is a fixed supply (why the supply is fixed? – the coe is a quota system – ss is fixed by the government)

- State that the intersection of Dd and Ss will mean that the market is in equilibrium and price and quantity level will be set as seen in the diagram.

( the price level is set by the change in demand as the qty in the market is determined by the fixed supply set by the government)

**Draw diagram and describe diagram 1**

**2. Explain how the recession will lead to a fall in market demand for cars**

Decrease in disposable income – lower purchasing power – decrease in demand for cars – normal good – large proportion of income spent on the car.

Switch to alternative MRT services – decrease in demand for cars as there is an increase in quantity demanded for mrt services – a cheaper alternative mode of transport

3. How reduction the supply of COE affect the market ss

Directives set by the government to reduce car population – decrease in the supply – shift of the vertical supply to the left.

4. How the market equilibriumm will change – the extent of change in price level and qty

The qty for the car market will reduce as seen in the diagram – control by the government

As for price level – the impact is based on the extent of reduction in demand and supply

(explain based on if (conditional changes)

Decrease in demand < decrease in supply – price increase

Decrease in demand = decrease in supply – price remains the same

Decrease in demand > decrease in supply – price decrease

Prediction : the impact will base on the extent of change in the market demand which is determined by the severity of the recession and the time period of recession.

Draw diagram and description of the diagram (1

SS is a fixed supply – reduce So to S1

DD is downward sloping – Do to D1

Decrease in dd > decrease in supply

**Conclusion**

**Essay question 44**

**In 2012 the UK had very poor harvests for grain and potatoes, which are major ingredients of many of the foods of UK consumers and also provide feed for much of Britain’s livestock. At the same time, there was a decline in the real incomes of many UK citizens, especially those on low incomes.**

**Using economic analysis, discuss the impact these events are likely to have had on UK consumers and farmers. [25]**

**market – grains and potatoes, livestock. food**

Introduction

The market equilibrium for grain and potatoes, livestock and food of UK consumers is determined by the changes in the demand and supply due to several factors as discussed in the pre-amble of the question. The supply factor is the poor harvest for grain and potatoes, which will lead to the fall in supply for grain and potatoes, as well as the fall in supply for Britain’s livestock. As for the demand factor, the low income of UK citizens will lead to the fall in demand for food of UK consumers.

Main Body

**1. Explain how poor harvests lead to the fall in supply for grain and potatoes, whereas the fall in real income of UK consumers will lead to the fall in demand for grain and potatoes**

Market equilibrium is determined when the demand for grain and potatoes is equal to the supply of grain and potatoes in the UK market, such that there are no subsequent changes in the demand and supply of grain and potatoes.

For the market of grain and potatoes, from the supply side, poor harvests for grain and potatoes are non-price determinants of supply that will lead to the fall in supply for grain and potatoes, indicating a leftward shift of the supply curve.

From the demand side, low income is a non-price determinant of demand for grain and potatoes that will lead to the fall in demand for grain and potatoes as these UK consumers, comprising of the UK household individuals and UK farmers who need grain and potatoes for their livestock (derived demand), have smaller purchasing power to consume these goods, indicating a leftward shift of the demand curve.

 Quantity of grain & potatoes

Q1

D0

D1

Q0

S0

S1

Price of grain & potatoes

P0

P1

As seen from the diagram, the fall in demand for grain and potatoes, as indicated by the leftward shift from D0 to D1, is greater than the fall in supply of grain and potatoes, as indicated by the leftward shift from S0 to S1. Consequently, the equilibrium price for grain and potatoes fell from P0 to P1 and the equilibrium quantity for grain and potatoes fell from Q0 to Q1.

The fall in demand for grain and potatoes is greater than the fall in supply of grain and potatoes as there are many substitutes that UK consumers can switch to, such as cauliflower and rice, whereas producers do not reduce supply of grain and potatoes extensively as it is difficult to cut production within a short time period.

**2. Explain how poor harvests and rise in the cost of grains and potatoes lead to the fall in supply for livestock**

As for the livestock market in the UK, poor harvests lead to the fall in supply for grain and potatoes, as mentioned previously, such that the lower degree of availability of grain and potatoes will raise the cost of maintaining animal livestock, such as cattles, thus leading to the fall in supply for livestock, indicating a leftward shift of the supply curve. (potatoes are part of the COP of the supply of Livestock)

From the demand side, the decline in real incomes of UK citizens will lead to the fall in demand for livestock as it is a normal good, given that it occupies a large proportion of income for the consumers, thus resulting in the leftward shift of the demand curve.

 Quantity of livestock

Q1

D0

D1

Q0

S0

S1

Price of livestock

P0

P1

As seen from the diagram, the fall in supply for livestock, as indicated by the leftward shift from S0 to S1, is smaller than the fall in demand for livestock, as indicated by the leftward shift from D0 to D1. Consequently, the equilibrium price for livestock increased from P0to P1 and the equilibrium quantity for livestock fell from Q0 to Q1.

**(decrease in demand is greater than decrease in supply)**

The fall in demand is greater than the fall in supply for livestock as producers will maintain a reasonable supply of livestock due to the long time period for livestock farming. Also, consumers will switch to cheaper alternatives, such as frozen meat, which have a higher degree of availability, inducing the extensive fall in demand for livestock.

**3. Explain how poor harvest will lead to the fall in supply of food for UK consumers and fall in real income of UK citizens will lead to the fall in demand of food for UK consumers (food market\_)**

As for the market for food for UK consumers, both poor harvest for grain and potatoes and the fall in supply of livestock will lead to the fall in supply of UK food, since many foods is prepared using essential ingredients, such as grain, potatoes and meat, inducing a leftward shift of the supply curve.

From the demand side, the fall in real incomes of UK citizens leads to the fall in demand for UK food due to the lower purchasing power of consumers, as food is considered a normal good, which occupies a large proportion of income spent on the good, especially for the lower income group, thus inducing a leftward shift of the demand curve.

Price of UK food

S0

S1

P1

P0

 Quantity of UK food

Q1

D0

D1

Q0

As seen from the diagram, the fall in supply for UK food, as indicated by the leftward shift from S0 to S1, is greater than the fall in demand for UK food, as indicated by the leftward shift from D0 to D1. Consequently, the equilibrium price for UK food increased from P0 to P1 and the equilibrium quantity for UK food fell from Q0 to Q1.

The fall in supply is greater than the fall in demand for UK food as poor harvests will raise the cost of resources extensively, such as the price of livestock, thus increasing cost of production and inducing the fall in production of UK food. The fall in demand is small due to the large population size in the UK that increases demand for essential goods and services for survival, particularly food for daily consumption.

**4. Explain that the equilibrium price and equilibrium quantity for the three markets are influenced by the price elasticity of demand and supply concepts**

Given this understanding, it is important to consider the price elasticity of demand and supply concepts, so as to determine the extent of change in equilibrium price and quantity for the three markets discussed. The demand for UK food is price-inelastic due to several factors, such as the high degree of necessity of demand and low degree of substitutability. The supply of grain and potatoes is price-inelastic due to factors, such as the long time period for production due to long gestation period and limited capacity of production due to land space constraints.

Conclusion

In conclusion, poor harvest for grain and potatoes as well as the fall in real incomes of UK citizens will lead to changes in the demand and supply for the three markets, grain and potatoes, livestock and UK food. The extent of changes in the equilibrium price and quantity for these goods depend on the coefficients of the elasticity of demand and supply.

**Why demand for food is price inelastic?**

**higher degree of necessity of demand**

**Why supply of food is price elastic/**

**can stock-pile – easy in increasing production when demand increases**

**why demand for livestock and agricultural product is price-inelastic?**

**high degree of necessity of demand as it is essential resource for the production of food**

**why supply of livestock and agricultural product is price-inelastic?**

**Long gestation of production**

**Essay Question 3 (GCE A level 2018)**

The average price of tickets for two concerts performed by singer-song writer Ed Sheeran in November 2017 at the Singapore Indoor Stadium was S$180. Tickets went on sale six months earlier and both concerts sold out almost immediately. Some tickets were later being offered for resale at prices well above their face value.

(a) Using supply and demand curves, explain why there is an excess demand for tickets and why there is a high resale price. [10]

(b) Discuss possible strategies that concert organisers could use to improve the market outcome for this type of concert for producers and consumers. [15]