

# 2015

# RVHS H2 Prelims

# Paper 2 Question 1

## Price Theory

Rising fuel prices and a slow economic recovery were observed at the start of 2013.

Discuss the likely combined impact of these events on various markets in air travel.

[25]



## Question Analysis

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Discuss the likely combined impact of these events on various markets in air travel. [25]

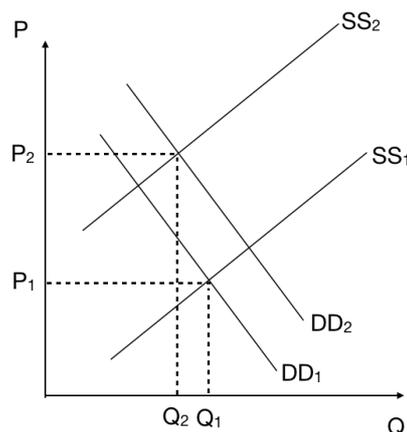
### Question requirements

Students are expected to determine the different demand and supply factors provided in the stem of the question. These factors are likely to have different impacts on the markets for long-haul and short-haul flights due to the different values of price and income elasticities.

Demand factors: Increase in demand for air travel due to higher income (but slow rate) from subdued economic growth.

Supply factors: Decrease in supply for air travel due to higher costs of production from rising fuel prices.

### Market outcome



**Figure: Market for air travel**

In the figure above, the initial equilibrium price and quantity is represented by  $P_1$  and  $Q_1$  respectively. Supply decreases and shifts leftward from  $SS_1$  to  $SS_2$  while demand increases and shifts rightward from  $DD_1$  to  $DD_2$ . Equilibrium price will increase but the change in quantity is indeterminate and depends on the magnitude of the shifts in demand and supply. The increase in demand is likely to be lower than the decrease in supply as the economic growth was tepid. This causes an increase in the equilibrium price of air travel from  $P_1$  to  $P_2$  while a decrease in equilibrium quantity from  $Q_1$  to  $Q_2$ .

**Effect of PED, PES and YED on the markets**

The table below shows the effect of PES and YED on the markets for long-haul and short-haul flights due to a shift in demand from the increase in income of consumers, under ceteris paribus

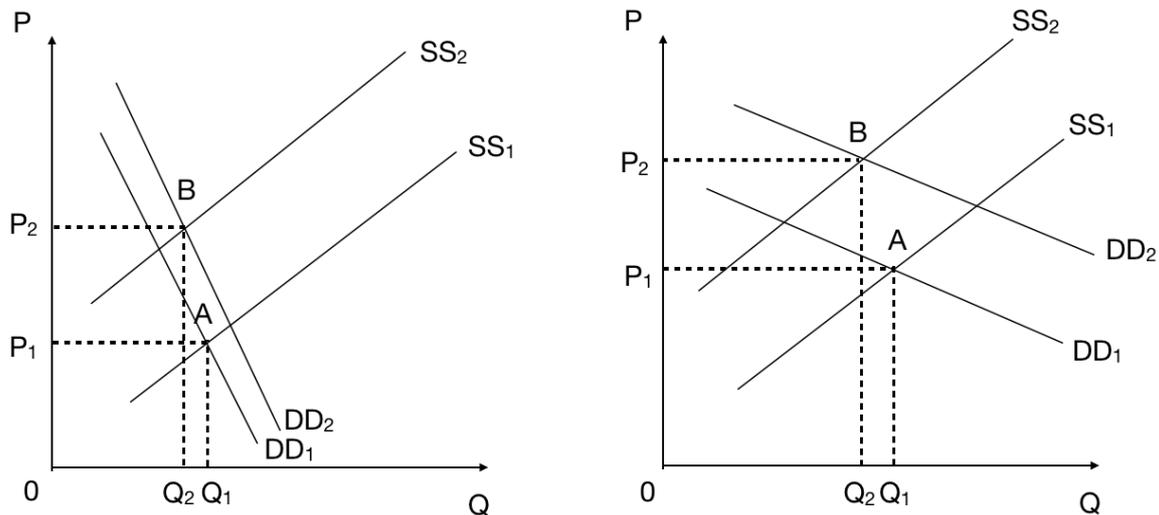
<b>Elasticities</b>	<b>Long-haul flights</b>	<b>Short-haul flights</b>
<b>Price elasticity of demand (PED)</b> on a shift in supply	$ PED  < 1$ Decrease in supply will result in an increase in price and a less than proportionate decrease in quantity -> increase in TR	$ PED  > 1$ Decrease in supply will result in an increase in price and a more than proportionate decrease in quantity -> decrease in TR
<b>Income elasticity of demand (YED)</b> on a change in income	$0 < YED < 1$ (necessity) Increase in income will result in a less than proportionate increase in demand -> smaller increase in TR as compared to SH flights	$YED > 1$ (luxury) Increase in income will result in a more than proportionate increase in demand -> larger increase in TR as compared to LH flights
<b>Elasticities</b>	<b>Short-run</b>	<b>Long-run</b>
<b>Price elasticity of supply (PES)</b> on a shift in demand	$PES < 1$ Increase in demand will result in an increase in price and a less than proportionate increase in quantity -> smaller increase in TR as compared to LR	$PES > 1$ Increase in demand will result in an increase in price and a more than proportionate increase in quantity -> larger increase in TR as compared to SR

conditions.

Other ways to differentiate the air travel market are possible. Some examples are:

- Budget vs full-service flights
- Regional vs international flights

### Analysis of the combined impacts of change in demand and supply



**Figures: Markets for long-haul (left) and short-haul (right) flights**

Using the elasticities, we can see that the effect on the two markets are similar. Total revenue will increase for producers of both markets.

#### Possible evaluative points

- The producers of short-haul and long-haul flights may not necessarily be different and it may be difficult to differentiate the markets into these types of flights. For example, Singapore Airlines has many long-haul flights to cities in the USA and Europe and also short-haul flights to regional hubs such as Malaysia and Thailand.
- Improvements in technology may change the level of necessity of the different types of flights. For example, in the past, it may be impossible to operate on a patient without the surgeon flying over in person, but recent technological advancements have allowed remote operations to take place using robots.
- Consumers may have expectations that the economic growth rates will remain low and thus lower their expectations of future income, limiting the increase in demand for both long-haul and short-haul flights.

<b>Knowledge, Application, Understanding and Analysis</b>		
<b>L3</b>	For a developed explanation of the demand and supply factors that affect two different markets in the air travel market with the aid of diagrams and application of PED, YED and PES in context.	<b>15-21</b>
<b>L2</b>	For a developed explanation of the demand and supply factors that affect one of the markets involved in air travel with regard to price, quantity and total revenue with some application of the concepts of elasticity  OR  For an undeveloped explanation of the demand and supply factors that affect two different markets in the air travel market with some application of the concepts of elasticity.	<b>10-14</b>
<b>L1</b>	For an undeveloped explanation of the demand and supply factors that affect the air travel market with or without a brief statement of the concepts of elasticity.	<b>1-9</b>

<b>Allow up to 4 additional marks for Evaluation</b>		
<b>E2</b>	For an evaluative assessment that is based on economic analysis	<b>3-4</b>
<b>E1</b>	For an unexplained judgement, or one that is not supported by analysis	<b>1-2</b>

## Marking Scheme