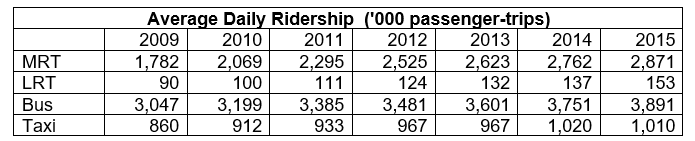
**J2 H1 Economics CSQ Q3**

**Public Transport in Singapore**

**Extract 1: Bus and train ridership hits new high**

Bus and rail ridership rose by 4.1 per cent last year. According to the Land Transport Authority (LTA), LRT patronage led the growth, followed by MRT trips. Together, rail ridership grew 4.6 per cent to cross the three million mark for the first time - more than double the ridership a decade ago.

**Table 1: Public Transport Ridership**

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Source: Land Transport Authority, Singapore 2016

The public transport ridership growth has come on the back of a growing population and more prohibitive car prices. It has also been driven by more buses, trains and to a smaller extent, the opening of Downtown Line 2 in late December. As at the end of last year, more than three quarters of a planned tax-funded fleet of 1,000 public buses have been put on the road, while more new trains were added for the various MRT lines. Furthermore, bus and rail fares fell by 1.9% from 2014 to 2015. Meanwhile, taxis suffered a dip in ridership last year.

Source: The Straits Times, 10 March 2016

**Extract 2: Government spends on transport infrastructure and subsidies**

To ensure that public transport costs in Singapore stay affordable to the commuter, the government has been subsidising public transport by funding the infrastructure and start-up costs of the rail and bus networks, such as rail tracks, signalling and power systems, buying buses under the Bus Service Enhancement Programme and providing direct fare subsidies. While fares should be kept affordable, the government also needs to ensure that the burden on taxpayers does not become excessive.

Both SBS Transit and SMRT have seen higher operating expenses last year, however, public transport operators are seeing lower energy costs today.

Source: The Straits Times, 23 Feb 2015

**Extract 3: The bumpy road to a 'car-lite' Singapore**

A “car-lite” Singapore by 2030 has been a major theme for the Transport Ministry this year. In January, it launched the “Walk, Cycle, Ride” campaign which encourages commuters to choose public transport over driving. In addition, the construction of infrastructure to facilitate walking, cycling and the use of personal mobility devices (PMDs) has already started to take shape. With legislation that will officially legalise the use of PMDs expected by year’s end, Singapore looks to be on track to achieving its “car-lite” status.

Some bumps, however, still remain. Strong demand for cars is evident from prohibitive car prices. Stocks of cars are running low. Convincing people to give up owning a car in exchange for the alternatives is increasingly difficult. Indeed, changing the belief that car ownership is a mark of success needs to take place before Singapore can realise its goal.

Source: Channel NewsAsia, 18 Jun 2016

**Questions**

(a) Using Table 1, compare the relative changes in the public transport ridership of bus, MRT and taxi for the period shown. [2]

(b) With the help of a supply and demand diagram, explain the likely impact of increasing population and lower energy costs on the market for public transport. [6]

(c) (i) Using Extract 1, calculate the price elasticity of demand for bus travel from 2014 to 2015. [2]

Hw

(ii) Explain the likely impact of a fall in bus fares on bus operators’ total revenue. [3]

(d) With reference to Extract 3, explain why car prices may remain prohibitive. [3]

(e) Comment on the use of subsidies as a means to keep public transport affordable in Singapore. [6]

[Total: 30]

**Suggested Answers**

**(a) Using Table 1, compare the relative changes in the public transport ridership of bus, MRT and taxi for the period shown. [2]**

Bus ridership, taxi ridership and MRT ridership all rose. MRT ridership increased most significantly while taxi ridership rose by the least.

**(b) With the help of a supply and demand diagram, explain the likely impact of increasing population and lower energy costs on the market for public transport. [6]**

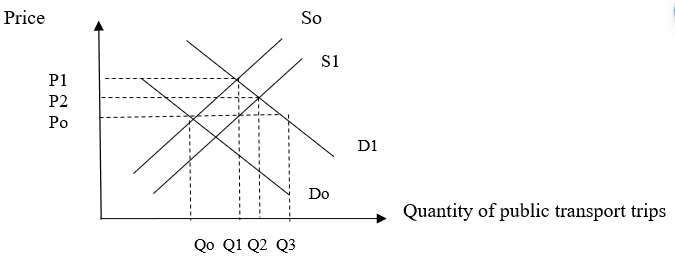
-the resulting change in price and output – cs, ps, total revenue

An increasing population means more users for public transport, which leads to a rise in the demand for public transport trips from Do to D1. A shortage of EoA at Po results in the equilibrium price and quantity of public transport increasing from Po to P1 and Qo to Q1 respectively.

With lower energy costs, the unit cost of producing public transport trips falls, which results in a rise in the supply of public transport trips from So to S1. Equilibrium price falls from P1 to P2, while equilibrium quantity increases from Q1 to Q2.

Prediction – why increase in demand is greater than increase in supply

Draw and describe diagram



Analysis : ped and pes

**(c) (i) Using Extract 1, calculate the price elasticity of demand for bus travel from 2014 to 2015. [2]**

PED = % change in quantity demanded of bus travel / % change in Price of bus travel

PED for bus travel is (-) 1.96.

**(c) (ii) Explain the likely impact of a fall in bus fares on bus operators’ total revenue. [3]**

The fall in bus fares could be due to a rise in the supply of bus trips due to a subsidy [extract 2] which lowers the unit cost of producing bus trips. (decrease in price and then increase in qty dd)

Total revenue = P X Q

As the demand for bus trips is price elastic as shown in c(i), bus operators’ total revenue is likely to increase as the loss in total revenue due to the fall in bus fares is smaller than the gain in total revenue due to the more than proportionate rise in bus trips.

**(d) With reference to Extract 3, explain why car prices may remain prohibitive. [3]**

Extract 3 suggests that there continues to be a strong consumer preference towards use of cars which is a status symbol so the high demand for cars results in extremely high car prices or prohibitive prices.

If people increasingly feel that car is a status symbol, demand will increase. The low availability of car stocks means that PES<1. Hence, any increase in demand brings about a sharp increase in price explaining why car prices remaining prohibitive.

**(e) Comment on the use of subsidies as a means to keep public transport affordable in Singapore. [6]**

A subsidy reduces the unit cost of producing public transport trips which increases the supply of public transport trips and hence lowers its price, making public transport more affordable in Singapore.

Draw and describe the diagram.

Strengths:

Cheaper public transport would reduce the problem of inequity as the lower income groups could afford more public transport.

Subsidies are effective being a market-based solution which is flexible that can be easily implemented to influence the affordability of public transport.

Limitations:

E.g. However, extract 5 points out the Singapore government, in recent years, has been spending more than it collects due to an ageing population. Hence, subsidies on public transport would place a strain on the government’s budget, which would limit spending in other areas such as healthcare and education. The opportunity cost of subsidising public spending may be significant, due to large potential welfare gain to an ageing population with more spending on healthcare and education being sacrificed.

Conclusion

In my opinion, while the Singapore government could successfully keep public transport affordable via subsidies, it should not depend on subsidies as the only way to do so in light of greater net benefit that can be gained by an ageing population via better allocation of government funds in various areas.