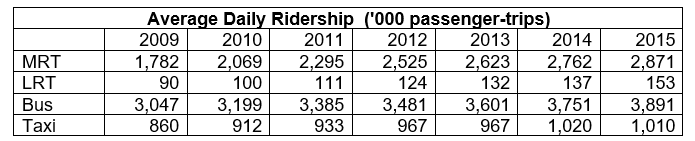
**J2 H1 Economics CSQ Q3**

**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

**Extract 4 Enabling trade: Transport infrastructure in Singapore**

Transport infrastructure development, particularly links with the rest of the world, has been of particular significance for Singapore. Because of its small size and lack of natural resources, the island republic is critically dependent on trade and capital and labour flows for its continued prosperity. Transport infrastructure is vital to Singapore’s economic progress.

Almost as significant as Singapore’s reliance on trade is its reliance on foreign capital and labour. In this respect, transport infrastructure has made important contributions. In order to attract and retain mobile capital and labour, Singapore has invested heavily in infrastructure along with other public services and housing while maintaining political and social stability.

In particular, the rail infrastructure has contributed significantly to the development of the financial and business sectors in Singapore. A good land transportation network has been integral to improving the accessibility of the Central Business District, allowing it to support a large workforce and to attract high value-added investments.

Investing in transportation saves workers and businesses time and money in the long run.

Source: Southeast Asian Economic Outlook, 2010

**Extract 5: Key challenges for Singapore**

Key challenges confront Singapore in the next 50 years - balancing financial prudence with higher social spending, a rapidly ageing population that does not replace itself and competition from abroad.

The sobering reality is that the Government has in recent years been spending more than it collects. Singapore is one of the fastest greying populations in the world. Besides raising healthcare costs, an ageing population will affect the country's economic vibrancy and tax base, and result in fewer young people available for a defence force.

Abroad, Singapore faces both regional and global competition. Whether it is Kuala Lumpur and Hong Kong vying to be the next top financial hub, Thailand trying to overtake Singapore as the region's largest air hub, or countries like Indonesia and Malaysia moving up the petrochemical value chain, Singapore cannot afford to take its position in the world for granted.

Amid these challenges, there are also opportunities for Singapore. Singapore is well-positioned to be the financial centre for the region. As a small and nimble economy, Singapore is also well-placed to take advantage of opportunities offered by China and India. Moreover, Singapore's continued emphasis on education means a people who can think on their feet, which will be a crucial skill in a more unpredictable world.

Source: The Straits Times, 29 March 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]

(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]

(f) Discuss the view that developing transport infrastructure is vital to Singapore’s regional and global competitiveness. [8]

[Total: 30]

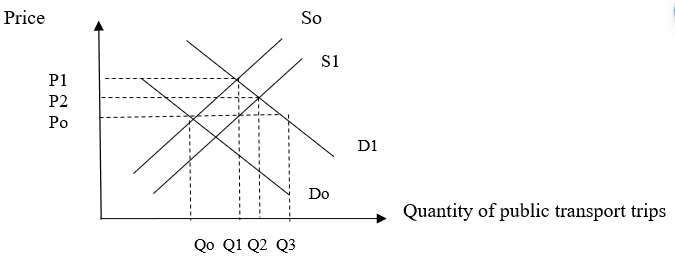
**Suggested Answers**

**(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]**

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.

With increases in both demand and supply for public transport trips, the quantity of public transport trips rises but the impact on its price is uncertain.

**(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.

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.

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.

**(f) Discuss the view that developing transport infrastructure is vital to Singapore’s regional and global competitiveness. [8]**

SG’s regional and global competitiveness refers to the price and non-price competitiveness of SG exports, as well as SG’s ability to attract foreign direct investment (FDI) and foreign labour within the region or internationally. To decide if developing transport infrastructure is vital or essential to SG’s regional and global competitiveness, one should weigh the significance of developing Singapore’s transport infrastructure against developing other areas in affecting her regional and global competitiveness.

Thesis: Developing transport infrastructure may be vital to SG’s regional and global competitiveness

Transport infrastructure is a key factor that affects the efficiency that goods are traded and businesses are conducted.

A good land transport network has significantly improved the accessibility of the Central Business District, which facilitates business transactions and mobility of workers. A more efficient land transport system translates into unit cost savings (especially in terms of time) for firms and workers. Furthermore, SG is the region’s largest air hub, with highly developed transport infrastructure. The expectations of higher profits due to more efficient transport infrastructure is likely to attract an inflow of FDI to SG away from neighbouring countries which have less developed infrastructure, which means that SG is more competitive in attracting FDI.

Furthermore, due to a more efficient transport infrastructure, workers may spend more time on their work and even become more productive as they spend less time travelling.

Illustrate using AD/AS analysis

Anti-thesis: Developing other aspects of the economy may be vital to SG’s regional and global competitiveness

Government spending on education and training may be more important in enhancing SG’s competitiveness. Illustrate using AD/AS analysis

In face of increasing regional competition, the SG government may also need to allocate more funds to R & D to maintain her competitiveness in niche areas, such as the region’s financial centre or petrochemical industry (Extract 5), of which transport costs constitute a less significant proportion of total costs.

Further government spending on transport infrastructure, however, may have negative consequences such as a budget deficit (Extract 5). If the SG government runs persistent deficits over many years, these debts will accumulate.

Hence, the SG’s government to develop transport infrastructure may not be vital to SG’s competitiveness if such negative consequences occur.

Conclusion:

Whether developing transport infrastructure is vital in boosting SG’s regional and global competitiveness depends on the pervasiveness of transport infrastructure in facilitating the country’s economic activities with other countries. Transport infrastructure plays a significant role in facilitating a wide range of economic activities in SG (i.e trade, air and financial services) since SG is a key air, financial and trading hub in the region as well as internationally. Hence, developing transport infrastructure is vital to her regional and global competitiveness.