

PJC 2015 H1 Prelim Q1

- (a) **With reference to Table 1, compare how government spending on primary schools and on universities increased in 2013 relative to total government spending on education?** [2]

Suggested answer:

Both government spending on primary schools and universities have increased by a larger extent relative to the increase in total government spending on education. (1)
However, government spending on universities increased by a larger extent than that of primary schools relative to total government spending on education. (1)

✓ 1 mark for similarity and 1 mark for difference

- (b) **Using demand and supply analysis, explain two possible reasons for the increase in university tuition fees as highlighted in Extract 2.** [4]

Suggested answer:

As highlighted in Extract 2, there is an increase in university tuition fees which refers to the price of university education. This can be accounted by an increase in demand and a fall in supply.

SS Factor - COP

With reference to Extract 2, average operating cost per student is rising in institutions such as NUS due to higher costs of talent, supplies and services. Hence, this reflected a rise in COP, reducing the education institutions willingness to supply education services at each and every price level. To maintain profitability, higher education providers will pass on the rise in COP to students in the form of higher university fees. (2)

DD Factor – T&P

In addition, Extract 2 also mentioned that total enrolment for tertiary education is increasing annually. This could be due to a rise in preference for pursuing higher education as it possessed close links to future income and career prospects. Furthermore, with Singapore's higher education sector gaining recognition in the region, it could greatly influence the population's decision to study more and result in a rise in demand for university education, leading to a rise in university fees. (2)

Another possible reason: PED

Singapore's education sector is recognised as one of the best in the region which means that the demand for education in Singapore is price inelastic. Thus, when supply falls, price (tuition fees) will rise by a large extent. (2)

✓ 2 marks for supply factor

✓ 2 marks for demand factor/PED

- (c) **Explain how the “need for close links between higher education institutions and industry” affects unemployment.** [2]

Suggested answer:

Education from higher education institutions must be aligned with industry needs as failure to do so will result in students gaining skills and knowledge that are not what the different

sectors of the economy require. This results in a mismatch of skills and job requirements, leading to structural unemployment.

✓ 1 mark for identifying type of unemployment

✓ 1 mark for explaining need for close links between higher education institutions and industry due to mismatch of skills

- (d) With the help of an AD/AS diagram, explain the impact of education on the macroeconomic performance of the Singapore economy. [5]**

Suggested answer:

Impact on AS

- Extract 1 indicated that education is necessary to develop human capital to drive economic growth. Education allows the economy to build up a highly skilled workforce that has a direct impact on AS. With a well-educated and skilled workforce, productivity rises and this leads to an increase in potential output, raising the level of potential economic growth.
- The increase in AS in the long run also allows the economy to alleviate inflationary pressures through lowering of GPL and accommodate greater increase in AD, resulting in price stability
- With greater spending on education by the government, this also increases the G component of her AD. This leads to a rise in AD and a multiplied increase in national income via the multiplier process. This raises level of actual growth and employment.

Impact on AD

- Extract 2 mentioned that there are social returns to higher education. With a well-educated society, there will be lower chance of poverty which will result in lower crime rates, leading to a higher non-material SOL as the society is more gracious and stable.
- An economy that is socially and politically stable coupled with a well-education population are also important factors for attracting FDIs. The influx of FDIs will result in a significant increase in I as there are benefits to both the designated industry and complementary industries. The rise in I will result in a rise in AD and via the multiplier process, increasing the actual growth of the economy, increasing level of national income and employment.

Some other possible points to consider:

With a well-educated workforce and higher efficiency, it may also help improve the balance of payment through more competitive exports and a draw to investments. This will aid in increasing long term economic growth as well.

However, with higher education, the demand for imports may be higher due to higher wages earned as imports are income-induced and there may be the possibility of lowering long term economic growth instead.

**1 mark for a correctly drawn AD/AS diagram*

✓ 2 marks for effect of rise in AD on macroeconomic performance

✓ 2 marks for effect of a rise in AS on macroeconomic performance

- (e) Comment on the impact of higher education on the standard of living of graduates. [4]**

Suggested answer:

SOL refers to the economic and social well-being of a population assessed through the material and non-material aspects.

Armed with a tertiary qualification, an individual is able to gain access to better paying jobs and opportunities. This should allow the individual to earn a higher level of income compared to others. Table 2 also reflected that workers with professional qualifications and degrees do earn a higher level of wage compared to workers with lower qualification. Hence, this will mean that workers with degrees possessed higher purchasing power, allowing them to purchase a higher quantity and variety of goods and services and fulfilling more of their needs and wants. Thus, material living standards for workers with higher education qualifications tended to be higher.

However, having a degree may not necessarily imply a higher level of SOL. It is highly dependent on economic conditions and the nature of jobs undertaken by workers with degrees. For instance, if the economy is not vibrant and doing well, job creation could be low and this affects employment (Extract 3 – which jobs are hard to come by). Furthermore, if the degree possessed by the worker does not match the expectations and requirements of employers, they could be structurally unemployed instead (Extract 2 – need for close links between higher education institutions and industry). Lastly, workers with degrees may be taking up jobs of a more complex and stressful nature that adversely affects health. Thus, lower non-material SOL is lowered and overall living standards may not be higher for workers with degrees.

✓ 2 marks for explaining how higher education **may** lead to a higher SOL of graduates

✓ 2 marks for explaining how higher education **may not** lead to a higher SOL of graduates

- (f) (i) Explain what is meant by the term positive externality [2]**

Suggested answer:

Positive externality refers to benefits borne by individuals or society who are not directly involved in the production or consumption of a good. They are known as third party benefit.

- (f) (ii) With the help of an example, explain how positive externalities arise in education. [3]**

Suggested answer:

From Extract 2: There are social returns to higher education, in terms of lowering poverty and crime rates. Many studies have suggested that numerous productivity externalities arise from higher education. For instance, economists hypothesise that a city with more human capital would be able to generate more knowledge capital, and the productivity gains from that would then spill over and raise wages among the rest of society.

Education also enlarges the pool of productive workers in a country. As workers are more productive (more human capital), industries (3rd parties) become more efficient and profitable. This would have a knock on effect on other sectors (retail industry) which results in greater economic growth for the country. There will be greater job creation which would increase jobs and wages (lower poverty) among the rest of the society.

In addition, as people become more educated and are more likely to hold jobs, the crime rates in the country would fall and this benefits third parties who are not educated too as their non-material SOL will increase.

✓ 1 mark for identifying private consumer does not consider external benefits and under consume.

✓ 2 marks for any one explanation of the external benefits to society that will be gained through the consumption of education by a private consumer.

- (f) (iii) In Britain, Denmark and Finland, education is free. In contrast, the Singapore system avoids this. Assess the economic case for these two different approaches.

[8]

Suggested answer:

Introduction

Due to the presence of positive externalities, education tends to be under-consumed in the free market and thus leading to market failure. To correct the market failure, governments will usually provide subsidies to make education more affordable and accessible to the population.

Why some countries provide education free?

In countries like Britain, Denmark and Finland, education is provided free, meaning that the government provides full subsidies. This is because these countries deem education to be an essential good that brings social mobility and drives economic growth. From an economic perspective, the provision of free subsidies is to ensure that education is made available to everyone and therefore promoting equity. In addition, making education free will raise the consumption of education and allows the market to internalize the external benefits. Education is also seen by Finland to be critical in luring top foreign professionals (Extract 3) to the country which will subsequently benefit the country greatly in terms of productivity and growth.

Drawbacks of providing education free

However, providing education free may bring about over-consumption instead. (Extract 3) There is an incentive to consume more education than what is required and unnecessary resources are wasted in the process, leading to greater welfare loss to society. In Denmark, since education is free, there are students who delay their entry into the labour market when the economy is not doing well and this will come at the expense of tax payers who have to fund this expenditure. Higher taxes are detrimental as it dampens incentive to work, economic growth, politically unfavourable and may cause inter-generational inequity.

The Singapore Model

In Singapore, partial subsidies are provided as the government believes in a scheme of co-payment that promotes a small degree of personal responsibility though the amount of education to consume. Ideally, the amount of subsidy provided should be equivalent to the MEB of education. This will allow the MPC to converge towards MSB and internalize the external benefits of education. Welfare loss to society is eradicated and consumption of education increases, moving to the socially desirable level of consumption whereby $MSC=MSB$. In addition, the government also provides funding for schools to lower their costs of running programmes for students, shifting the MPC rightwards and ensuring that education is more affordable and accessible. Consumption thus moves towards the socially desirable level. This system of co-payment removes incentive for student to consume education beyond what is necessary, preventing wastage of resources.

Drawbacks of the Singapore system

It is not easy to estimate the right amount of subsidies to be given as the MEB of education may not be entirely quantifiable, such as the impact it creates on creating a safer and more gracious Singapore. Wrong amount of subsidies given may mean that market failure remains and government resources are wasted which could otherwise be better used in other areas of priority.

Assessment of the two approaches

- Western countries' approach generally unsustainable and may the fact that many of these countries are in debt now verifies this argument

- In addition, despite higher spending on education (as a % of GDP), the education outcomes of the western nations are comparable to Singapore.
- In Singapore, our system of co-payment promotes personal responsibility in deciding how much education we should pursue and also responsible decision making in choosing the courses we want to study. Resources may be better allocated with students making more well-informed decision and taking personal responsibility. Availability of scholarships and bursaries also ensure that no student will fall through the cracks or be denied of education (equity).
- Hence, to a large extent, the Singapore Model is more effective and sustainable in correcting the market failure in the market for education.