

VICTORIA JUNIOR COLLEGE
2011 JC2 PRELIMINARY EXAM
H1 ECONOMICS (REVISED) – PAPER NO. 8819/01

16 September 2011

8:00 – 11:00 am

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for diagrams.

Do not use staples, paper clips, glue or correction fluid on the work that you hand in.

Section A

Answer **all** questions.

Section B

Answer **one** question.

The number of marks is given in [] at the end of each question or part question.

At the end of the examination, fasten your work securely, by question, using the strings provided.

This document consists of **10** printed pages.

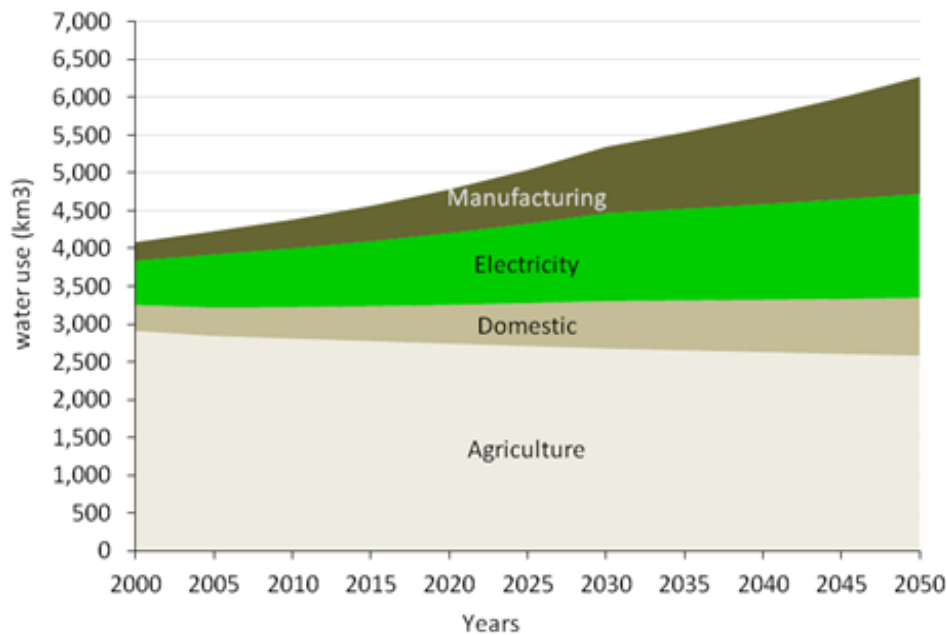
Section A

Answer **all** questions in this section

Question 1

Water: Scarcity or Shortage?

Figure 1: Projected world water use: By sector



Source: OECD Environmental Outlook Baseline

Extract 1

Drinkable water, a basic human need, is a scarce natural resource, just like oil and gas. Water may become the most precious natural resource as the world's population grows. Of principal concern is our failure to recognize and accept that there is a finite supply of water. Over half of the world's population could be living in areas where water is projected to run short by 2030. This would be a result of a number of factors such as the increased demand for food and agricultural products and the cultivation of biofuel crops. Studies have shown that demand for water increases significantly as the world population expands and economies grow, which further intensifies the competition and conflicts among water users for the limited supplies of water.

Source: Adapted from various reports from World Bank, 2009

Extract 2

To mitigate and adapt to water scarcity, there have been some policy responses such as preserving or improving the quality of the available resource. This is done through enhanced pollution abatement and wastewater treatment. While most developed countries have tackled surface water pollution problems through regulation, pollution from diffuse sources continues, particularly from agriculture.

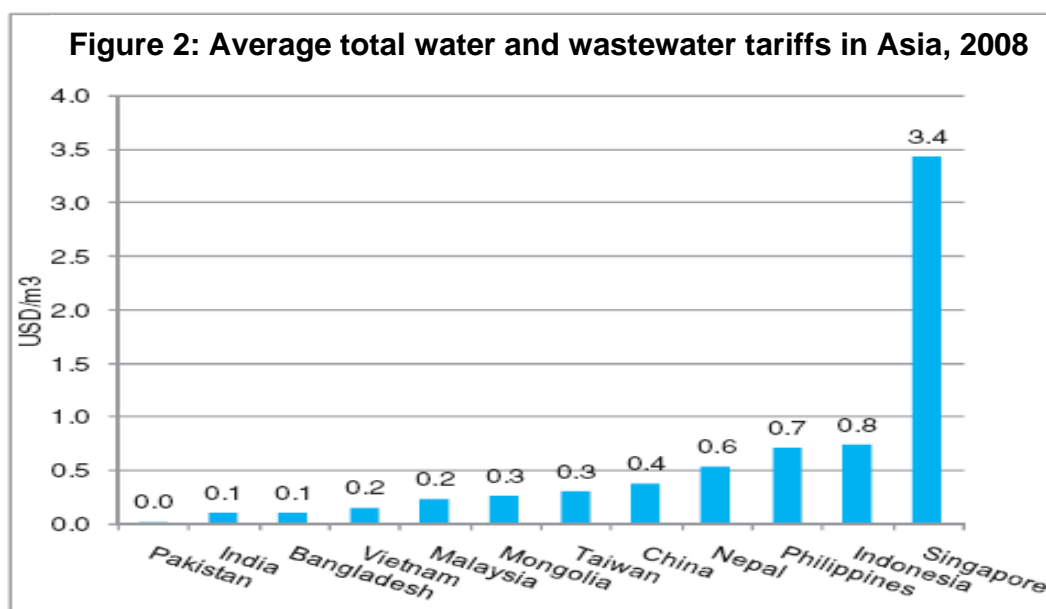
Another way is to manage its demand. The cheapest new source of water has often been water gained through conservation. Demand management changes the nature of needs for water supply infrastructure. Improving conservation can reduce the need for new and expensive water supply projects, which require high capital intensity, large initial outlays and long payback periods.

Climate change and over-use of water will mean that nearly one in every two people will live in water-stressed areas by 2030. This has given the private sector the opportunity to be involved in the development of technology for water provision. New studies say that putting the right price on water will give people the incentive to waste less, pollute less, and invest more in water supply infrastructure. Indeed, households and industries in many countries increasingly pay the true cost of the water they consume to ensure that the water management is realistically financed and sustainable. This is done through water tariffs. Many developed countries have successfully reduced water use per capita in recent years. This indicates that appropriate pricing can lead to a decoupling of water use from economic and population growth.

For most households in developed countries, such water tariffs are not a significant burden as they typically account for less than 1% of household income. However, in many of the poorest developing countries, water bills may represent a more significant portion of the income. Research on several countries in the last 35 years found that the price elasticity of demand estimates has a range of -0.1 to -0.2 .

Subsidies are therefore often justified in terms of keeping water affordable for poor households, but there is mounting evidence that they are often not well targeted and not very effective since these households are frequently not connected to water distribution and sanitation networks. Hence regulation with the relevant incentives for efficiency and fairness must be in place as human and financial resources are limited.

Source: Adapted reports from Organization for Economic Cooperation and Development 2009



Source: GWI, 2008.

Extract 3

For years, water has been imported through three pipelines from neighbouring Malaysia. The issue is becoming increasingly acute ahead of the expiry of two long-term supply deals that guarantee deliveries of Malaysian water for less than one cent per 1,000 gallons - one until 2011, the other until 2061.

As a first step, a few large reservoirs are being constructed to harvest as much rain as possible. In addition, desalination plants that turn salt water into drinking water provide 10% of Singapore's current needs. Desalination plants can provide a wide range of outputs to cater for small isolated communities or for irrigation. However, users cite energy costs and environmental issues as concerns. With greenhouse gas production and discharge of concentrated brine into the marine environment, satisfactory dilution of the concentrate needs to be achieved to avoid increasing local levels of ocean salinity to unacceptable levels, especially in sheltered waters.

But the real breakthrough has come from NEWater, a government-initiated project, produced in water reclamation plants from so-called "used" water. The plants use cleaner and more energy efficient technology to produce water that is almost as clean as distilled water.

Also, as demand is curbed by high water taxes and efficient technologies, and Singaporeans are constantly exhorted to conserve every drop, Singapore has managed to find the right balances between water quantity and water quality considerations; water supply and water demand management and strategic national interest and economic efficiency.

Source: BBC News; 6 May 2008

Questions

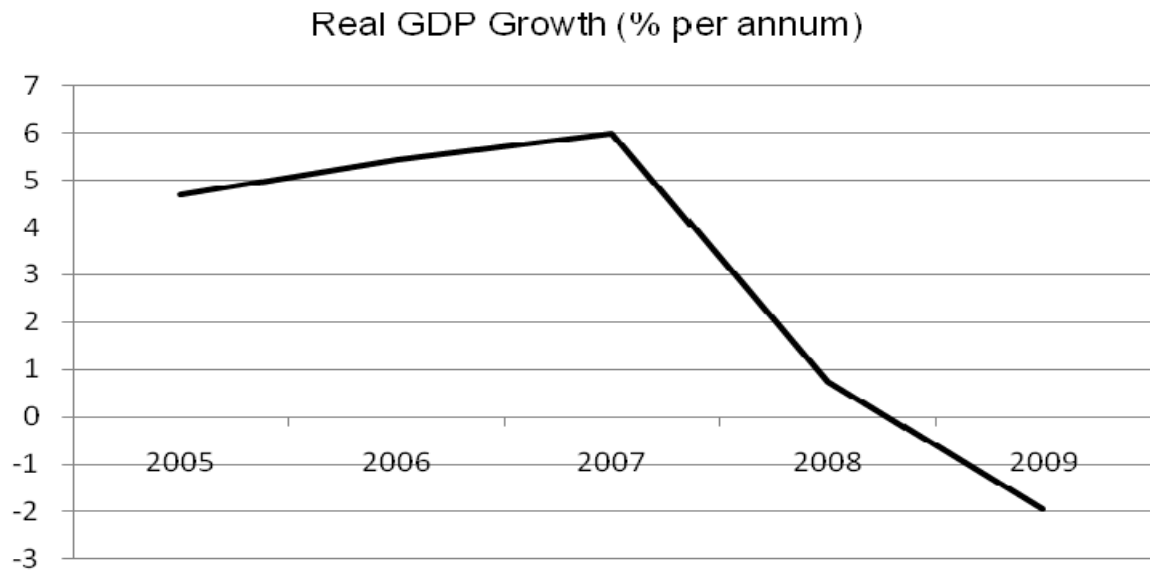
- (a) i) Compare the trends of projected water use in Figure 1. [2]
- ii) With the aid of economic theory and materials provided, predict the trend of the price of water in the next few decades. [4]
- (b) i) With the aid of an example from the data, explain what is meant by an external cost. [2]
- ii) Explain the economic justification for governments to intervene in the provision of water treatment. [4]
- (c) To what extent does putting a tariff on water achieve the microeconomic objective of efficiency? [6]
- (d) Distinguish between the concepts of '*shortage*' and '*scarcity*'. [4]
- (e) Examine the relative effectiveness of the methods adopted by countries to tackle the problem of shortage of clean water. [8]

Total: 30m

Question 2

Global Recession

Figure 3: Growth of Taiwan's real GDP (% per annum)



Source: National statistics, Republic of China (Taiwan)

Table 1: Composition of GDP of selected countries (% of GDP), 2009

	Singapore	Taiwan	USA
Private final consumption expenditure	48.8	54.6	70.8
Government expenditure	11.4	12.8	17.3
Gross fixed capital formation	27.9	18.7	14.6
Exports	198.6	69.5	11.1
Imports	186.7	55.6	13.8

Source: UN Statistics Division

Extract 4

Asia in recession

Taiwan has tumbled into recession, suffering a record annual fall in output at the end of last year to become East Asia's worst-performing economy. Official data showed Taiwan's gross domestic product shrank 8.36 per cent year-on-year in the last quarter of 2008, highlighting the exposure of Asian exporters to the slump in world demand. Exports are expected to drop by a

fifth this year from the aftermath of the global recession, with consumption and investment levels projected to fall sharply too.

The government has already announced a NT\$500 billion (US\$14.4bn), two-year stimulus package that would boost GDP by 2.77 per cent, which includes infrastructure projects and measures to boost employment. In addition, to make up for the shortfall in external demand, each of the island's 23 million residents received a NT\$108 voucher that can be used just like cash -- except that it must be spent by year-end. While cash payments may end up getting saved, these vouchers force recipients to spend their handout.

In Singapore, as the recession took hold last November, the Singapore government has enhanced its funding support for the Skills Programme for Upgrading and Resilience (SPUR). Minister for Manpower Gan Kim Yong said that SPUR has been money well spent and added that employers have been able to cut costs and save jobs. At the same time, more workers have gone for training under SPUR, boosting the quality of Singapore's workforce in the long run.

Source: The Financial Times, Bloomberg Businessweek and The Straits Times, 2009

Extract 5

'Buy American' - Sparks fly

The crisis saw American households suffer financial pressure from heavy debt burdens and the housing market slump, which led to the US economy facing a sharp retreat by customers from shops and malls. Another equally serious problem is that businesses did not really want to borrow in the poor economic climate.

The US\$787 billion economic stimulus package that would push the government budget deficit to near US\$1 trillion was finally approved by Congress last week. The plan was to jumpstart economic growth, and save between 900,000 and 2.3 million jobs. However, a debate is brewing over the so-called "Buy American" provision which stipulates that any products and equipment used in the public works projects should be American-made and not imported.

This clause would extend a much-needed lifeline to America's declining industries such as steel manufacturers reeling from the recession and competition from China. However, many economists argue that this provision could actually backfire, slowing economic growth instead of helping to expand the American job market.

"It's not a good time to initiate protectionist measures in any shape or form," said Kurt Karl, an economist. "It hurts growth, because if you force some industries to use domestic sources only, then that prevents them from getting less expensive materials from overseas."

"We believe it invites reciprocal restrictions on U.S. exports," added a spokesman for General Electric. "Less competition drives prices up. We're in a globalized world - we can't turn back the clock." His sentiments were echoed by several American firms which base their operations outside the US and derive the bulk of their profits from overseas markets.

Source: CNNMoney.com, 29 Jan 2009

Extract 6

Making the most of globalisation

Given that Singapore is a small, open economy, the benefits of globalisation outweigh the costs. Singapore has effectively used the drivers of globalisation to develop its economy and integrate itself to the global marketplace. By attracting foreign direct investments, opening up to immigrants to supplement the domestic population and adopting an export-driven economic strategy, it has been able to achieve robust and sustained economic growth driven by industries such as pharmaceuticals and chemicals.

The vulnerability of Singapore to external shocks has also increased. Over the past decade, since the Asian Financial Crisis, Singapore has been exposed to several economic shocks including the Sept 11 terrorist attacks, SARS, the dot.com bust and the recent global financial crisis.

Source: The Straits Times, 23 September 2010

Questions

- (a) i) Using Figure 3, describe the trend of Taiwan's real GDP. [2]
- ii) Using Extract 4, account for Taiwan's real GDP growth rate in 2009. [4]
- (b) Using Table 1, predict how the economic growth in Taiwan and Singapore could be affected differently by the global recession. [4]
- (c) Using AD/AS analysis, explain how the Taiwanese stimulus package may affect its economic growth. [4]
- (d) In light of the global recession, discuss whether the stimulus package with the "Buy American" clause is helpful in addressing unemployment in the US. [8]
- (e) Do you agree that "the benefits of globalisation outweigh the costs" for Singapore? [8]

Total: 30m

Section B

Answer **one** question from this section.

3. a) Explain the factors that result in inflation. [10]
- b) To what extent will supply side policies help to tackle inflation in Singapore? [15]
4. a) Explain how resources are allocated via the price mechanism. [10]
- b) To what extent will the price mechanism achieve efficient allocation of resources in Singapore? [15]

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