

ANGLO-CHINESE JUNIOR COLLEGE
2016 JC2 PRELIMINARY EXAMINATIONS



ECONOMICS

8819/01

Higher 1

18 August 2016

Paper 1

FA3 hours

Additional materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

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

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid / tape.

Begin each question on a **fresh** sheet of paper.

Section A

Answer **all** questions.

Section B

Answer **one** question.

At the end of the examination, fasten all your work securely together.

Fasten the **White** cover sheet on top of your Case Study Question 1 answers, the **Beige** cover sheet on top of your Case Study Question 2 answers, and the **Yellow** cover sheet on top of your Section B (Essay) answers.

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

This document consists of **9** printed pages.
Please check that your question paper is complete.

Section A

Answer **all** questions in this section.

Question 1

The Market for Steel

Table 1: Crude steel production (million tonnes)

Country \ Year	2010	2011	2012	2013	2014
China	638.7	702.0	731.0	822.0	822.7
United Kingdom	9.7	9.5	9.6	11.9	12.1
WORLD	1,433.4	1,538.0	1,560.1	1,650.3	1,670.1

Source: World Steel Association

Table 2: Crude steel consumption (million tonnes)

Country \ Year	2010	2011	2012	2013	2014
China	587.6	641.2	660.1	735.1	710.8
United Kingdom	8.8	9.0	8.4	8.5	9.6
WORLD	1,308.2	1,411.8	1,439.3	1,528.4	1,537.3

Source: World Steel Association

Figure 1: Global steel prices (US\$/tonne)

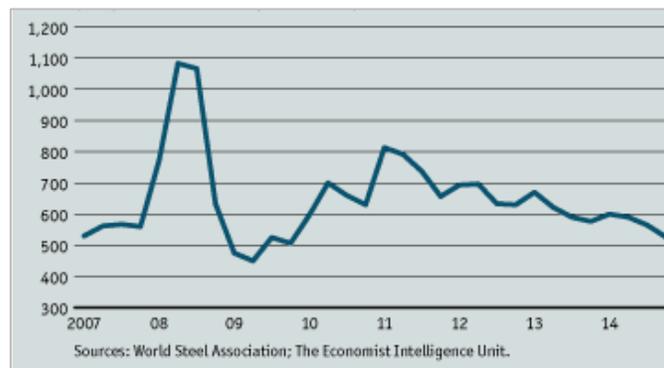


Figure 2: Employment in UK Steel Manufacturing (thousands)

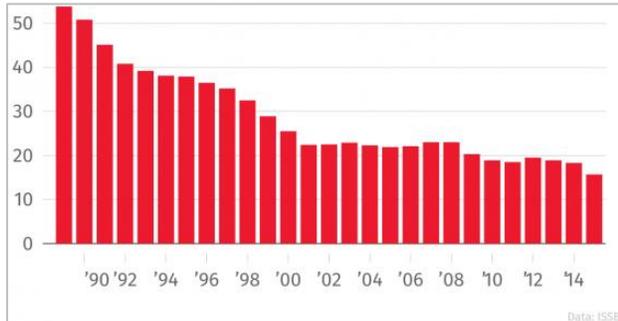


Figure 3: UK Industrial Production Index (1990=100)

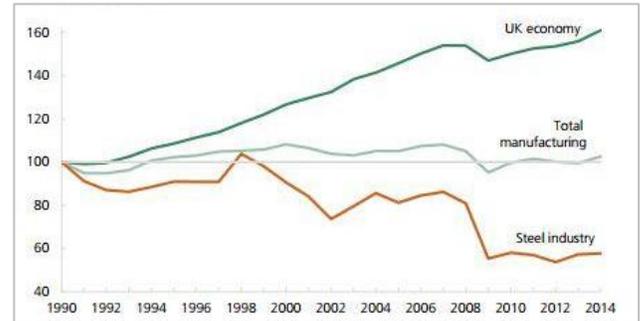


Fig 2 & 3 Source: www.independent.co.uk

Extract 1: The changing niobium landscape

Applications of niobium have increased steadily over the years. About 90 per cent of niobium is used in the steel industry, primarily in oil and gas pipelines, automobiles, bridges, high-rise buildings and welded pipes. Resistant to corrosion, niobium strengthens and lightens steel.

Niobium is hard to find and currently mined in only three places on Earth. 84 per cent of the global supply comes from one company - Companhia Brasileira de Metalurgia & Mineracao (CBMM) in Brazil. London-based Anglo American is the second largest niobium producer in the world and also mines in Brazil. The third niobium producer is Niobec, which mines in Canada.

The demand for niobium remains high due to its use in the production of quality steel. Yet, prices fell last year as slumping oil and gas markets led to fewer metal pipe purchases, according to niobium producer, Anglo American. On 28 April 2016, Anglo American announced that it was selling its niobium business in Brazil for US\$1.5 billion to China Molybdenum, in a bid to focus on other markets and cut back debt against a backdrop of volatile commodity prices.

Adapted from: *The Globe and Mail*, 18 May 2016
Argonaut Research, 29 April 2016
Materials Research, vol. 18 no. 1, Jan/Feb 2015
Reuters, 2 September 2011

Extract 2: Chinese steel firms expanding in Africa

China produces too much steel. With 800 million tons of steel a year, the country makes up half of world production in 2014 - adding to the current global glut. Chinese steel is at its lowest price in over a decade and most firms producing the commodity in the country are loss-making as construction slows in the world's second largest economy. Market analysts are not surprised to see China's steel sector shrinking because "a lot of that growth was artificially supported by government subsidies".

But with overcapacity continuing, Chinese steelmakers are exporting a large amount of the metal to other markets at low prices, hurting the sector and prompting trade participants to cry foul on what is perceived as dumping. Yet, instead of shrinking its steel sector, Chinese firms are expanding steel production in Africa. According to a Shanghai-based trade publication, Chinese

firms are taking a longer view of Africa's potential given that African steel demand is expected to hit 300m tonnes per year by 2050. African sources of iron ore and basic steel could also give China a more stable supply to feed its industry.

Adapted from: *The Economist*, 13 July 2015
& *CNBC.com*, 18 November 2015

Extract 3: Two towns in Quebec, Canada, protest against niobium mining proposals

Protesters voiced their disapproval of a proposed niobium mine in Kanesatake outside an information session on the project. The Mohawks, whose traditional territory will be affected by the mine, invited the company, Eco-Niobium, to tell community members about the proposed mine, including its promise to create much-needed jobs. However, protesters' major concerns were the irreversible impacts on local farmlands because niobium mining is associated with radioactivity. Water will also be adversely impacted by contamination and lowering of the water table.

Two months ago, nearby town Oka had rejected a similar proposal from Eco-Niobium, which the company said would create 250 jobs and pump about \$5 million per year in terms of royalties and taxes. Residents opposed to the reopening of this mine, claiming it could contaminate the water supply and soil in the small agricultural town of nearly 4,000 people. Oka's mine was one of the world's largest producers of niobium for decades until it closed in 1977 after residents complained that well water was being siphoned off from farmers.

Adapted from: *CBC news*, 3 June & 5 April 2016

Extract 4: UK steel crisis

More than one in six workers in Britain's steel industry is facing the axe after Tata Steel, one of Europe's leading steel manufacturers, confirmed it was cutting almost 1,200 jobs as part of a radical shakeup. The announcement increases pressure on the government over its handling of the crisis.

Britain's steel industry has been battered by falling steel prices, high energy costs, cheap imports and the strength of the pound. Tata said imports of steel plate into Europe had doubled in the past two years and imports from China had quadrupled. The steel crisis threatens severe knock-on effects, with jobs threatened throughout the supply chain for the industry. In addition, many towns with steel plants rely on the sector's skilled workers to spend money in local shops and other businesses.

Karl Köhler, chief executive of Tata Steel's European operations, said "The European commission needs to do much more to deal with unfairly traded imports – inaction threatens the future of the entire European steel industry." Tom Westley, chairman of the UK's Westley Group foundry business, said that in the short run, ministers might need to intervene to save the industry. "Perhaps we have got to give some level of subsidy to keep this industry alive and look at it as a national asset rather than [in terms of] costs."

Adapted from: *The Guardian*, 20 October 2015

Questions

- (a) Using Tables 1 and 2, compare the relative changes in China's crude steel production and consumption from 2011-2014. [2]
- (b) Using Extracts 1 and 2, explain one demand factor and one supply factor that could support the trend in global steel prices from 2011 to 2014. [4]
- (c) Explain how the "current global glut" would affect the price elasticity of supply for metal. [2]
- (d) Explain the opportunity cost of Anglo American's decision to sell its niobium mining business. [3]
- (e) With the use of relevant economic theory, explain why there have been protests against niobium mining proposals in Kanesatake and Oka. [5]
- (f) To what extent should the Quebec government accede to the protests by Kanesatake and Oka residents? [6]
- (g) Discuss whether the UK government should protect the country's steel industry. [8]

[Total: 30]

Question 2

The economics of ageing population

Extract 5: Young people wanted in Europe

Population projections published by the European Commission in 2015 highlighted that between 2013 and 2030 the euro zone's working-age population will decline by 6%. As the working-age population falls, the ranks of pensioners will be growing. Both these forces will push up the old-age dependency ratio which is defined as those aged 65 or more relative to 20-to 64-year-olds. The demographic change is especially intense in Germany, where the number of pensioners will rise by 5 million (an increase of 30%) even as the working-age population falls by over 6 million. That will drive up its dependency ratio from 34% to 52% in 2030—the highest in Europe. Ageing population is threatening Europe's largest economy.

Figure 4: Demographic indicators: old-age dependency ratio & working population changes (%), 2013 - 2030



Source: *The Economist*, 6 June 2015

Extract 6: The Japanese solution

Many governments are watching keenly as Shinzo Abe, the Prime Minister elected in 2012 on a platform of economic rejuvenation takes on Japan's economic mess. What the economy needs is not simply growth, but growth fast enough to allow Japan to come to grips with its massive public debt.

Japan will run a structural budget deficit of more than 5% of GDP this year. After a rise in the country's consumption tax in April of 2014, from 5% to 8%, both household spending and GDP tumbled, leading the government to postpone a second rise to 10% that had originally been

scheduled for October of this year. An analysis published in 2013 estimated that stabilising Japan's debt would require tax revenues of between 30% and 40% of total consumption, equivalent to a consumption tax rate of about 60%. As more Japanese workers retire, domestic saving is falling and spending on the old soaring. Even a modest rise in borrowing costs could bring insolvency.

At current growth rates, any big tax rises or spending cuts would tip Japan straight back into recession. Yet generating faster growth is a tall order. Supply-side reforms could be more vigorous. Yet the scope to improve productivity in Japan is smaller than might be imagined.

Source: *The Economist*, 7 Nov 2015

Extract 7: Ageing population has macroeconomic benefits?

A paper from Morgan Stanley reckons that there may be positive dramatic impacts from ageing population in the developed world. Ageing population will create additional demand for labour, as illnesses such as dementia will require more care workers. This will start to push real wages higher, raising labour's share of national income and reducing inequality. Also, as the elderly save less and spend more of their income, savings are bound to fall. In a slow-growing economy there will be fewer profitable investment opportunities but the paper argues that investment will not fall as fast as savings because rising wages will encourage companies to substitute capital for labour. Also, because the elderly tend to stay put in their homes, residential investment will not fall significantly due to demand from new families.

Source: *The Economist*, 6 June 2015

Extract 8: Ageing population poses both challenges and opportunities

Prime Minister Lee Hsien Loong urged world leaders to see an ageing population as a force that can power economies. While the phenomenon of ageing population poses challenges to many countries, it also brings opportunities for societies that are willing to look at longevity with more friendly eyes. He said "we need to transform our societies and economies to become more age-friendly, and turn longevity into a positive force for economic and social development."

To adapt to ageing trend, Singapore is transforming in three ways. Firstly, to help seniors stay active and healthy for longer, the government is raising the re-employment age further, to 67 years old, and is also providing financial incentives for companies to make jobs and workplaces more senior-friendly. The SkillsFuture initiative for example gives workers credits for courses they can take to upgrade themselves at any age.

Second, safety nets in housing, retirement adequacy and healthcare were also strengthened to give seniors peace of mind. The Central Provident Fund (CPF) ensures retirement adequacy, and the Medishield Life, is a universal healthcare insurance which will help to cover large hospitalisation expenses for life. Lastly, infrastructure - in public transport, public housing, and parks - are being refreshed for the elderly to move around the city independently, confidently and freely.

Source: *The Straits Times*, 19 Nov 2015

Extract 9: With population ageing, Singapore must become a manpower-lean economy

Manpower Minister Lim Swee Say says Singapore must become a manpower-lean economy due to its ageing population. The government is trying to spread the mind-set of lean enterprises, industry and services. He noted that small and medium enterprises (SMEs) must become manpower-lean because they employ two-thirds of the Singapore workforce.

Source: *The Straits Times*, 27 April 2016

Questions

- (a) (i) With reference to Figure 4, identify the country which appears to face the least challenge to the size of its future labour supply. Explain the basis of your choice. [2]
- (ii) Using AD/AS analysis, explain two ways in which ageing population in Germany might threaten the country's future economic growth. [6]
- (b) Explain why it is likely that the government and not the private sector would finance the provision of infrastructure for the elderly population. [4]
- (c) With reference to Extract 7, comment on the view that ageing population would reduce income inequality. [4]
- (d) With reference to Extract 8, discuss the macroeconomic opportunities which ageing population might bring about to Singapore economy. [6]
- (e) In light of the problems of massive public debt and weak economic growth which the Japanese economy is facing, discuss the merits of raising consumption tax to tackle these problems. [8]

[Total: 30 marks]

Section B

Answer **one** question from this section

3. Members of Parliament in Singapore have raised suggestions to discourage unhealthy eating habits and prevent obesity, such as imposing a sugar tax or labelling of sugar content progressively in high-calorie foods, starting with canned and packet drinks.

Todayonline.com, 14th April 2016, accessed 1st July 2016

- (a) Explain the factors that will determine whether consumers or producers bear more of the burden of a sugar tax. [10]
- (b) Discuss whether the imposition of a sugar tax on canned and packet drinks is appropriate in achieving efficiency in allocation of resources. [15]
4. Unlike the United Kingdom that has been running a persistent deficit in the current account of its balance of payments, Germany has been consistently having current account surplus. There have been calls for Germany to reduce this surplus.
- (a) Explain why governments aim to have current account surplus. [10]
- (b) Discuss the view that countries with persistent current account surplus should adopt expansionary fiscal policy. [15]