ANGLO-CHINESE JUNIOR COLLEGE

2016 JC2 PRELIMINARY EXAMINATIONS

ECONOMICS 9808

Higher 3

13 September 2016

3 Hours 15 Minutes

Additional materials: Writing 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.

Section A
Answer **all** questions.

Section B
Answer **two** questions.

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

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

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

Please check that your question paper is complete.
This document consists of **9** printed pages, including the cover sheet.

Section A

Answer **all** questions in this section.

Question 1 The Era of Digital Globalisation

Extract 1: Digital globalisation and developing countries

Globalization is entering a new era, defined not only by cross-border flows of goods and capital, but also, and increasingly, by flows of data and information. This shift would seem to favour the advanced economies, whose industries are at the frontier in employing digital technologies in their products and operations. Will developing countries be left behind?

For decades, vying for the world's low-cost manufacturing business seemed to be the most promising way for low-income countries to climb the development ladder. Global trade in goods rose from 13.8% of world GDP in 1985 ($2 trillion) to 26.6% of GDP ($16 trillion) in 2007. Propelled by demand and outsourcing from advanced economies, emerging markets won a growing share of the soaring trade in goods; by 2014, they accounted for more than half of global trade flows.

Since the Great Recession, however, growth in global merchandise trade has stalled, mainly owing to anaemic demand in the world's major economies and plummeting commodity prices. But deeper structural changes are also playing a role. Many companies are simplifying and shortening their supply chains. For a range of goods, automation means that production location and outsourcing decisions no longer depend primarily on labour costs. Quality of talent, infrastructure, energy costs, and speed to market are assuming greater weight in such decisions. In the near future, 3D printing could further reduce the need to ship goods across long distances.

If trade in global goods has indeed peaked relative to global GDP, it will be harder for poor countries in Africa, Latin America, and Asia to develop by becoming the world's next workshops. But globalization itself is not in retreat. While global goods trade has stalled and cross-border financial flows have fallen sharply since 2007, flows of digital information have surged: Cross-border bandwidth use has grown 45-fold over the past decade, circulating ideas, intellectual content, and innovation around the world.

New research from the McKinsey Global Institute (MGI) finds that cross-border flows of goods, services, finance, people, and data during this period increased world GDP by roughly 10% – roughly an additional $7.8 trillion in 2014 alone. Data flows accounted for an estimated $2.8 trillion of this gain, exerting a larger impact than global goods trade – a remarkable finding, given that the world's trade networks developed over centuries while cross-border data flows were nascent just 15 years ago.

Digitization disrupts everything: the nature of goods changing hands; the universe of potential suppliers and customers; the method of delivery, and the capital and scale required to operate globally. It expands opportunities for more types of firms, individuals, and countries to participate in the global economy. It also gives countries and companies everywhere an opportunity to redefine their comparative and competitive advantage. For example, while the United States may have been at a disadvantage in a world where low labour costs were

paramount in global manufacturing value chains, digital globalization plays directly to its strengths in technology and innovation.

On its face, this shift to digital globalization would seem to work against developing countries that have large pools of low-cost labour but inadequate infrastructure and education systems. Yet digital flows offer developing countries new ways of engaging with the global economy. The near-zero marginal costs of digital communications and transactions create new possibilities for conducting cross-border business on a massive scale. Alibaba, Amazon, eBay, Flipkart, and Rakuten are turning millions of small enterprises around the world into "micro-multinational" exporters. Companies based in developing countries can overcome local market constraints and connect with customers, suppliers, financing, and talent worldwide. Twelve percent of global goods trade is already conducted in ecommerce channels.

Moreover, a country need not develop its own Silicon Valley to benefit. Countries on the periphery of the network of global data flows can benefit more than countries in the centre. Digital connections promote productivity growth; indeed, they can help developing economies move to the productivity frontier by exposing their business sectors to ideas, research, technologies, and best management and operational practices, and by building new channels to serve large global markets.

But the Internet cannot deliver such improvements in efficiency and transparency unless countries build the digital infrastructure needed to connect the world's huge offline population. The number of Internet users worldwide now exceeds 3.2 billion, but at the end of 2015, 57% of the world's population, or four billion people, remained offline, and many who are online use only basic cell phones. In many developing countries, connectivity is too slow, unreliable, or expensive to allow entrepreneurs and individuals to take full advantage of the new global business and educational opportunities.

Education systems will also need to keep up with demand for language fluency and digital skills. While 40% of the world's population are connected to the Internet, 20% are still unable to read and write. According to another recent MGI study, there are also large gender gaps in access to digital technologies around the world, and this lack of access impedes women's economic and social empowerment. Lagging countries that fail to promote gender equality, invest in education, and adopt broader governance and regulatory reforms risk falling even further behind in reaping the significant benefits of globalization.

Twenty-first-century globalization, driven by digitization and rapid changes in competitive advantage, can disrupt local industries, companies, and communities and cause job loss, even as it spurs greater productivity, boosts overall employment, and generates economy-wide gains. Governments must consider these trade-offs carefully, and develop ways to support those who are harmed by global flows, giving them paths to new roles and livelihoods. To date, few governments have done so. Ironically, the political backlash against globalization is gaining momentum in many places even as digitization increases the opportunities and economic benefits that globalization has to offer.

Adapted from Project Syndicate, 25 March 2016

Figure 1: Global flows of goods, services and finance from 1980 to 2014

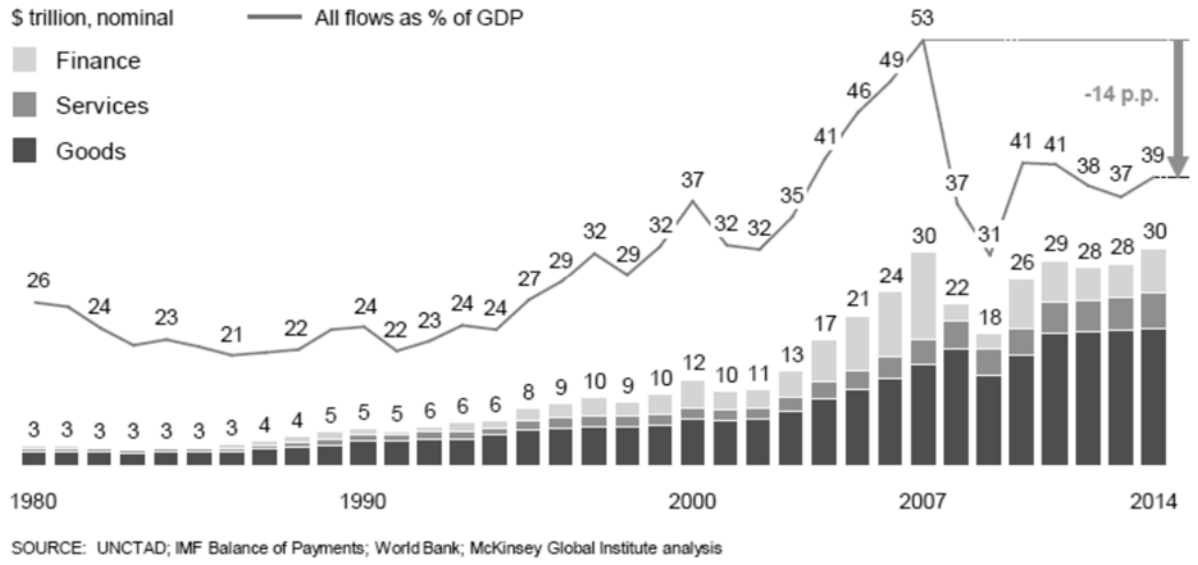
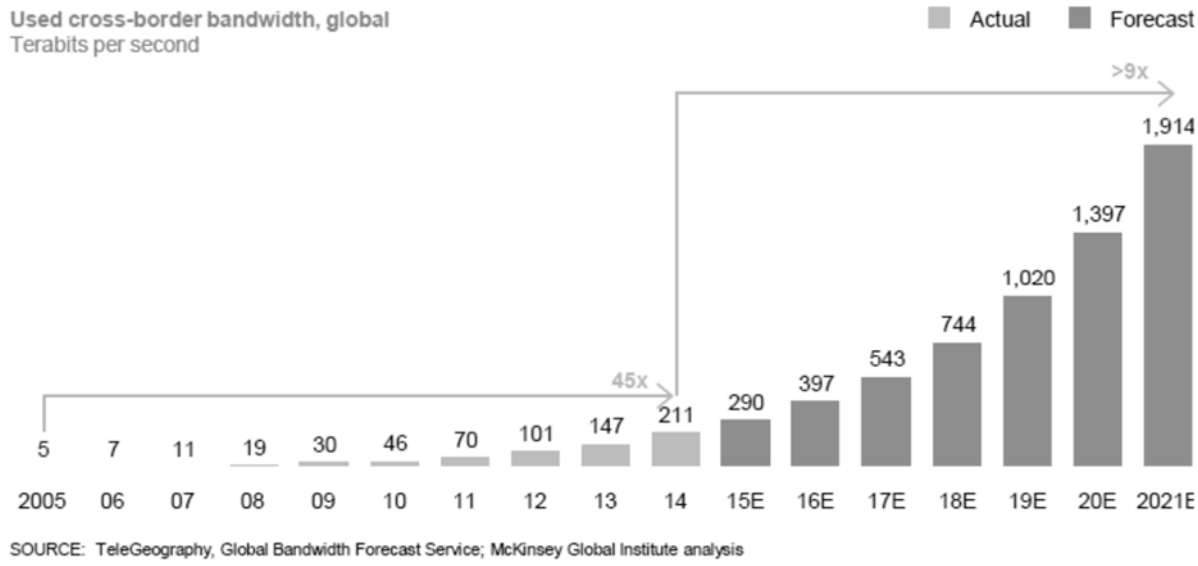


Figure 2: Actual and projected changes in used global cross-border bandwidth (terabits per second) from 2005 to 2021(forecast)



Extract 2: Digital economy, information and consumer protection

"Many people want the government to protect the consumer, while a much more urgent problem is to protect the consumer from the government," Milton Friedman said. And it is truer than ever today, since the digital economy and its rules don't seem to run at the same speed. As a result, many governments around the world – and especially in Europe – are having a hard time justifying to the 21st century consumer the need for endless authorization procedures, stifling regulatory demands of federal agencies, obscure laws on product liability, taxi's monopolistic driving licenses, notarial records, et cetera.

The justification for all such regulation usually concerns consumer ignorance. Crucial information about products and services within the market may indeed be ignored or misunderstood by the economic actors participating in it. And since trust among consumers and producers is essential for the economy to flourish, an assurance of quality and safety provided by the government is often viewed as a tool for economic growth and development. Regulation, in this regard, is deemed to be potentially helpful in identifying good suppliers and safe products, as well as in preventing frauds and rip-offs.

Until very recently, even the most stubborn free-marketers accepted the case for government intervention to mitigate market failures generated by the fact that producers would not be able or willing to provide information about given products and services.

In the past, various counterarguments have challenged the need for government regulation to ensure consumer protection. However, the greatest challenge to it has undoubtedly been triggered by the digital revolution that has been taking place in recent years. The internet has proven capable of connecting people on a common platform, where they can share opinions, desires and experiences. The common knowledge thus created is inevitably more precise and complete than anything certified by a government agency.

The internet has greatly expanded the market for goods and services, while reducing barriers to entry and many limits to innovation. It has thus solved problems that regulation has failed to solve for decades. Think of the impact of car sharing on pollution. Specifically regarding the protection of consumers, the internet contains a quantity of information on any good or service that was inconceivable before its advent. Asymmetric information – often denounced as one of the main reasons underpinning the need for market regulation, has mainly become a bad memory. Today's consumers not only have access to powerful tools for analysis and comparison of goods and services, but transaction costs normally associated with them have also been drastically reduced.

Adapted from **"**Innovation Is Replacing Regulation" by Giacomo Lev Mannheimer

Extract 3: Digitization, profitability and market power

Many US industries, including some of the most innovative, are dominated by a handful of large companies, some of which enjoy very large market shares and generate returns that greatly exceed historical averages. And some companies are stockpiling cash or acquiring competitors rather than using their returns to build productive capacity.

Nonetheless, it would be a mistake to conclude that weakening competition is driving these unusual economic trends. They are taking place in a context of swiftly changing sectoral dynamics and rapid digitization.

Corporate profits may be near all-time highs, but their variance among firms and industries has also increased significantly. The most profitable firms in the US are no longer in heavy industry; they are in sectors that capitalize on research and development, brands, software, and algorithms. Companies in sectors like pharmaceuticals, media, finance, information technology, and business services have the highest profit margins. Even excluding finance, these sectors' share of US corporate profits has increased significantly, from 25% in 1999 to 35% in 2013.

Corporate profitability is increasingly driven by digital capabilities. In the most digitally advanced sectors of the economy, margins have grown 2-3 times faster than average. And even within these sectors, there are enormous spreads between the top-performing companies and the rest of the pack. The "winner-take-most" dynamic of the digital economy is not only producing record profits for leading firms; it may be accelerating the pace of innovation and broadening the areas in which companies can enter and quickly establish market power.

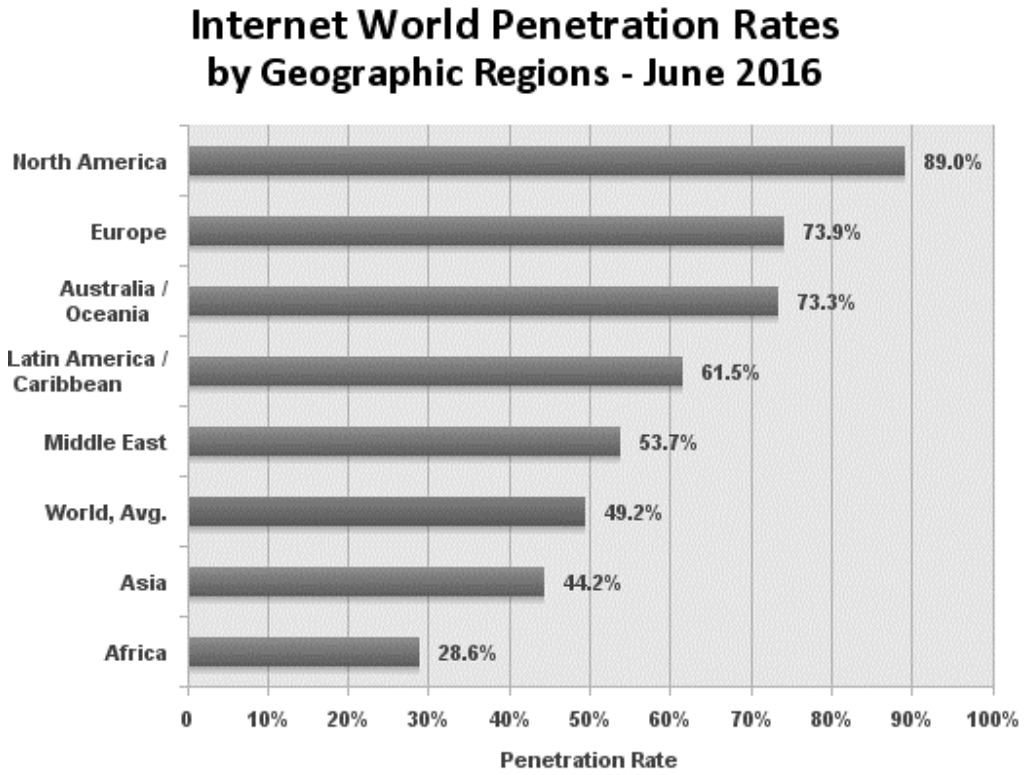
Indeed, in a growing number of digital markets where a few giant firms hold commanding shares, there is little evidence that market power is leading to higher prices. On the contrary, consumers have gained an array of free services and conveniences.

More relevant concerns about market concentration may turn out to be privacy and data ownership, not pricing power. Indeed, some have begun to ask whether the collection and control of large amounts of data by a few huge firms with commanding market shares can be an anticompetitive force, creating insurmountable entry barriers for would-be innovators.

At the same time, however, some of the largest digital platforms, by their very nature, may promote competition, as they improve transparency in markets and enable millions of small enterprises to reach customers and suppliers around the world. A recent study found that digital platforms can help small businesses increase their export rates dramatically.

Adapted from Project Syndicate, 27 May 2016

Figure 3: Internet penetration rates across the world as of 30 June 2016



Source: Internet World Stats - www.internetworldststs.com/stats.htm
Penetration Rates are based on a world population of 7,340,093,980 and 3,611,375,813 estimated Internet users on June 30, 2016.
Copyright © 2016, Miniwatts Marketing Group

Questions:

(a) With reference to Figures 1 and 2, explain the trends in global flows in goods, services, finance and data. [6]

(b) Assess the view that the shift to digital globalisation will benefit advanced economies more than developing countries. [8]

(c) Extract 3 mentions that 'corporate profitability is increasingly driven by digital capabilities.'

To what extent can game theory explain a firm's decision to invest in developing its digital capabilities? [6]

(d) In light of digital globalisation, discuss whether there remains a need for government regulation to deal with the problems of imperfect and asymmetric information, as well as market dominance in a country. [10]

[Total: 30]

References:

Extract 1: https://www.project-syndicate.org/commentary/digital-globalization-opportunities-developing-countries-by-laura-tyson-and-susan-lund-2016-03
Figures 1 and 2: Report on Digital Globalisation by McKinsey Global Institute, March 2016
Extract 2: http://www.valuewalk.com/2016/06/innovation-vs-regulation/
Extract 3: https://www.project-syndicate.org/commentary/profits-competition-digital-economy-by-laura-tyson-and-james-manyika-2016-05
Figure 3: Internet World Stats

Section B

Answer **two** questions from this section.

2. Statistical analysis can only demonstrate correlations within economics. This does not prove causation. To what extent does this and a lack of experimentation mean that economics is not a true science? [35]

3. Nash equilibrium is an example of the solution of an economic model developed by John Nash to deduce the actions taken by different agents in a non-cooperative situation.

   Evaluate the view that economic models, such as game theory, are ultimately redundant in today's volatile and uncertain economic environment. [35]

4. Discuss whether strategies adopted by firms to gain a competitive advantage is likely to lead to a more profitable outcome and a more efficient and equitable allocation of resources. [35]

5. 'Apart from local sources of pollutants, Singapore has had in more recent times to deal with the transboundary haze pollution from Indonesia. The sources of air pollution can be grouped into three categories. These are stationary sources such as power stations, oil refineries and industrial development; mobile sources such as motor vehicles, shipping and air travel; and others such as open burning of waste materials and trans-boundary air pollution.'

   Source: http://filter-the-fumes.blogspot.sg/2011/01/causes-of-air-pollution-in-singapore.html

   Since the publication of this blog in 2011, air pollution reached a record high in Singapore in June 2013.

   Discuss which policies are likely to be the most successful in reducing air pollution in Singapore. [35]

6. Assess the extent to which trade theories justify the need for regional trading agreements amongst different countries. [35]

7. Consider whether foreign direct investment and multinational enterprises are an absolute necessity for a developing country to grow its economy. [35]

END OF PAPER

		2EC					
Name	Form Class	EC Class	Name of Tutor	Index No			

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ECONOMICS **9808**

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Additional materials: Writing paper

Cover Sheet

INSTRUCTIONS

Arrange your answers in order.
Fasten your answers to this cover sheet using the string provided.
Write your index number and name on all the work you hand in.
Complete the information in the boxes on this cover sheet.

Essay *(Write down question number attempted)*		**Marks**
Question No.	1	**/ 30**
Question No.		**/ 35**
Question No.		**/ 35**
Total		**/ 100**