Anglo-Chinese Junior College
Department of Economics

H2	International Trade
TUTORIAL WORKSHEET	

Section A: Discussion Questions

Question 1: International Trade Research Activity [Inquiry- Based Learning (IBL)]

This is a group research activity aims to explore how different countries approach trade. The group's research will be presented through google slides before sharing with your classmates.

1. Each group (4-5 students) to select one of the following countries:
   - Singapore
   - China
   - US
   - UK
   - United Arab Emirates
   - Germany
   - India
   - South Korea

2. Refer to the following website (or scan the QR code below) to find out the **composition of GDP** for your chosen country. Present the data in a chart on **one slide** (e.g. pie chart, bar chart) https://www.cia.gov/the-world-factbook/field/gdp-composition-by-end-use/

3. Using a search engine, identify the **top 10 exported goods and services** of your selected country. Present the list of exported goods and services on **one slide.**

4. Using **Gemini,** a generative artificial intelligence chatbot, and type in the prompt **"What is the [your selected country]'s policy approach to international trade?" Summarise the group's findings** into **one slide.**

5. Consider **whether how the country's composition of GDP may have affected their chosen policy approach and/or vice versa**. Present your group's response in **one slide.**

Question 2: The Theory of Comparative Advantage

Let us assume 2 countries, Vietnam and China, make 2 goods, bamboo baskets and necklaces. The table below shows how much of each product they could produce for a given volume of resources.

	Bamboo baskets weaved	Necklaces made
Vietnam	12	20
China	16	32

(a) Explain how free trade based on comparative advantage would allow both Vietnam and China to enjoy higher consumption of both products.

(b) Suggest a way for the country with comparative disadvantage in necklaces to acquire the comparative advantage in this product.

Question 3: Terms of Trade

Figure 1: China's terms of trade

Figure 2: RMB to 1 USD

With reference to Figures 1 and 2:

(i) Define terms of trade.

(ii) Describe the trend in China's Terms of trade over the period Jan 2016 to Jan 2017.

(iii) Explain one reason for the trend identified in (ii).

Question 4: Protectionism

EU hikes tariffs on India, Indonesia stainless steel imports

The European Union will increase tariffs on stainless steel products from India and Indonesia after determining they benefited from unfair subsidies, including some from China under its Belt and Road investment programme.

The European Commission, which conducted the investigation, has set the anti-subsidy duties on stainless steel cold-rolled flat products at rates of between 4.3% and 21.4%, the EU official journal said on Wednesday. This will add to anti-dumping tariffs already in place.

The Commission said the subsidies took the form of preferential loans, duty exemptions and cheap provision of raw materials, partly because of export restrictions for those materials. Indonesia also benefited from subsidies to help build up its stainless steel industry from China, which in return benefited from taking up a larger share of Indonesia's nickel ore exports.

This is the European Union's second investigation into trans-national Chinese subsidies. In 2020, the bloc imposed duties on glass fibre fabrics and products from Chinese companies on joint venture operations in Egypt.

The Commission said that the new tariffs, to take effect from Thursday, aim to remedy damage caused to EU producers.

Source: Reuters, 17 March 2022

(a) Explain why the EU uses anti-dumping tariffs.

(b) With the aid of a diagram, explain the impact of the EU's tariff on steel imports on:

(i) EU producers – Total revenue and producer surplus

(ii) EU consumers – Total expenditure consumer surplus

(iii) EU government – Tax revenue and budget position

(c) Comment on whether the tariffs imposed are overall beneficial to the EU economy.

Question 5: Protectionism

Indonesia wants to be a global electric vehicle hub

In December 2022, Indonesia's President Joko Widodo announced an export ban on bauxite, to take effect in June 2023. This had followed an earlier export ban on another metal, nickel. Prior to the ban, Indonesia was the world's largest exporter of nickel ore, traditionally used in the production of stainless steel and, more recently, in electric vehicle (EV) batteries. Indonesia has the world's largest nickel reserves, at 22 per cent, followed by Australia at 21 per cent. While only 6 per cent of the world's nickel production is currently used in EV battery manufacturing, it is estimated that by 2030, the figure will have reached over 30 per cent, highlighting the metal's future strategic importance. The European Union had challenged the ban, arguing that it threatened the nickel supply for EU's stainless steel industry.

The bauxite ban speaks of not just Indonesia's ambitions for its metals processing sector, but also the President's dreams of Indonesia becoming a global production hub for electric vehicles. Bauxite is a primary alloy in the manufacture of aluminium, a key component in EV technology. The country is the world's fifth-largest reserves of bauxite.

Indonesia is no longer satisfied with being just an exporter of metal ores. It sees export bans as a way to compel foreign investors to build smelters in the country, thereby adding value to its metal exports and creating more jobs. The President had said before that, save lithium, Indonesia had all the natural resources to create an integrated EV battery ecosystem, namely nickel, copper, bauxite and tin. If all goes well, 60 per cent of all EVs in the world would run on Indonesian-produced batteries in the future, he said. The country is determined to attract investments from big electric automakers into the country.

Indonesia has a huge population of two-wheelers. On average, each of the country's 70 million plus households has at least one motorcycle. In March, 2023, the Indonesian government announced subsidies of up to seven million rupiah (S$623) each for electric two-wheelers. This translates into a potential discount of at least 25 per cent off a motorbike's price. It has plans to shell out 1.8 trillion rupiah in 2023 to subsidise sales of up to 200,000 electric motorcycles as well as more than 30,000 four-wheelers. The benefits are aimed at lower-income consumers running small businesses and limited to models with parts made in Indonesia that account for 40 per cent of the vehicle's value.

The subsidy, though welcomed, falls far short of turbocharging demand for EVs in a country where petrol – thanks to official price caps – is half the price per litre compared with countries like Singapore. Steep EV prices and having few places to charge batteries have also hurt domestic demand, which is partly deterring foreign investors, say analysts.

Source: The Straits Times, 10 Jan & 5 April 2023

Questions

(a) Explain how Indonesia's export bans on nickle and bauxite are meant to lead to the development of new areas of comparative advantage for the country.

(b) Discuss whether the use of subsidy is appropriate for Indonesia to achieve its aim of becoming a global production centre of EV industries.

Section B: Case Studies

Question 1: Looming Threats to Globalisation

Extract 1: The potential impacts of Brexit on the global economy

The markets were caught off guard by the UK's vote to leave the European Union (EU) on 23 June. The immediate reaction in the financial markets was swift and violent, and will feed into the far-flung macroeconomic consequences of Brexit (Britain's exit from the EU). For example, a sharp and sustained rise in the value of the US dollar versus the euro will put added pressure on the weak US manufacturing sector just as it seemed to find a new footing. This puts additional downward pressure on historically weak US growth momentum.

While it is uncertain how the Brexit vote will reverberate in the months and years to come, a few immediate consequences seem highly likely:

- The flight to safety away from the epicentre of this British-EU divorce will push capital away from the region and toward key safe-haven markets including the US and Japan.
- A higher US dollar and Japanese yen are negative to both economies' export sectors. In the case of Japan, this is particularly unhelpful to its efforts to reinflate and reinvigorate the economy after decades of deflation.
- The higher US dollar also triggers additional pressure on China to float the yuan lower, as it is caught in the divergence between its two largest export markets – the EU and the US.
- For the US, the negative impact on exports is relatively small compared with trends in domestic demand, but the deflationary pressure on tradable goods will widen the divergence between reasonably strong inflation in the services sector vs. reasonably strong deflation in the goods sector.
- The European Central Bank will be compelled to raise its level of intervention yet again, as risk premiums across the region rise. Members of the Eurozone may be hard hit by the loss of investor confidence coupled with debt problems.

Source: *Forbes*, 29 June 2016

Extract 2: Why sterling suffered a "flash crash"

If a country's exchange rate represents international investors' confidence in its government's policies, the markets have given Britain the thumbs-down. On October 7th the pound sterling fell from $1.26 to $1.18 against the dollar within a few minutes. The sterling Effective Exchange Rate Index (EERI) – a measure of the value of the pound calculated according to UK's trade with different countries and in various currencies – is close to a record low.

Following the referendum in which Britain voted to leave the EU, the government appears to be pursuing a "hard Brexit", in which economic aims (free trade and membership of the single market) are subordinated to the political priorities of legal sovereignty and reduced immigration. Analysts at UniCredit, an Italian bank, said that "investors are now perplexed by the country's vision on immigration, openness and business friendliness. This will be detrimental to the outlook for sterling given the global status that the UK has enjoyed for many years."

Source: *The Economist*, 20 Oct 2016

Table 1: Quarterly Average Sterling Effective Exchange Rate Index (2005 = 100)

2014				2015				2016			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
85.6	86.9	88.0	87.3	89.4	91.2	92.9	92.2	87.0	85.5	78.8	76.6

Source: Office for National Statistics, United Kingdom

Extract 3: Trade, at what price?

Since the 1980s, America's economy has gradually opened up to cheap imports. This accelerated in 1993 with the signing of the North American Free-Trade Agreement (NAFTA) with Mexico and Canada. The deal eliminated most tariffs on trade between the three countries over a decade. Imports (excluding fuel) from Mexico grew by about five times between 1993 and 2013, according to the Peterson Institute.

In 2001 China joined the World Trade Organisation (WTO). Although this did not change any tariffs, a tsunami of cheap Chinese imports followed. "Made in China" labels became ubiquitous on clothes, toys, furniture and, eventually, electronics as Chinese imports surged from 1% of Gross Domestic Product (GDP) in 2000 to 2.7% by 2015.

In any case, cheap imports were a windfall for American consumers. Excluding food and energy, prices of goods have fallen almost every year since NAFTA. More trade brought more choice, too. Robert Lawrence and Lawrence Edwards, two economists, estimate that trade with China alone put $250 a year into the pocket of every American by 2008 due to cheaper goods. The gains from cheap stuff flowed disproportionately to the less well-off, because the poor spend more of their incomes on goods than the rich.

At the same time, trade created new markets for American firms. In 1993 America sold nearly $10 billion-worth of cars and parts to Mexico, at today's prices. Many American firms have become tightly integrated across the southern border, with low-skilled work done in Mexico and more complex tasks done at home. Exports to China grew by almost 200% between 2005 and 2014, with agriculture and the aerospace and car industries leading the charge. Some workers have benefited from rising exports, because firms that export pay more. Outsourcing low-wage assembly has also increased the productivity of America's high-skilled workers. For example, Apple's ability to assemble its iPhones cheaply in China has made the work of its American designers much more lucrative.

Trade, however, has an acute image problem. Its benefits are hard to perceive directly, spread across various stakeholders: consumers, exporters, and workers. In contrast, its costs are highly concentrated. Cheap imports have been lethal for many American manufacturers, particularly in the mid-western rustbelt and in the South.

The impact of trade on jobs was a growing concern. The sharp decline in American manufacturing employment began in 2000, just as Chinese imports took off. A recent study by Daron Acemoglu, David Autor and others estimated that about 1 million of 5.5 million manufacturing jobs were lost between 1999 and 2011 to Chinese competition.

Many workers displaced by Chinese imports did not simply find another job. Mr Autor and his colleagues have shown that, at the local level, displaced workers are unlikely to move to seek new work. One reason for this immobility could be that the economy is now an unwelcoming place for jobseekers without a university degree.

Source: *The Economist*, 2 Apr 2016

Extract 4: How dairy farmers in Belgium held up a big EU trade deal

Christian Wiertz is a leader of a group of dairy farmers in the Wallonia region in Belgium that single-handedly threatened to derail a landmark accord to deepen commerce between Canada and the European Union. On 14 October, Wallonia's regional Parliament used its veto power to block Belgium from approving the Comprehensive Economic and Trade Agreement (CETA) with Canada, which requires consensus among the 28 nations of the EU.

"Global competition has squeezed small businesses dry," said Mr. Wiertz, a fifth-generation farmer. Selling milk at the world price, according to Mr Wertz, was not commercially viable for them due to their higher costs and taxes compared to the big multinationals.

Source: *The New York Times*, 28 Oct 2016

Table 2: Selected trade indicators (as percentage of GDP), 2016

Percentage of GDP	Belgium	United Kingdom	United States
Exports of goods and services (%)	82.9	28.3	11.9
Imports of goods and services (%)	81.5	30.3	14.7
Current account balance (%)	0.1	- 5.8	- 2.4

Source: World Bank

Questions

(a) **(i)** State what happened to the British pound sterling Effective Exchange Rate Index between Q1 2014 and Q4 2016. [2]

(ii) Using a demand and supply diagram, explain the cause of the trend observed in the Sterling Effective Exchange Rate Index in 2016. [4]

(b) With reference to Table 2, calculate and compare the net income flow (including transfers) in the UK current account balance with that of the US. [2]

(c) Explain how a free trade agreement between the EU and Canada might affect a small dairy farmer in Belgium. [4]

(d) Given that membership in the EU means free movement of goods, labour and capital among member countries, assess the possible impacts of Brexit on the UK economy. [8]

(e) Discuss the factors that determine the extent to which globalisation is beneficial to different countries. [10]

[Total: 30]

Question 2: The Dangers of a Trade War [2020 A' Level Case Study]

Extract 5: International trade data for China, the United States (US) and Singapore

Tables 2, 3 and 4 provide information from the current account of the balance of payments for these three economies from 2013 to 2017.

Table 2: Combined value of exports and imports of goods and services as a % of GDP, 2013–2017

	2013	2014	2015	2016	2017
China	46.6	44.9	39.5	37.0	37.8
US	30.2	30.2	27.9	26.6	–
Singapore	366.0	362.3	329.9	318.4	–

Source: World Bank national accounts data, and OECD National Accounts data files

Table 3: Current account balance as % of GDP, 2013–2017

	2013	2014	2015	2016	2017
China	2.0	2.1	2.7	1.8	1.3
US	−2.4	−2.2	−2.6	−2.4	−2.4
Singapore	16.9	19.7	18.1	19.0	19.5

Source: World Bank national accounts data, and OECD National Accounts data files

Table 4: Singapore: Selected external balances (S$ million), 2013–2017

	2013	2014	2015	2016	2017
Current account balance	62940	73738	77668	81297	84221
Goods balance	95281	107740	123483	118092	116966
Services balance	−9671	−15790	−15889	−6281	−8445

Source: Singstat.gov.sg

Extract 6: US President's tariffs pose a threat to China's economy but it faces a range of other problems as well

US and Chinese officials have made headlines in recent months for their confident predictions of trade war victory, but many experts on Chinese affairs say the problems facing Asia's largest economy go well beyond tariffs.

As the trade war between the US and China becomes more severe, analysts are divided over just how tariffs will impact on China's economy. Some economists say the tariff battle between the world's two largest economies could land a significant blow to the East Asian giant, while others contend that China will be able to cope with the tariff rises imposed by the US.

One problem is that China has long relied on infrastructure investment to drive its economic growth but, as the trade war escalates, it will not be easy for the Chinese government to use public spending to boost investment to compensate for the fall in export revenues. This is because government spending has resulted in persistent budget deficits and rising public sector debt. The world's second-largest economy had a relatively stable level of debt until the financial crisis in 2008 when it spent a huge 12.5% of its GDP to stimulate the economy. The Chinese government has borrowed to fund its spending and has encouraged Chinese banks to lend to the private sector to boost economic growth.

That credit explosion caused worries about financial risks, so the authorities in 2017 pledged to contain the rapid build up in debt. Since then however, Chinese debt-to-GDP has steadily grown to about 250% – or about US$28 trillion. The International Monetary Fund (IMF) issued a strong warning about the country's economy in 2017, warning that debt-fuelled growth is an unsustainable long-term solution.

Chinese authorities had been trying to control the country's rising debt, but as the trade war drags on, China appears to be using investments to boost the economy again.

A further problem is that while China is trying to improve productivity through automation and robotics, the effects of its ageing population are harming the economy. 'Demographic trends could subtract 0.5 to 1 percentage points from annual GDP growth over the next three decades in countries such as China,' the IMF said in a 2017 report. China's one-child policy ended in 2016. Couples are now limited to two children, but there has been speculation that officials are considering scrapping birth restrictions altogether. But decades of limiting couples to having only a single child have led to rapidly falling birthrates. That, along with a corresponding ageing population and shrinking labour force, has implications for the country's economy.

Source: Xin En Lee, CNBC, 24 September 2018

Extract 7: The trade war's impact on China will be insignificant, former central bank governor says

The US President has said he is ready to increase the range of tariffs to all US$506 billion worth of Chinese imports to the US. So far, the US has imposed duties on US$50 billion worth of Chinese goods, and a further US$200 billion more will be imposed this month. China is unable to match the tariff threats because the value of its imports from the US is far less.

The trade war between the US and China will not have a huge effect on the Chinese economy, according to the former Governor of the People's Bank of China (PBOC). 'We used a mathematical model to calculate the negative impact of the trade war. It is not very large and it is not significant. The impact on the Chinese economy will be less than 0.5% of GDP', he stated. He said that China's response would be to quickly re-route goods to other countries. 'The worst case scenario is that China is no longer going to export US$500 billion of goods to the US market and then it is dependent on how quickly China can diversify those export goods to the other countries. I think China could act quickly,' he stated.

In addition, he explained that with economic growth of 6% a year and a floating exchange rate, the Chinese economy was well placed to withstand external shocks.

Source: David Reid, CNBC, 7 September 2018

Extract 8: Singapore warns of big risks if trade wars go on

Export-dependent Singapore has a strong warning for the rest of the world: The damage from a prolonged trade war will be severe. Southeast Asia has found some benefits as their patterns of trade have changed in response to the deepening trade hostilities between the US and China. However, the risk of a protracted conflict should have everyone worried about the state of the global economy, said the Minister for Trade and Industry, Chan Chun Sing.

'In the short term, some countries benefit and some countries lose,' Chan said. 'What is worrying for everyone is that the entire global economy loses confidence.' That would have 'a huge impact' on the financial markets, and could slow down the entire level of economic activity.

It is still early days and that worst-case scenario has not materialised yet. But it is a worry for a small, open economy like Singapore's, where exports amounted to 173% of gross domestic product last year. The city-state finds itself in the crossfire as two of its four biggest trading partners engage in a trade war which threatens to disrupt global supply chains.

With the global economy already facing a potential cyclical downturn in the next few years, it would be made worse by a trade-related sharp fall in confidence. There are already troubling signs in Asia where surveys showed a decline in manufacturing confidence in September, signalling weaker activity stemming from the US–China tensions.

Chan said Singapore's economic fundamentals are 'still alright' and fluctuations in the data can be expected. 'There are some cyclical factors. The concern is the longer-term structural shifts.' For now, the economy is still growing steadily, with economists forecasting growth of about 3.2% this year, compared with 3.6% in 2017.

Some economists, however, are predicting an all-out trade war, with the US slapping higher tariffs on all Chinese imports. Some estimates predict that a slowdown in China leading to weaker export growth will spill over to the rest of Asia and cut the region's GDP growth rate extensively.

In order to weather that storm, the Singapore government sees two tasks at hand: keeping the global trading system open and working domestically to make the economy more resilient. 'We need to work with like-minded partner countries to uphold the global trading system, to continue to have free-trade agreements either bilaterally or multilaterally and to make sure that the global trading system remains open, free and rules-based,' Chan said.

He added that the country of 5.6 million people needs to continue to recycle its factors of production efficiently from the less-productive sectors to the more-productive sectors – this might include re-training workers for entry into newer markets such as financial technology – and to welcome foreign workers who will contribute to the more productive parts of the labour market.

Source: Todayonline, 5 October 2018

Questions

(a) With reference to Table 4, state the **two** components of Singapore's current account, other than the goods and services balance. [2]

(b) Using a production possibility curve diagram(s), explain the likely impact of the change in the labour force described in Extract 6 upon China's economic growth. [2]

(c) With reference to Extract 7, explain why it might be claimed that a floating exchange rate means that the Chinese economy 'was well placed to withstand external shocks'. [4]

(d) Explain **two** factors that will determine the impact upon the US balance of trade if China raises tariffs on imports from the US. [4]

(e) Explain how supply-side policies aimed at Singapore's labour market could 'make the economy more resilient' and consider how likely they are to be successful. [8]

(f) Discuss whether an open economy such as that of Singapore would gain or lose from an ongoing US-China trade war. [10]

[Total: 30]

Section C: Essays

Question 1 [2015 A’ levels]

“While Singapore's economic restructuring efforts have borne fruit, it is a marathon with no finish line. We are not done. I don’t think we’ll ever be done. Ten years from now, I’m sure we’ll still be talking about productivity growth and upgrading.” - Prime Minister Lee Hsien Loong

Todayonline, 11 June 2019

(a) Explain why an economy’s comparative advantage might change over time. [10]

(b) Assess the measures adopted by the Singapore government to improve the economy’s global competitiveness. [15]

Question 2 [2018 A’ Levels]

(a) Describe two different types of protectionist policy measure and explain how each type would affect trade. [10]

(b) Discuss the extent to which protectionism would be beneficial to an economy. [15]

Question 3 [2022 A ‘levels]

Singapore’s Prime Minister has stated that Globalization will be under pressure but it is imperative for countries to cooperate, for business to operate across many geographies, to tap resources, to bring skills and talents and experiences together, and then serve markets all around the world.

(a) Explain the benefits and costs of globalisation to Singapore. [10]

(b) Discuss the most appropriate policy measures that the Singapore government should take to increase the benefits and reduce the cost of globalisation. [15]

Question 4 [2019 A ‘levels]

Globalisation has been a major influence on Singapore’s economic performance. The uncertainty and instability happening around the world in recent years could threaten the economic benefits that globalisation brings.

Source: BBC News, Globalisation, Key Facts: The Global Economy

(a) Explain two different factors that have enabled globalisation to occur. [10]

(b) Discuss the most appropriate policy measures that Singapore government should take in the face of countries retreating from globalisation. [15]

Optional Question [TJC 2022 Prelim]

Recently, many countries implemented export bans on food products such as grains and meat. When countries ban exports, this can cause soaring prices, presenting potential risks to Singapore's economy.

Source: International Food Policy Research Institute

(a) Explain the likely consequences of export bans on both the exporting **and** importing countries. [10]

(b) Assess the extent to which the Singapore government can manage the harms of export bans by other countries on her economic performance. [15]