



TEMASEK JUNIOR COLLEGE

2023 JC2 PRELIMINARY EXAMINATIONS

Higher 2



ECONOMICS

9570/01

Paper 1

23 August 2023

2 hours 30 min

Additional Materials: **two 12-page** answer booklets

READ THESE INSTRUCTIONS FIRST

Answer booklets will be provided with this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

Answer **all** questions.

Indicate the question number clearly in your answers.

Start Question 1 and Question 2 on separate answer booklets.

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

Question 1: The Future of Food in Singapore

Extract 1: Why cloud kitchens are disrupting the Food & Beverage sector

As technology rapidly advanced, so did innovation within the food and beverage (F&B) sector. Third-party apps like Uber Eats have made ordering out easy with just a click of a button. It is with the advancement of this technology that has allowed new businesses like cloud kitchens to thrive. A cloud kitchen is basically a commercial kitchen optimized for food delivery. What that means is that you can have your restaurant ready for takeout orders, without ever needing a dine-in space. One of the major reasons to pivot toward cloud kitchens is the pandemic. As restaurateurs struggle to find ways to succeed in the new normal, consumer behaviour has also shifted radically. Consumers are no longer comfortable with dining out, and many are tired of cooking at home.

Adapted from *Forbes.com*, 29 Sep 2020

Extract 2: F&B firms not easing off on delivery despite strong dine-in recovery

In the two months since many Covid-19 rules in Singapore were relaxed, F&B outlets have seen a strong recovery for dine-in but have no plans to wind down delivery efforts. This is because delivery sales, their lifeline during the pandemic, have become a key pillar of business, serving up convenience that customers can no longer do without. During the pandemic, restrictions battered dine-in sales, leading eateries to beef up their delivery arms, such as by tying up with platforms or setting up cloud kitchens. Ms Lee, the co-founder of Poke Theory, hopes to grow the delivery business, as “customers are just used to the convenience now as people get too used to ordering delivery. I think it’s never going to be replacing dining out, but it’s a part of life now.”

Source: *Channelnewsasia*, 1 July 2022

Extract 3: Fifth of global food-related emissions due to transport

Food transport constitutes 19 per cent of food emissions, equivalent to 6 per cent of emissions from all sources, research finds. This is up to seven times higher than previously estimated, and far exceeds the transport emissions of other commodities. The study estimates global food systems, due to transport, production, and land use change, contribute about 30 per cent of total human-produced greenhouse gas emissions. So, food transport – at around 6 per cent – is a sizeable proportion of overall emissions. Cloud kitchens may play a part in addressing this. The more kitchens that share a location, the greater the chances of a rider consolidating several orders to the same area, which would reduce the delivery miles per meal compared with delivering from several individual takeaway sites. Researchers also say that among affluent countries especially, the biggest food transport emitters per capita, eating locally grown and produced food should be a priority.

Adapted from *The University of Sydney*, 21 June 2022 and *Financial Times*, 2021

Extract 4: Strengthening food security in Singapore

Having to import more than 90 per cent of its food for its population of almost six million, land-scarce Singapore is subjected to the volatilities of the global food market, including export bans and disruptions to transport routes. The Covid-19 situation has brought the issue of food security – access to safe and nutritious food – into sharper focus.

Beside working to ensure food supply continuity as countries shut down their borders, Singapore has also set its sights on raising its local food production. The "30 by 30" goal aims to increase the cultivation of vegetables and boost the production of protein sources to 30 per cent of Singapore's nutritional needs locally by 2030. Authorities also established a \$30 million grant to support local farmers to ramp up local production of eggs, vegetables and fish.

There has also been growing focus on food waste. When food is wasted, more food has to be sourced to meet the food demand and this affects our food security. A 2016 household waste study on the amount of waste disposed found that food waste accounted for about half of the waste disposed of by each Singapore household a day. Of this, more than half of the food waste could have been prevented through actions such as not over-ordering, over-buying or over-cooking. A Food Waste Reduction outreach programme was launched to encourage the adoption of smart food purchase, storage and preparation habits that help to educate consumers on reducing food wastage.

Adapted from Singapore Food Agency and The Straits Times, 2020

Extract 5: GrabFood's three technology strategies

Grab prepares three technology strategies to dominate market share in Southeast Asia. First, provide a local touch in which the display on the application page is different in each country. "This is so that the platform can focus on customer interest based on the consumption patterns of each country," said the Head of Engineering Deliveries, Mr Kuang. In addition, content on various displays, such as banners and images also adjusts for a local touch. Second, to provide recommendations for alternative order options to consumers. If the user is unable to find the food he is looking for, the application will look for similar merchant partners based on the similarity of keywords on the menu. Third, personalised applications. Apart from recommendations, Grab is also developing the ability to make applications closer to users, based on the things they like, tapping on artificial intelligence.

Such strategies may be key with the looming changes for the gig economy – a labour market that relies heavily on temporary and part-time positions filled by independent contractors and freelancers rather than full time permanent employees. In Singapore, measures bolstering CPF savings of gig economy workers will be rolled out in 2024. Unlike regular employees, who contribute 20 per cent of their wages to their CPF while their employers contribute 17 per cent, neither platform workers nor their platform companies need to contribute to CPF ordinary or special accounts. Under the new regulations, gig workers under age 30 will also be required to contribute to these accounts to ensure they have enough savings for housing and retirement. But the recommendation has been met with considerable concerns. Dr Walter Theseira, an associate professor of economics explained that this would cause "significant changes to consumer prices, take-home wages and platform operating costs" adding, "It is not practical to implement this overnight, all at once."

Adapted from Channelnewsasia, 2021 and Mime.asia, 2019

Table 1: Revenue of Grab Holdings Inc.'s delivery services (in USD millions)

	2020	2021	2022
Grab Holdings Inc's revenue from delivery services	5	148	663

Source: *Statista*, 2023

[Turn Over

Questions

- (a) Using the marginalist principle, explain why a rational working adult would choose to purchase food via UberEats. [3]
- (b) Given how “customers are just used to the convenience now” (Extract 2), explain how the price elasticity of demand for food delivery services has changed during the pandemic. [3]
- (c) (i) Explain why there is allocative inefficiency in the market for food delivery services. [4]
 - (ii) With reference to Extract 3, explain how the establishment of cloud kitchen addresses allocative inefficiency in food delivery services. [2]
- (d) With reference to Extract 4, discuss the effectiveness of the policies implemented by the Singapore government to improve food security. [8]
- (e) With reference to the case material, discuss whether food delivery firms such as GrabFood can continue to remain profitable. [10]

[Total: 30]

Question 2: A more inward-looking China and the Russian-Ukraine Conflict

Table 2: GDP growth (annual %)

Year	United States	China	Singapore
2017	2.2	6.9	4.5
2018	2.9	6.7	3.6
2019	2.3	6.0	1.3
2020	- 2.8	2.2	-3.9
2021	5.9	8.4	8.9
2022	2.1	3.0	3.6

Source: *World Bank*, 2023

Extract 6: The regional impact of Russian's invasion of Ukraine

The ongoing war in Ukraine has dimmed prospects of a post-pandemic economic recovery for emerging and developing economies in Europe and Central Asia, says the World Bank's Economic Update. Energy price shocks continue to impact the region. So far, however, the region has weathered the storm of Russia's invasion of Ukraine better than previously forecast. Regional output is now expected to contract only by 0.2% this year due to the prudent extension of pandemic-era stimulus programs by some governments.

Source: *World Bank*, 2023

Extract 7: Why a more inward-looking China is bad news for the world economy

Ever since the 2008 global financial crisis, when the West's reliability as a trading partner was thrown into question, self-reliance has become a more decisive organising principle for Chinese officials. As a result, the export-dependent growth model on which China built its economic rise in recent decades has been fraying. Exports as a share of China's GDP peaked at 35 per cent in 2007 but had fallen to around 20 per cent by last year, a level not seen since before China's accession to the World Trade Organisation in 2001. This shows that net exports no longer make any meaningful contribution to Chinese GDP growth.

Although China's inward tilt towards self-reliance may have started out as a response to purely economic phenomena – the post-crisis global recession, belt-tightening in the West, the eurozone crisis, and a general softening of global trade growth in the post-crisis years – China's more inward-looking development path became clear in its response to the aggressive tariffs and export controls introduced by the Trump administration in the US.

The more obvious result of China's inward-looking approach is a rebalancing of China's economy away from a reliance on external demand as a stimulus to growth ('international circulation') towards increased self-dependence ('domestic circulation'). China is reducing its economic dependence on the West by reshaping trade and investment links. A greater push has been made for 'stronger, better, and bigger' state-owned enterprises (SOEs) and the past five years have indeed seen a measurable rise in the role that SOEs play in the Chinese economy. These firms now account for more fixed investment in the economy than private foreign firms, for the first time since 2005.

[Turn Over

Since its dependence on imported technology, food, and fossil fuels, has created a substantial strategic vulnerability, Chinese policymakers will likely attempt to build up the country's ability to supply its own semi-conductors, food, and green energy source over the next few years. This all amounts to a more inward-looking Chinese economy that is more dependent on internal factors rather than external factors for its growth. For China itself, growth is likely to suffer, since there is a wealth of analysis to suggest that the efficiency of SOE-led investments is lower than that of foreign direct investments. For the rest of the world, a China that is more inclined to buy its own stuff than import also that means other countries will receive less of a boost to their economic activity per unit of China's GDP. And that is bad news for the world economy.

Source: Adapted from *Chatamhouse.org*, 2022

Extract 8: Russia-Ukraine conflict has a limited impact on China's food prices

China's emphasis on its own food production and security helps mitigate the impact of the Russia-Ukraine conflict on domestic food prices, analysts said. Notably, China is the world's second-largest consumer of corn, but only 9.4% of domestic corn consumption in 2021 came from imports. Only 5.9% of China's wheat consumption last year was imported. China has boosted agriculture production at home and expanded the sources of imported food.

However, soybeans are the only major crop for which China relies heavily on imports — 84% of domestic consumption in 2021, mostly from the U.S. and Brazil. Soybean prices have climbed as traders worry that a shortage of sunflower oil from Ukraine might boost demand for other vegetable oils, said chief executive officer of the U.S. Soybean Export Council.

Source: CNBC, 3 March 2022

Extract 9: The impact of Russia-Ukraine conflict on Singapore

Global supply chains had already been hammered by the Covid-19 related challenges and have been further dislocated by geopolitical tensions such as the Russia-Ukraine conflict. Tensions between the two countries could impact the global economy and contribute to rising living costs. Singapore is no exception.

Russia is the world's second-largest oil exporter. As the conflict worsened, it triggered an energy crisis, driving up oil and gas prices. Oil refining produces gasoline and natural gas, which are widely utilised in energy generation in many nations, including Singapore, which relies mainly on natural gas for power generation. Russia and Ukraine are also major exporters of metals and minerals. Supply disruptions in these commodities might have a big impact on the manufacturing industry, which makes stainless steel, sensors, transistors, and chips.

The situation in Ukraine has influenced inflation expectations, with prices of food staples such as wheat and corn skyrocketing. Ukraine is the world's third-biggest maize exporter and fourth-largest wheat exporter, with Russia being the world's largest wheat exporter. In January, food inflation was one of the critical causes of increasing consumer prices in Singapore.

Source: *Nexia Singapore*, accessed 19 July 2023

Questions

- (a) Using Table 2, summarise the main features of Singapore's growth rates compared to other countries. [2]
- (b) Explain how inflation rates and real GDP growth rates are related. [2]
- (c) Using an aggregate demand and aggregate supply diagram, explain how China "that is more inclined to buy its own stuff" (Extract 7) might affect economic growth in Singapore. [4]
- (d) Account for the climb in soybean prices as seen in Extract 8. [4]
- (e) Discuss whether China should rely more on domestic or external factors to boost its growth rates further. [8]
- (f) In the light of the Russian-Ukraine conflict, and China turning inwards, discuss how Singapore can boost its economic performance. [10]

[Total: 30]

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