



JURONG PIONEER JUNIOR COLLEGE

JC2 Preliminary Examination 2024

ECONOMICS

8843/01

Higher 1

26 August 2024

Paper 1

3 hours

Additional Materials:
Answer Booklets

READ THESE INSTRUCTIONS FIRST

Two 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.

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

If there are part questions you did not attempt, please write the question number and part in the margins before you submit your answers. (*i.e. if did not complete 2b, indicate 2b in the margin of the answer script that you submit for question 2.*)

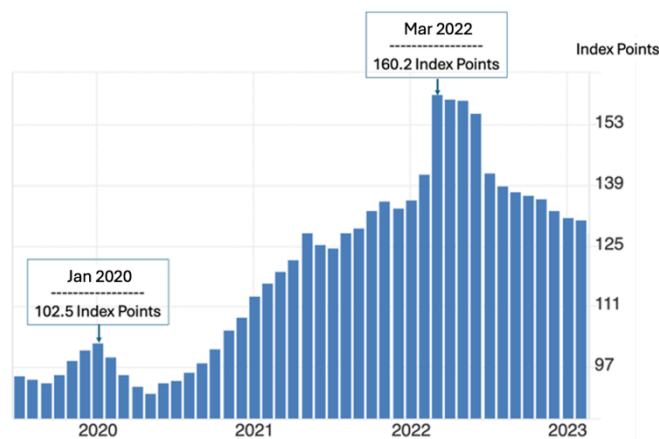
Question 1: Rice and Food Security

Extract 1: World food prices hit record high in 2022

Food prices surged after Russia's invasion of Ukraine in February last year on fears of disruptions to Black Sea trade. Russia and Ukraine are major exporters of wheat, corn, barley and sunflower oil via the Black Sea, and Moscow's invasion of its neighbour has stalled Ukrainian exports. The disruption caused by Russia's invasion of Ukraine raised concerns of shortages, sent the U.N. food agency's average price index to the highest level on record. The Food and Agriculture Organisation's (FAO) food price index tracks international prices of the most globally traded food commodities, averaged 143.7 points in 2022, up 14.3% from 2021, and the highest since records started in 1990, the agency said on Friday. The index had already gained 28% in 2021 from the previous year as the world economy recovered from the impact of the pandemic.

Source: adapted from Reuters, 6 January 2023

Figure 1: World Food Price Index



Source: <https://tradingeconomics.com/world/food-price-index>

Extract 2: Thailand had sought rice price pact with Vietnam to boost 'bargaining power'

Thailand and Vietnam were in talks on a pact to raise the price of their rice exports to improve farmer incomes (profits), a Thai government official said on Friday. Agriculture officials from Thailand and Vietnam, the world's second and third biggest rice exporters, met in Bangkok on Friday to discuss joint measures to support their farmers and rice industries and manage growing production costs. The rice price had been low for more than 20 years while the cost of production had been increasing.

Source: adapted from Reuters, 27 May 2022

Extract 3: Global rice shortage is set to be the biggest in 20 years

From China to the U.S. to the European Union, rice production is falling and driving up prices for more than 3.5 billion people across the globe, particularly in Asia-Pacific. The global rice market is set to log its largest shortfall in two decades in 2023. At the global level, the most evident impact of the global rice deficit has been, and still is, decade-high rice prices.

Source: adapted from <https://www.cnn.com/2023/04/19>, accessed 2 June 2024

Extract 4: Strained rice supplies

In the second half of last year, swaths of farmland in the world's largest rice producer China were plagued by heavy summer monsoon rains and floods. The accumulated rainfall in the country's Guangxi and Guangdong province, China's major hubs of rice production, was the second highest in at least 20 years. Similarly, Pakistan which represents 7.6% of global rice trade saw annual production plunge 31% year-on-year due to severe flooding, that also affected most parts of the country in 2022. In addition to tighter supply challenges, rice became an increasingly attractive alternative following the surge in price of other major grains since Russia's invasion of Ukraine in February 2022. The resulting rice substitution has driven up demand.

The global rice production deficit situation will increase the cost of importing rice for major rice importers such as Indonesia, Philippines, Malaysia and African countries in 2023. Many countries will also be forced to draw down their domestic stockpiles. Countries most affected by the deficit would be those already suffering from high domestic food price inflation such as Pakistan, Turkey, Syria and some African countries.

Source: adapted from <https://www.cnbc.com/2023/04/19>, accessed 2 June 2024

Extract 5: Can Vietnam grow greener rice?

Rice – Asia's principal staple – is to blame for around 10 per cent of global emissions of methane, a gas that over two decades traps about 80 times as much heat as carbon dioxide. Usually associated with high levels of methane are also generated by bacteria that grow in flooded rice paddies and thrive if leftover straw rots in the fields after harvest. The message from scientists is: Rice cannot be ignored in the battle to cut emissions.

A programme – organised by the International Rice Research Institute (IRRI) – is trying to steadily shrink methane emissions from rice production. This programme requires the farmers in Vietnam to upon harvesting, push carts overflowing with straw bales that will later be soaked and laid out to grow straw mushrooms. Once the fungi are ready they will be sold before the farmers take back the straw and funnel it into a composting machine. Two months later it will be ready and can be sold for around 15 cents a kilogram. Vietnam's environment ministry says irrigated rice accounted for almost half of methane emissions in 2019. Climate-friendly straw management has been introduced and spread "widely to farmers and local agricultural officials" throughout the country, according to CGIAR, an international agricultural research centre. How many practise what they have learned is unclear. In 2022, the World Bank said that more than 80 per cent of rice straw in the Mekong Delta is still burned in the fields after harvest.

Source: The Straits Times, 24 March 2023

Extract 6: High-tech farming 'toolbox' can help Singapore weather future food supply challenges

Food security is the state of having reliable access to a sufficient quantity of affordable, nutritious food. It is crucial for public health, economic stability, and social harmony, particularly in nations like Singapore that depend heavily on food imports, ensuring resilience against global supply disruptions and maintaining sovereignty over their food supply.

Developing a "toolbox" of high-tech farming solutions in Singapore will equip the country with the capabilities it needs to scale up local production when the need arises, even if such strategies are not be deployed immediately, Trade and Industry Minister Chan Chun Sing

said. According to Minister Chan, once Singapore has built such capabilities, then when the conditions necessitate it, we can scale up our capacity (for local production). For instance, if demand for locally produced food goes up because of natural causes, another outbreak of an infectious disease, or because of export restrictions that disrupt supply chains, Singapore will have the know-how to increase production.

The global food system is facing multiple challenges and there is a need to grow more affordable, high-quality food to feed a growing global population in a sustainable way. Ensuring the resilience of supply chains is also crucial. The Republic now banks on three strategies to safeguard its food supply - importing from a diversity of countries and jurisdictions, boosting local production, and maintain adequate stockpiles of essential food items that can meet our nutritional needs during a severe food supply disruption or emergency.

The contribution of each strategy to overall food supply depends on Singapore's security needs at that point, as well as the associated costs and opportunities of each. For instance, during peacetime, Singapore is able to count on its multiple sources of foreign imports. But even then, the country will still invest in developing its local agri-tech capabilities. This approach of building up a portfolio of different technologies will also allow Singapore to find the most appropriate solution to scale up capacity when needed. In 2019, Singapore set a "30 by 30" goal to produce 30 per cent of its nutritional needs with local food by 2030. Currently, more than 90 per cent of the nation's food is imported.

Source: adapted from The Straits Times, 17 March 2021

Questions

- (a) (i) With reference to Figure 1, describe the changes in the world food price for the period from January 2020 to January 2023. [2]
- (ii) With the aid of a diagram, account for the extent of the change in world food price in March 2022. [5]
- (b) Using the concept of Production Possibility Curve (PPC), explain the likely impact of 'severe flooding' (Extract 4) on the Pakistan economy. [4]
- (c) Extract 2 mentions that Thailand and Vietnam are in talks on a pact to raise the price of their rice exports to improve farmer incomes (profits). [6]
- Comment on the effect of an increase in price of rice exports on farmer incomes, taking into account the rising costs of production and the implications of price elasticity of demand.
- (d) Rice cultivation is one of the main crops grown in Vietnam, which is one of the world's top rice producing countries. With reference to Extract 5: [5]
- (i) Explain why there is an inefficient allocation of scarce resources in the market for rice. [5]
- (ii) Discuss whether the government should support the proposed method of climate-friendly straw management by the private research institute. [8]
- (e) Achieving food security is among the objectives of the Singapore government. [10]

Discuss the view that achieving food security should be the priority of the Singapore government.

[Total: 40]

Question 2: Navigating Economic Turbulence

Extract 7: World economic outlook 2022

Global economic activity is experiencing a broad-based and sharper-than-expected slowdown, with inflation higher than seen in several decades. The cost-of-living crisis, Russia's invasion of Ukraine, and the lingering COVID-19 pandemic all weigh heavily on the outlook. Global growth is forecast to slow from 6.0 percent in 2021 to 3.2 percent in 2022 and 2.7 percent in 2023. This is the weakest growth profile since 2001 except for the global financial crisis and the acute phase of the COVID-19 pandemic. Global inflation is forecast to rise from 4.7 percent in 2021 to 8.8 percent in 2022. Both monetary and fiscal policy should stay the course to restore price stability. Structural reforms can further support the fight against inflation by improving productivity and easing supply constraints, while multilateral cooperation is necessary for fast-tracking the green energy transition and preventing fragmentation.

Source: International Monetary Fund (IMF) accessed 11 July 2024

Figure 2: Annual growth rates (%) in selected countries 2018 – 2022

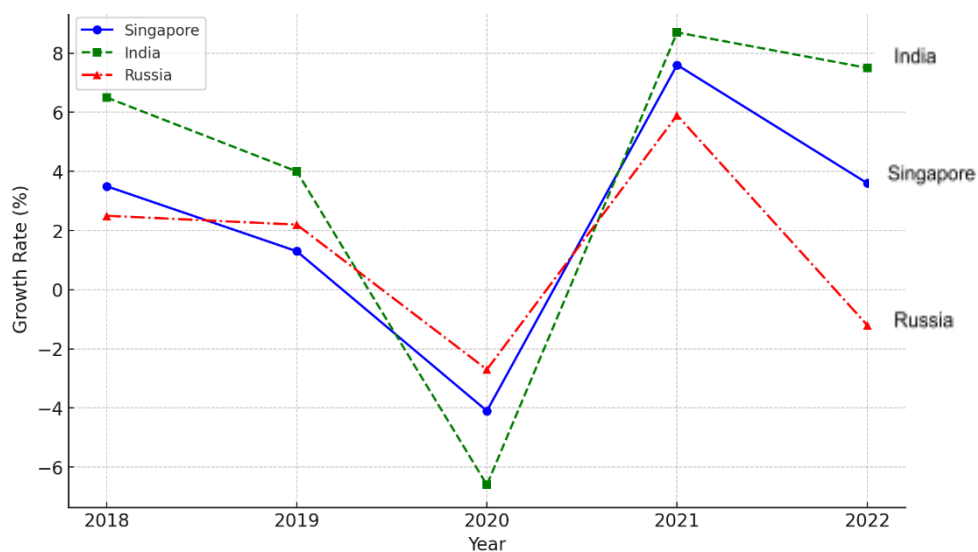


Table 1: Selected economic indicators for India and Russia, 2018 – 2022

India	2018	2019	2020	2021	2022
Inflation (annual %)	3.4	3.7	6.3	5.1	6.7
Unemployment, total (% of total labour force)	6.1	5.8	7.1	5.9	6.4
Youth Unemployment rate (%) 15 – 24 years	22.8	23.1	27.3	25.5	24.9
Population growth (annual %)	1.04	1.00	0.96	0.92	0.91
Life expectancy at birth, total (years)	68.8	69.0	69.4	69.6	69.8
Literacy rate (%)	74.4	74.9	75.2	75.5	76.0
Russia	2018	2019	2020	2021	2022
Inflation (annual %)	2.9	3.0	4.9	5.0	7.4
Unemployment, total (% of total labour force)	4.8	4.6	4.6	5.2	5.0
Youth Unemployment rate (%) 15 – 24 years	14.5	13.7	13.5	14.4	14.0

Population growth (annual %)	-0.1	-0.5	-0.6	-0.7	-0.6
Life expectancy at birth, total (years)	72.6	73.0	73.2	73.4	73.6
Literacy rate (%)	99.7	99.7	99.7	99.7	99.7

Source: World Bank, 2024

Extract 8: Russia's Economy at the End of 2022: Deeper Troubles

In 2022, Russia's economy faced severe challenges due to the combination of its invasion of Ukraine and the resulting international sanctions. These sanctions targeted crucial sectors such as finance, energy, and technology, leading to disrupted trade, reduced foreign investment, and financial isolation. The sanctions caused shortages of essential goods and technology, significantly hampering industrial production. The European Union's reduction in reliance on Russian energy further impacted the economy, despite Russia's attempts to redirect exports to other markets. This resulted in a significant GDP decline, with estimates suggesting a contraction of 2.5% to 4.5%.

Inflation surged due to supply chain disruptions and increased import costs, causing volatility in the ruble. The central bank implemented monetary policies to control inflation. Additionally, increased military spending diverted resources from other economic activities, straining government finances. The mobilisation for the war and the emigration of many Russians affected the labour market, leading to decreased consumer confidence and spending.

While the pandemic highlighted the vulnerabilities of "just-in-time" supply chains, the economic fallout from the war between Russia and Ukraine has underlined the additional risks in such a system. Globalisation is not dead, and world manufacturing and commerce will continue. But the new geo-political environment will affect future investors decision-making. Cost savings will be more closely scrutinised against risk. De-globalisation means increased prices, at least in the short run, adding to inflationary pressures.

"Just-in-time" supply chains refer to a strategy in manufacturing and logistics where goods are produced or delivered exactly when they are needed in the production process, rather than being held in inventory.

Source: RAND.org, November 7, 2023

Extract 9: India stares at high youth unemployment despite positive growth

Despite sluggish global growth, India achieved a noteworthy 7.5% growth rate in 2022. However, the world's most populous country despite having the world's largest youth population, struggled to provide adequate employment opportunities for its millions of young entrants into the job market each year. In response, the government has ramped up spending on infrastructure like roads and bridges to stimulate the economy and create jobs. Nevertheless, youth unemployment persists as automation and artificial intelligence adoption picks up pace, many roles in IT are becoming increasingly redundant, a trend not unique to India.

The mismatch between skills and job opportunities exacerbates youth unemployment, with many graduates trained in IT skills while job growth occurs in sectors like manufacturing. For example, positions requiring AI skills in manufacturing increased significantly, yet there remains a perception among youth that IT careers are superior. This perception may prevent them from pursuing emerging opportunities in other sectors.

Analysts worry that extended youth unemployment could reduce future earnings and exacerbate societal problems like increased crime and poorer health outcomes. Despite investing in higher education, many young Indians are stuck in low-skilled, poorly paid jobs

out of economic necessity. High youth unemployment also represents lost economic potential as well as strains government finances due to increased spending on support programmes.

Source: adapted from CNBC Report 2022, 3 April 2024

Extract 10: Singapore must transform 'troubled environment'

Singapore cannot escape global headwinds from developments such as the Russia-Ukraine crisis and must instead transform itself to make a living even in such circumstances, said Prime Minister Lee Hsien Loong.

In the year ahead, Singapore must brace itself for the 'troubled environment' of persistently high inflation, the tightening of monetary policy by global central banks, and weaker global growth - with the possibility of a recession in the next two years, he said. The Russia-Ukraine war will further exacerbate the trend of countries pulling back from free trade, making things harder for Singapore, with its heavy dependence on international trade and investment, said Lee. "More immediately, Singaporeans are already feeling the impact of the war on the cost of living," he said, noting that inflation was already a problem before the war, but has worsened due to the global energy crunch and disruption to food supplies.

The government is doing all it can to cushion the impact, with support for households, tighter monetary policy to reduce imported inflation, and efforts to secure food and energy supplies, he said. As part of the support for households, the government has provided a cost-of-living (COL) Special Payment to provide more support for lower- to middle-income groups. There are also Public Transport Vouchers and Community Development Council (CDC) vouchers which can be spent on a wide variety of items.

However, such government support helps in the short term but does not solve the problem in the long-term. The fundamental issue is higher energy and food prices; and the fundamental solution is for the workers and economy to be more productive, transform, and grow the economy, so that incomes can go up, he said.

Larger countries can turn inwards, relying more on domestic markets and producing more onshore, even at an economic cost - but that is not a choice for Singapore, said Lee: "Our strategy can only be one - and that is to stay open, to make our economy stronger, more resilient, and to keep on seizing opportunities for growth, developing new capabilities and becoming a more competitive economy."

"Because if we do that, then despite the uncertain climate, despite the pressures against globalisation, investors will still find it worthwhile to put their projects in Singapore, our exports will still find foreign markets, and we can still earn a living for ourselves in the world."

Source: Adapted from The Business Times, 1 May 2022

Questions

- (a) With reference to Figure 2, which country showed the greatest variation in growth rate? [1]
- (b) With reference to Table 1 and Figure 2, what can you conclude about the economic performance of Russia in 2022? [4]
- (c) With reference to Extract 8 and using an AD/AS diagram, explain how international sanctions and supply chain disruptions can affect Russia's growth rate in 2022. [5]
- (d) Extract 9 states that as automation and artificial intelligence adoption picks up pace, many roles in IT are becoming redundant - a phenomenon that's not restricted to India.
- (i) Explain why automation and artificial intelligence in India may benefit some groups of workers more than others. [4]
- (ii) Explain **one** negative impact of increased youth unemployment in a country such as India. [2]
- (e) Comment on the view that India's living standards has risen over time. [6]
- (f) Using Extract 10 and AD/AS analysis, assess the extent to which monetary policy centred on exchange rate would dampen price pressures from domestic and external sources in Singapore. [8]
- (g) Discuss how fiscal measures can be used to achieve inclusive growth in light of the 'troubled environment' faced by Singapore (Extract 10). [10]

[Total: 40]

– End of Paper –