RAFFLES INSTITUTION
2022 YEAR 6 TERM 2 TIMED PRACTICE
Higher 2

ECONOMICS 9757/01

Paper 1 Case Study Questions **March 2022**

2 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name, index number and civics class 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 diagrams, graphs or rough working.
Do not use paper clips, highlighters, glue or correction fluid.

Answer all questions.

The number of marks is given in brackets [ ] at the end of each question or part question.
Start each Case Study on a fresh sheet of paper.
At the end of the examination, fasten your answers to Case Study 1 and Case Study 2 separately.
Detach this cover page and secure it in front of answers to Case Study 1.

Name: _____

Civics Class: _____

Economics Tutor: _____

Question	Marks
1	/25
2	/25

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Question 1: Electricity Market

Background

The electricity market consists of the wholesale electricity market and the retail electricity market. Power generation companies bid to sell electricity in the wholesale electricity market while electricity retailers buy electricity in bulk from the wholesale electricity market and compete to sell electricity to consumers in the retail electricity market.

Extract 1: Volatile global market conditions

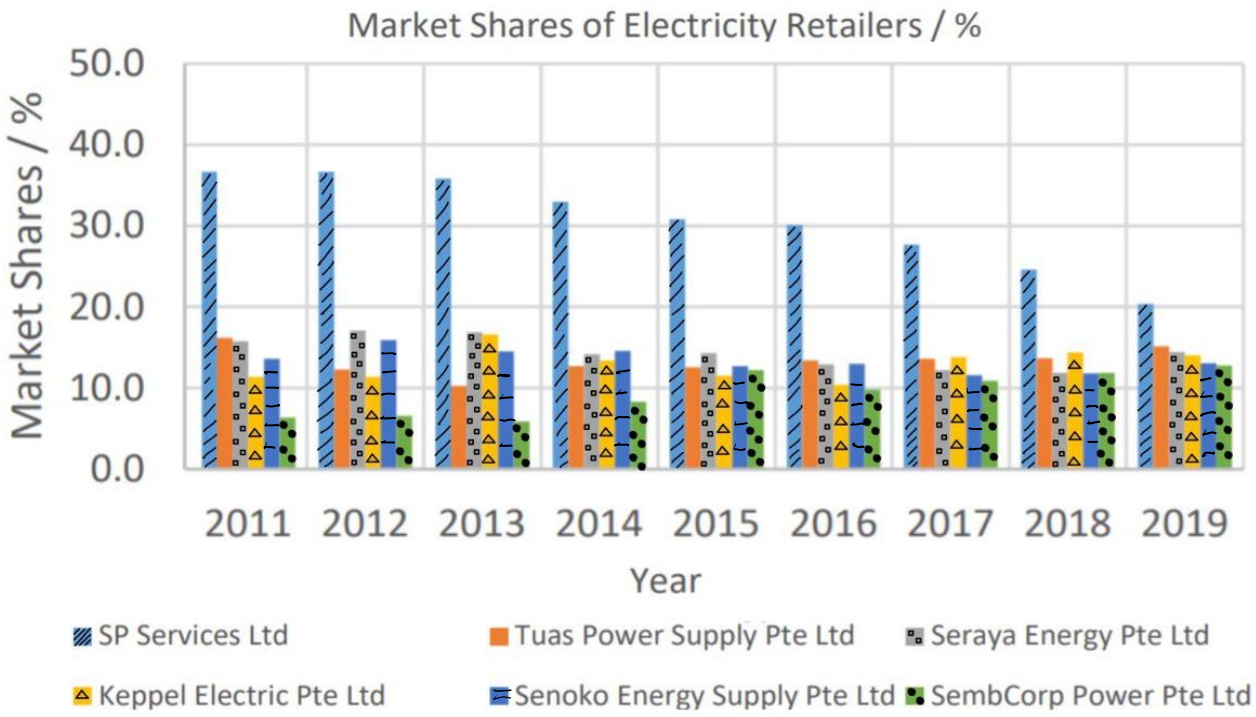
Climbing electricity prices in Singapore come amid an unfolding global energy crisis in recent weeks, with reports of the soaring costs of gas supply chain disruptions worldwide.

Demand for natural gas is further fueled by the gradual resumption of activities in post-COVID-19 economies, which have reached their vaccination targets. Furthermore, global gas reserves have been shrinking due to the increase used of heating by residential and commercial consumers brought about by unexpected harsh winter conditions.

Given that natural gas accounts for more than 95 per cent of electricity generation in Singapore, the developments in the natural gas market would have a huge impact on electricity prices in Singapore.

Adapted from: The Straits Times, 2021

Table 1: Market share of Electricity Retailers in Singapore between 2011 and 2019



Source: Energy Market Authority Singapore, 2019

Extract 2: Liberalising the Electricity Retail Market in Singapore

Previously, households and businesses had to purchase their electricity at a regulated electricity tariff price. The electricity retail market is liberalised to form the Open Electricity Market in 2018 to spur competition between power companies and to ultimately reduce energy prices and offer more choices and flexibility when buying electricity for consumers. Through the issue of more licenses, potential electricity retailers can enter and compete with incumbent retailers.

Yet, despite greater choice of customised product offerings and overall lower prices, more than half of consumers are still reluctant to switch to other providers.

While liberalisation ensures that incumbent firms and future entrants to the electricity retail market will have a strong incentive to keep electricity prices competitive, retailers must still be able create a margin between purchasing energy and re-selling electricity to remain profitable.

Adapted from: Various sources, 2019 and 2020

Extract 3: Consolidation of market despite attempt at liberalisation

The prospect of surging energy prices for the next few years and a severely diminished ability to effectively safeguard against volatile conditions are what spurred the departure of two retailers, iSwitch and Ohm Energy, from Singapore's Open Electricity Market. Such retailers offered fixed price plans that promise to sell electricity at a cheap price without sufficiently ensuring that they would be able to purchase this electricity at low prices from the wholesale electricity market.

Independent retailers also had to compete in a saturated Singapore market - with 12 retailers for 1.4 million residential households - and for some of them, at the disadvantage of not having their own power generation assets or backed by their own power generation company that generates and sells electricity in the wholesale electricity market.

In some other countries, electricity retailers are known to go beyond electricity to provide anything from energy management solutions to broadband and heating. These additional offerings improve the stickiness of their customer base and increase revenue per customer. Therefore, to stay relevant, competitive and profitable in the long run, retailers will need to reinvent their business model and offer more value-added and diverse services to consumers.

Adapted from: The Straits Times, 2021

Extract 4: The push for renewable energy

The growth of the world’s capacity to generate electricity from solar panels, wind turbines and other renewable technologies is on course to accelerate over the coming years, with 2021 expected to set a fresh all-time record for new installations, the International Energy Agency says in a new report.

By 2026, global renewable electricity capacity is forecast to rise more than 60% from 2020 levels to over 4,800 gigawatts– equivalent to the current total global power capacity of fossil fuels and nuclear combined. Renewables are set to account for almost 95% of the increase in global power capacity through 2026, with solar energy alone providing more than half. The amount of renewable capacity added over the period of 2021 to 2026 is expected to be 50% higher than from 2015 to 2020. This is driven by stronger support from government policies

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and more ambitious clean energy goals announced before and during the COP26 Climate Change Conference.

Solar energy remains the powerhouse of growth in renewable electricity, with its capacity additions forecast to increase by 17% in 2021 to a new record of almost 160 gigawatts. In the same time frame, onshore wind additions are set to be almost one-quarter higher on average than during the 2015-20 period.

In the case of Singapore, solar energy is the most promising renewable energy source for electricity generation. Solar energy is clean, generates no emissions, and contributes to Singapore's energy security. The Energy Market Authority has been taking proactive steps to facilitate its deployment, while ensuring that power grid stability is maintained.

There are, however, some challenges to deploying solar on a large scale in Singapore, including land constraints, local weather conditions and employing people with relevant job experiences. To prepare for a future when solar energy could form a more significant portion of our energy mix, Energy Market Authority has started investing in R&D areas such as solar forecasting and in particular energy storage

Adapted from: Various, 2021

Questions:

(a) Using an appropriate diagram, explain how the developments in the natural gas market have led to a sharp surge in electricity prices. [5]

(b) **(i)** Compare the market share of SP Services and SembCorp Power between 2013 and 2019. [2]

(ii) With reference to Table 1, explain how the electricity retail market might fail to allocate resources efficiently in the absence of government intervention. [4]

(c) Assess whether liberalisation of the electricity retail market is better than marginal cost pricing policy in improving allocative inefficiency. [10]

(d) Explain 2 factors affecting a government's decision in accelerating the use of renewable energy source for electricity generation. [4]

[25 marks]

Question 2: COP26, Floods and Malaysia's Economy

Table 2: Malaysia and China Key Economic Indicators

Malaysia			
Year	**2018**	**2019**	**2020**
Real GDP growth (% annual)	4.8	4.4	-5.6
Inflation rate (%)	0.8	0.6	-1.1
Unemployment rate (%)	3.3	3.3	4.4
Current account balance (USD, billions)	8.0	12.8	14.3
China			
Year	**2018**	**2019**	**2020**
Real GDP growth (% annual)	6.7	5.9	2.3
Inflation rate (%)	2	2.9	2.4
Unemployment rate (%)	4.3	4.6	5
Current account balance (USD, billions)	24.1	102.9	274.0

Source: World Bank

Table 3: Gross Domestic Product (GDP) and its components (% of total), 2020 Projected

	Malaysia
Total GDP (US$billion) at current prices	337.1
Total GDP (US$billion) at 2015 prices	344.1
Composition:	**%**
Private Consumption	60.8
Government Consumption	12.9
Gross Fixed Capital Formation	20.9
Exports of goods and services	61.4
Imports of goods and services	-54.9

Source: Department of Statistics Malaysia

Extract 5: Double whammy of Covid-19 and floods for Malaysia, but growth expected

In the serious floods that ravaged many parts of Peninsular Malaysia last month as a result of the monsoon season, many businesses suffered unprecedented losses and damage. Only a few shops had started operating again, after disposing of the damaged goods and bringing in new stock

for sale. Some estimated that the losses caused by the floods could run into billions of ringgit. Many businesses suffered severe damage to vehicles, machinery, equipment and stock. The Malaysian Employers Federation (MEF) said that most businesses were still trying to recover from the long lockdown due to COVID-19, and the floods had caused further losses.

Sunway University economics professor Yeah Kim Leng said there would be a short-term boost for economic purchases and spending for the replacement and repairs of damaged items, but this would come at the expense of savings or more borrowings.

With the short-term boost, HSBC expects the economic recovery in Malaysia to be quite strong in 2022, with the gross domestic product (GDP) set to expand 5.6% despite the impact of the recent floods in the country. James Cheo, chief investment officer for Southeast Asia at HSBC Global Private Banking and Wealth, said key drivers to the nation's growth would be a higher consumption level, an influx of infrastructure spending that has been on hold for the last two years, as well as buoyant foreign direct investment.

Source: Various

Extract 6: COP26: A new global agreement - the Glasgow Climate Pact

COP stands for "Conference of the Parties", and the one in Glasgow was the 26th annual summit. Ahead of it, 200 countries were asked for their plans to cut emissions by 2030. It aims to reduce the worst impacts of climate change - cutting emissions until they reach net zero by mid-century.

Nearly half of emissions come from the way we make and use things, including food. Given this reality, businesses have an important role in fixing the climate by re-shaping the economy – rethinking how they innovate and collaborate, and in the process, how they design, produce and distribute their goods. Those efforts will create new jobs and better growth. Advocates of early climate action say the sooner you start the better. The widely used NiGEM [1] macroeconomic forecast model even suggests an early start would offer small net gains for national output thanks to the big investments needed in green infrastructure.

Explicit plans were made to reduce the use of coal - which is responsible for 40% of annual carbon emissions, to significantly increase money to help poor countries cope with the effects of climate change and make the switch to clean energy, to phase out subsidies that artificially lower the price of coal, oil, or natural gas, to stop deforestation by 2030, among other plans.

The world's biggest carbon emitters, the US and China, pledged to cooperate more over the next decade in areas including cutting methane emissions and the switch to clean energy. Financial organisations agreed to back "clean" technology, such as renewable energy, and direct finance away from fossil fuel-burning industries. Supporters of such changes hope that it will pave the way for better labour productivity as workers need to be upskilled to work in tandem with such "clean" technology. However, some leaders and campaigners say it does not go far enough as much of it is not legally binding.

According to Malaysia's COP 26 delegate Datuk Zaini, Malaysia is committed to the methane reduction pledge during COP26. Solid waste disposal is the third biggest source of methane emission in Malaysia.

Source: Various

[1] NiGEM – is a leading global macroeconomic model used by both policy makers and the private sector across the globe for economic forecasting, scenario and simulation purposes.

Questions

(a) With reference to the growth and inflation indicators in Table 2, compare the economic performance of Malaysia with China in 2020. [5]

(b) Malaysia is expected to see a "short-term boost for economic purchases and spending for the replacement and repairs of damaged items".

Explain one factor that determines the extent of impact from the above development on national income. [2]

(c) Discuss how Malaysia's current and future living standards are affected by the composition of national income in terms of the expenditure components as shown in Table 3. [8]

(d) Discuss the extent to which COP26 affects Malaysia's ability to achieve sustainable growth. [10]

[25 marks]