T2W10 Class Test 4 (Thursday Group)
Macroeconomic Aims, Issues & Policies
Mark Scheme

The Covid-19 pandemic led to border lockdowns creating supply chain disruptions. Many governments fear that there could be a world-wide recession as spending falls.

(a) Explain how the Covid-19 pandemic may affect economic growth and balance of trade of a small and open economy such as Singapore. [10]

(b) Discuss whether the Singapore government should use fiscal policy alone in managing the economy when faced with a recession. [15]

Part (a)

Introduction

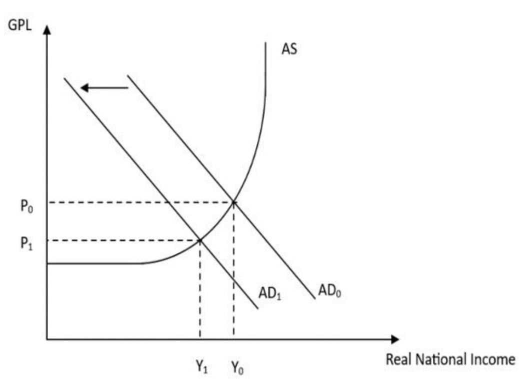
- Smallness refers to
  - limited land and thus lack of natural resources
  - small population and thus small domestic market [C as relatively smaller % of GDP]
- Being small leads to need to be open:
  - reliance on imported raw materials and even foreign labour
  - reliance on exports as engine of growth [X as 200% of GDP]

Development

R1: Economic Growth

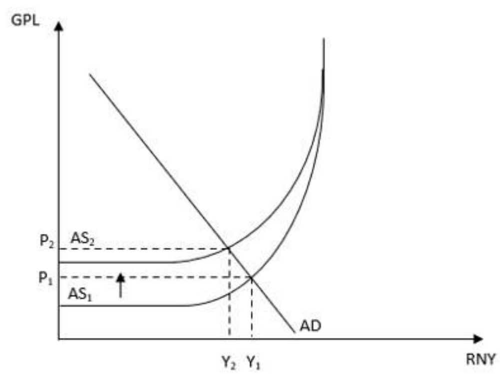
measured by year-on-year % change in real GDP

On AD:
- Covid-19 led to pessimism and people cut down on spending as they fear a looming recession. Furthermore, strict lockdowns lead to less consumption at restaurants and entertainment outlets. Border lockdowns also make it difficult for goods to reach foreign consumers.
- In all, the fall in C and X causes a fall in AD. Being open, the fall in X will have an adverse impact on Singapore's AD.
- Using an AD-AS diagram, show the multiple shifts in AD curve to the left.



- The fall in AD works through the reverse multiplier to reduce real GDP by more than proportionate. One man's fall in spending leads to less income for the next person. The process goes through many rounds of fall in induced consumption to reduce real GDP.
- With reference to Figure above, the AD curve shifts finally from AD0 to AD1. The result is either a slow-down in actual growth or in a worse-case scenario – negative GDP growth rate.

On AS:
- goods and [sometimes] labour cannot move across borders due to government restrictions for fear of Covid-19 transmissions
- total restrictions or delay in shipments lead to shortages of raw materials and labour – causing rise in prices
- being open, the rise in import prices causes rise in production cost leading to a fall in AS
- Use AD-AS diagram to show how the upward shift of the horizontal and upward sloping portion of the AS curve causes a rise in GPL – known as imported cost-push inflation



- Due to the rising inflation, households and foreigners cut down on spending
- The upward movement along the AD curve leads to a fall in real GDP – thus negative growth.

[Acceptable idea – but not required - no extra credit given]
- Answers can link to a fall in productive capacity as quantity of raw materials and labour falls – thereby affecting potential growth and future actual growth.

R2: Balance of Trade
Balance of trade = total revenue from exports – total expenditure on imports [answer must link to change in P and change in Q]

- Being small and open makes Singapore dependent on imported raw materials as explained earlier. Singapore is also dependent on imports of final consumer goods – given its small production base. As such, the demand for such imports is price-inelastic.
- With shortages caused by border lockdowns, the rise in prices of such imports leads to rise in import spending as the fall in quantity demanded is less than proportionate compared to the rise in price. The total expenditure on imports rises. Ceteris paribus, this may cause a BOT deficit.
- In addition, a fall in spending world-wide (due to reasons explained earlier) cause a fall in demand for Singapore's exports. Ad the price and quantity both fall due to the fall in demand, total revenue from exports faces a huge dip. The huge fall arises as Singapore sells high value-added goods and services such as pharmaceutical products, semi-conductors and refined oil.

- The analysis can also be linked to a recession that ensues. The fall in income will further worsen the fall in demand. Given that Singapore sells high value-added goods, the demand may fall by more than proportionate as world incomes decrease. This causes the TR from exports to fall
- The combined effect of a fall in TRx and rise in TEm will lead to a worsening BOT deficit.

[Partial credit for this idea below]

- With the rise in import prices, production cost rises causing a fall in AS. The upward shift of the AS curve leads to a rise in GPL – aka imported cost-push inflation.

- With a higher **relative** inflation rate, exports become less competitive and demand falls. Conversely, imports become more attractive to Singapore consumers and the demand rises. The resultant fall in TRx and rise in TEm leads to a BOT deficit.

Mark Scheme: Knowledge, Application, Understanding, Analysis

L1	*Lack application of relevant economic framework and context* *Critical errors in analysis* Significant conceptual gaps in explanation	***1 - 4***
L2	*Some economic analysis for both requirements (R1 and R2) but with gaps or lapses in explanations* *Some application of context and use of examples* *Lacking in full scope of analysis*	***5 - 7***
L3	*A well-developed answer that demonstrates:* *Rigorous analysis for BOTH requirements* Good scope of coverage *Good application of contextual examples*	***8-10***

Part (b)

Introduction

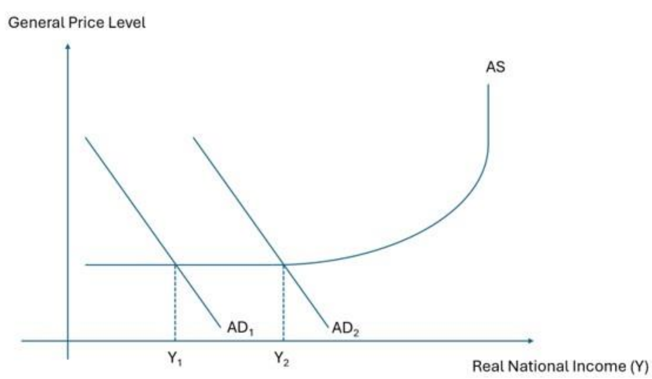
- A recession is a fall in real GDP for at least 2 consecutive quarters.
- In this context, the recession caused by fall in C and X as 'spending falls'. Being small and open and with X being 200% of GDP, a recession in Singapore is most always due to a world recession such as a recession in the USA. Typically, recessions in recent years are due to a fall in AD.
- To manage a recession, the government has to use policies to increase real GDP and decrease cyclical unemployment.

Development

R1: Fiscal Policy

Thesis: FP alone can stimulate the economy

- **Explain how expansionary FP works:**
  - An increase in G in areas such as infrastructure is a direct injection into the circular flow of income. A decrease in personal income taxes raises the disposable income of households, while a fall in corporate taxes raises the post-tax profits of firms. These may cause a rise in household consumption and firms' investment respectively.
  - Together, the rise in AD will work through the multiplier to increase real GDP by more than proportionate. As shown in diagram below, as AD curve shifts finally from AD0 to AD1, there is a rise in real GDP from Y0 to Y1.
  - As output rises, there will be a derived demand for labour input and that reduces cyclical unemployment.



  - The multiplier process is based on the principle that one man's spending creates income for the next person, and that income generates more spending. The process goes through many rounds of spending to create more income and indirect jobs. Each round of increase in AD gets smaller due to leakages in the form of savings, taxes and imports. The process does not go on indefinitely and will end when the initial increase in injections has totally leaked out as withdrawals. Eventually, the real GDP would have risen by more than proportionate to the initial increase in injections.

  - **Additional ideas on why FP can be used alone [any 1 or 2 ideas]**
    - Increase in G [part of FP] is a direct injection into the circular flow of income, and is thus likely to have a greater expansionary effect unlike other measures such as use of

interest rates, exchange rates and even direct taxes. The latter measures depend on the willingness of the private sector (C/I and X) to spend and they may not be willing to as there is a climate of pessimism in a recession. Households fear loss of jobs and wage cuts while firms fear continued fall in demand and profits.

- ***[This point can be written as a T or AT]*** If a government has the ability to finance its spending, FP alone can be effective. In the case of Singapore, the government has accumulated huge reserves through its persistent budget surpluses to be able to use FP effectively. This reduces the problem of crowding out if a government finances its spending by borrowing from the private sector through the issue of bonds.
- Use of expansionary FP has an added secondary advantage of increasing AS. For example, spending on training improves the quality of labour while lower taxes can increase the incentive to work and increase investment. These raise the productive capacity. The resultant increase in AS leads to a lower inflation which is conducive for X competitiveness. This, in some ways, it is also useful for increasing X in a recession.

Anti-Thesis: FP alone cannot stimulate an economy due to its limitations

- ***Earlier idea of inability to finance.*** Theoretically that can affect Singapore. There is no guarantee that reserves will not be depleted and it took a Covid pandemic alone for the government to expend millions of dollars. The response can link to the undesirable effects of crowding out of C and I. As competition for limited loanable funds rises, the higher interest rates may lead to a fall in C and I as borrowing cost increases. The fall in C and I reduce the expansionary impact of an increase in G.
- ***The idea can also be linked to the issue of a budget deficit.*** Sustained use of FP can create problems since more spending and less tax revenue can result in a budget deficit and its associated repercussions. Learning from the experience of the USA, a persistent budget deficit can reduce the ability of the government to spend in future. They may have to raise taxes in the future, and this worsens inter-generational inequity as the disposable incomes of future generations fall. And an adverse effect may arise in that if people fear that the government is not going to be able to sustain its spending, the households and firms may reduce C and I in response. This in turn results in a contractionary effect on the economy.
- Pertaining to the use of taxes, the resultant rise in domestic C is less likely to help significantly since Singapore has a small domestic market of only > 6 million people. The effect on domestic I is likely to be minuscule due to the small pool of domestic entrepreneurs. While lower corporate taxes can attract FDI, the effect is uncertain since FDI plan long-term and the world recession might affect their investment plans and they are also pessimistic about business prospects in the region.
- On the issue of time lag, it seems that the use of FP has longer implementation lag since the government needs to discuss where to spend the money on, the size of the spending and consider the ramifications on the budget. With a longer time lag, it may be difficult to reduce the hardship of the people [eg. loss of jobs and incomes] before the policy starts taking effect.
- Much also depends on the root cause of the recession. In Singapore, a recession [the recessions of 2001 and 2009] is due to a fall in X. So while FP can help to some extent, it cannot be used alone. It needs to be complemented by a measure that directly targets X.
- Idea of small multiplier and pessimism may also be discussed. Do take note that k size affects all demand-management policies – be it FP, interest rate or depreciation. And pessimism affects C and I, and also affects spending by foreigners – and the latter is linked to the use of a depreciating exchange rate.

R2: Depreciation of S$ exchange rate

Thesis:

- Explain how depreciation works:
  - Depreciation causes price of Singapore exports to fall in foreign $. The quantity demanded of exports increases. At the same time, the price of imports will rise in S$, with a resultant fall in quantity demanded. The net exports ie. X-M increases. The rise in AD works through the multiplier to increase real GDP and decrease cyclical unemployment.

- Why depreciation is an appropriate measure:
  - It directly targets the root cause of the recession caused by a fall in X-M. And for Singapore, X is 200% of its GDP and therefore its engine of growth. Conversely, C is a relatively smaller % of GDP due to the small domestic market.

Anti-thesis:

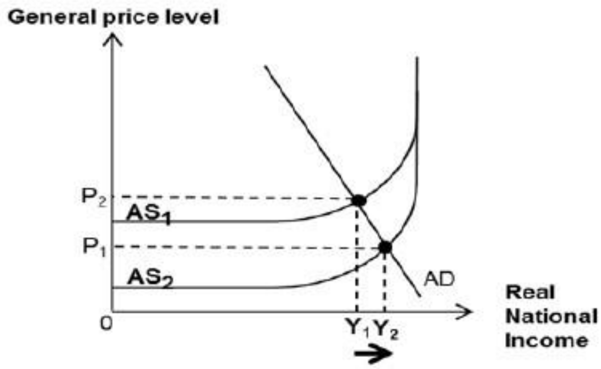
- Repercussion of imported cost-push inflation as price of imported raw materials rises. This causes production cost to rise and the fall in AS leads to imported cost-push inflation. The Singapore government's fear is that this may lead to the next level of inflation. For example, wages may have to rise to help workers cope with the rising cost of living. This leads to spiraling inflation that will over time affect export competitiveness and thus mid-term and long-term growth. The Singapore government's long-term policy stance is for a gradual and modest appreciation of the S$ exchange rate. There were however 2 occasions where its policy stance was changed– 2001 where it allowed a temporary depreciation and 2009 where a 0% appreciation of the S$ was adopted – in the face of the world recessions.

- Do note however that depreciation will benefit the short-term or immediate growth as it causes a ST rise in X-M and this positive effect outweighs the cost of rising import prices. This is because imported input prices will always be a fraction of the final export price.

- Using depreciation is also insufficient since there is not much that can be done to raise world demand when world incomes are falling. The fall in demand due to falling incomes is likely to outweigh any positive effect due to depreciation. Moreover, the government is not likely to allow a significant depreciation – given its fear of imported cost-push inflation.

LT Supply-side measures - Partial Credit [not the best approach]
#Long-term supply-side measures do not solve the immediate problem of a recession. They should always be in place and should be there to prep the economy in times of a recovery

- LT supply side measures such as education and training, building infrastructure and others
- A better way can be to discuss SS-side measures with more immediate impact on production. Some examples include 2009 Job Credit Scheme, 2013 onwards – Wage Credit Scheme and Covid-10- Job Support Scheme. Wages and rentals are subsidised to allow firms to retain jobs of workers and to survive with lower production cost. Theoretically, this can be seen as AS increasing leading to a lower inflation and thus X competitiveness.



Conclusion/Evaulation

- All things considered, in a world recession, FP is seldom used alone. It has to be used in conjunction with exchange rate management.
  - FP is used as an interim measure while depreciation targets the root cause of the problem ie. fall in X.
  - Furthermore, use of both policies [instead of relying on FP alone] is in some ways all-encompassing as FP targets domestic demand whilst exchange rate targets external demand
  - It can also be argued that exchange rate is needed to complement FP since the latter targets the domestic market which tends to be a relatively smaller % of GDP
  - Nonetheless, though FP cannot be used alone, we cannot ignore its importance in Singapore since there is more certainty in terms of effects arising from G compared to uncertain effect on X due to depreciation. Moreover, the ability to finance due to huge reserves can allow for sustainability of spending if the recession persists.
  - If the alternative policy suggested is supply-side measures with more immediate impact on cost, the opinion can be that FP can be used with such supply-side measures like Job Support Scheme to more directly help retain jobs and help firms stay afloat.

Another way of looking at it:

- To the extent that there is more certainty in use of G in that it is a direct injection into the circular flow of income, one can argue that FP can be used alone. The effect of depreciation on X-M is uncertain. Moreover, the Singapore government is often unwilling to use depreciation [or a huge depreciation] as it fears the loss of mid-term and long-term competitiveness due to higher imported input prices.
- Furthermore, the huge reserves makes the use of FP somewhat sustainable and the ability of the government to spend also induces confidence in the private sector. That may make economic recovery gather pace.
- Moreover, one cannot ignore the effects of G and direct taxes on AS. Theoretically, the lower inflation that results can bring about X competitiveness and boost external demand.

Mark Scheme:
Knowledge, Application, Understanding, Analysis

L1	No use of relevant economic framework *Answer is mainly descriptive or mere listing of points* *Significant conceptual errors in explanation*	***1 - 4***

L2	*Some application of relevant economic concepts and framework in analysis* *Some use of contextual examples* *Lacking in full scope of analysis*	***5 - 7***
L3	*A well-developed answer that demonstrates:* ▪ *Rigorous analysis for BOTH requirements* ▪ *Good application of contextual examples* ▪ *Good application of relevant economic framework*	***8 - 10***
Evaluation		
E1	Unsupported judgment *Superficial conclusion/assertion*	***1 – 2***
E2	*Substantiated judgment, recommendation supported by reasons/ economic analysis*	***3 - 4***
E3	*Insightful and perceptive evaluation and recommendation well discussed and evaluated using economic analysis and good application to the context* *At least 2 well explained insights covering both R1 and R2 and with a summative evaluation at the end*	***5***