H2 Economics Chapter 11, 12 and 13 Notes

This document is intended as a summary of the points provided in the NJC 2024 H2 Economics Chapter 11, 12 and 13 Seminar Notes. It is to be used as a **study guide** to provide a **structure** for studying the Chapter 11, 12 and 13 Notes.

1 Interest Rate Monetary Policy

1.1 Theory of Liquidity Preference

Keynes proposed that money can be treated like a commodity in his Theory of Liquidity Preference. Similar to how goods and services are bought by consumers from producers, there is a market for money, as money can be 'bought' by households and firms for a 'price'. This price is more commonly known as the interest rate of a country's central bank.

Liquidity Preference is the preference for holding money[1] over other kinds of assets.

Why do we use the term 'other kinds of assets'?
People store their wealth not only in terms of money but also other financial assets such as bonds and stocks. A reduction in the quantity of money in circulation does not translate to money simply disappearing. Instead, people convert their money into assets so that they retain their wealth while holding less money.

<u>The Liquidity Preference (Money Demand) Curve</u>
There are three main purposes for holding money. Should a question require explanation on determinants of liquidity preference, it is important to link to these concepts.

(1) ***Transactionary Purpose:*** Money needed to facilitate payment for daily transactions of goods and services.
(2) ***Precautionary Purpose:*** Money held as a precaution for unexpected items of expenditures like sickness or accidents.
(3) ***Speculative Purpose:*** Money held instead of investing it in bonds or other assets. You can think of this as money that is held because it is not worth it to buy other assets.)

[1] Holding money refers to the act of keeping cash readily available instead of investing or spending it immediately. A portion of one's wealth is held in the form of currency or cash equivalents, such as deposits in bank accounts or physical currency.

As the government increases interest rates, the cost of borrowing[2] money from the bank increases since a borrower would have to repay a greater sum of money in the future than if the interest rate was lower. Hence, households and firms would borrow less money. Conversely, if the interest rate was lowered, more money would be borrowed. This inverse relationship between interest rate and quantity of money borrowed is similar to the inverse relationship between price and quantity demanded of other commodities. Hence, liquidity preference can be thought of as the 'demand for money' and is a generally downward sloping curve

The Money Supply Curve

Governments can directly change their country's interest rates to influence consumption and investment. But it is actually harder to control spending in this way as it is less direct, so frequently they influence interest rates by changing the amount of money in circulation.

When the government wants to decrease money in circulation, they sell 'bonds', which is basically a deal to the public to say "If you pay us money now, we will pay you back more money in the future". People who pay the government money through this medium are called 'buyers'. These actions withdraw money from the banking accounts of buyers when they use money in the bank to buy these bonds, causing banks to have less money available to lend. As a result, banks' reserves shrink and their ability to issue new loans diminishes, causing banks to become more selective about who they lend to, so they increase interest rates as a measure to ration money.

On the other hand, to increase money in circulation, the government buys bonds. In effect, they buy bonds back from people who have previously bought bonds by putting money into their banking accounts. And in doing so, banks' reserves increase which hence decreases the interest rates in banks

This is the concept of money supply. The central bank, owned by the government, may determine the exact quantity of money to be put in circulation by buying and selling bonds to the free market. Changes in the interest rate does not affect the ability of the central bank to print money and hence the money supply is hence represented by a vertical line which is independent of the interest rate.

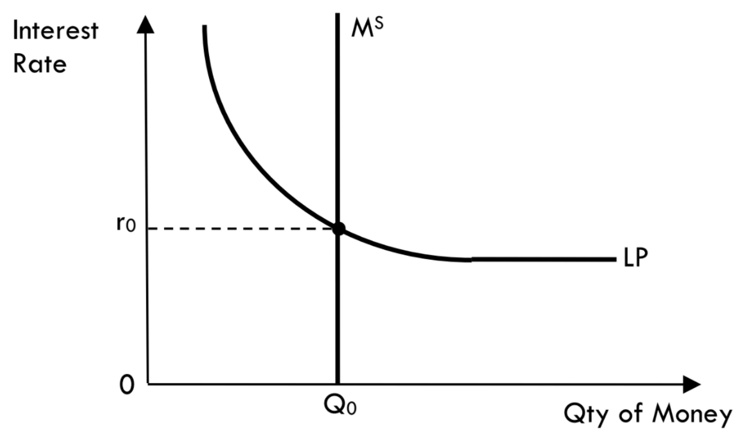
[2] Theoretically, it is possible to analyse the inverse relationship between interest rate and money via the returns from saving, but the explanation for that is slightly longer and more difficult to write.

The Liquidity Trap

When the interest rate became very low, it was observed that increasing the money supply by buying bonds did not lower interest rates any further. This is because lowering the interest rates further would make banks unwilling to lend money as they would no longer be profitable and cannot operate. Hence, increasing money supply ceases to increase spending as cost of borrowing can no longer be changed. While the quantity of money being held increases with money supply, the quantity of money spent does not increase. This is illustrated by a horizontal portion on the liquidity preference curve.

The Market for Money

Taking all the above into consideration, the demand-supply diagram for money looks something like this.



'Income' VS 'Wealth' VS 'Money'

Income: Payment received from providing factors of production. The sum of money earned from working and money received from rent, interest and dividends.

Wealth: Difference between financial assets and liabilities.[3]

Money: A financial asset used to purchase goods and services. In the 'A' Level syllabus, this primarily refers to coins, notes and demand deposits.

These terms cannot be used interchangeably in Economics as they are different concepts and it is a conceptual error to conflate them.

[3] It is important to distinguish between changes in wealth and changes in the *composition* of wealth. When one repays a loan by writing a cheque, there is a decrease in debt that is equal to the decrease in money, so the decrease in liabilities is matched by a decrease in assets and there is no change in wealth, but only in the composition of wealth.

1.2 Causes of Interest Rate Changes

Determinants of Interest Rates

Determinant of Liquidity Preference	Key Analysis/Technical Terms
Business and Consumer Expectations	Transactionary demand and expectations of future interest rates and bond prices, speculative demand, buy higher value bonds now to sell in secondary market for profits
Economic Growth	Transactionary demand via purchasing power Precautionary demand via optimal amount to hold on hand.
Inflation	Prices, Transactionary demand
Frequency of Payment	Time before next wage payment, money on hand must last longer
Usage of Credit Cards and Cheques	Alternative method of spending which does not involve cash
Government Expenditure	Transactionary demand Ev: crowding out effect, interest rate increases when government borrows more money
Determinant of Money Supply	**Key Analysis/Technical Terms**
Expectations of Changes in Exchange Rate	Expectation of appreciation of domestic currency causes foreigners to increase demand for domestic currency in FOREX market, increasing money supply to increase quantity supplied of domestic currency
Openness of Economy	Difference in interest rates, Hot money inflow to country with higher interest rate to earn higher interest, money supply increases

1.3 Impacts of Interest Rate Changes

The Indirect Transmission Mechanism

When money supply is increased, holding liquidity preference constant, there would be a surplus of money at initial interest rate, resulting in a downward pressure on interest rate to fall. As interest rates decrease, the cost of borrowing decreases. This results in higher returns on investment, incentivising firms to increase investment so investment expenditure (I) increases. The lower cost of borrowing also means the opportunity cost of consumption would be lower for households and thus they would borrow more to increase consumption, thus increasing consumption expenditure (C). Overall, AD=C+I+G+(X-M) would increase.

The Direct Transmission Mechanism

An increase in money supply via quantitative easing would result in economic agents having excess liquidity. This is because households would prefer to hold an optimal proportion of their wealth in cash but the increase in money supply would cause households to hold cash in excess of their optimal amount. As households hold more cash than they require, they will then use some of this excess liquidity to purchase financial assets such as shares and bonds, and physical assets or to purchase goods and services, increasing consumption expenditure (C).

1.4 Evaluation of Interest Rate Policy

The Liquidity Trap

To evaluate, at the liquidity trap, the interest rate is very low and cannot fall further as banks risk becoming unprofitable if they lower interest rates further. Therefore, any increase in money supply is unlikely to cause a change in consumption and investment since the cost of borrowing remains constant. Hence, AD does not increase much.

Marginal Propensity to Save (MPS)

An increase in money supply via quantitative easing may have an insignificant impact on spending if the marginal propensity to save is high. Even if households have excess liquidity, they may still prefer to hold a large proportion of their wealth in cash in the bank as they prefer to save for rainy days. This is more prevalent in Asian countries which are typically more thrifty, with parents saving up for their children's university fees. Hence, the unit increase in the liquidity they hold would lead to a significantly smaller unit increase in consumption as they still save most of the liquidity in the bank.

Untargeted and General Nature

Compared to fiscal and supply-side policies, interest rate policy is rather unspecific in its target. While fiscal and supply-side policies allow the government to set guidelines for who constitute eligible stakeholders of the policies, interest rate policy tends to affect consumption and investment on a whole due to the administrative challenge in offering different interest rates to different stakeholders. This is because it is difficult and inefficient to determine whether certain firms or households should qualify for certain benefits, especially through banks which are already typically very crowded areas. Hence, if the root cause of the issue is a certain group of individuals, it may be more efficient to tackle the issue in a more focused manner rather than affecting parties which are not directly responsible.

Why Interest Rate Policy is Highly Unsuitable in Singapore

An increase in interest rates is ineffective in controlling inflation in Singapore because of Singapore's nature as an open economy that is open to capital flow. Singapore needs to have free capital mobility as an international financial and business hub to encourage businesses and international corporations to set up firms in Singapore to promote the much-needed investment into Singapore. Hence, an increase in interest rates in Singapore above world interest rates would incentivise hot money inflow in search of earning higher rates of return, given Singapore's openness to capital funds flow. This would in turn increase money supply in Singapore. Holding liquidity preference constant, there would be a surplus of money in the economy, resulting in a downward pressure on interest rates until interest rates in Singapore equalise with world interest rates. Therefore, any attempt by Singapore to independently increase the interest rates would be futile as the interest rates would fall back to world interest rates.

Moreover, given the smallness of Singapore's domestic investment relative to the size of its foreign direct investments (FDI) and Singapore's openness to capital flow, Singapore's MEI is relatively interest inelastic. FDI takes up a large proportion of Singapore's investment expenditure and these FDI mainly rely on retained profits or funds from their countries of origin to fund their investments. Hence, they are insensitive to changes in Singapore's domestic interest rates. A decrease in Singapore's domestic interest rates is unlikely to result in a large increase in investment. Hence, it is unlikely to cause AD to increase significantly.

Moreover, if Singapore chooses to control interest rates it will have to give up management of its exchange rates as explained by the open economy trilemma. The increase in interest rates which results in hot money inflow would increase the demand for Singapore dollars (SGD) in the FOREX market thus leading to an appreciation of SGD via the free market mechanism. Singapore cannot manage its exchange rates if it controls its interest rates. An appreciation of SGD would make Singapore's export relatively more expensive to consumers in foreign countries thus losing its export price competitiveness. Given that Singapore is an export-oriented economy with export revenue (X) taking a large proportion of Singapore's AD, the decrease in X which led to a decrease in Singapore's AD would have significant negative effects on Singapore economy e.g. decrease in economic growth, increase in unemployment, reduction in Singapore's balance of trade surplus, etc. As such, Singapore would prefer to manage its exchange rate rather than control its interest rates.

2 Exchange Rate Monetary Policy

2.1 Exchange Rate Framework

2.2 Causes of Exchange Rate Changes

2.3 Impacts of Exchange Rate Changes

3 Fiscal Policy

3.1 Government Budget Framework

Governments around the world spend out of a government budget that is decided on based on the revenue the government collects, the planned spending that the government aims to achieve in a year and the current debt position of the government.

Fiscal Policy is the discretionary management of government spending and/ or taxation designed to influence the level of aggregate demand and hence economic activity.

Why do we use the term 'government spending'?
While many extracts refer to government spending as 'government expenditure', it is inaccurate to do so in economic essays because government expenditure refers purely to spending by the government in exchange for goods and services.

Government Revenue Governments source their revenue from a multitude of different sources. They may collect fees from the sale of goods and services like telecommunication and public utilities service fees, postal fees, etc. They may also invest their funds or reserves in income yielding assets, which then yield capital gains[4]. Governments also take loans or grants like treasury bills, bonds, or loans from international institutions like the World Bank. The main focus in the H2 syllabus however, is taxation, which is the main source of revenue for most economies.
Government Spending Government spending may be classified under current/ operating expenditure and development expenditure. Current/ operating expenditure is expenditure that is incurred on a day to day routine basis and is recurrent in nature. For example, wage costs of civil servants, expenditure on social services, etc. Development expenditure is expenditure that is expenditure for the purpose of economic and social development. It consists of expenditure on development projects like the building of expressways, schools, land reclamation, etc.

[4] Capital receipts is effectively the 'revenue' received from an appreciation in fixed capital assets. The difference between capital receipts and the cost of investing is known as 'capital gains.'

National and Foreign Debt

National debt is the total amount of money that a government owes to its own citizens and domestic institutions. This debt is typically issued in the country's own currency and can take various forms, including: Government Bonds, Treasury Bills, Loans from Domestic Banks and Savings Bonds. The national debt is accumulated when the government runs budget deficits, meaning its spending exceeds its revenue.

Foreign debt is the total amount of money that a country owes to foreign creditors. This can include: Loans from other countries, organisations such as the International Monetary Fund (IMF) or the World Bank, banks and other financial entities based outside the country. The national debt is accumulated when the government runs balance of payments deficits, meaning its debits exceed its credits.

3.2 Impact of Fiscal Policy on AD

Direct Taxes are taxes on income and wealth paid directly to the tax department. They include personal income taxes, corporate taxes, property tax (for rent from land ownership), capital gains tax (for interest from capital ownership), estate duty/ inheritance tax.

Indirect Taxes are taxes on expenditure or production of goods and services. They include general expenditure tax (e.g. goods and services tax) and customs duty.

Transfer payments are payments made by the government to individuals or other entities without any goods or services being received in return.

Government Expenditure refers to government spending on goods and services.

When governments decrease personal income tax or increase subsidies/ transfer payments, there is an increase in disposable income. Hence, households' purchasing power increases and they spend more on consumption of goods and services, increasing consumption expenditure (C). When governments reduce corporate income tax, there is then an increase in post tax profits, resulting in an increase in the returns on investment. Hence, firms are incentivised to increase their investment expenditure (I) so as to maximise profits. Moreover, with an increase in government spending on goods and services, government expenditure (G) increases.

Crowding-Out Effect

To evaluate, tax cuts may result in a budget deficit, resulting in greater government borrowing in order to finance its expenditure. This increases the rate of interest as the supply of money decreases as the government borrows more money, which then causes a shortage of money at the current interest rate which generates an upward pressure on interest rates to rise. As a result, the cost of borrowing increases. This may counter the effect of tax cuts as firms now see a lower rate of returns on their investment and consumers feel there is a greater opportunity cost of spending, hence causing investment expenditure (I) and consumption expenditure (C) to fall respectively.

Time-lags

To evaluate, fiscal policy can involve considerable time lags; if these are long enough, fiscal policy can be de-stabilising. For example, expansionary policies implemented to cure a recession may come into effect when the economy has already recovered and is experiencing a boom, thereby worsening the problem of overheating. For example, there may be time which elapses before the problem is recognised and diagnosed, time required for planning, designing of policies and the signing of contracts. Additionally, there may be time between action and impact. For example, a change in tax rates may not immediately affect tax payments. A change in corporate tax will affect tax payments only at the end of the financial year, so a change in investments responding to a change in tax rates would take time. With planning required, this could potentially be a very slow process

Financial Crisis

To evaluate, if the government is unable to meet its debt obligations i.e. the government defaults on its debt, the government is said to be insolvent. This could trigger a financial crisis as the financial institutions which are the creditors to the government (holders of government bonds) may face a shortage of cash to meet their financial obligations when they do not receive the debt payments from the government. Furthermore, when the government debt level becomes too high, investors form pessimistic expectations towards the economy. This is due to the fear that the government may not be able to service or repay its debt. Firms may then reduce their investments and foreign investors may decide to withdraw their investments in the country, further destabilising the economy.

<u>National Debt</u>

To evaluate, the pursuit of an expansionary fiscal policy is only possible if the government is able to finance a resulting budget deficit. The government may have to fund the additional expenditure through borrowing, often through selling of bonds. If the debt burden is deemed excessive by financial markets, the cost of borrowing will rise to levels that are much higher than before, further increasing the debt burden. In the long run, a high level of government borrowing adds to the accumulated National Debt. Hence, the government has to spend more each year in debt-interest payments to holders of government bonds and other securities. This results in an opportunity cost to society when the funds could have been put to other more productive uses.

In response, the government may be forced to implement austerity measures to reduce its debt level by cutting its spending and/or increasing taxes. This will have a contractionary effect on the economy, counteracting expansionary fiscal policies. Hence, expansionary fiscal policy would not be effective. Moreover, reducing government expenditure could mean less spending on merit goods, causing a decline in non-material standard of living. Moreover, the government may implement future increases in taxes to repay the debt. As the level of debt increases, it becomes increasingly difficult for the government to repay its debt from its tax revenue. Hence, the government will raise taxes, reducing the disposable income of future generations, lowering their purchasing power and hence lowering the amount of goods and services they may consume. Hence, the material standard of living of future generations might fall.

<u>Bureaucracy</u>

To evaluate, public works projects, especially major infrastructural projects, are difficult to stop without wasting resources due to bureaucratic processes which delay communication and relay of information. Neither can spending on large infrastructure projects be increased immediately, as construction projects follow a planned schedule for the various stages of the project.

<u>Lobby Groups</u>

To further evaluate, powerful lobby groups with political clout often influence government decisions. If the root of the issue is corporations which can influence government decisions via funding their campaigns, then politicians face difficulty in deciding whether or not to implement certain fiscal policies. Hence, any fiscal policy implemented might benefit these firms rather than society as a whole.

3.3 Other Impacts of Fiscal Policy

Effect		Key Analysis/Technical Terms
Aggregate Supply	**Potential Growth**	Substitution Effect → lower disposable income, less goods and services, sacrifice of same amount of leisure. opportunity cost of leisure in terms of consumption decreases Income Effect → reduces disposable income, work more to maintain their consumption of goods and services. Government expenditure on infrastructure, improvement and extension of transport and communication facilities, and skills training increase quality of resources and level technology
	Cost-Push Inflation	Indirect taxes → GST increases general price level and cost of living; Direct Taxes → workers' disposable income fall; workers and trade unions demand wage increase, wage-price spiral
Efficiency	**Allocative Efficiency**	(1) Indirect taxes imposed at different rates on different goods and services, relative prices changed, rationing function of price mechanism suggests demand for goods higher (2) Taxes on various types of resources decrease supply of such resources, cost of production AND quantity (3) Varying types of government spending, pattern of production Therefore, resources diverted away from some industries and towards other industries.

4 Supply-side Policy

4.1 Supply-side Policies

Besides influencing the AD of an economy by using monetary and fiscal policies, governments may also influence the AS of an economy by using supply side policies because the root causes of some macroeconomic problems may be related to production. Moreover, aggregate demand policies may bring about undesirable side-effects.

Supply-side Policies aim to shift the AS curve in the short run or long run, or both, through reducing structural rigidities and production costs and/or increasing the productive capacity of the economy, hence influencing economic activity.

General Question Answering Structure for Supply-Side Policy Analysis

Step 1: ***Description*** of the supply side policy using examples or explanation of details

Step 2a: How Cost of Production (COP) will decrease, causing an increase in SRAS

Step 2b: How QQT (Quantity of resources, Quality of resources, Technology) will increase LRAS

Step 3: What ***effect*** this has on one of the seven friends

SRAS Analysis

Firms will respond partly by increasing production due to higher profitability causing real national output to increase, and partly by passing the lower costs in terms of lower prices to consumers to maintain their price competitiveness. Hence, the general price level falls.

LRAS Analysis

With an increase in the quantity of resources, there is an increase in the ability of the economy to produce goods and services since more goods and services can be produced by more resources. With an increase in the quality of resources or level of technology, the same amount of factors of production can be used more efficiently to produce more goods and services. Hence, there is an increase in the productive capacity of the economy and the full employment level of output is increased.

4.2 Market-Oriented Policies

Pro-Competition Policies I
Antitrust policy refers to legislation designed to prevent the deliberate creation of monopolies, and to prevent dominant firms from engaging in anti-competitive practices. ● Firms in the US and the European Union wanting to merge have to first seek regulatory approval. The courts will decide whether such a merger will lead to exploitation of market power to set high prices. ● Firms may be accused of anti-competitive behaviour when they are found to be colluding with other firms to prevent competition, or engaging in predatory pricing, forming cartels, price fixing and erecting high barriers to entry. ***Deregulation*** refers to the reduction of legal barriers to entry like licensing requirements, thus allowing more firms to enter the industry. ***Free Trade/Capital Policy*** refers to the reduction or removal of trade restrictions to allow for more foreign competition. ● Import tariffs were removed between India and Singapore when they signed the India-Singapore Comprehensive Economic Cooperation Agreement (CECA), allowing for free trade between the two countries

Government agencies can take firms accused of breaching antitrust policies to court and such firms may be required to lower their prices or cease their operation altogether. Such threats may force firms to behave in a more competitive way. Hence, this policy reduces the market power of resource-selling firms, and encourages them to reduce inefficiencies in production and reduce structural rigidities (to remain price competitive — for deregulation), which causes prices of factors of production to adjust downwards, so as to decrease other firms' cost of production.

With an increase in competition, larger firms may try to gain market share via more competitive means. For example, using their supernormal profits, they may invest in R&D for both product and process innovation, so as to differentiate their product from other firms, and to produce more efficiently respectively in order to maximise profits. Hence, the level of technology and the quality of fixed capital goods like machinery may increase.

To evaluate, with an increase in competition, larger firms in the market would have a lower market share and hence produce on a smaller scale. As a result, they would not be able to enjoy substantial economies of scale compared to if they operated on a larger scale. Hence, this would increase the average cost of production, reducing the level of supernormal profits firms make, making them less able to invest in technology and other forms of R&D.

To further evaluate, the social rate of returns on private investment may exceed the private rate of returns. That is to say, while investment would generate positive externalities in production, the returns in terms of profits is insufficient incentive for firms to invest to fully realise such benefits to society. Hence, governmental control over such production, aiming to maximise societal welfare may perhaps be a more beneficial policy because the government would be more willing to make such investments.

To further evaluate, political realities are such that any administration is unlikely to undertake a vigorous anti-monopoly crusade. Large corporations and trade unions are often powerful lobby groups with political clout. As a result, politicians are frequently beholden to these groups which have funded their campaigns and contributed to their popularity. Hence, any antitrust laws implemented might be purely for show and may contain legal loopholes which allow such large corporations to continue non-competitive behaviour anyway.

Pro-Competition Policies II
Privatisation refers to the transfer of ownership of companies from the public sector to the private sector. ***Outsourcing*** refers to the government contracting some of its functions to the private sector. This is usually done through a competitive bidding process

This helps to reduce inefficiency due to government bureaucracy which slows down the production process as a result of long and drawn out discussions across different departments due to the lack of profit motive. Moreover, profit-maximising firms as producers will aim to produce with lower costs by minimising any unnecessary expenses. Hence, the production process is swifter and there is reduced miscommunication, resulting in more output being able to be produced by the same amount of resources such that the per unit cost of production falls.

To evaluate, services which are necessities to society like telecommunications, public transport and power supply may require some degree of government intervention. This is because in the hands of firms which prioritise profits, monopoly power may potentially be abused, causing firms to set high prices and limit output, which would be detrimental to society as it would result in the poor being unable to afford and access such necessities.

Manpower Policy
Unemployment Welfare Benefits refer to transfer payments granted by the government to those who are unemployed. ● In France, an unemployed worker can receive up to 18 months of welfare benefits, which has cultivated a feeling of security in the unemployed.

Unemployment welfare benefits are seen as encouraging people to remain unemployed, especially if the difference between the take-home pay of being employed and the welfare benefit is small, as the opportunity cost of being employed may be higher than the benefits of working. Hence, reducing unemployment benefits pressures the unemployed to find jobs, increasing the number of workers, hence increasing supply of labour. This results in a downward pressure on wages by the price mechanism, resulting in a fall in cost of production. This also increases the size of the labour force, as those who were initially willingly unemployed become more willing to work. Hence, the quantity of labour increases.

Manpower Policy
Trade Unions refer to organisations which bargain for higher wages for workers. Hence, reducing the power of trade unions would reduce wages and cost of production. ● Under the UK Conservative governments between 1979 and 1997, Employees may be given the right to join any union, putting an end to closed-shop agreements, where firms agree to employ only union members. Political Strikes, sympathy action and action against other non-unionised companies were made illegal.

This reduces structural rigidities by allowing wages to adjust more freely according to market conditions. This allows for labour costs to employers to be reduced as wages are bidded down, preventing a wage-price spiral. Hence, the per unit cost of production falls.

To evaluate, political realities are such that any administration is unlikely to undertake a vigorous anti-monopoly or anti-union crusade. Large corporations and trade unions are often powerful lobby groups with political clout. As a result, politicians are frequently beholden to these groups which have funded their campaigns and contributed to their popularity.

Tax Cuts
Tax Cuts refer to a reduction in the personal and corporate income tax rate to incentivise workers to work longer hours and to provide lower cost of production for firms.

Reducing income taxes would bring about higher disposable income for households, so that the substitution effect of the tax cut increases the opportunity cost of leisure in terms of the higher post-tax income foregone, resulting in a greater incentive for people to work. Hence, those who are initially unwilling to work enter the labour force and existing workers become more willing to work longer hours. This would outweigh the income effect which causes people to consume more leisure as they are relatively better off and can better afford after the tax cuts in developing economies as the households have lower income to start with and would prioritise earning more income than to have more leisure.

To evaluate, it is difficult to ascertain in reality whether tax cuts would make people work harder and businesses invest more. This is particularly true in more developed countries, where a large part of the population have a decent level of income and prioritise a work-life balance. Hence, even if taxes were reduced, people may not work harder as they might still consider time spent with family for example, to be more important. Moreover, corporate tax cuts may result in an increase in post-tax profits, which may even result in X-inefficiency for businesses, as they feel more confident of continued supernormal profits and do not feel a need to invest in productive assets since they are already making a comfortable level of profits due to the lower tax.

To further evaluate, taxes are one of the largest components of most governments' budgets. Hence, with a tax cut, tax revenue may fall, leading to the government having to borrow money from their reserves or from the public, which results in huge public debts. These debts may impact future generations in the form of higher taxes, which causes a fall in disposable income and purchasing power. Hence, this may result in a decreased ability of households in the long run to purchase goods and services for the satisfaction of their wants and needs

4.3 Interventionist Policies

Nationalisation
Nationalisation refers to the process of the government taking over the ownership and running of businesses. ● The government might also take over the running of a firm to prevent a firm from collapsing during a crisis, which would greatly affect the AS of the economy.

Producing on a larger scale would result in higher efficiencies due to economies of scale. For example, plant economies of scale are enjoyed via higher utilisation of indivisible but highly efficient machinery with fixed productive capacity when scale of production increases. Certain types of machines are only available in a fixed productive capacity. When the government produces on a larger scale, they can better utilise these machineries via, for example, working on 24 hour shifts as compared to firms with smaller scale of production where the machines may be under-utilised. The percentage increase in the cost of operating the machines such as labour and overhead costs can be insignificant compared to the level of output that can be produced due to the high productivity of the machines when inputs are increased by the same proportion. This is especially true if the investment has very high fixed costs and cannot be recovered due to the relatively low market size, for example the rail industry.

When the government enjoys economies of scale to minimise their average cost of production, their supernormal profits also increase. This would provide the government with sufficient funds in order to invest in R&D for both product and process innovation, so as to increase the variety and quality of the goods and services they produce, and to produce more efficiently in order to be able to pass down cost savings to consumers as lower prices to improve consumer welfare. Hence, the level of technology and the quality of fixed capital goods like machinery increases.

To evaluate, if a government is operating at an excessively large scale, this may give rise to inefficiencies due to bureaucracy and corruption. The profit margin is a potent incentive to produce with lower costs. Without it, governments may be more lax with their cost controls and abuse their authority by administering certain resolutions for their personal gain. With more departments, decision-making processes are also more tedious as more opinions are considered. Overall, the cost of production may rise.

Regulation & Legislation
Foreign Labour Policy refers to the set of regulations that a country implements to manage and control the entry, employment, and rights of foreign workers within its borders ● In February 2024, Chinese citizens were exempted from visa requirements for a stay of up to 30 days in Singapore, which allowed for the inflow of Chinese labour to enhance productivity in Singapore. ***Legal Working Age*** refers to the minimum age at which an individual is legally allowed to work, as determined by national or regional laws. ***Retirement Age*** refers to the age at which a person is typically expected or eligible to cease full-time employment and may begin to receive retirement benefits, such as a pension. ***Birth Control Policies*** refers to policies implemented to encourage higher birth rates and support families. ● Financial incentives such as cash bonuses and paid parental leave ***Land Use Policies*** refers to the regulations and planning strategies that govern how land is developed and used within a specific area. ***Protectionist Policies*** refers to measures imposed by governments to restrict imports or promote domestic industries.

The above policies increase the quantity of factors of production like capital, entrepreneurship, land and labour such that the supply of resources in the market increases. This hence leads to prices being bidded down in the market, such that cost of production falls. Additionally, with such policies, there is an increased competition in the labour, capital and land market. Providers of such resources might hence be incentivised to improve the quality of these resources. Workers which provide labour would be more likely to undertake skills upgrading programmes so as to remain relevant to many job industries to remain employed. Firms producing capital may invest in machinery so as to standardise their equipment, providing a sense of consistency to firms which buy them, so as to reduce the likelihood of malfunction.

Incentives
Minimum Wage refers to the minimum legal wage set and allowed by the government. It is regarded as a structural rigidity. ***Flexi-Work Arrangement*** is an arrangement in Singapore which allows workers to work flexibly at different timings with no changes to total working hours and workload. ***Price Ceiling*** refers to the maximum legal market price set and allowed by the government. ***Subsidies*** refer to a payment of money to a household or firm by the government for which it receives no goods or services in return. ***Taxes*** refer to an involuntary payment of funds to the government by a household or firm for which the household or firm receives no goods or services in return. Other examples include: Procreation incentives, Childcare subsidies, welfare benefits tied to employment, encouraging employment of disadvantaged or older workers, promoting lifelong education and training of workers, encouraging R&D and innovation, attracting foreign investments into the country, encouraging risk taking and entrepreneurship, helping small and medium enterprises to grow and expand.

With the raising of the minimum wage, the compensation for workers in construction-related sectors is increased. With the implementation of flexible work hours, the comfort of working conditions increases. This would increase the marginal benefit of working in construction-related sectors which outweighs the marginal cost of such work which could be time wasted doing other work, to increase the willingness of the unemployed to work in the sectors. This would increase the quantity of labour in the industry[5].

Subsidies/ Tax Cuts for firms would increase the post-tax/subsidy profits for firms. This would hence increase the profit margin for firms. Hence, as the average cost of production decreases with a lowering of taxes, firms' willingness and ability to produce goods and services increases, hence increasing the SRAS.

[5] This point cannot be linked to SRAS because the minimum wage inherently raises the cost of labour.

5 Singapore's Policies

5.1 Singapore's Monetary Policy

5.2 Singapore's Fiscal Policy

5.3 Singapore's Supply Policy

6 Glossary

Demand deposit account is a checking account that allows the depositor to make payments through issuing cheques.