RAFFLES INSTITUTION YEAR 6 H1 ECONOMICS 2019

MACROECONOMIC POLICIES FISCAL POLICY

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References:

- 1 Case, K. E. & Fair, R. C, Principal of Economics, Prentice Hall
- 2 Miller, R., Economics Today, 18th Edition, Addison-Wesley
- 3 Sloman, J., Economics, 8th Edition, Pearson
- 4 http://www.singaporebudget.gov.sg

Lecture Objectives:

After the series of lectures, students should be able to:

- Distinguish between automatic stabilisers and discretionary fiscal policy.
- Analyse the impact of discretionary fiscal policy on the macroeconomic aims of an economy using AD/AS analysis.
- Explain the intended and unintended consequences of government policy decisions on the other economic agents (consumers and producers).
- Explain the factors limiting the effectiveness of fiscal policy.
- Demonstrate a good understanding of recent economic trends and developments, particularly the Singapore economy.

1 INTRODUCTION

The government can use different policy tools to influence the level of economic activity. They are either used to increase the rate of economic growth and reduce unemployment or lower the inflation rate.

Such policies work to affect the aggregate demand or aggregate supply of goods and services. **Fiscal and Monetary Policies** affect aggregate demand and are known as **demand-management policies**. Conversely, supply-side policies affect the aggregate supply.

2 FISCAL POLICY

2.1 Objectives

Fiscal policy is the deliberate management of **<u>government spending</u>** and **<u>taxation</u>** designed to influence the level of economic activity in order to achieve the economic goals of the government, such as:

i. Macroeconomic goals

- i. to smooth out the ever-present fluctuations in economic activity
- ii. to promote economic growth
- iii. to push the economy closer to full employment
- iv. to maintain price stability

ii. Microeconomic goals

- i. To achieve a more efficient allocation of resources
- ii. To achieve a more equitable distribution of income

2.2 Rationale for Intervention

Decisions by the private sector are made mainly based on self-interest. Thus changes in consumption spending by households and investment expenditure by firms can cause the economy to land in an equilibrium state that is not desirable. While weak private sector spending results in cyclical unemployment, excessive spending can lead to demand-pull inflation. Therefore, government action is necessary to reduce the harmful impact of unemployment and inflation.

2.3 Fiscal Policy Tool – The Budget

The Budget is an estimate of government expenditure and revenue for the coming Financial Year. It is a careful planning of the government expenditure to be spent and forecasts of tax and other revenue received in the coming year.

Budget planning is necessary to facilitate raising of necessary revenue to cover spending programs. A government can <u>deliberately plan for a budget deficit or surplus</u>. This is known as <u>discretionary fiscal policy</u>, and the fiscal stance can be either an expansionary or contractionary fiscal policy.

Balanced budget:	Government revenue (T) = Government expenditure (G)
Budget surplus:	Government revenue (T) > Government expenditure (G)
Budget deficit:	Government revenue (T) < Government expenditure (G)

In Singapore, the National Budget is an annual statement of government accounts spelling out the estimated expenditure and revenue for the forthcoming financial year; it is from 1st April of the current year to 31st March of the following year. The Budget is debated before it is passed by Parliament.

Singapore Budget 2018:



2.3.1 Sources of Government Revenue

Government revenue comes from:

- 1) Sale of Goods and Services, including:
 - State Enterprises fees from postal, telecommunications and public utilities services, earnings from commercial and industrial undertaking, state trading.
 - Investments in securities by the Government Investment Corporation of Singapore (GIC).
 - License fees and fines e.g. marriage licence, hawker's licence, and littering fines.

2) Taxation

Taxes are **compulsory payments** made by individuals or firms (i.e. the private sector) to the government without any services rendered in return. It is a transfer of funds from the private sector to the government. There are two main sources of government taxation revenue:

a. Direct Taxes

Personal income taxes and corporate income taxes are examples of direct taxes. These are *taxes on income and wealth* paid direct to the Tax Department (Inland Revenue Authority of Singapore). The burden of such taxes is borne by the person or company the tax is imposed on. The <u>impact and incidence</u> is usually on the same party and is <u>not easily shifted to others</u>.

- Personal income taxes are imposed on all incomes derived from or remitted into the country. Most personal income taxes are progressive. This means the rate of tax increases as income increases i.e. progressive tax takes a *larger proportion* of income from the rich than from the poor (*refer to Appendix 2*). Therefore, a progressive tax system serves to improve equity. In Singapore, personal income tax rates ranges from 2% to 20% for the year of assessment 2012 till 2016. Personal income tax is capped at 20% for the highest income bracket till 2016, and is considered low compared to many developed countries. The objective of making income taxes less progressive is to prevent brain drain and attract foreign talent. However, with the concern about rising income inequality, personal income tax will increase in the year of assessment 2017. Currently, the income tax rate is at 22% for the highest income bracket.
- Corporate income tax is tax on a company's chargeable income i.e. the profits of the company. Over the years, corporate income taxes had been reduced from 20% to 18%, and it stands at 17% from 2010. The objectives of a lowered corporate tax are to encourage entrepreneurship and attract foreign direct investment. Currently, Singapore's corporate tax rate is considered one of the lowest for developed economies.
- b. Indirect Taxes

Indirect Taxes are taxes on *expenditure or production of goods and services*. They are called indirect taxes because although the producers are legally liable to pay the taxes to the government, the consumer is often made to share part of the burden in the form of higher prices for the goods and services. The <u>impact and incidence may</u> <u>not be on the same person</u>. The main indirect tax in Singapore is the Goods and Services Tax (GST).

Impact and Incidence of tax

Direct and indirect taxes are often distinguished according to the impact and the incidence of taxes.

- Impact of taxation is on the person or firm on which the tax is levied. The party is responsible for handing the levy to the tax authorities.
- Incidence of taxation refers to the eventual distribution of the burden of the tax; it shows how the tax burden may be transferred from one party to another. The proportion of the tax burden borne by the buyers and the sellers <u>depends on the relative elasticities of demand and supply of the good</u> in question.

Some examples of indirect tax:

- Value-added tax (VAT) is collected at different stages of production. In Singapore, the Goods and Services Tax (GST) is an example of a VAT which stands at 7% from 1st Jul 2007.
- **Customs Duty** may be levied on goods and services coming into or leaving the country.

Refer to Appendix 1 for Income Tax and Goods and Services Tax (GST) in Singapore.

Chart 1: Breakdown of Sources of Government Operating Revenue in FY 2017



Economic Effects of Different Types of Taxes (Refer to Appendix 2 for more details)

Effects on the economy depend on the type of taxes levied. Different types of taxation can have different effects on the economy.

(a) Resource Allocation

Taxation may influence the supply of various types of labour and therefore the supply of output of various occupations. For example, in high paying jobs in the banking industry, a high progressive income tax may trigger an outflow of talent to countries where taxes are lower. In the case of indirect taxes, different rates of indirect taxes (or subsidies) on different goods raise (or lower) their prices. This changes equilibrium output in each of the product markets and resulting in resource movements in or out of the industries.

(b) Investments

Lower corporate tax could increase the financial capital available for investment. For example, a cut in corporate tax will increase the profitability of firms which in turn can lead to increase in the level of investments. However, whether firms will invest more or not depends on many factors. These include the prevailing interest rate levels, other business costs (wage rates, rentals, etc), expectations about the future, etc. The final outcome on investment is thus less certain. So a tax policy to encourage investments must be complemented by other measures.

(c) Inflation

Indirect taxes levied on goods and services (e.g. GST) increase the prices of goods and service and hence the cost of living. This gives workers and trade unions reasons to demand for higher wages. Given favourable economic conditions, such demands will be met; prices will rise even further resulting in an inflationary spiral. On the other hand, increasing direct taxes reduces disposable income, which reduces demand for goods and services and hence prices.

Thus, while an increase in indirect taxes tend to be inflationary in its effects, an increase in direct taxes are deflationary.

2.3.2 Government (Public Sector) Expenditure

Government expenditure refers to spending by the public sector.

Types of Expenditure:

Operating expenditure

i.

This refers to recurrent spending by the government i.e. on a day to day basis. Some examples include:

- General services: expenditure on general administration e.g. expenses for various government departments and ministries, including on defence and justice.
- Servicing national debt i.e. paying interest on existing debts and making capital repayments when debts mature.
- Economic services expenses on transport, telecom services, storage or aid in times of economic crisis (e.g. aid to farmers in times of sudden drought)
- Social services expenditure on education, health & social welfare.

ii. <u>Development Expenditure</u>

This is for the purpose of economic and social development. Expenditure on development projects such as the building of expressways, schools, land reclamation and flood alleviation schemes.

Refer to Appendix 2 for the Economic Effects of Different Government Expenditure.

2.4 Types of Fiscal Policy

2.4.1 Non-Discretionary Fiscal Policy: Automatic Stabilisers

This is an <u>automatic</u> fiscal policy that checks or stimulates economic activity, not by any deliberate government action, but by the <u>operation of *built-in* or *automatic* <u>stabilisers</u>. These tend to increase budget deficits during slumps and increase surpluses during booms. Since budget deficits are expansionary and budget surpluses are contractionary, the economy is "automatically" stabilized. Examples of built-in stabilisers include:</u>

(a) <u>Progressive tax structure</u>

As an economy expands, tax payments increase faster than the increase in incomes. The government will receive more tax revenues - since people earn more and so pay extra income tax (note that the existing tax rates do not change). This extra withdrawal exerts a contractionary impact on the economy. Economic expansion therefore slows down, thus reducing the pressure on prices.

This helps to control the increase in aggregate demand, keeps inflation in check and thus helps to <u>automatically</u> stabilise the economy when it is experiencing high growth.

Conversely, in times of recession, tax receipts fall sharply. As income falls, tax payments fall faster than the fall in national income - since people earn less and so pay less income tax. Therefore, the fall in consumption slows down and the fall in AD is checked.

Hence, progressive tax systems tend to **<u>automatically stabilise</u>** any abrupt changes in consumption and therefore economic activity.

(b) <u>Unemployment compensation</u>

When income is falling and unemployment level rises, there will <u>automatically</u> be more unemployment benefits paid out. This will offset the loss of earned income of the unemployed and therefore the fall in AD slows down.

As the economy expands, fewer workers will be unemployed; therefore less unemployment benefits are paid out. This slows down the rate of growth.

Note: Non-discretionary fiscal policy exercises <u>counter-cyclical effect</u> on economic activity. They help to <u>reduce the magnitude of the fluctuations in national income</u>. However, it <u>will</u> <u>not eliminate fluctuations entirely</u> and therefore cannot be completely relied on. Thus, the focus is on how <u>governments use discretionary fiscal policy</u> rather than automatic stabilisers to achieve their macroeconomic objectives.

2.4.2 Discretionary Fiscal Policy

It refers to a **deliberate change in G and/or T** so as to bring about the desired change in the level of AD. The main tool is therefore the Budget. The Budget is an estimate of government expenditure and government revenue for the coming financial year and reflects the fiscal stance of the government. The government's fiscal stance refers to whether it is pursuing an expansionary (budget deficit) or contractionary (budget surplus) fiscal policy.

3 EFFECTS OF DISCRETIONARY FISCAL POLICY ON THE ECONOMY

Discretionary fiscal policy involves <u>deliberate</u> changing of government spending (G) and taxation (T) so as to bring about the desired change in the level of AD and hence to

achieve a range of economic objectives.

- Expansionary FP = Budget Deficit
- Contractionary FP = Budget Surplus

• Expansionary Fiscal Policy:

This is applied when the economy is in a <u>recession</u> (sustained period of low growth and high unemployment) and is operating **below** full employment. The policy seeks to stimulate aggregate demand (AD) for goods and services in order to lift the economy out of a recession.

A <u>budget deficit</u> (G greater than T) is planned for - by <u>either increasing government</u> <u>spending and/or reducing taxes</u>. By spending more on public works projects or giving out transfer payments and/or cutting direct taxes, AD will increase.

 Contractionary Fiscal Policy: This is used during periods of excessive demand and where the economy is already near or at full employment, thus resulting in <u>high</u> <u>inflationary pressures</u>.

The government then plans for a <u>budget surplus</u> (G less than T) by <u>either decreasing</u> <u>G or/and increasing T</u>.

3.1 Using Expansionary Fiscal Policy to Boost Growth and Lower Unemployment

In a recession, a government can use an expansionary fiscal policy to stimulate economic growth and reduce the resultant cyclical unemployment.

3.1.1 How the Policy Works?

Correcting Macroeconomic Problems of Recession and Unemployment



Figure 1: How an increase in G results in a more than proportionate increase in GDP

Increasing Government Spending (G)

Assume a government injects \$10m into the economy to build a new polytechnic. The job is tendered to a large domestic contractor - firm XYZ. The initial effect of this increase in demand for goods and services by the government is to raise XYZ's income by \$10m.

XYZ hires more workers to carry out the new construction. This creates income for the people directly employed. These people, in turn spend the money in restaurants, cinemas, supermarkets etc. This again creates more employment and income for others. At each round, some of the extra income is spent. This is known as <u>induced</u> <u>consumption</u>, and it creates income for another person. The rest 'leaks out' in the form of savings, taxes and import spending.

<u>The multiplier process works on the premise that one person's spending generates</u> <u>income for the next</u>, and the process goes through many rounds of induced spending to increase national income by a larger magnitude, compared to the initial autonomous increase in AD.

With reference to Figure 1, as a result of the government injection of \$10m, aggregate demand rises and the AD curve shifts outwards to the right. If AD₁ is the initial level of aggregate demand and AD₂ after the initial injection of \$10m, the final level of aggregate demand is depicted as AD₃ due to induced spending via the multiplier effect. The eventual national income has increased by more than proportionate to Y3 via the multiplier effect. <u>Actual growth occurs</u>.

Since the demand for labour is a derived demand and more workers are required to produce the output to meet the higher demand, <u>cyclical or demand-deficient</u> <u>unemployment can thus be reduced</u>. In short, demand-management policies such as fiscal policy are used to work on the level of AD to increase national output and employment.

Decreasing Tax

The consumption (C) and investment (I) components of AD may be increased by reductions in direct taxation.

Link fall in tax to increase in C and I

Link to diag.

other goals

Impact on

When a government reduces personal income taxes, households' disposable income rises and they have more to spend. In addition, when corporate taxes are reduced, the post-tax (after-tax) profits of firms are increased. Firms may plough this increase into the purchase of more plants and machines as well as inventories, thus increasing investment expenditure. Such private sector spending increases the aggregate demand for goods and services, shifting the AD curve to the right to AD2 as seen in Figure 1. There will be an unplanned shortage of goods and services, and output will be increased and more workers hired to meet the higher demand hence cyclical unemployment will be reduced. The creation of income for the firms leads to multiple rounds of spending as income increases. The multiplier effect sets in where the initial increase in AD brought about by the tax reduction results in a more than proportionate increase in national income and output, bringing about actual economic growth.

3.1.2 Factors Limiting the Effectiveness of Expansionary Fiscal Policy

1) Size of Multiplier

The size of the multiplier affects the extent of increase in national income for a given increase in expenditure. The less the households spend out of each additional dollar of increase in income perhaps due to high savings rate, the smaller is the size of the multiplier. In this instance, the marginal propensity to withdraw (MPW) is said to be large.

Recall: $k = \frac{\Delta NY}{\Delta AD}$ $= \frac{1}{MPW}$	1	
$=\frac{1}{MPS+M}$	IPT+MPM	

With a smaller multiplier, the government needs to pump in a greater amount of G to achieve the desired increase in national income. This limits the effectiveness of fiscal policy as the government may lack the ability to finance the huge expenditure.

2) Problem of Time Lags

There are 3 phases which affect the timing and effectiveness of fiscal (and also monetary) policies, namely:

Recognition Lag

Time which lapses before the problem is recognised and diagnosed as economic data takes time to be gathered. By the time it is recognised, the economy may be a few months into a recession or inflation.

There is no difference in recognition time lag between fiscal and monetary policy.

Administrative Lag

Time between the recognition of the need for fiscal policy and the implementation of policy measures. Since discretionary fiscal policy involves changes in government spending and taxes, new laws may be required and such policy decisions have to be debated and approved. This is especially when there can be ramifications when increased spending and tax cuts result in budget deficits. And the government also has to decide on which areas to increase the spending on – be it on public works or transfer payments. This is further compounded by time needed by the respective departments to implement the changes.

In terms of administrative lag, fiscal policy is likely to take a longer time than monetary policy as interest rate changes may be more easily effected through the Central Bank.

Operational Lag

Time between implementation of policy and its impact on the desired macro-economic objective. As a case in point, a change in corporate tax will affect tax payments only at the end of financial year - a full 12 months delay; a change in investments responding to a change in tax rates will also take time as firms need time to plan and forecast their expected profits from the investment. In addition, the multiplier 'k' ' effect also takes time i.e. to filter through many rounds of induced consumption.

All in all, the different phases of time lags may cause much hardship for citizens in the interim before the policy takes effect. Furthermore, by the time the policy takes effect, the economy could have recovered on its own. The expansionary impact of the fiscal policy may cause further increases in AD, thereby contributing to a possible adverse problem of higher demand-pull inflationary pressures as the economy is already near full employment.

3) Methods of Financing Government Expenditure (Crowding-Out Effect)

Crowding-out Effect on Domestic Private Sector (Consumers and Firms)

The government may finance its increased spending by <u>borrowing from the public</u>. It can do so by borrowing from financial institutions or through the issue of bonds. In this case, there is a competition with the private sector i.e. households and firms for scarce funds. The interest rate (which is the price of borrowing) thus rises, and it becomes more expensive to borrow. As a result, households may borrow less to finance big-ticket items such as cars. Firms borrow less to finance their expansion plans as their expected profits are affected by the higher cost of borrowing. <u>The respective fall in consumption and investment spending by the private sector partially offsets the expansionary impact of the fiscal expansion as a result of the increase in government spending.</u> Thus AD does not increase by the full amount of government expenditure.

In short, crowding out refers to a decline in private sector expenditures as a result of an increase in government spending.

4) People's Expectations about the Future State of the Economy

An expansionary fiscal policy may not achieve its desired objective of increasing national income and employment if people remain pessimistic about the future state of the economy. If households expect the recession to persist and there is a possible loss of jobs or wage cuts, any increases in income due to the tax cuts may be saved instead of being spent. With such pessimism, firms may expect demand to continue falling and thus not plough the savings from taxes into investment. These serve to

dampen the effect of the expansionary policy on national income and employment.

5) Accuracy of Forecast (Availability of Information)

The government may not know exactly how much and when fiscal policy should be changed. It does not know for certain the values of key variables such as the multiplier. It only has estimates obtained from past data. Mistakes in estimating the multiplier will lead to incorrect decisions about the extent of the fiscal change needed to change the level of national income.

3.2 Using Contractionary Fiscal Policy to Reduce Demand-Pull Inflation

3.2.1 How the Policy Works?

Recall that inflation can be caused by demand or cost factors. Demand-pull inflation arises when there are further increases in AD while the economy is already near or at full employment. As shown in Figure 2, the economy is in equilibrium at Yf1 and the general price level is high at P2.



To reduce the demand-pull inflation, <u>contractionary fiscal policies</u> can be used. This involves a reduction in government expenditure (G) and/or an increase in taxation (T).



Referring to Figure 2, assume that the economy is in an expansionary phase where households and firms are optimistic and increases C and I. This shifts the AD from AD1 to AD2. To prevent the general price level from rising from OP1 to OP2, the government can decrease AD from AD2 to AD3 by decreasing G and/or increasing T (have a budget surplus). The government has succeeded in reducing the price level form OP2 to OP3 but at the cost of some unemployment and a lower output as output fell from OYF1 to OY3. Thus, a budget surplus will have a dampening effect on the economy.

3.2.2 Factors Limiting the Effectiveness of Contractionary Fiscal Policy

1. Problems of Time Lag (as discussed earlier in Section 3.1.2)

Due to the time lag as discussed, before the policy takes effect, there may be increased hardship for citizens since the cost of living has risen significantly. Furthermore, by the time the policy takes effect, AD could have fallen on its own due to other factors such as a worldwide recession. The contractionary impact of the fiscal policy causes further decreases in AD, thereby leading to the reverse problem of a recession. From Fig 2, if AD were to fall beyond AD₂, the national income will be lower than Y₂.

2. Inflexibility of Government Expenditure

One of the limitations of contractionary fiscal policy is the inflexible nature of government expenditure in the short run since such expenditure is geared towards important social and political programmes. Any reduction in the expenditures in merit goods such as education and health services will affect efficiency in resource allocation and welfare of citizens. Thus, cuts in these areas as well as in pensions and other social security measures will be highly resisted. Long term projects, such as road construction, school building and hospital building cannot be 'switched on and off' as means of varying aggregate demand. Once the work has begun, it will be difficult and costly to postpone or reschedule the work.

3. People's Expectations about State of the Economy

A contractionary fiscal policy may not achieve its desired objective of reducing aggregate demand if people remain optimistic about the future state of the economy. If households expect the economy to continue booming, tax increases may not reduce their spending as they expect further pay increases or bonuses. Firms react to such optimism by increasing output and may thus not cut back on investment even if corporate taxes are higher. Optimism may therefore render government efforts to reduce AD ineffective.

4. Disincentive Effects on Work and Investment

Increases in direct taxes cause disposable income of households and post-tax profits of firms to fall. If such tax increases are sustained, individuals may have less of an incentive to work while firms have less to plough into investment. These could affect the productive capacity and cause AS to fall. The adverse effect will be on the future growth of the economy.

5. May Not Tackle the Root Cause of Inflation (to be elaborated later)

It is <u>necessary to prescribe the appropriate policy to deal with the root cause of a problem</u>. If inflation is caused by high domestic demand, contractionary policies can be effective. But if the inflation is due to cost factors such as incessant wage increases (not matched by productivity increases) or higher imported prices of raw materials, policies will have to seek to reduce the cost of production. In this case, contractionary demand-management policies will not be appropriate.

Note: Though <u>fiscal policy is primarily intended as a tool to affect aggregate demand</u>, there can also be <u>secondary effects on aggregate supply</u> if the government spending is directed at areas like subsiding firms' training, R&D or improving infrastructure. (*Refer to Lecture Notes on Supply-Side Policy*)

4 FISCAL POLICY IN SINGAPORE

The main focus of the Government's expenditure is on the delivery of essential public goods and services to Singaporean. The Government spends to assure the nation of a secure future. Therefore, key areas of expenditure are on education, public housing, health care and national security. The Government is also committed to building and maintaining world-class economic infrastructure and services. This is evidenced by the fact that development expenditure accounted for around one-third of government expenditure on average over the last three decades.

Singapore's tax policies, although providing the main source of funding for the government, seek to enhance its economic competitiveness and attract foreign investments to Singapore.

This <u>combination of fair tax policies and prudent expenditure programmes</u> are key reasons for Singapore's successful fiscal policy over the years, which <u>complemented the monetary</u> policy in promoting sustained and non-inflationary economic growth.

As Singapore's fiscal policy is directed primarily at promoting long-term economic growth, rather than cyclical adjustment or distributing income, the Singapore Government has adopted the following principles in its conduct to meet its objective:

- the private sector is the engine of growth, and the government's role is to provide a stable and conducive environment for the private sector to thrive;
- tax and expenditure policies should be justified on microeconomic grounds and focus on supply-side issues, i.e. incentives for saving, investment and enterprise;
- the counter-cyclical role of fiscal policy is limited, due to high import leakages.

Against the backdrop of such a prudent fiscal policy, Singapore was able to enjoy consistent budget surpluses over the years, which contributed to a high savings rate that allows it to achieve one of the highest investment rates in the world without having to incur foreign debt. High domestic savings have further, in turn, provided Singapore a high level of foreign reserves, which has served to boost investor confidence and provide a buffer against adverse economic shocks.

With this ethos of fiscal rectitude, which extends throughout the public sector, the MAS has been able to focus on its primary goal of ensuring price stability and preserving confidence in the domestic currency through the appropriate management of the S\$ exchange rate, without needing to balance this against the requirements of deficit financing.

Source http://www.sgs.gov.sg/The-SGS-Market/Fiscal-Policy.aspx

CONCLUDING REMARKS

The recent global economic and financial crisis has placed increasing emphasis on fiscal policy as a tool to manage economic cycles. This is because the transmission mechanism of monetary policy to the real economy has been weakened significantly due to the credit crunch resulting from the financial crisis. Many countries around the world have thus introduced fiscal stimulus packages to provide significant countercyclical boost to their economy.

Singapore has also chosen to respond to this economic downturn with significant but temporary discretionary fiscal measures that would not come at the expense of fiscal sustainability. Bearing in mind our major trading partners in the US, Europe, and East Asian economies are also undertaking significant fiscal measures at around the same time, we expect the effectiveness of our fiscal measures to be enhanced despite the high leakages of the Singapore economy. Although the fiscal actions are unlikely to forestall a recession, they would mitigate the impact and avert an even sharper downturn where more businesses fail and unemployment soars.

Summary of Key Learning Points

- A government can implement a discretionary fiscal policy when it *deliberately* plans for a budget deficit (expansionary) or budget surplus (contractionary). On the other hand, a non-discretionary fiscal policy (automatic stabilisers) is an *automatic* fiscal policy that checks or stimulates economic activity *not by any deliberate government action*.
- Governments can implement expansionary fiscal policy (budget deficit) during a recession by increasing G and/or lowering T to *boost actual economic growth and lower cyclical unemployment*. They can also implement contractionary fiscal policy (budget surplus) by reducing G and/or increasing T to *reduce demand-pull inflation*.
- ✓ Factors limiting the effectiveness of fiscal policy include:
 - Size of multiplier
 - Time lags etc.

Appendix 1 Goods and Services Tax (GST) in Singapore

- It was first implemented in 1 April 1994 at a rate of 3%. It was a 4% tax on domestic consumption in 2003, with a further revision to 5% in 2004 (off setting packages were introduced to cushion the rise in GST on the poor in 2003). Since 2007, the rate has been revised to 7%. Refer to Table 1 for the workings of the GST.
- It is paid when money is spent on goods and services, including imports. GST is a type of value added tax which is an indirect tax imposed on the value added at each stage of production.
- The producers of goods and the providers of services collect the tax. GST is attracted on goods and services of businesses whose annual taxable turnover exceeds or is expected to exceed S\$1 million.
- *Exemptions:* Financial services, transactions of residential properties and purchases by tourists from participating retailers.

	Price (\$) – before GST	Price (\$) – after GST (7%)	GST paid to govt. (\$)
Manufacturer	5.00	5.35	0.35
Wholesaler	7.00	7.49	0.14 (0.49 – 0.35)
Retailer	10.00	10.70	0.21 (0.70 – 0.49)

Table 1: Example of the workings of GST (at 7% rate)

Rationale for the implementation of GST

- Encourage savings and investment i.e. it rewards enterprise (due to reduction in income taxes).
- A tax on domestic consumption only. Exports are not taxed.
- Cuts down on tax avoidance and evasion.
- Does not dilute the incentive to work.
- More stable source of revenue as it is less affected by trade cycles and the ageing population.

More specific reasons for the use of GST in Singapore

- To keep corporate tax rate at an internationally competitive level.
- To keep personal income tax rate low so as to retain the existing professional and skilled manpower and to attract others from abroad.

• To enable the spreading of tax burden more broadly among the population, in view of our ageing population.

To sum up, the main rationale for the introduction of GST is to promote economic growth leading to a higher standard of living.

Economic implications of GST

<u>Tax level and tax mix</u> – Tax level is not expected to change (measured by tax revenue to GDP), therefore, it is revenue neutral and the types of taxes in Singapore will gradually shift towards indirect taxes to improve economic competitiveness.

<u>Price level and inflation</u> – One time increase in price level, it may not be inflationary unless economy is unable to manage wage-price spiral initiated by the one-time increase (which is unlikely to happen in Singapore as our labour union has good rapport with the government).

In conclusion, the implementation of GST and the accompanying measures help the government to mitigate the regressive impact of an indirect taxation. In broadening the tax base, it gives more flexibility to the government in its policy-making.

Offsets for GST

- increase in personal tax relief; income tax rebates
- reduction in income tax rates
- rebates on service and conservancy charges for HDB flats
- property tax on some properties
- suspension of tax on phone charges and entertainment duty
- additional subsidies for health and community services

Appendix 2

Economic Effects of Different Types of Taxation

1. Production

(a) Incentive to work (supply of labour)

High income taxes, especially high and steeply progressive types will encourage absenteeism and discourage overtime work. It may reduce labour supply, production and income. The changes in labour supply depend on the relative strengths of the *income and substitution effects* of a tax:

Income effect: With <u>higher taxes</u>, people cannot afford to have the same amount of both leisure and goods and services as before. It may lead some people to work more so as to maintain a certain established living standard. This is the income effect. Higher taxes encourage people to work more.

Substitution effect: With higher taxes, an hour's work buys less consumption than before, but it still involves the sacrifice of an hour's leisure. Conversely, an extra hour taken in leisure now involves a smaller sacrifice in consumption. This is the substitution effect. <u>Higher taxes encourage people to work less</u>.

The <u>net effect is uncertain</u>. For example, if a worker has debts to service, e.g. people with children to feed and mortgages to pay, a higher income tax rate may cause him to supply more labour and enjoy less leisure hours. On the other hand, substitution effect is likely to dominate for those with few commitments.

(b) Incentive to Take Risk (Enterprise)

Entrepreneurs earn profits, a reward for risk taking. Higher corporate tax rates reduce aftertax profits, hence taking away a larger part of the reward for risk taking. If the government does not have tax incentives to encourage entrepreneurial firms (start-up firms), higher corporate taxes will act as a disincentive for enterprise and production. This is especially important today due to the high degree of capital mobility and competitive corporate tax rates in the region.

2. Resource Allocation

Tax incentives e.g. tax deductions for local research and development (R & D) will influence the allocation and production of various types of goods and services. Taxation may also influence the supply of various types of labour and therefore the supply of output of various occupations. E.g. high progressive income tax may trigger an outflow of talent to countries where taxes are lower. Indirect taxes like the GST raise prices and increase the number of tax accountants and other administration staff needed by firms to comply with these taxes.

3. Savings

Heavy progressive income taxes, high capital transfer taxes and wealth taxes reduce the ability and willingness to save. This in turn will reduce the pool of loanable funds available for capital formation (investment). The move by the Singapore government to remove the estate duty was to encourage more people to save and also encourage the wealth management industry.

4. Investments

Lower corporate tax could increase the financial capital available for investment. For example, a corporate tax cut will increase the profitability of firms and therefore increases the level of investments. However, whether firms will invest more or not depends on many factors. These include prevailing interest rate levels, expectations about the future, etc. (Refer to your previous notes on factors affecting the investment demand curve.) The final outcome on investment is thus less certain.

At the same time, tax cuts may increase the government budget deficit, causing the government to borrow more. This pushes up the rate of interest which in turn reduces private investments (*crowding-out effect*). Thus, overall effects of corporate taxation on investments are uncertain.

5. Inflation

Indirect taxes levied on goods and services e.g. GST and excise taxes, increase prices of goods and service hence the cost of living, thereby giving workers and trade unions reasons to demand higher wages. Given favourable conditions, such demands will be met; price will rise even further resulting in an inflationary spiral.

On the other hand, increasing direct taxes reduces disposable income, which reduces demand and hence prices. However, the opposite effect may result. Unions, upon finding that the workers' disposable income has been reduced, may press for a wage increase. If the unions' request is granted, inflation may result.

Economic Effects of Different Types of Government Expenditure

1. Stability: internal and external

Government expenditure is used as a tool to influence the level of economic activity. For example, in a depression, Government Expenditure (G) is increased to push up Aggregate Demand (AD) thereby increasing the level of employment, output and income. During inflation, G is reduced to push down AD so as to arrest a rise in the general price level. Taxes (T) may be imposed on imports to reduce a country's balance of payment deficit.

2. Resource allocation

By varying the types of government expenditure, the government can affect the pattern of production. For example, if the government encourages a rapid move from labour intensive industries, it may give grants and subsidies to the technology industries. Resources will be diverted from the labour intensive industries to the high technology industries. This can impact the aggregate supply in the economy.

3. Income and wealth distribution

Expenditure on health, educational services, social welfare, old age pensions benefits mainly the poor. Therefore, together with a progressive tax system, such benefits arising from revenue obtained by taxing the rich more will reduce the inequalities of income and wealth distribution to some extent.

4. Economic growth (output employment and income)

Expenditure on infrastructure, improvement and extension of transport and communication facilities improve the productive efficiency of a country, thus affecting the potential capacity of an economy.