Fiscal Policy

Important Definitions

Fiscal Policy = The deliberate management of government spending and taxation designed to influence the level of economic activity in order to achieve the economic goals of the government

Non-Discretionary Fiscal Policy = Automatic fiscal policy that checks or stimulates economic activity not by any deliberate government action but by the operation of built in stabilisers

Discretionary Fiscal Policy = Deliberate change in G and/or T to bring about desired change in level of AD

Direct Taxes = Taxes where the impact and incidence is on the same party and is not easily shifted

Indirect Taxes = Taxes where the impact and incidence may not be on the same person as it is easily shifted

Impact of Tax = The party on which the tax is levied

Incidence of Tax = The eventual distribution of the burden of the tax

Marginal Tax Rate = Proportion of additional income paid in taxes

Average Tax Rate = Proportion of total income paid in taxes

Proportional Tax = Same proportion of income is paid as tax as income rises (e.g. Corporate Tax); MTR = ATR

Progressive Tax = Rate of tax (both marginal and average) increases as income increases (e.g. Income tax); MTR > ATR

Regressive Tax = Rate of tax decreases as income increases (e.g. GST); MTR < ATR

Effects of Δ in Taxes

Personal Tax

- Savings
 - ↑ capital transfer tax/wealth tax/inheritance tax ⇒ ↓ incentive to save ⇒ ↓SS of loanable funds for I ⇒ ↑i/r ⇒ ↓I (MEI theory) ⇒ ↓AD ⇒ ↓real NY
- Consumption
 - ↑ income tax $\Rightarrow \downarrow$ disposable income $\Rightarrow \downarrow C \Rightarrow \downarrow mSOL + \downarrow AD \Rightarrow \downarrow$ real NY
- (?) Productivity of workforce
 - Income effect:
 - ↑ income tax ⇒ ↓ disposable income ⇒ Individuals cannot afford the same amount of G&S as before ⇒ Individuals work more to ↑ income to maintain previous SOL ⇒ ↑ productivity of work force ⇒ ↑ productive capacity
 - Substitution effect:
 - ↑ income tax ⇒ ↓ disposable income per hour of working ⇒ ↓ opportunity cost in consuming an extra hour of leisure ⇒ ↓ incentive to work as hard
 ⇒ ↓ productivity of work force ⇒ ↓ productive capacity

- Brain drain
 - ↑ progressive income tax ⇒ Outflow of high wage earners (talent) to countries where taxes are lower ⇒ ↓SS of labour in certain industries (e.g. banking) ⇒ ↓ productive capacity + ↓ output in certain industries
- Inflation
 - ↑ direct tax $\Rightarrow \downarrow$ disposable income $\Rightarrow \downarrow C \Rightarrow \downarrow AD \Rightarrow \downarrow DD$ -pull inflation

Corporate Tax

- Investments
 - ↑ corporate tax ⇒ ↓ after-tax profits ⇒ ↓ profitability of investments ⇒
 leftward shift of MEI curve + ↓ financial resources to invest ⇒ ↓I, c.p. ⇒ ↓
 capital formation ⇒ ↓AD + ↓ productive capacity in LR ⇒ ↓ real NY
 - However, I is determined by many other factors (e.g. business costs, interest rates, expectations of the future)
- Incentive to take risks
 - ↑ corporate tax ⇒ ↓ after-tax profits ⇒ Outflow of firms seeking lower corporate tax rates esp with high capital mobility and competitive tax rates in the region ⇒ ↓ productive capacity
- Resource allocation
 - ↑ indirect taxes in certain areas ⇒ ↓ equilibrium output of certain goods and services ⇒ Outflow of resources from those areas
- Inflation
 - ↑ indirect taxes ⇒ ↑P of G&S since incidence of tax can be shifted ⇒ ↑Costpush inflation ⇒ ↑ cost of living ⇒ Trade unions demand higher wages for workers ⇒ Wage-price inflationary spiral

Government Expenditure

Types

- Operating Expenditure (Recurrent)
 - General administration of government departments and ministries
 - Economic services (Transport, storage, telecom services + Financial aid in times of economic crises)
 - Social services (Education, health, social welfare/transfer payments)
 - Community services (Sewerage, fire brigade, police services)
 - Servicing national debts
- Development Expenditure (Usually once-off)
 - Economic and social development (Building of **infrastructure**, schools, hospitals, flood alleviation schemes etc)

Effects

- Resource allocation
 - ↑ Grants and subsidies in certain industries ⇒ ↑ incentive to ↑ production in those industries ⇒ ↑ resource allocation in those industries [can also be supplyside]
- Income and wealth distribution (equity)
 - ↑G in social welfare/transfer payments, pensions, healthcare, education ⇒ ↓
 income inequality since poor are likely to benefit more
- Economic growth
 - $\circ \quad \uparrow G \Rightarrow \uparrow AD \Rightarrow \uparrow \text{ real NY}$
 - \uparrow G in infrastructure \Rightarrow More conducive environment for doing business \Rightarrow Attract firms to invest $\Rightarrow \uparrow I \Rightarrow \uparrow AD$
 - ↑G in infrastructure ⇒ ↑ productive capacity ⇒ ↑AS (together with ↑AD) ⇒ Sustained economic growth
- Inflation
 - $\uparrow G \Rightarrow \uparrow AD \Rightarrow \uparrow DD$ -pull inflation assuming economy is operating within intermediate or classical range of AS curve

Fiscal Policy

Built-in Stabilisers (non-discretionary/automatic) How it works:

- Progressive tax structure (fiscal stabiliser)
 - Economic boom ⇒ ↑ real NY ⇒ ↑ income of workers ⇒ m.t.p. ↑ tax revenue ⇒ Lesser ↑ in disposable income ⇒ Lesser ↑ in C ⇒ Contractionary impact ⇒ ↓ inflationary pressure
- Unemployment compensation/Family assistance programmes
 - Economic boom ⇒ ↑ real NY + ↓UnN ⇒ ↓ unemployment benefits/family assistance programmes paid out ⇒ ↓G ⇒ Contractionary impact ⇒ ↓ inflationary pressure

Limitations:

- Fiscal Drag = Contractionary effect of increased tax revenues produced by increase in real NY
 - Assuming constant tax rates, ↑ real NY ⇒ ↑ income of workers ⇒ m.t.p. ↑ tax revenue ⇒ Lesser ↑ in disposable income ⇒ Lesser ↑ in C ⇒ Contractionary impact
 - \uparrow real NY + \downarrow UnN $\Rightarrow \downarrow$ unemployment benefits/family assistance programmes

- paid out $\Rightarrow \downarrow G \Rightarrow$ Contractionary impact
- Moderates expansionary effect of FP when recovering from recession
- ↓ Productivity of labour
 - Assuming that substitution effect is greater than income effect
 - If unemployment benefits are too high, individuals may be content to continue being unemployed + 1 frictional unemployment

Expansionary (discretionary/deliberate)

How it works:

- Budget Deficit (i.e. G>T)
 - 1G in transfer payments/public works projects (building infrastructure)
 - Economic Growth
 - $\uparrow G \Rightarrow \uparrow$ autonomous AD since AD = C+I+G+(X-M) $\Rightarrow \uparrow$ profits of
 - firms + \uparrow employment as firms seek to \uparrow production \Rightarrow \uparrow income \Rightarrow

↑ induced consumption \Rightarrow m.t.p. ↑ real NY than initial ↑G due to successive rounds of spending and respending by consumers via multiplier effect since one person's spending is another person's income and income generates more spending

- ↑G in infrastructure ⇒ More conducive environment for doing business ⇒ Attract firms to invest ⇒ ↑AD
- ↑G in infrastructure ⇒ ↑ productive capacity ⇒ ↑AS (together with ↑AD) ⇒ PG ⇒ Sustained economic growth
- Unemployment
 - ↓ cyclical UnN
- SOL
 - \uparrow real NY, c.p. $\Rightarrow \uparrow$ mSOL
 - ↑G on transfer payments ⇒ ↑ mSOL of unemployed and low income groups
 - \uparrow G on education/healthcare $\Rightarrow \uparrow$ nmSOL
 - \downarrow UnN \Rightarrow Social stability \Rightarrow 1nmSOL
- Resource allocation
 - ↑ Subsidies for merit goods/goods with positive externalities ⇒ ↓

deadweight welfare loss $\Rightarrow \uparrow$ allocative efficiency

- Equity
 - ↑ transfer payments ⇒ ↑ redistribution of income ⇒ ↓ income inequality
- ∘ ↓T by reducing tax rates/eliminating certain taxes
 - Economic Growth
 - \downarrow income tax \Rightarrow \uparrow disposable income \Rightarrow \uparrow C \Rightarrow \uparrow AD \Rightarrow \uparrow real NY
 - \downarrow corporate tax \Rightarrow \uparrow after-tax profits \Rightarrow \uparrow profitability of investments

⇒ rightward shift of MEI curve + ↑ financial resources to invest ⇒ ↑I, c.p. ⇒ \uparrow AD + ↑ productive capacity in LR ⇒ Sustained economic growth

- Eliminate capital transfer tax/wealth tax/inheritance tax ⇒ ↑
 incentive to save ⇒ ↑SS of loanable funds for I ⇒ ↓i/r ⇒ ↑I (MEI theory), c.p. ⇒ ↑AD + ↑ productive capacity in LR ⇒ Sustained economic growth
- Unemployment
 - ↓ cyclical UnN
- SOL
 - \downarrow income tax \Rightarrow \uparrow disposable income \Rightarrow \uparrow C \Rightarrow \uparrow mSOL

Advantages:

- Effects of 1 G are direct
- Govt spending can be targeted at key areas to increase AS, SOL and NY at the same (e.g. Education, Infrastructure, Transfer payments, Healthcare)

Limitations:

- **Size of k multiplier
 - Extent of increase in real NY for a given increase in autonomous spending
 - k = 1/MPW where MPW = MPM + MPS + MPT
 - Small k due to high MPW ⇒ Requires larger ↑G to ↑ real NY to same extent ⇒ Limits effectiveness of expansionary FP; Government incures high opportunity cost to stimulate the economy
 - In the case of Singapore, this is significant since Singapore has high MPM and MPS ⇒ Small k Multiplier
- **Limited effectiveness of 1G
 - In the case of Singapore, X contributes to >200% of GDP while G contributes to low proportion of GDP
 - Global recession ⇒ ↓X ⇒ Large ↓AD ⇒ ↑G unlikely to be able to offset ↓X, can only cushion
- **Need to finance
 - Crowding out effect = ↓ private expenditure due to ↑ government spending
 - Govt unable to finance an increase in budget deficit by ↑ money supply (central bank refuses) ⇒ Borrow money from private sector ⇒ Compete with private sector for scarce supply of loanable funds ⇒ ↑DD for loanable funds ⇒ ↑i/r ⇒ ↓I and C ⇒ Lesser ↑ in AD
 - ↑i/r ⇒ Inflow of hot money ⇒ ↑DD for domestic currency ⇒ Appreciation of domestic currency assuming free floating exchange rate ⇒ Constant Px

in terms of domestic currency but $\uparrow Px$ in terms of foreign currency $+ \downarrow Pm$ in terms of domestic currency $\Rightarrow \downarrow Qx + \uparrow Qm \Rightarrow \downarrow X + \uparrow M$ assuming price elastic demand for imports $\Rightarrow \downarrow (X-M)$ assuming MLC holds \Rightarrow Lesser \uparrow in AD

- Government sector requires land, resources and labour ⇒ Competes with private sector for scarce resources in the host country ⇒ Drives up factor prices ⇒ ↑COP for firms ⇒ ↓ willingness and ability of private firms to set up businesses in Singapore
- Burden on future SOL
 - Budget deficit ⇒ ↑ borrowing from banks and foreign countries ⇒ ↑
 national debt ⇒ Need for contractionary FP (austerity measures) in the
 future to repay debts ⇒ ↓mSOL and nmSOL in the future
 - ∴ Need to exercise fiscal prudence
 - Hope is that current budget deficit ⇒ Strong enough economic growth such that govt can adopt contractionary FP in the future without severely compromising SOL
- Depletion of reserves
 - Budget deficit ⇒ Need to finance using reserves ⇒ ↓ reserves available in case of another emergency
- Fiscal drag
 - ↓ Effectiveness of expansionary fiscal policy due to built-in stabilisers when trying to recover from a recession
 - Assuming constant tax rates, ↑ real NY ⇒ ↑ income of workers ⇒ m.t.p. ↑ tax revenue ⇒ Lesser ↑ in disposable income ⇒ Lesser ↑ in C ⇒ Contractionary impact
 - ↑ real NY + ↓UnN ⇒ ↓ unemployment benefits/family assistance programmes paid out ⇒ ↓G
 ⇒ Contractionary impact
- Conflicts with other Macro objectives
 - Inflation
 - ↑G ⇒ ↑ AD ⇒ ↑GPL assuming economy is operating in intermediate range of AS curve ⇒ ↑DD-pull inflation
 - BOP
 - \uparrow real NY \Rightarrow \uparrow C, some of which will be imported \Rightarrow \uparrow M
 - ↑GPL ⇒ ↑Px + constant Pm but relatively cheaper compared to domestic goods ⇒ ↓Qx + ↑Qm ⇒ ↓X assuming price elastic demand and ↑M ⇒ ↓(X-M) ⇒ ↓BOT ⇒ ↓ current account ⇒ less healthy BOP
 - However, unlikely to be significant/likely to be muted given that expansionary fiscal policy is usually adopted in times of recession when economy is operating within Keynesian range
- Time Lag
 - Recognition lag (i.e. Time before problem is recognised and diagnosed)
 - Administrative lag (i.e. Time between recognition of problem to taking of action)
 - Planning, construction of policies, signing of contracts etc
 - Changes in taxes and subsidies have to be passed by Parliament before implementation

- Operational lag (i.e. Time between taking of action and impact on output and employment)
 - Changes in tax only take place at the end of the financial year
 - Change in I takes time
 - Multiplier effect takes time
- By the time expansionary FP takes effect, economy might have already recovered \Rightarrow
- Inflationary pressures
- Imperfect info
 - Difficulty in accuracy of forecasting outcome of fiscal measures
 - Difficulty in estimating size of k (MPC and MPM fluctuate depending on expectations
 of future prices and incomes; where on the AS curve the economy is operating at)

Contractionary (discretionary/deliberate)

How it works:

- Budget Surplus (i.e. G<T)
 - ↓G in transfer payments/public works projects (building infrastructure)
 - 1 T by increasing tax rates
- Effects:
 - ↓ Inflation
 - ∎ ↓G
 - \uparrow income tax $\Rightarrow \downarrow$ disposable income $\Rightarrow \downarrow C$
 - \uparrow corporate tax $\Rightarrow \downarrow$ after-tax profits $\Rightarrow \downarrow$ profitability of investments \Rightarrow rightward shift of MEI curve + \downarrow financial resources to invest $\Rightarrow \downarrow$ I, c.p.
 - Combined effect of ↓C+I+G ⇒ ↓AD since AD=C+I+G+(X-M) via reverse multiplier effect ⇒ Dampens EG
 - Assuming economy is operating within intermediate or classical range, ↓AD ⇒ Alleviate DD-pull inflationary pressures ⇒ ↓ production ⇒ ↓ need to compete for scarce resources and hence, no need to bid up factor prices ⇒ Downward pressure on GPL
 - Prevent DD-pull inflation ⇒ Prevent wage-price spiral ⇒ Achieve price stability ⇒ Maintain price competitiveness to ensure sustained EG
 - BOP
 - ↓GPL ⇒ ↓Px + constant Pm but relatively more expensive compared to domestic goods ⇒ ↑Qx + ↓Qm ⇒ ↑X assuming price elastic demand and
 - $\downarrow M \Rightarrow \uparrow (X-M) \Rightarrow$ Improvement in current account \Rightarrow Improvement in BOP
 - Reduce budget deficit (austerity measures) → ↑ Business and consumer confidence + ↑ Credit rating in order to ↓ hot money outflow

Limitations:

• Difficulties in ↓G

- ↓G in transfer payments ⇒ ↓mSOL of low income earners + ↓ social stability ⇒ ↓nmSOL
- ↓G in infrastructure \Rightarrow ↓ productive capacity in LR \Rightarrow ↓AS in LR \Rightarrow ↓PG
- ↓G in healthcare, education ⇒ ↓ in quality of healthcare and education
 ⇒ ↓nmSOL
- Some G are long term projects, difficult to cut readily
- Rebuttal: Can choose to decrease G in less crucial aspects e.g. Excessive spending on defence, Excessive spending on subsidies, Spending on space exploration etc
- Difficulties in [↑]T
 - \uparrow income tax $\Rightarrow \downarrow$ disposable income $\Rightarrow \downarrow C \Rightarrow \downarrow mSOL$
 - But can choose to 1T on luxury goods and higher income earners to reduce impact on lower income earners
 - Politically unpopular
 - (?) Productivity [see above] (may \downarrow if substitution effect > income effect)
 - Depends on original tax rate and income level
 - Brain drain
 - \uparrow income tax \Rightarrow Outflow of high wage earners (talent) to countries where
 - taxes are lower $\Rightarrow \downarrow$ SS of labour in certain industries (e.g. banking) $\Rightarrow \downarrow$
 - productive capacity + \downarrow output in certain industries $\Rightarrow \downarrow AS \Rightarrow \downarrow PG$
 - ↑ corporate taxes $\Rightarrow \downarrow I \Rightarrow \downarrow$ capital formation $\Rightarrow \downarrow$ productive capacity $\Rightarrow \downarrow AS \Rightarrow PG$
- Conflicts with other Macro objectives
 - ↓AD may compromise real NY and UnN assuming economy is operating within the intermediate range of AS curve
- Time lag
- Small k value
 - Need to ↓G/↑T by greater extent ⇒ ↑ opportunity cost (esp ↓G as some public goods spending are essential)
- Imperfect info