Demand-side Policies
focus on changing aggregate demand, or shifting the aggregate demand curve in the AD-AS model to achieve macroeconomic objectives.

2.4 Fiscal Policy

The Government Budget

Sources of government revenue:
1. Taxes: both direct and indirect
2. Sales of goods & services: government-owned industries (eg. transport, water, electricity)
3. Sale of government-owned enterprises: Privatization – transfer of ownership to private owners, or rent from buildings rented out by governments (eg. GCBs in Singapore)

Types of government expenditure:
1. Current expenditure: spending on day-to-day items that are recurring (wages and salaries for government employees); supplies for government activities (eg. supplies for public schools and hospitals; provision of subsidies, interest payments on government loans)
2. Capital expenditure: public investments, production of physical capital like airports, roads)
3. Transfer payments: payments by the government to specific groups for income redistribution (eg. unemployment benefits, child allowances)

Budget: plan of a country’s tax revenues and expenditures over a period of time.
Balanced budget: tax revenue = government expenditure
Budget deficit: tax revenue < government expenditure
  • Government pays for excess of expenditures over revenues by borrowing/ public debt
Budget surplus: tax revenue > government expenditure
  • During times of budget surplus, revenue can go to paying back public debt

The Role of Fiscal Policy

Fiscal policy: manipulation of level of government expenditure or taxes in the economy to influence aggregate demand.

Aggregate demand = C + I + G + (X-M)
Fiscal policy can affect C (direct taxes on income affect consumption), I (business taxes), and G

Expansionary Fiscal Policy
• Help close a deflationary (recessionary) gap
• Increase aggregate demand (creates budget deficit/shrinking surplus)
  ▪ Increase government spending
  ▪ Decrease income taxes
    ▪ Decrease business taxes
• Both models predict increase in real GDP
  ▪ But effects depend on AS curve
  ▪ Increase in GDP in Keynesian model, may have no increase in price level at all if AD shift occurs entirely within horizontal section of the Keynesian AS curve
  ▪ See elasticities of aggregate supply

Contractionary Fiscal Policy
• Help close an inflationary gap
• Decrease aggregate demand (creates budget surplus/ shrinking deficit)
  ▪ Decrease government spending
  ▪ Increase income taxes (after-tax income falls, less consumer spending)
    ▪ Increase business taxes (businesses spend less on investment)
• Both models show decrease in real GDP and price level
  ▪ Also depends on the slope of the curve
  ▪ *Note: in the Keynesian model, the price level does not fall easily even as aggregate demand decreases (ratchet effect), therefore only fall in real GDP rather than price
**Automatic stabilizers:** factors that automatically, without any action by government authorities (non-discretionary), work toward stabilizing the economy by reducing the short-term fluctuations of the business cycle.

*note: only reduces severity of economic fluctuations, cannot stabilize economy and eliminate inflationary and recessionary gaps on their own.*

1. Progressive income taxes (as well as proportional income taxes – with progressive the average tax rate increases as income/real GDP increases, so the more progressive an income tax system, the greater the stabilizing effect on economic activity)
   - As real GDP and incomes rise, government tax revenues automatically increase, causing disposable income to be lower
   - Dampens aggregate demand
   - Counteract economic expansion (make it smaller than it would otherwise be; and vice-versa in reducing severity of a recession)

2. Unemployment benefits
   - As real GDP falls, unemployment increases and so unemployment benefits rise as they are paid out to more workers
   - Consumption will be maintained to some extent as their benefits replace part of their lost income, lessening downward pressure on aggregate demand
   - Vice versa in an expansion

The Multiplier

- Discretionary fiscal policy
  - The effect of increasing government spending on the increase of real GDP depends on the multiplier (G* multiplier) eg. MPC = ¾, increase in government spending = $1, increase in AD = $4
  - The effect of reducing taxation depends on the multiplier
    - Will have a lesser impact on AD than an equivalent increase in government spending
    - Eg. $1 tax cut, MPC= ¾, so extra $0.75 spent, $0.25 leaked – so increase in AD is $0.75 * 4 = $3
- Automatic stabilizers
  - Reduce the value of the multiplier as they lower the size of MPC
  - Progressive tax
    - The more progressive, the larger the MPT, and the smaller the MPC, smaller the multiplier
  - Unemployment benefits
    - Partially replaces lost income (MPC is less)

**Fiscal policy and long-term economic growth: impact on potential output**

Demand-side policies also have supply-effects and can affect long-term economic growth.

- Indirect effects on potential output
  - Create stable macroeconomic environment that encourages firms to plan over long periods of time (activities impacting long-term growth)
    - Firms invest in capital goods (capital formation)
    - How to pursue R&D (technological innovation)
    - Shift LRAS to the right in monetarist context
- Direct effects on potential output
  - Government spending on physical capital goods: infrastructure, R&D
  - Government spending on human capital formation: training and education programs that increase the quality of the labor force and labor productivity
  - Provide incentives to encourage investment by firms (lowering business taxes)

**Evaluating Fiscal Policy**

**Strengths of a fiscal policy**

- Ability to target sectors of the economy
  - Fiscal policy can target specific sectors by making changes in composition of government spending
    - Education
    - Healthcare/ social groups
    - Infrastructure (types and location – on economically depressed regions that could benefit from physical capital)
    - Merit goods
    - Public goods (police force, public parks)
Direct impact of government spending on aggregate demand
- Changes in government spending directly impact aggregate demand, which can be useful to policy makers that want to be certain that changes in spending will affect aggregate demand in the desired direction.
- Changes in taxes less direct (some uncertainties over effects as they change disposable income – if consumers are insecure, tax cuts may lead to greater saving rather than greater spending, not very effective in recession).

Promoting economic activity in a recession
- Wage and price inflexible downwards (Keynesian theory), so low AD would keep economy stuck in recessionary gap (if AD intersects AS on horizontal section, an increase in AD would increase GDP).

Dealing with rapid and escalating inflation
- Inflationary pressures due to inflationary gap can get out of hand; rapid increases – contractionary fiscal policy is effective to bring problem under control.

Ability to affect potential output
- Can affect long term economic growth (as seen above).

Weaknesses of a fiscal policy
- Time lags (by time policy takes effect, may not be appropriate anymore)
  - Problem (recessionary/inflationary gap) to be recognized by authorities
  - Appropriate policy to be decided by the government
  - Time for policy to take effect
- Political constraints
  - Government spending and taxation face pressures – cannot cut spending on social services and public goods easily if contractionary policy required
  - Tax increases are unpopular, tax decreases popular (during election, unsuitable fiscal policies may be enacted).
- Inability to deal with supply-side causes of instability
  - Stagflation: Falling GDP and inflation simultaneously – cannot have both contractionary and expansionary policy at the same time.
- Inability to ‘fine tune’ the economy
  - Cannot be used to reach a precise target with respect to level of output, employment, and price level.
- Crowding out
  - Deficit spending – governments have to borrow; therefore there is an increase in demand for money, increase in the rate of interest, and lower investment spending by private firms, ‘crowding out’ of private investment, weakening policy.

2.5 Monetary Policy

Interest Rates

The role of central banks:
usually government institution, but degree of independence from government interference – can be conducted with a view to what is considered better for long term interests.

- Banker to government:
  - Holds the government’s cash (as deposits) and receives/makes payments for them
  - Manages government borrowing: sells bonds to commercial banks and the public
  - Advises the government on financial and banking matters
- Regulator and banker to commercial banks:
  - Holds deposits and makes loans in times of need
  - Makes sure commercial banks operate with appropriate levels of cash
  - Stick to rules that ensure safety of financial system
- Conduct monetary policy:
  - Changes in money supply
  - Interest rate
  - Also determine the exchange rate because of close relationship between interest rates and exchange rates (see international trade; generally interest rates and exchange rates of a country move in the same direction.

Determining the rate of interest:
can be illustrated using a diagram illustrating the demand and supply of money (anything that is acceptable as payment for goods and services (currency and cheques))
• Horizontal axis: quantity of money
• Vertical axis: rate of interest
  ▪ The ‘price’ for money services
  ▪ As rate of interest falls, quantity of money demanded by the public (consumers, firms, government) increases (downward sloping demand curve)
  ▪ Supply of money is fixed at level decided upon by the central bank (vertical line as it does not depend on the rate of interest).
• An increase in money supply leads to fall in the rate of interest; a decrease in money supply leads to increase in the rate of interest:
  ▪ One determines the other
  ▪ Used to control money supply, but hard to do that now effectively due to the sheer amount of money, transactions – not simply printing anymore
  ▪ Control interest rate – target interest rate and takes steps to adjust money supply so that equilibrium interest rate will equal target
    ❖ Can target different interest rates: the ‘base rate’, the ‘federal funds rate’

Open market operations: Central banks themselves can influence money supply by the required reserve ratio (sort of like a monetary multiplier: 1/rr; creating new money – the more excess reserves, the more loans banks can make, more money is created). If they need to increase money supply, they can buy government bonds from commercial banks, increasing the excess reserves for commercial banks (that lend out more loans, money supply increases).

The Role of Monetary Policy

Interest Rates and Aggregate Demand
• Consumption:
  ▪ Some consumer spending is paid for out of borrowing
  ▪ Increase in interest rates, lower consumer spending (downward shift AD)
  ▪ Shift of AD to the left
• Investment:
  ▪ Amount of borrowing to finance their investment expenditures
  ▪ Increase in interest rates, lower business spending (downward shift AD)
  ▪ Shift of AD to the left

Expansionary (easy) money policy
• Money market and rate of interest curve:
  ▪ Increase in money supply
  ▪ Rightwards shift in supply of money curve
  ▪ Interest rate falls
• Price level and real GDP curve:
  ▪ When interest rate falls, I and C increase
  ▪ AD curve shifts right
  ▪ Recessionary gap is closed
• Both models predict increase in real GDP
  ▪ But effects depend on AS curve
  ▪ Increase in GDP in Keynesian model, may have no increase in price level at all if AD shift occurs entirely within horizontal section of the Keynesian AS curve
  ▪ See elasticities of aggregate supply

Contractionary (tight) money policy
• Money market and rate of interest curve:
  ▪ Reduces money supply
  ▪ Leftwards shift in supply of money curve
  ▪ Interest rate rises
• Price level and real GDP curve:
  ▪ When interest rate rises, I and C decrease
  ▪ AD curve shifts left
  ▪ Inflationary gap is closed
• Both models predict decrease in real GDP
  ▪ But effects depend on AS curve
  ▪ Fall in GDP in Keynesian model, may have no increase in price level at all if AD shift occurs entirely within horizontal section of the Keynesian AS curve (note ratchet effect – price sticky downwards)
Monetary policy and inflation targeting

Central banks around the world are trying a kind of monetary policy that aims at maintaining a particular target rate of inflation (e.g., Australia, Brazil, UK) rather than both full employment and low rate of inflation.

- Usually between 1.5% to 2.5%
- One percentage point above and below as ‘tolerance’ margin
- Policies usually based on future inflation based on CPI
  - If predicted inflation > target inflation, contractionary policy
  - If target inflation > predicted inflation, expansionary policy

Advantages of inflation targeting

- Lower rate of inflation
  - Particularly in countries experiencing persistent high rates of inflation, inflation targeting can be effective way to reduce it
- A more stable rate of inflation
  - Reduced fluctuations as a target is pursued
- Improved ability of economic decision makers to anticipate future rate of inflation
  - Facilitates investment decisions, etc.
- Greater coordination between monetary and fiscal policy
  - Clear target allows government to plan fiscal policy to complement monetary policy
- Greater central bank transparency and accountability
  - Central bank becomes more open about its activities and more accountable to government and public – has to provide explanations

Weaknesses of inflation targeting

- Reduced ability of the central bank to pursue other macroeconomic objectives
  - If focusing on maintaining inflation at target rate, unable to use monetary policy to pursue other goals
  - (e.g., full employment level of real GDP and exchange rate stability)
- Reduced ability of central bank to respond to supply-side shocks or unexpected events like financial crisis
  - Sudden increase in oil prices causing cost-push inflation and stagflation; may need flexibility to pursue expansionary policy to bring economy out of recession – may mean higher inflation rate than the target
  - Financial crisis also needs expansionary monetary policy
- Difficulties in finding appropriate target
  - Too high: high inflation, lower standard of living, etc.
  - Too low: Unemployment
- Difficulties of implementation
  - Based on forecasts of future inflation and economic activity
  - Forecasts are unreliable

Evaluating Monetary Policy

Strengths of a monetary policy

- Relatively quick implementation
  - More quickly implemented than fiscal policy because it does not have to go through the political process, which is very cumbersome and time consuming
- Central bank independence
  - Independence from the government means that central bank can take decisions that are in the longer term interests of the economy
  - Greater freedom in pursuing policies that are politically unpopular (such as higher interest rates, making borrowing more costly)
- No political constraints
  - Even if central bank is not independent of the government, still not subject to same kind of political pressures as fiscal policy, since it does not involve making changes in the government budget (taxes, merit or public good provision)
- No crowding out
  - Does not lead to crowding out (due to expansionary fiscal policy and higher interest rates; in fact, an easy monetary policy involves lower interest rates)
- Ability to adjust interest rates incrementally
  - Can be adjusted in small steps or ‘fine tuning’
Weaknesses of a monetary policy

- Time lags (by time policy takes effect, may not be appropriate anymore)
  - Can be implemented quickly because doesn’t depend on political process
  - However, there are still delays: recognition of problem
  - Time for policy to take effect (changes in interest rates can take several months to have an effect on AD, real output, and price level)
- Possible ineffectiveness in recession
  - Presupposes that banks will be willing to increase lending, and firms and consumers willing to increase spending
  - Increases aggregate demand by encouraging investment and consumption spending through low interest rates, but may not be possible
  - Banks fear the consumers will not be able to pay back; firms and consumers pessimistic about future conditions and unwilling to take out new loans
- Inability to deal with supply-side causes of instability
  - Stagflation: Falling GDP and inflation simultaneously – cannot have both contractionary and expansionary policy at the same time
- Conflict with government objectives
  - Manipulation of interest rates affects:
    - Consumption and investment spending
    - Inflation
    - Unemployment
    - Foreign sector: eg. exchange rates

2.4 Supply-side Policies
focus on the production and supply side of the economy (changing aggregate supply) or shifting the long run aggregate supply curve or Keynesian AS curve right, to increase potential output and achieve long-term economic growth.

The Role of Supply-Side Policies
*do not attempt to stabilize the economy by reducing the severity of the business cycle; instead focus on the quantity and quality of factors of production, and institutional changes intended to improve the productive capacity of the economy.

Types of supply-side policies:
1. Interventionist: rely on government intervention to achieve growth in potential output (usually favored by economists influenced by Keynesian economic thinking)
2. Market-based: emphasize the importance of well-functioning competitive markets in achieving growth in potential output (favored by monetarist/ new classical economists)

Interventionist Supply-Side Policies
*will have a short term effect on aggregate demand, but more importantly, will shift LRAS to the right in the long term

Investment in human capital:
- Training and education
  - Improvement in quality of labor resources, increasing labor productivity
  - Workers become more employable, reducing natural rate of unemployment
  - Also education has many positive externalities
  - Specific measures:
    - Retraining programs for structurally unemployed workers to obtain skills in greater demand
    - Assisting young people through grants or low interest loans
    - Direct government hiring and provision of on-the-job training
    - Offering subsidies to firms to higher structurally unemployed workers
    - Assisting workers to relocate to areas where there is greater demand for labour through grants and subsidies (eg. provision of low-cost housing)
    - Provide information on job availability in geographical areas
    - Establishing government projects in depressed areas (create employment)
• Improved healthcare services and access
  ▪ Workers become healthier and more productive – increasing labor productivity and economy’s potential output
  ▪ Also many positive externalities

**Investment in new technology:**
• Research and development the fundamental activity behind the development of new technologies, resulting in new or improved capital goods, increasing potential output and economic growth
  ▪ Governments heavily involved in investing in R&D (government spending)
  ▪ Provide incentives to private sector to engage in R&D activities
    ❖ Tax incentives
    ❖ Granting of patents for protection of new inventions

**Investment in infrastructure:**
• Investment in physical capital
  ▪ Increases efficiencies in production and lowers cost
  ▪ Qualify as merit goods or public goods, justifying government intervention
    ❖ Good roads, transport systems save time and effort in transport, allowing more output to be transported and lowering costs
    ❖ Effective telecommunications permits faster and easier communications, enabling economic activities to be carried out more efficiently
    ❖ Better infrastructure improves labor productivity

**Industrial policies:**
• Government policies designed to support the growth of the industrial sector of an economy (all of the above government investments are industrial policies)
  ▪ Support for small and medium-sized enterprises or firms, promoting efficiency, capital formation and more employment possibilities
    ❖ Tax exemptions (tax cuts and allowances) and grants/subsidies
    ❖ Low-interest loans
    ❖ Business guidance
  ▪ Support for ‘infant industries’:
    (newly emerging industries in developing countries, that sometimes receive government support)
    ❖ Tax exemptions (tax cuts and allowances) and grants/subsidies
    ❖ Tariffs and other forms of protection against exports
    ❖ Low-interest loans

**Market-based Supply-Side Policies**
believes that economy’s real GDP automatically tends towards full employment equilibrium and potential GDP; so focus of government policies not on stabilization but more on creating conditions that allow market forces to work well (shift in LRAS matches shift in AD, so need not have price level increases)

1. **Encouraging Competition:**
   Greater competition amongst firms forces them to reduce cost, greater productive efficiency, improves allocation of resources, possibly improve quality of goods and services
   • **Deregulation** involves the elimination or reduction of government regulation of private sector activities (as government regulation stifles competition and reduces efficiency)
     ▪ Economic deregulation: government control of prices, output, and activities of firms (that protects against competition); deregulation to allow new private firms to enter monopolistic or oligopolistic industries, forcing existing firms to face competition (eg. transport, natural gas, telecommunications, electricity, financial services)
     ▪ Social regulation: protecting consumers against undesirable effects of private sector activities (eg. food, pharmaceutical safety, worker protection, pollution control) – although needs to be strengthened for public safety, some economists argue that social regulation is excessive and costly in terms of red tape or paper work
   • **Privatization** involves the transfer of ownership of a firm from the public to private sector, improving efficiency due to improved management and operation (gets rid of bureaucratic procedures, high administrative costs, and unproductive workers)
   • **Outsourcing to private sector**
     ▪ Public services are provided by private firms on a contractual agreement between government and private service provider (information technology, human resources management, accounting services)
     ▪ Increased competition as private firms compete with each other to get contracts with government
     ▪ Improved efficiency, lower costs of production, improved quality
• Trade liberalization
  - International trade has become freer in recent decades due to reductions in trade barriers
  - Increase competition, efficiency, etc.
• Restricting Monopoly Power
  - Break up large firms into smaller units that behave more competitively
  - Prevent mergers
  - More scope for forces of supply and demand, greater efficiency

2. Labor market reforms:
Increasing labor market flexibility (or reducing rigidities) to make labor markets more competitive, make wages respond to forces of supply and demand, to lower labour costs and increase employment by lowering natural rate of unemployment.
(Lowers cost of production, more profits, investment, R&D, capital good production, and therefore potential output/ economic growth)
• Abolishing minimum wage legislation
  - May reduce unemployment by allowing equilibrium wage to fall
  - Increased downwards wage flexibility mean lower unemployment
  - Greater firm profits, more investment and economic growth
• Weakening the power of labor/trade unions
  - Unions try to secure wage increases, if weakened, wages more responsive to supply and demand forces
  - Increased wage flexibility
• Reducing unemployment benefits
  - Payments to workers who have lost their jobs, meant to provide income (although loss of automatic stabilizer)
  - Increased incentive to find a job
  - Reduce natural rate of unemployment
• Reducing job security
  - Remove laws that protect workers from being fired and high levels of compensation, easier to let go of workers
  - Will hire more workers if they know they can fire them easily without cost if no longer needed (although could increase unemployment instead)
  - Decrease labor costs

3. Incentive related policies:
Incentive related policies involve cutting various types of taxes, which are expected to change the incentives faced by taxpayers (firms or producers)
*may be small compared to effect on AD
• Lowering personal income taxes
  - Affect both AD and AS
  - Higher disposable income, creating incentive for people to work (*although might use higher income to increase time for leisure)
  - Increase in hours working, people interested in working, number of years worked
  - Decrease in unemployment and shift in LRAS curve right, increased potential output
• Lowering business tax
  - Affect AD and AS (firstly increase investment spending)
  - Firms have greater financial resources for investment and pursue R&D, improving supply, quality/quantity of production (*although may consume more rather than save)
  - Greater output
• Lowering capital gains tax and interest income
  - Tax on financial investments (stocks, bonds) or from buying and selling real estate plus taxes on income from interest on saving deposits reduced
  - More motivation to save and invest
  - Greater production of capital goods and therefore increase in potential outputs

Evaluation of Supply-Side Policies

Time lags
• Work after significant time lags, making the supply-side effects on the economy over longer term, need time to materialize and affect potential output
• Although may have effect on AD in short term
  - If economy experiencing inflation, could destabilize economy by adding to inflationary pressures in the short term
  - Can help close recessionary gap in a recession
Impact on economic growth

- Increases in potential output
- Arguments favoring interventionist policies
  - Targeted government support in specific areas such as investment, R&D, training and education, unlikely for market to provide as needed
    - Industrial policies allow the government to support particular industries that offer greatest possibilities for growth in the future
- Arguments against interventionist policies (favoring market-based policies)
  - Government interference in interventionist policies may lead to inefficiencies and resources misallocation (government failure)
    - Political pressures and corruption
    - Lack of necessary information to make correct choices
    - Unintended and unwanted consequences of government action
  - Interventionist policies rely heavily on government spending
    (Impact on the government budget)
    - Opportunity cost
    - High taxes and large government sector; disincentive to work and inefficiencies
    - Add to budget deficit
- Debate over incentive-related policies
  - Reduces government revenue (tax cuts) and may create budget deficit
  - Questionable effects on work, saving, and growth of potential output
  - Question strength of supply side effects; believed to be small compared to the effect on aggregate demand
    - Difficult to detect which policy responsible for which effect

Ability to create employment (reduce unemployment)

- Reduction of NRU (structural, frictional, seasonal)
- Interventionist policies (involving education and training)
  - Enabling workers to acquire skills needed to meet needs of employers
  - Providing assistance to workers to relocate
  - Providing information that reduces unemployment when workers are in between drops (frictional unemployment) or between seasons (seasonal unemployment)
- Market-based policies (involving labor market reforms)
  - Make labor market more responsive to demand and supply (lower wages and production costs, easier hiring and firing)
  - However, may actually increase unemployment over short term (although may improve over longer term as economy begins to benefit from broader effects)
    - Firms try to cut costs by firing workers to make operations more efficient
    - Contracting out to private sector; government job losses, as well as job losses for country if contracted out to foreign workers
    - Economic deregulation can increase competitive pressures for firms to fire workers and lower their costs

Ability reduce inflationary pressure

- (See diagram) Reduces inflationary pressures
  - Firms’ cost of production kept low
    - Increases in efficiency (increased competition)
    - Lower wage costs (increased labor market flexibility)

Effects on equity

- Interventionist policies that focus on investments in human capital that are broadly distributed throughout the population tend to have positive effects
  - Increased income equality
    - Educated, skilled and healthy workers more likely to be employed
    - Active and productive – income more equally distributed
    - Lower NRU reduces inequality by providing incomes to previously unemployed workers
- Market-based policies tend to have negative effects on equity
  - Greater competition
    - Results in some unemployment and loss of income
  - Labor market reforms
    - Reducing worker protection
    - Increased job insecurity
    - Increasing income inequality
  - Privatization
Higher prices than what the government charged if they have market power, as well as restrict quantity of output produced
- If necessities or merit goods, will affect poor people
  - Incentive-related policies (tax cuts may worsen equity)
  - High taxes disincentive to work applies mainly to higher income groups with higher tax rates (cutting taxes makes system less progressive, reducing redistributive effects)
  - The wealthy enjoy capital gains and earn most of interest income and business profits

**Effects on environment**
- Market-based policies tend to have negative effects on environment
  - Greater competition
    - Increased scope for activities leading to negative externalities affecting the environment (although government can limit these by taking appropriate measures)

**Conclusion:** Most economists believe that interventionist and market-based policies should complement each other, and a mix of policies should be used according to a country’s economic and social conditions. It is unlikely that any policy can yield positive results without some negative consequences.