Aggregate Demand

Aggregate Supply: The total quantity of goods and services produced in an economy over a particular time period at different price levels.

AD = C + I + G + (X - M)

Why AD slopes downwards

1. Wealth effect
2. Interest rate effect
3. International trade effect

Short run: The period of time when prices of resources are roughly constant or inflexible

Long run: The period of time when prices of all resources, including labour (wages) are flexible and change along with changes in the price level.

Aggregate Supply

Aggregate supply: The total quantity of goods and services produced in an economy (real GDP) over a particular time period at different price levels.

The **short run aggregate supply curve** shows the relationship between the price level and the quantity of real output when resource prices (particularly wages) do not change.

Why the SRAS curve is upward sloping When price level increases without a change in resource prices, output prices and therefore profits increase - hence firms increase the quantity of output supplied.

Shifts in the SRAS curve:

- Changes in wages
- Changes in non-labour resource prices
- Changes in business taxes
- Changes in subsidies offered
- Supply shocks

Shifts in the LRAS curve:

- Quantity of factors of production
- Quality of factors of production
- Technology
- Efficiency
- Institutional changes - degree of private ownership, degree of competition
- Reductions in the natural rate of unemployment

Monetarist / New classical model

Why the LRAS curve is vertical: Wages and other resource prices are now changing to match changes in output prices, hence the cost of production remains constant even as the price level changes. Therefore with constant real costs, profits are also constant, so there is no incentive to produce more or less.

Auto-correction: When AD shifts to the right, PL increases so cost of production increases and hence SRAS shifts to the left, restoring macroeconomic equilibrium. *The assumption is that wages and other resource costs are price flexible which allows the economy to automatically come back to long-run equilibrium level of output.*

In the long run, changes in aggregate demand affect only the price level, real GDP remains unchanged.

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Keynesian model

Based on the work of John Maynard Keynes.

Wages are sticky downwards: There is an asymmetry between wage changes in the upwards and downwards directions. Wages rise easily, but due to worker and union resistance, minimum wage legislation and labour contracts, wages do not fall easily. Furthermore, resource prices also do not fall easily, due to factors such as fear of price wars and firms' fear of reducing profits by lowering prices.

Inflexible wage and resource prices mean that the economy cannot move into the long run. This is represented by the horizontal section of the Keynesian AS curve.

Sections of the Keynesian AS curve:

1. Horizontal - low real GDP, price level remains constant, high spare capacity and unemployment.
2. Curved - price level increases with real GDP, spare capacity decreases so wages and resource prices rise.
3. Vertical - real GDP cannot increase any further, vast changes in price level, no spare capacity, all resources are used up.

Spare capacity: Physical capital that firms have available but do not use.

Unemployment

Unemployment refers to people of working age who are actively looking for a job but who are not employed.

Underemployment refers to people of working age with part time jobs who want full time jobs, or with jobs that do not fully utilize their skills or education.

Difficulties in measuring unemployment

- **hidden unemployment** - underemployment, discouraged workers, early retirement, part time jobs
- underground economy/informal economy

Consequences of unemployment:

- Loss of real output
- Loss of income (for unemployed workers)
- Loss of tax revenue for the government
- Cost to the goverment (unemployment benefits)
- Cost of dealing with social problems
- Unequal distribution of income

Types of unemployment:

1. Structural - occurs as a result of changes in demand for particular types of labour skills, changes in the geographical location of industries, and therefore jobs, and labour market rigidities.
2. Frictional - when workers are between job. Short term, does not involve a lack of demanded skills.
3. Seasonal - when the demand for labour changes on a seasonal basis due variations in needs.
4. Cyclical (demand-deficient) - Occurs during the downturn of the business cycle, when there is low or declining AD. As real GDP falls, firms lay off workers.

Labour market rigidities are factors preventing the forces of supply and demand from operating in the labour market. They include:

- Minimum wage legislation
- Labour union activities and wage bargaining with employers
- employment protection laws
- generous unemployment benefits

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Inflation

Inflation is a sustained increase in the general price level.

The **consumer price index (CPI)** is a measure of the cost of living for the typical household, and compares the value of a basket of goods and services in one year with the value of the same basket in a base year.

Problems with the CPI:

- Different rates of inflation for different income earners
- Different rates of inflation depending on regional or cultural factors
- Changes in consumption patterns due to consumer substitutions when relative prices change.
- Changes in consumption patterns due to increasing use of discount stores and sales
- Changes in consumption patterns due to the introduction of new products
- Changes in product quality
- International comparisons
- Comparability over time

Consequences of inflation:

1. Redistribution effects

Groups who lose from inflation:

- People with fixed income or wages
- People whose wages increase slower than the rate of inflation
- Holders of cash
- Savers
- Lenders (creditors)

Groups who gain from inflation:

- Borrowers
- Payers of fixed incomes or wages
- Payers of income or wages that increase slower than the rate of inflation

2. Uncertainty
3. Menu costs
4. Money illusion
5. International competitiveness

Hyperinflation consists of very high rates of inflation. It is defined as occurring when the price level increases by more than 50% per month.

Most governments prefer a *low and stable rate of inflation* as opposed to a zero rate of inflation, this is because a zero rate of inflation is dangerously close to deflation, which is far more damaging to an economy.

Types/causes of inflation:

1. Demand-pull inflation - involves an excess of AD over AS at the full employment level of output. Shown by a rightwards shift of AD.
2. Cost-push inflation - caused by a fall in AS, resulting from an increase in wages or prices of other inputs. Shown by a leftward shift of AS.

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Deflation

Why deflation occurs rarely in the real world

- Wages of workers do not ordinarily fall, so firms cannot easily lower costs. This is because of labour contracts, minimum wage legislation, worker and union resistance, etc.
- Large oligopolistic firms may fear price wars which leave all parties worse off
- Firms want to avoid incurring menu costs resulting from price changes, so they are reluctant to lower prices

Consequences of deflation

1. Redistribution effects - opposite to those in inflation
2. Uncertainty
3. Menu costs
4. Risk of a deflationary spiral with high and increasing cyclical unemployment - Deflation discourages spending by consumers (they expect that prices will fall in the future) and discourages borrowing by consumers and firms (the real value of debt increases as the price level falls). Hence AD falls, widening the recessionary gap, and the economy enters a devastating spiral.
5. Risk of bankruptcies and a financial crisis - As the real value of debt increases while incomes are falling, there is a high likelihood of widespread bankruptcies and a large risk of a financial crisis

Causes of deflation:

1. 'Good' deflation - increases in AS (associated with economic expansion, rising incomes and output)
2. 'Bad' deflation - decreases in AD

Both types of deflation are still bad for an economy.

Examples of deflation: Great Depression in the 1930s (bad deflation), Japan from 1996 to 2006, United states and Europe in 2003 (both good and bad)

Fiscal Policy

Fiscal policy refers to manipulations by the government of its own expenditures and taxes to influence the level of AD.

How fiscal policy affects the components of AD:

- *G* can be directly affected by changing the level of government expenditure
- *C* can be influenced by changes in taxes on consumers (personal income taxes), changing their disposable income.
- *I* can be influenced by changes in business taxes

Expansionary fiscal policy:

Used to close a recessionary gap caused by low AD.

Tools:

- increasing government spending
- decreasing personal income taxes
- decreasing business taxes
- a combination of the three (this will have to funded by borrowing as it will lead to a budget deficit)

Contractionary fiscal policy:

Used to close an inflationary gap caused by an excess of AD over AS.

Tools:

- decreasing government spending
- increasing personal income taxes
- increasing business taxes

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Fiscal Policy (cont)

- a combination of the three (this will lead to a budget surplus)

Keynesian model & the ratchet effect:

PL can increase easily with strong AD but cannot fall easily even with a drop in AD. PL moves up when there is an increase in AD, then *remains at the same level until there is a further increase in AD*.

Long term impact of fiscal policy on potential output

1. Direct:

- Allocation of government spending to physical capital goods such as infrastructure and R&D which improves technology and therefore improves the quality of capital goods and productivity of labor.
- Incentives to encourage investment by firms (lower business taxes) thereby contributing to new capital formation.

The effect of fiscal policy on RGDP and PL depends on the model being considered. For example the increase in RGDP from expansionary fiscal policy will be smaller in the monetarist model due to the upward sloping SRAS curve

Automatic Stabilisers

Factors that work automatically, without any action by the government (non-discretionary policy).

Progressive income taxes:

- Average tax rate increases as income/RGDP increases
- Hence in a recession, progressive taxes increase disposable income, lessening the impact of the recession

Unemployment benefits:

- In a recession, provides income to unemployed workers and hence prevents a sharp decrease in AD which would increase the recessionary gap, hence it lessens the impact of a recession

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