M.A. Economics (Semester-II)
Macroeconomics-II: ECON4007

BUSINESS CYCLE

(Part – B)

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Business Cycle or Trade Cycle

The 'Stylized Facts' of the Business Cycle*

No two business cycles are identical; however, they have many features in common.

According to Abel and Bernanke (2001), there is a reasonable amount of agreement about the basic business cycle facts.

The main 'stylized facts', as summarized by Abel and Bernanke, are classified according to both **direction** and **timing** relative to the movement of GDP.

With respect to the direction of movement

Procyclical: Variables that move in the same direction as GDP and display positive correlation with GDP.

Countercyclical: Variables that move in the opposite direction to GDP and display negative correlation with GDP.

Acyclical: Variables that display no clear pattern and have zero correlation with GDP.

With respect to timing

Leading Variables: Variables that move ahead of GDP.

Lagging Variables: Variables that follow GDP

Coincident Variables: Variables that move at the same time as GDP.

Source: Snowdown, B. (2005). Modern Macroeconomics: Its Origins, Development and Current State, Edward Elgar, Massachusetts, USA.

The 'Stylized Facts' of the Business Cycle

Variable	Direction	Timing
Production		
Industrial production	Procyclical	Coincident
Expenditure		
Consumption	Procyclical	Coincident
Business fixed investment	Procyclical	Coincident
Residential investment	Procyclical	Leading
Inventory Investment	Procyclical	Leading
Government Purchases	Procyclical	Undesignated
Money Supply and Inflation		
Money Supply	Procyclical	Leading
Inflation	Procyclical	Leading

Continued

The 'Stylized Facts' of the Business Cycle

Variable	Direction	Timing
Labour market variables		
Employment	Procyclical	Coincident
Unemployment	Countercyclical	No clear pattern
Average labour productivity	Procyclical	Leading
Real wage	Procyclical	Undesignated
Financial variables		
Stock prices	Procyclical	Leading
Nominal interest rates	Procyclical	Lagging
Real interest rates	Acyclical	Undesignated

Source: Abel and Bernanke (2001, p. 288)

Theories of Business Cycles

A number of competing theories of business cycles can be grouped under two categories

i. **Demand-induced Theories**
ii. **Supply-induced Theories**

Demand-Induced Theories

Three main types of demand-induced theories are –

i. **Keynesian theory**
ii. **Monetarist theory**
iii. **Rational Expectations Theories**

Keynesian Theory

In traditional Keynesian economics the primary cause of the business cycle is a change in expectations concerning future sales and profits of firms. This change in expectations leads to a change in demand for new capital equipment and therefore investment.

Keynes maintains that the change in expectations is the product of ‘animal spirits’, which gives the initial impulse and starts the multiplier-accelerator process.

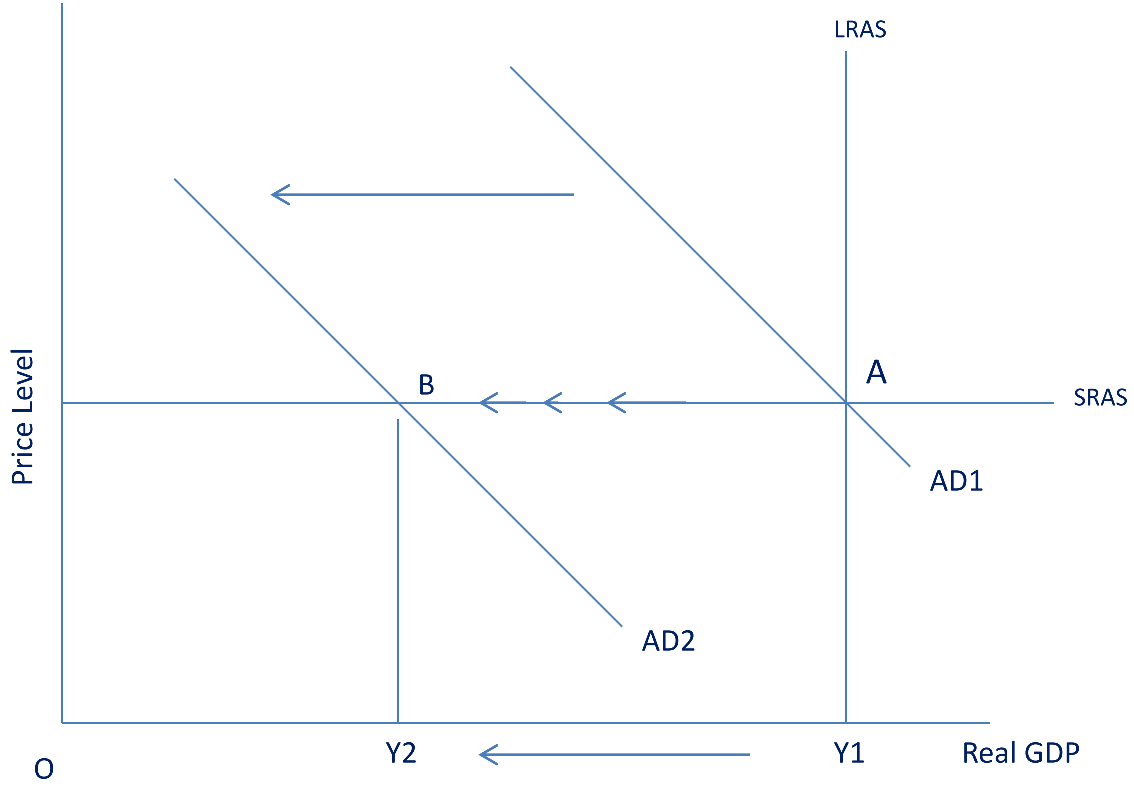
Keynesian view of the contraction phase

The short-run aggregate supply curve (SRAS) is horizontal. A fall in aggregate in aggregate demand leads to a reduction in real GDP; money wage rates and prices remain the same. Money wages are ‘sticky’ in a downward direction.

With a fall in aggregate demand and money wages and prices remaining the same, the economy becomes stuck in a below full-employment equilibrium level of GDP.

In the absence of any further changes in aggregate demand or supply, the economy will stay in this position until ‘animal spirits’ cause investment and output to recover.

The long-run aggregate supply curve (LRAS) is vertical at the full-employment level of real GDP.



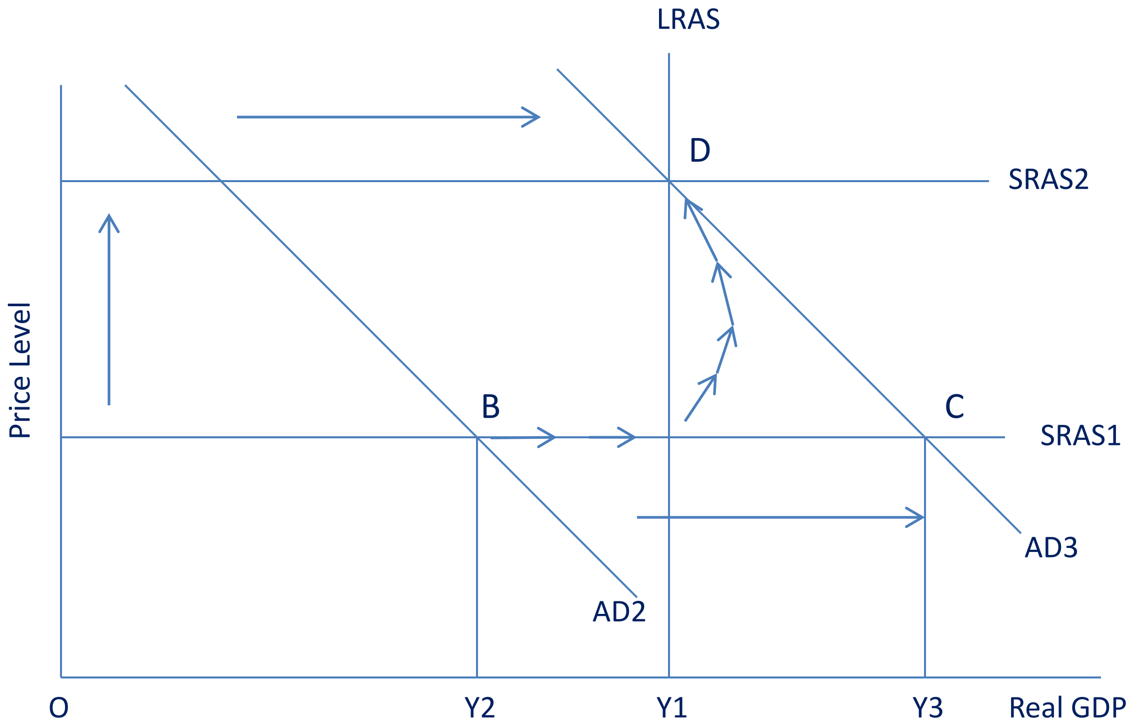
A Keynesian Economic Contraction

Keynesian view of the expansion phase

Money wages and prices are not ‘sticky’ in an upward direction.

Wages and prices can be expected to rise as aggregate demand rises, especially as the economy approaches its full-employment equilibrium.

As the aggregate demand increases and the AD curve shifts to the right, the short-run aggregate supply curve shifts upwards because of rising wages pushing up prices.



A Keynesian Economic Expansion

Here pt. C (in the diagram) is unobtainable because real GDP of Y_3 exceeds full employment or potential output with stable prices.

The economy moves to pt. D, implying a restoration of a full-employment equilibrium but with a higher price level.

Monetarist Theory

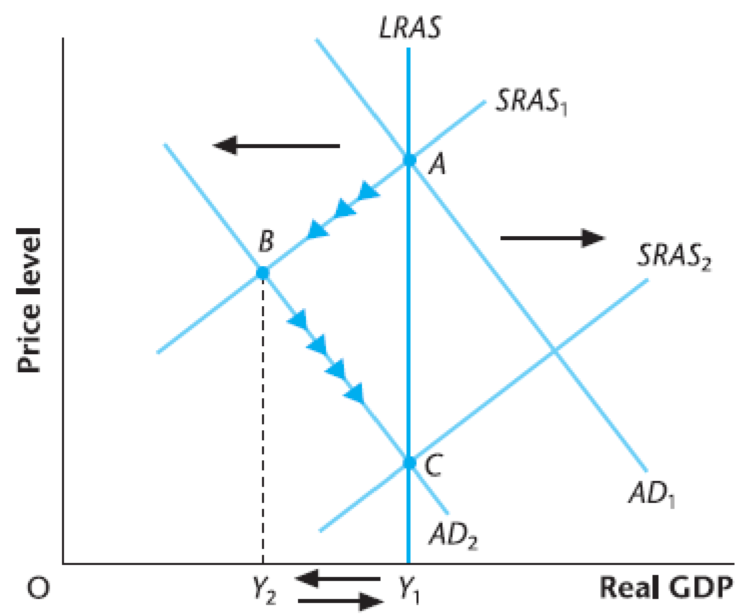
The monetarist theory of the business cycles emphasises the role of monetary variables as the main source of economic fluctuations.

Case of Contraction

Increase in the cost of borrowing causes a slow down in money growth. A rise in the cost of borrowing will impact investment decisions as well as consumer spending. It will also impact on exports through the impact of interest rates on the exchange rate. All these factors lead to a leftward shift in the aggregate demand curve.

In the monetarist case, the short-run aggregate supply curve (SRAS) is upward sloping rather than horizontal as in Keynesian case.

Monetarists maintain that the money wage rate is only 'sticky' temporarily and will adjust as aggregate demand alters.



A monetarist contraction

A fall in aggregate demand from AD_1 to AD_2, moves the economy from point A to point B. It results in a contraction of real GDP from Y_1 to Y_2, i.e. an economic recession.

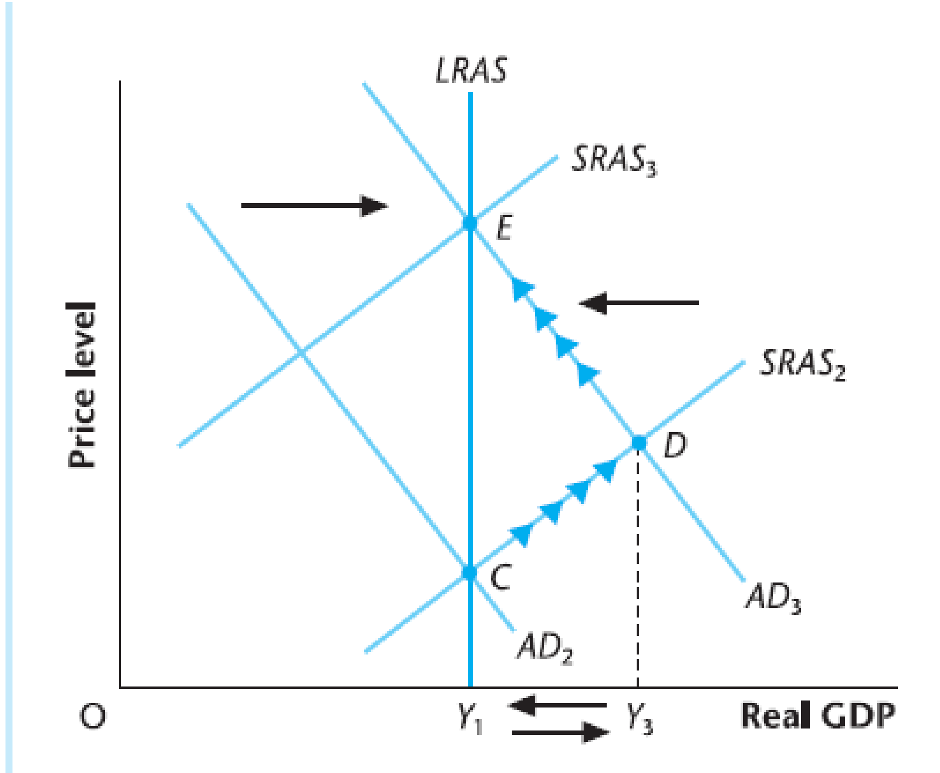
In recession there is a surplus of labour, leading to a fall in money wage rates. As money wages fall, the short-run aggregate supply curve will shift rightwards from $SRAS_1$ to $SRAS_2$. It restores full employment (point C in the diagram) at a lower level of money wages and prices.

Case of Expansion

A rise in money supply and hence a fall in interest rates will shift aggregate demand rightwards from AD_2 to AD_3. This will result in an increase in both real GDP and the price level.

Production at above full-employment output level (point D in the diagram) will put upward pressure on wages leading to a rise in prices. This will shift the short-run aggregate supply curve leftwards from $SRAS_2$ to $SRAS_3$.

This will restore full-employment equilibrium at Y_1, but at a higher price level than previously.



A monetarist expansion

The monetarist theory suggests that changes in the money supply trigger the business cycle. Also, movements of real GDP away from full-employment are only temporary.

A slowdown in monetary growth causes business cycle recession. This is self-correcting after a short time.

Business cycle expansions are caused by monetary expansion and these are also self-correcting.

Government intervention is necessary to rectify ‘booms’ and ‘busts’. The monetarist view emphasises the role of central banks in using monetary policy to target inflation rather than real GDP.

Rational Expectations Theories

An expectation based on all of the available information is referred to as rational expectation.

The role of unanticipated changes in aggregate demand is an alternative approach to explain business cycles.

An expansion in the economy is caused by a larger than anticipated increase in aggregate demand. A smaller than expected increase in aggregate demand results in a recession.

Changes in fiscal policy, monetary policy , international factors which impact on exports and imports, or any other factor that influences aggregate demand whose change is not anticipated can bring about a change in real GDP.

There are two theories of the business cycle that stem from the idea of rational expectations:

i. **the New Classical theory**
ii. **the New Keynesian theory**

Both these theories are based on the notion that the money wage rate is determined by a rational and unanticipated view of the future price level.

In the case of the New Classical theory, economic fluctuations are the result of unanticipated changes in aggregate demand.

In the case of the New Keynesian theory, unanticipated fluctuations in aggregate demand are at the heart of the business cycles; however, anticipated changes in aggregate demand have also an effect.

(Both these theories will be covered in subsequent PPTs.)

Supply-induced Theories

Demand-induced theories regard fluctuations in aggregate demand as the driving force of business cycles. These theories regard aggregate supply shocks as rare rather than common events and maintain that they are not a satisfactory explanation of the business cycle.

Real Business Cycle theorists maintain that a business cycle can be caused by a major supply-side shock that reduces an economy's potential productive capacity.

Supply-side shocks that could trigger a business cycle may include national disasters, international disturbances, and technological change.

*(**Real Business Cycle** Theory will be covered in subsequent PPTs.)*

Reading List

i. Abel, A. B. & B. S. Bernanke (2006). Macroeconomics, Pearson, Delhi.

ii. Begg, D., S. Fisher & R. Dornbusch (1994). Economics, McGraw-Hill, Berkshire.

iii. Shapiro, E. (2005). Macroeconomic Analysis, Galgotia, New Delhi.