EE312 Macroeconomics, 2/2020 (Sec. 046401/ Sicha)
Topic 2.

Five Main Point about Business Cycles.

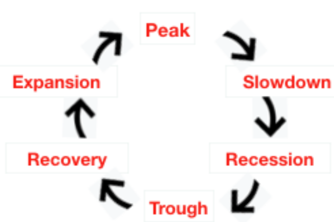
1. Business cycles are fluctuations of aggregate economic activity, not a specific variable, about its trend.

X = T + C + S
X = Actual; T = Trend; C = Cycle; S = Seasonal

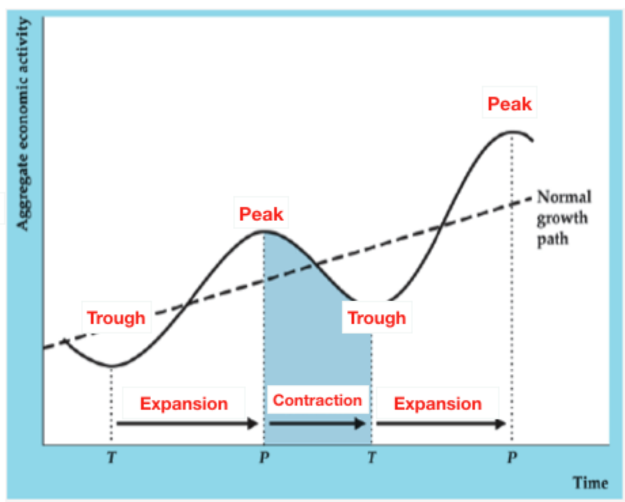
For example : GDP = Trend GDP + Cycle GDP + Seasonal Part

2. There are expansions and contractions; phase of cycle variations
3. The business cycle is recurrent, but not periodic
4. The business cycle is persistent

- **Recurrent** means the pattern of *contraction-trough-expansion-peak* occurs again and again.



- **Not being periodic** means that it doesn't occur at regular, predictable intervals

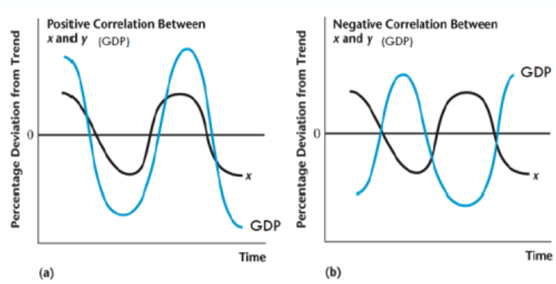


5. Economic variables show comovement- they have regular and predictable patterns of behaviour over the course of the business cycle

Cyclical Behaviour

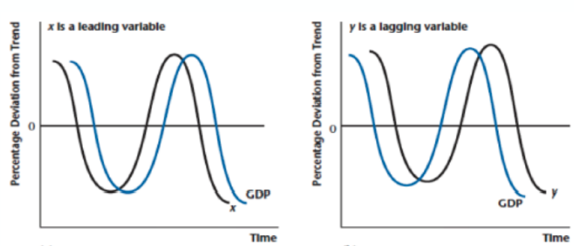
Direction : co-movement

- A **pro-cyclical variable** if corr(GDP,x) > 0.
- A **counter-cyclical variable** if corr(GDO,x) < 0
- **Acyclical variable** if corr(GDP,x) = 0



Timing = timing of variable's movements relative to real GDP:

- Leading (in advance)
- Lagging (after)
- Coincident (at the same time)



The Cyclical Behavior of Key Macroeconomic Variables (The Business Cycle Facts)

Variable	Direction	Timing
Production		
Industrial production	Procyclical	Coincident
Durable goods industries are more volatile than nondurable goods and services		
Expenditure		
Consumption	Procyclical	Coincident
Business fixed investment	Procyclical	Coincident
Residential investment	Procyclical	Leading
Inventory investment	Procyclical	Leading
Government purchases	Procyclical	—[a]
Investment is more volatile than consumption		
Labor Market Variables		
Employment	Procyclical	Coincident
Unemployment	Countercyclical	Unclassified[b]
Average labor productivity	Procyclical	Leading[a]
Real wage	Procyclical	—[a]
Money Supply and Inflation		
Money supply	Procyclical	Leading
Inflation	Procyclical	Lagging
Financial Variables		
Stock prices	Procyclical	Leading
Nominal interest rates	Procyclical	Lagging
Real interest rates	Acyclical	—[a]

[a] Timing is not designated by The Conference Board.

[b] Designated as "unclassified" by The Conference Board; leading at peaks and lagging at troughs.

Source: Business Cycle Indicators, September 2008. Industrial production: series 47 (industrial production); consumption: series 57 (manufacturing and trade sales, constant dollars); business fixed investment: series 86 (gross private nonresidential fixed investment); residential investment: series 28 (new private housing units started); inventory investment: series 30 (change in business inventories, constant dollars); employment: series 41 (employees on nonagricultural payrolls); unemployment: series 43 (civilian unemployment rate); money supply: series 106 (money supply M2, constant dollars); inflation: series 120 (CPI for services, change over six-month span); stock prices: series 19 (index of stock prices, 500 common stocks); nominal interest rates: series 119 (Federal funds rate), series 114 (discount rate on new 91-day Treasury bills), series 109 (average prime rate charged by banks).