ECON1102

MACROECONOMICS 1

T1 2020

Contents

Aggregate Production and Prices

Gross Domestic Product (GDP)

- The MONETARY VALUE of FINAL goods and services PRODUCED in a COUNTRY during a GIVEN PERIOD
    - Excludes unpaid housework (household production), imported goods and services
    - Includes publicly provided goods and services, rent, production by non-Australians in Australia
    - GDP is a flow variable (measured over time) – excludes goods and services produced in an earlier period, but re-sold in the current period
- Goods and services without market prices
    - Estimate / impute a market value for the good or service
    - Use the cost of providing the good or service in place of its unknown market value

<u>3 equivalent ways to measure GDP</u>

- Production method: summation of value added for all businesses operating in an economy
    - Intermediate goods: a good that is used in the production of another good or service

Firm	Sales	Input Costs (Intermediate)	Value added
Intel	20,000	0	20,000
Macro Soft	5,000	0	5,000
Bell	80,000	25,000	55,000
PC Charlie's	100,000	80,000	20,000

Value added = value of sales – cost of intermediate inputs
Final sales = sum of value added

- Expenditure method: summation of expenditures on domestically produced final goods and services
    - Y = C + I + G + X – M
    - Consumption: non-durables, durables and services
        - Second-hand goods are included at the time they were newly produced and sold
    - Investment: private gross fixed capital formation, dwelling construction, private business investment, change in inventories
        - Inventories: currently unsold stock of goods held by businesses
    - Government expenditure: current (consumption) spending or capital (investment) spending
- Income method: sum of payments to labour and capital plus any net indirect taxes

Gross National Income (GNI)

- Measures income payments to Australian workers and Australian-owned capital
    - Some income from production of GDP will accrue to foreign nationals
    - GNI > GDP e.g. UAE, Ireland vs GNI < GDP Philippines

Nominal and real GDP

- Current measure may change due to increase in prices
- Nominal: values quantities of goods and services produced at their current year (of production) prices
- Real (constant price/ chain volume measure): values quantities of goods and services produced at base year prices; measuring actual physical volume of production

	2007	2008	% Change
No. of cars	10	10	0
Price of cars	\$20,000	\$40,000	100
No. of apples	100	1000	900
Price of apples	\$10	\$25	150
Nominal GDP	\$200,100	\$400,200	100
Real GDP 2007 prices	\$200,100	\$210,000	4.5
Real GDP 2008 prices	\$402,500	\$425,000	5.6

- Choice of base year: Laspeyres index (initial prices) vs Paasche index (final prices)

Chain-weighted measure of Real GDP

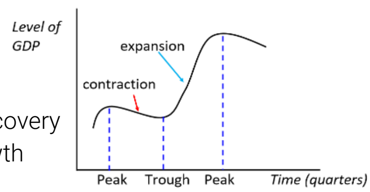
- Compute growth rates implied by Laspeyres and Paasche indexes
- Take the average of growth rates (this is chain-weighted growth rate)
- Multiply growth rate by real GDP of first-year
- To complete change over a long period, apply the approach on a year-by-year basis

GDP and economic welfare

- Real GDP per capita is commonly used as an indicator of economic growth
- Omissions from GDP that might matter for economic welfare
  - Leisure time
  - Household production
  - Environmental degradation
  - Quality of life
  - Economic inequality
- Alternatives to GDP
  - Direct measures of happiness through a survey
  - Index of variables that might affect welfare

Business cycles

Stylised Representation of a Business Cycle



- Contraction: a period where the level of GDP falls
- Expansion: a period where the level of GDP rises
- Peak: start of a contraction, high point of GDP prior to a downturn
- Trough: end of a contraction, low point of economic activity before recovery
- Recession: at least 2 consecutive quarters of negative economic growth

Measures of price level

Consumer Price Index (CPI)

- Consumer Price Index (CPI): for a given period, measures the cost in that period of a given basket of goods and services relative to their cost in a fixed (base) year
- Australian CPI published quarterly by ABS; basket determined by Household Expenditure Survey

INFLATION (AND DEFLATION)

- Inflation is measured by the percentage change in the CPI over a given period
  - Inflation = 0 (constant); inflation > 0 (rising); inflation < 0 (falling aka deflation)
- Limitations with CPI
  - Quality adjustment and new goods bias
    - Quality improvements can show up as higher prices
    - New goods are not included until CPI is re-based
  - Substitution bias – no allowance for preference towards less expensive goods
  - CPI tends to OVERSTATE rate of inflation
- Cost of inflation
  - Distinguish between relative price change and a change in the general price level
  - Unexpected inflation
    - Unexpected re-distributions of wealth (borrowers / lenders, fixed nominal incomes)
    - Distorts tax systems (if not indexed to inflation)
    - Introduces noise into the (relative) price mechanism
  - Fully anticipated inflation (full indexation)
    - Shoe-leather costs: inflation reduces the real purchasing power of money
    - Menu costs: are real cost associated with changing prices
- Optimal inflation rate
  - Wish to avoid high and variable inflation and deflation
  - A low positive inflation rate is helpful for allowing moderate falls in real wages
  - Many countries have inflation targets: 1-3% per annum