ECON1102

Current Issues

Secular Stagnation Hypothesis

developed countries are experiencing a pro-longed period of low economic growth

explanations:

- persistently low levels of private consumption and investment – Paul Krugman, Larry Summers
- slowdown in quantity and quality of new inventions – Robert Gordon

low inflation (deflation)

in many countries inflation has been (persistently) below their target

low nominal and real interest rates

- short-term and long-term interest rates have been low since GFC in 2007
- in some cases nominal interest rates have been negatives
- strong demand for 'safe assets' particularly government bonds

Measures of Macroeconomic Performance: Output & Prices

Evaluating Macroeconomic Performance

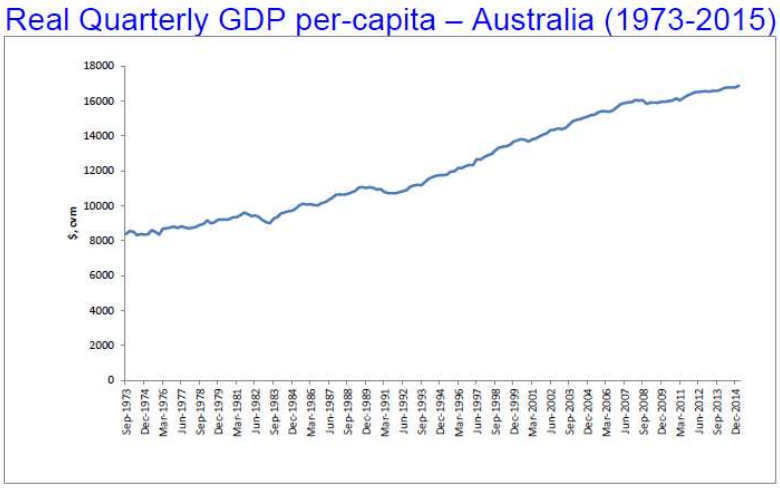
1. rising living standards – economic growth

tendency for the level of output (quantity and quality of goods and services) to increase over time

- output divided by population = output per capita
- trend rise in per-capita output = economic growth

may also care about the distribution of living standards

- income distribution



2. stable business cycle

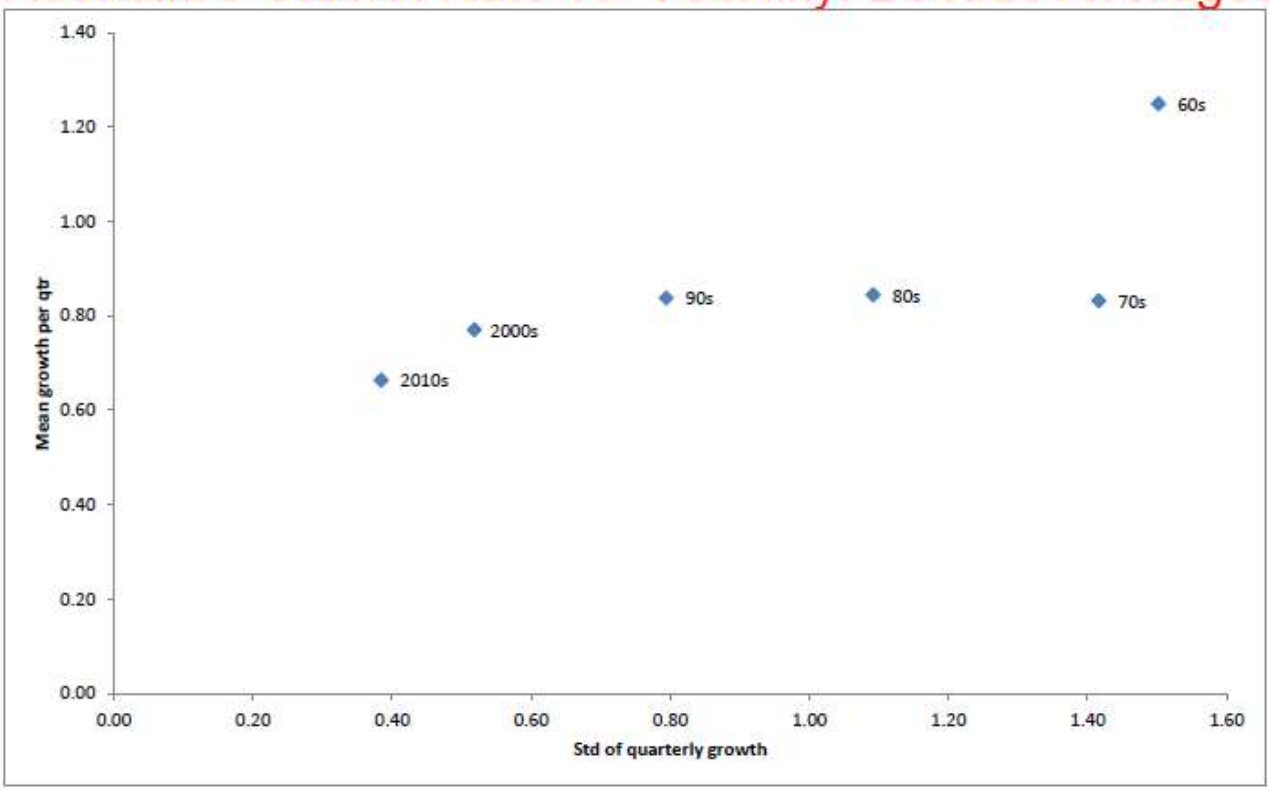
low volatility in fluctuations of actual output around its trend or potential output

Australia's Real Quarterly GDP Growth Rates – Decade Averages

	1960s	1970s	1980s	1990s	2000s	2010s
Mean	1.25	0.83	0.84	0.84	0.77	0.63
Standard Deviation	1.50	1.42	1.09	0.79	0.52	0.38
Ratio	0.83	0.58	0.77	1.06	1.48	1.66

Mid-1980s *Great Moderation* – large fall in volatility of real output – why?

Australia's Growth Rate vs. Volatility: Decade Averages

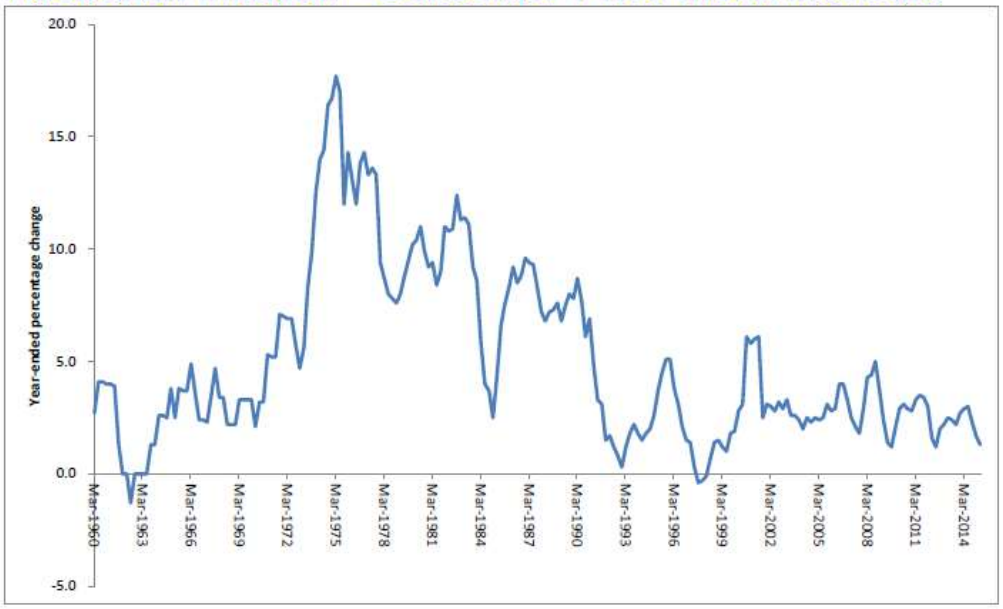


3. relatively stable price level – low (positive) rate of inflation

inflation has been concern for most developed countries over the last half century

Japan is an exception and has experienced deflation over the last decade

Australian Inflation - Consumer Price Index Measure

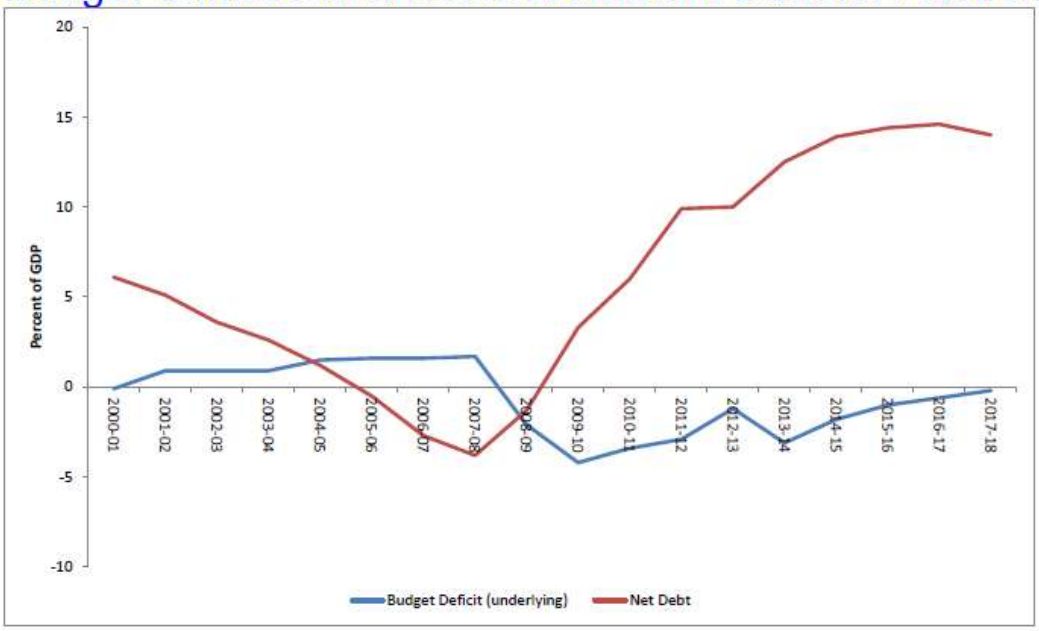


4. sustainable levels of public and national debt

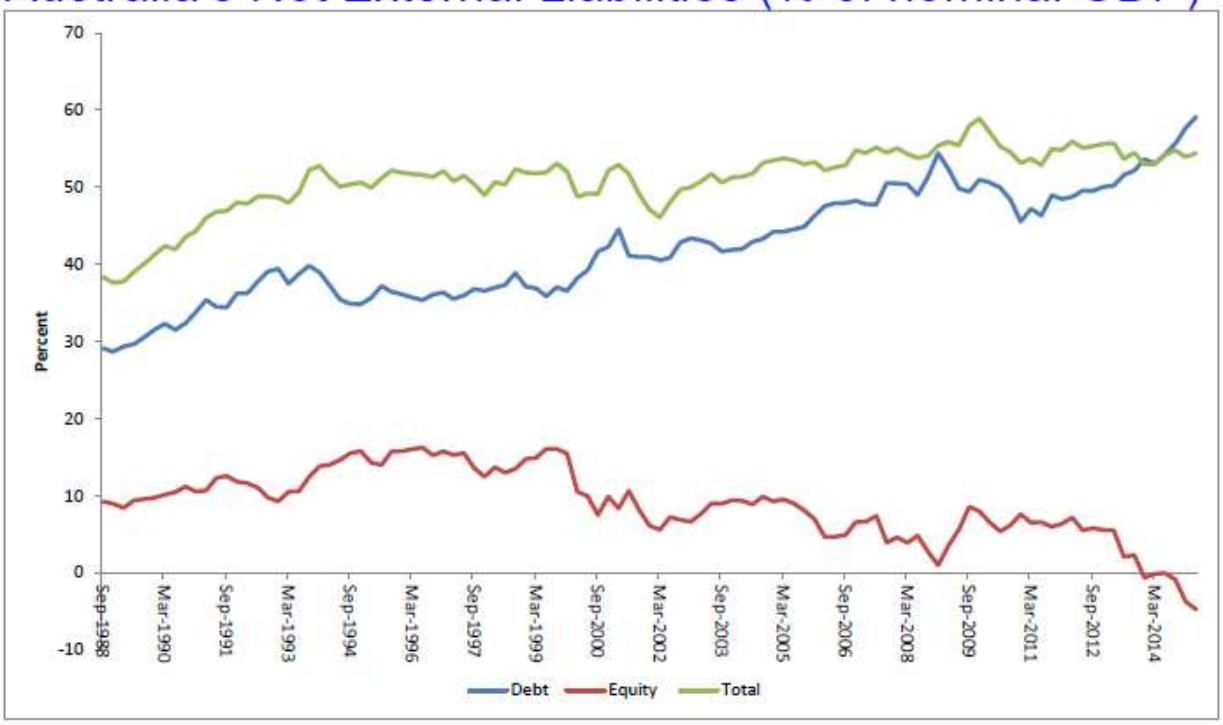
public debt – borrowing by public sector from private sector – influenced by government budget deficits/surpluses

foreign debt – borrowing by domestic residents from foreign countries – influenced by an economy's current account deficits/surpluses

Budget Balance and Net Government Debt for Australia



Australia's Net External Liabilities (% of nominal GDP)



5. balance between current and future consumption

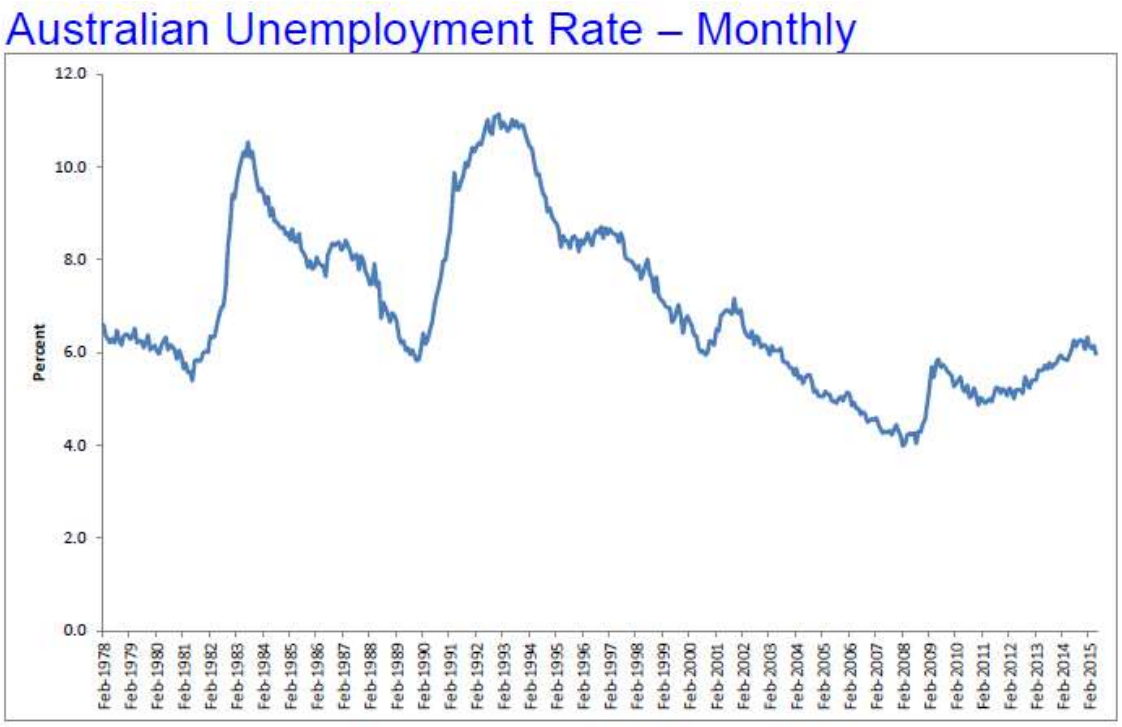
choice for an individual – how much should I consume today vs tomorrow?

similar issue for aggregate economy – how much should an economy save/invest?

Australian Investment and National Saving

6. full employment

does the economy produce employment for all individuals seeking work?



Standard Desired Outcomes for Macro Variables

- relatively high and stable growth rate of real per capita output
- stable and low (but positive) rate of inflation
- low unemployment rate
- sustainable level of public/external debt
- balance between current and future consumption

Measuring Output – GDP

Gross Domestic Product – measure of a country's aggregate output or production

> **the market value of final goods and services produced in a country during a given period**

Given Period

GDP is a flow variable – measured over a period of time

quarter – march, June, September, December

> Aus GDP in March 2016 = $412.4 billion

Annual/year – add up GDP over 4 quarters

- calendar – mar 09 + jun 09 + sep 09 + dec 09
- financial – sep 09 + dec 09 + mar 10 + jun 10

> Aus GDP for 2014/15 = $1610.8 billion = $1.6 trillion

- excludes godos and services produced in other countries, but consumed in Australia – imports

- excludes goods and services produced in an earlier period, but re-sold in the current period – second-hand goods

Market Value

GDP is measure of aggregate production or output

- cars, oranges, computers, lectures, Big Macs
- how do we add apples and oranges?

Use market prices to value (or weight) quantities of various goods and services

Example:	*Quantity*	*Market Price*
	10 cars	$20,000 per car
	100 apples	$1 per apple

GDP = $200,000 + $100 = $200,100

what about goods and services with no observed market price?

some are included in GDP:

- national defence
- roads

use costs of providing these goods and services as measure of their contribution to GDP

come are excluded from GDP

- unpaid housework – household production

Final goods and services

GDP excludes intermediate goods and services. these goods are used-up in the production process

eg. in the production of a loaf of bread, the flour used is an intermediate input and is not (double) counted in GDP

concept of value added – the market value of a firm's production less the cost of inputs purchased from other firms

Value Added in Computer Sales: Chapter 1, Problem 2 (Textbook)

Firm	Sales	Input Costs	Value Added
Intel Incorp	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

PC Charlie's *final* sales = $100,000

Sum of Value Added = $100,000

The *Verge Café* offers a big breakfast of bacon, eggs, tomato and toast for $10. What is the best measure of the value added of a big breakfast?

(a)$10 (contribution to GDP, not value added of big breakfast at *Verge Café)*
(b)$10 less the cost of the bacon, eggs, tomato and toast (Yes, price less cost of intermediate inputs)
(c)$10 plus the cost of the bacon, eggs, tomato and toast
(d) the cost to *Verge Café* of purchasing the bacon, eggs, tomato and toast (cost of intermediate inputs)
(e)$10 less the cost of the bacon eggs, tomato, toast and the labour cost (waiter and cook) required to produce the big breakfast (Labour cost is not intermediate input)

Measure GDP

1. *production method –value added approach*

everything produced – how much value is added to GDP

2. *expenditure method*

accounting identity

expenditure on goods and services by final users = the value of their production

main components of expenditure:

- consumption C – purchases by households
- investment I – purchases by firms
- government G – government purchase
- net exports NX – net purchases by foreign sector

NX = Exports (X) – Imports (M)

everything produced will be purchased by someone

national income accounting identity

GDP = expenditure

Y = C + I + G + NX

Y = C + I + G + X – M

Y + M = C + I + G + X

Supply of G & S = Demand for G & S

Australian GDP March Quarter 2016
Expenditure Approach

	$billion
Household Consumption	239.7
Private Investment	84.8
Government (Public) Spending	94.7
Change in Inventories	0.4
Exports	77.4
Less Imports	85.5
Total	**411.5**
Statistical discrepancy	0.9
GDP	412.4

3. *income method*

GDP also equals the aggregate income paid to

- Labour L
- Capital K

in the production of goods and services

GDP = Labour Income + Capital Income

Australian GDP March Quarter 2016
Income Approach

	$billion
Compensation of Employees	202.3
Gross Operating Surplus	134.4
Gross Mixed Income	35.1
Total Factor Income	*371.8*
Indirect Taxes – Subsidies	42.4
Total	**414.3**
Statistical discrepancy	-1.8
GDP (Market Prices)	412.4

Nominal GDP vs Real GDP

with out current measure of GDP, the number could increase if the prices of some goods and services increased.

useful to have a measure of changes in physical production or volume of goods and services produced

nominal – values quantities of goods and services produced at their current year (or year of production) prices

real (or constant price or chain volume measure) – values quantities of goods and services produced at base year prices – measure of the actual physical volume of production – excludes inflation

Example

	2007	2008	% Change
No. of Cars	10	10	0
Price of Cars	$20,000	$40,000	100
No. of Apples	100	100	0
Price of Apples	$1	$2	100
Nominal GDP	$200,100	$400,200	100
Real GDP			
2007 prices	$200,100	***$200,100***	0
2008 prices	***$400,200***	$400,200	0

Choice of Base Year (*Bit Technical*)

In the above example whether we use 2007 or 2008 as base year prices gives the same answer for the growth rate of real GDP

This is not the case in general, particularly if you are comparing real GDP over a 5-10 year period.

- Using initial prices (i.e. 2007) is known as a *Laspeyres* index
- Using final prices (i.e. 2008) is known as a *Paasche* index

Example

	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	$201,000	$425,000	111
Real GDP			
2007 prices	$201,000	***$210,000***	4.5
2008 prices	***$402,500***	$425,000	5.6

Chain-weighted measure of Real GDP

1. Take average of growth rates implied by 2007 and 2008 prices.

$$5.05 = (4.5 + 5.6)/2$$

2. Choose either 2007 or 2008 as the base-year (nominal=real GDP). Let's pick 2007

	2007	2008
Nominal GDP	201,000	425,000
Real GDP	201,000	211,151 (201,000×1.0505)

Chain Weighting

For any two consecutive years compute the growth rates of real GDP implied by both the Laspeyres and teh Paasche indexes.

Then take the average of the two growth rates and this is the chain-weighted growth rate. This can be used to compute a real chained-weighted GDP.

Finally to compute a change index over a long period, the above approach is applied on a year-by-year basis.

http://www.rba.gov.au/statistics/tables/index.html#prices_inflation

http://www.abs.gov.au/websitedbs/d3310114.nsf/Home/Home?OpenDocument

Is GDP a Good measure of Economic wellbeing?

GDP per capita = GDP/Population

omissions from GDP that might matter for economic welfare:

- leisure time – extra week of holidays
- household production – cook at home
- environmental degradation
- quality of life – happiness
- economic inequality – distribution of income

is GDP positively correlated with economic welfare?

Yes – medical care

no – income distribution over last 20 years

maybe – income and measures of happiness

Alternatives (complements) to GDP

1. direct measure of Happiness – survey based measures (ask how happy they are on scale of 1 to 10) http://www1.eur.nl/fsw/happiness/index.html
2. indexes of variables that might affect welfare http://www.smh.com.au/national/wellbeing-index-shows-impact-of-jobless-on-society-20140606-39okt.html

Measures of the Price Level

want to measure the average level of prices in the economy

main measures:

- GDP deflator or price index
- consumer price index (CPI)

Nominal and Real GDP

the following relationship holds:

nomial GDP = price level x real GDP

if we know any 2 variables we can derive the 3rd

- price level = (nominal GDP)/real GDP
- real GDP = (nominal GDP)/price level

Consumer Price Index (CPI)

for a given period, measures the cost in that period for a given basket of goods and services relative to their cost in a fixed year – called a base year

construct a CPI

Choose a basket of goods and services

Basket	2000 (base)	2015
Rent (2 bedroom flat)	$500	$630
Hamburgers (60)	$150	$150
Books (2)	$30	$70
Total Expenditure	$680	$850

	2000 (base)	2015
Total Expenditure	$680	$850

CPI = Cost of base-year basket of goods and services in *current* year / Cost of base-year basket of goods and services in *base* year

CPI = $850/$680 = 1.25

implications

- cost of living is 25% higher in 2015 than it was in 2000
- average prices are 25% higher in 2015 than in 2000

Australian CPI

- published quarterly by ABS
- *household expenditure survey* used to determine typical basket
- base year changes every 5 years

was Charles dickens the taylor swift of the 19th century?

according to a recent biography of the 19th century novelist Charles dickens, in 1862 he could earn 190 pounds per night for giving a reading from his novels.

according to *The Richest* Taylor swift earns revenue of about US$1.2 million from a concert

what information would you need to be able to calculate what dickens' earnings are in current UK pounds?

http://www.measuringworth.com/calculators/ppoweruk/

Inflation (and Deflation)

inflation is measured by the percentage change in the CPI over a given period

$$\text{Inflation rate} = [\frac{CPI - CPI(-1)}{CPI(-1)}] * 100$$

Inflation rate = 0 implies prices are constant

Inflation rate > 0 implies prices are rising

Inflation rate < 0 implies prices are falling – Deflation

relative price changes – individual good

inflation – general price level for whole economy

Limitations withe CPI

quality adjustment and new goods bias

- quality improvements may show up as higher prices for goods and services
- new goods are often not included until CPI is rebased

substitution bias

- use of a fixed basket means that no allowance is made for consumers' substitution toward relatively less expensive goods

CPI tends to overstate the rate of inflation – quality bias – quality of goods increases over time with price increase – CPI shows price increase but not quality increase

costs of inflation

important to distinguish between relative price change and a change in the general price level

- shoe-leather costs – inflation reduces the real purchasing power of a given amount of money
    - if you're holding money, you're losing money as the value is decreasing
    - put money in bank for interest – however costs of time, fees
- menu costs – real costs of changing prices
- introduces noise into the price mechanism