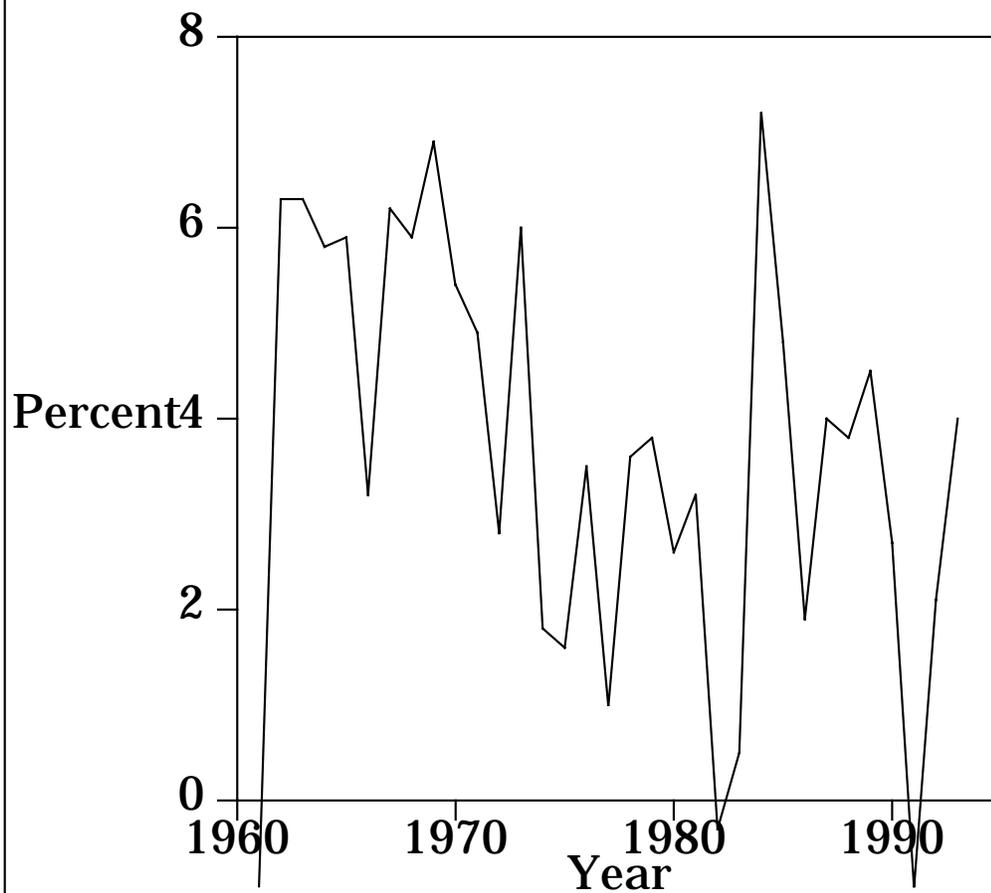## 9. Business Cycles

Business cycles consist of expansions occurring at about the time time in many economic activities, followed by similarly general recessions and revivals that merge into the expansion phase of the next cycle.

Consider the following graph of percentage changes in the real GDP:

Changes in Real GDP

On average, real GDP has risen over the past thirty years, but at greater and lesser rates. Three times over the period, real GDP has fallen. The accelerations and decelerations seen in the graph represent business cycles.

The distinguishing character of business cycles is their pervasive character, which affects many different types of economic activity at the same time. Business cycles are recurrent but not periodic: they recur but not with a constant frequency.
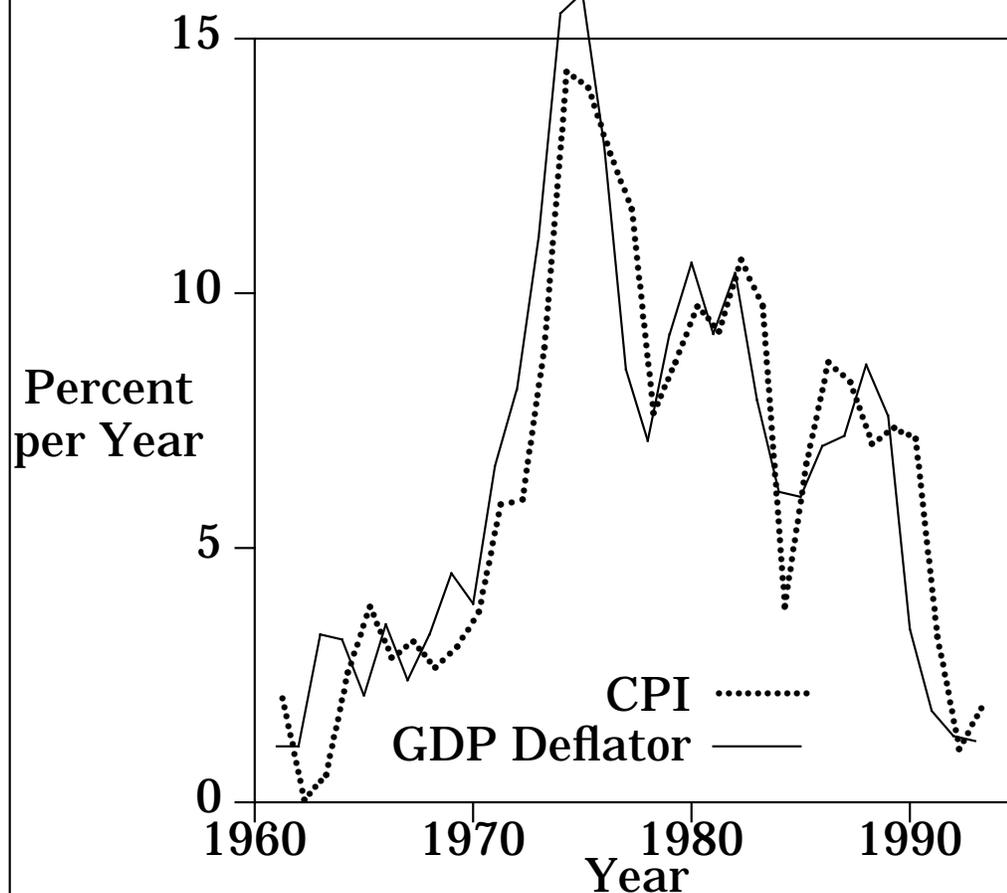
The high point in real GDP in each cycle is called the *peak*. The low point is the *trough*. The period between peak and trough is called a *recession*, followed by the *expansion*, which continues until the next peak.

In general we see that expansions last longer than recessions, so that each successive peak is greater than the last. We also see that business cycles vary in length.

Business cycles are not desirable, and governments attempt to dampen them, making the growth in real GDP smoother, and the fluctuations less severe. What exactly should a government's aim be?

Since more real GDP provides a greater quantity of goods and services, higher real GDP is better, no? No. Unfortunately, production at a peak tends to accelerate inflation: when there are "sellers' markets" for inputs to the productive process, and when there are "sellers' markets" for outputs, suppliers and firms find it easier to raise prices: too much real GDP is inflationary, and so is to be avoided.

The following graph should be compared with the last one, to see (1) the relationship between GDP growth and the inflation rate, and (2) to compare

**Australian Inflation
(GDP Deflator v. CPI)**

GDP-Deflator- and CPI-based inflation measures.

Too little real GDP is undesirable as well: layoffs, unemployment, and a decline in the overall standard of living, partly balanced by lower inflation, such as we are experiencing now, in mid-1994.

Gordon speaks of a "natural", or constant-price level, rate of real GNP growth, at which the inflation rate is constant, with no tendency to accelerate or decelerate.

When real GDP is low, many people lose their jobs, and the unemployment rate is high. Gordon

speaks of the *natural rate of unemployment*, the level of the unemployment rate at which the inflation rate is constant, with no tendency to accelerate or decelerate. This corresponds exactly to the natural real GDP: when the unemployment rate is high, real GDP is low, and the inflation rate slows down; when the real GDP is high, the unemployment rate is low and the inflation rate accelerates

The natural rate of unemployment is not necessarily constant; in fact it appears to have risen moderately since the mid-1950s, which means that a higher unemployment rate is now necessary to keep inflation from accelerating than was required in the 1950s. Possible causes in this rise of the natural rate of unemployment are a matter of debate, as we shall see later.

Governments face a dilemma when trying to attain low rates of inflation and low rates of unemployment at the same time, as this discussion suggests.

10. Stabilisation Policy

As Bertrand Russell said, "In order to change the world, it is first necessary to understand it." Macroeconomic analysts have two tasks:

- to analyse the causes of changes in important aggregates, and

- to predict the consequences of alternative policy changes.

In this subject, as managers (in the economy, not

in Treasury), we are interested in a further task:

- to predict what the government's policy will be, to predict the consequences for the macro economy.

Target variables are aggregates whose values society cares about: inflation, unemployment, the long-term growth of productivity, the twin deficits. When the target variables deviate from desired values, alternative *policy instruments* can be used by government in an attempt to achieve needed changes. Instruments fall into three broad categories:

- *monetary policies*, which include control of the supply of money and of interest rates;

- *fiscal policies*, which include changes in government expenditures and tax rates, and

- *other policies*, which include wage and price controls, employment policies, and income policies, including the Accord.

So the unemployment rate, inflation rate, and productivity growth are target variables. The interest rate and the government budget deficit are policy instruments, monetary and fiscal, respectively.

The foreign trade deficit can "constrain" policymakers in achieving their target variables with their available policy instruments. For instance, to avoid a large trade deficit and the indebtedness to foreigners it implies, policymakers may have to sacrifice a low unemployment rate or stable prices or a higher level of government

expenditures.

A *stabilisation policy* is any policy that seeks to influence the level of aggregate demand. Either monetary or fiscal policies can be used to offset undesired changes in private spending.

Fiscal policy can raise output and employment by increasing government spending that creates jobs through government hirings. Or fiscal policy can stimulate private spending by cutting tax rates, thus inducing a higher level of private purchases, production, and employment.

A *monetary policy* stimulus to output and employment is a reduction in interest rates and may in turn boost stock prices (and other durable assets) and make lending institutions more willing to grant credit. With historically high interest rates recently, we have seen monetary policy's effects on high inflation and an over-heated economy.

Since the mid-1970s we have experienced *stagflation*: excessive unemployment *and* inflation, which poses the problem of what policy measures to use. (Stagflation = *stag*nation + in*flation*.)

11. The "Internationalisation" of Macroeconomics

Australia has never been a *closed economy*: with no trade in goods, services, or financial assets with any other nation. Rather we live in an *open economy*, with exports and imports and international financial flows. (See graphs on the importance to Australia of international trade.)

This internationalisation means that the effectiveness of stabilisation policies may be diminished: no longer can we assume that a large government budget deficit automatically depresses or "crowds out" private investment spending: instead, the economy may get the capital it needs to finance *both* private investment and the government deficit from abroad through foreign purchases of Australian shares, bonds (government IOUs), factories and businesses, and hotels.

There is a bad side too: by financing the government budget deficit through capital flows from abroad, Australians have run up a massive foreign debt, which will require a sacrifices by future generations just to pay the interest bill.

Monetary policy is also changed by internationalisation: if interest rates fall to stimulate the economy, the dollar may also fall, increasing the Aussie dollar prices of imports and so pushing up inflation. On the other hand, if the government can maintain a constant exchange rate, or even a rising exchange rate, it may be more effective at reining in inflationary pressures, at the cost to exporters of lower profits, cet. par.

Case Study

Measurement

A boring but necessary preamble to developing a simple model to explain real output (GDP) and the price level.

1. Importance of Income

Movements in the unemployment rate are closely related to the parallel movements in the gap between actual and natural real GDP. The key to understanding changes in unemployment is total real *product*, equal to total real *income.*

Another reason to be concerned with measures of total real income is that when we divide real income across Australia by the number of Australians, we get a measure of average income per person, which can be used to obtain comparisons across countries.

Essential to studying the determinants of changes in real income and output is a discussion of definition and measurement, including, as with any accounting, some arbitrary definitions.

2. The Circular Flow of Income and Expenditure

A simple economy of households and firms. Households spend their entire income, saving nothing, and there is no government. (There is no capital or wealth, and all household income is in the form of wages for labour services.) The diagram depivts the operations of this simple economy.

There are two sorts of transactions:

- firms sell goods and services (product) to the households, paid for by *consumer expenditures* (*C*): purchases of goods and services by households for their own use.

- households, as employees, sell their labour services to the firms, for hourly wages, which is the component of income (*Y*).

By our assumption above, consumption (= product) must equal income (= labour services), or $C = Y$,

Each of these four is a *flow magnitude*: an economic magnitude that moves from one economic unit to another at a specified rate per unit time (often a year).

A flow is distinguished from a *stock*: an economic magnitude in the possession of a given economic unit at a particular point in time.

3. What to Include in Income and Expenditure

There are three major requirements for inclusion in the total *final product*, or GDP: Final product includes all *currently produced* goods and services that are *sold through the market* but *not resold during the current time period*.

1. "currently produced" excludes sales of used items such as houses and second-hand cars; it excludes transfers of money without exchange of goods or services, so-called *transfer payments*; also excluded are capital gains.

2. "sold on the market" means that we use market prices to value the demand for goods and services. Excluded from GDP is the value of personal time engaged in activities that are not sold on the market; also excluded are external costs such as pollution, and external benefits for which no explicit charge is made.

3. "but not resold" means that only *final goods* are counted, not *intermediate goods*: those which are resold by their purchaser either untransformed or in an altered form.

Intermediate goods are excluded to prevent double counting. By excluding the value of intermediate goods from final product, we guarantee that final product equals total income created or *value added*: the value of labour and capital services that take place at a particular stage of the production process.