Tarek Elsayed
February 10, 2002

GDP Data – Problems Over Time

Comparing GDP/national income of the UK today with the national income in the pasts presents many problems. These are:

<u>Prices</u> – Prices have tended to increase over time. So an increase in national income over the period does not necessarily indicate that there has been an increase in the number of goods and services produced in the economy. Only if the rate of increase of national income measured in money terms (the nominal rate of economic growth) has been greater than the increase in prices (the inflation rate) can there be said to have been an increase in output. So when comparing over time, it is essential to consider real and not nominal changes in income.

<u>The accuracy and presentation of statistics</u> – National income statistics are inaccurate and therefore it is impossible to give a precise figure for the change in income over time. Moreover, the change in real income over time will also be affected by the inflation rate. The inevitable errors made in the calculation of the inflation rate compound the problems of inaccuracy. The method of calculation national income and the rate of inflation can also change over time. It is important to attempt to eliminate the effect of changes in definitions.

<u>Changes in population</u> – National income statistics are often used to compare living standards over time. If they are to be used in this way, it is essential to compare national income per capita (i.e. per person). For instance, if population doubles whilst national income quadruples, people are likely to be nearer twice as well of than four times.

<u>Quality of goods and services</u> – The quality of goods may improve over time due to advances in technology but they may also fall in price. For instance, cars today are far better than cars 80 years ago and yet are far cheaper. National income would show this fall in price by a fall in national income, wrongly implying that living standards had fallen. On the other hand, pay in the public sector tends to increase at about 2 per cent per annum faster than the increase in inflation. This is because pay across the economy tends to increase in line with the rate of economic growth rather than the rate of inflation. Increased pay would be reflected in both higher nominal and real national income but there may well be no extra goods or services being produced.

Defence and related expenditures – The GDP of the UK was higher during the Second World War than in the 1930s, but much of GDP between 1940 and 1945 was devoted to defence expenditure. It would be difficult to argue that people enjoyed a higher standard of living during the war years than in the pre-war years. So the proportion of national income devoted to defence, or for instance the police, must be taken into account when considering the standard of living of the population.

Consumption and investment – It is possible to increase standards of living today by reducing investment and increasing consumption. However, reducing investment is likely to reduce standards of living from what they might otherwise have been in the future. As with defence, the proportion of national income being devoted to investment will affect the standard of living of the population both now and in the future.

Externalities – National income statistics take no account of externalities produced by the economy. National income statistics may show that national income has doubled roughly every 25 years since 1945. But if the value of externalities has more than doubled over that time period, then the rate of growth of the standard of living has less than doubled.

Income distribution – when comparing national income over time, it is important to remember that an increased national income for the economy as a whole may not mean that individuals have seen their income increase. Income distribution is likely to change over time, which may or may not lead to a more desirable state of affairs.