

- available for spending and saving.
- 13 An economy which does not transact with the rest of the world.
- 14 Goods currently held by a firm for future production or sale.
- 15 An economy which has transactions with other countries.
- 16 The ratio of nominal GNP to real GNP expressed as an index.

Exercises

Some of the relevant techniques and issues which you will need in the exercises in this chapter were first introduced in Chapter 2.

- 1 Table 19-1 presents consumer price indices (CPIs) for the UK, USA and Spain.
- (a) Calculate the annual inflation rate for each of the countries.
- (b) Plot your three inflation series on a diagram against time.
- (c) By what percentage did prices increase in each country over the whole period – i.e. between 1988 and 1998?
- (d) Which economy has experienced most stability of the inflation rate?
- (e) Which economy saw the greatest deceleration in the rate of inflation between 1990 and 1993?

Table 19-2 presents some data relating to national output (real GDP) of the same three economies over a similar period, expressed as index numbers.

- (f) Calculate the annual growth rate for each of the countries.
- (g) Plot your three growth series on a diagram against time.

Table 19-1 Consumer Prices

	United Kingdom		USA		Spain	
	Consumer price index	Inflation rate (%)	Consumer price index	Inflation rate (%)	Consumer price index	Inflation rate (%)
1988	71.7		77.6		68.2	
1989	77.3		81.4		72.9	
1990	84.6		85.7		77.7	
1991	89.6		89.4		82.4	
1992	92.9		92.1		87.2	
1993	94.4		94.8		91.2	
1994	96.7		97.3		95.5	
1995	100.0		100.0		100.0	
1996	102.4		102.9		103.6	
1997	105.7		105.3		105.6	
1998	109.3		107.0		107.5	

Source: International Financial Statistics

- (b) By what percentage did output increase in each country over the whole period?
- (i) To what extent did growth follow a similar pattern over time in these three countries?
- 2 In a hypothetical closed economy with no government, planned consumption is 150, planned investment is 50, total production is 210.
- (a) How much is total planned expenditure?
- (b) Calculate unplanned stock changes.
- (c) How much is savings in this situation?
- (d) What is actual investment?
- (e) How would you expect producers to react to this situation in the next period?
- 3 Table 19-3 lists a number of components of UK gross national product from both income and expenditure sides of the account for 1998. All quantities are measured in £ million at current prices and are taken from ONS, *United Kingdom National Accounts*, 1999 edition.
- Using the expenditure side of the accounts, calculate the following:
- (a) Gross domestic product at market prices.
- (b) Gross national product at market prices.
- (c) Gross domestic product at basic prices.
- (d) Net national product at market prices.
- (e) Net national income at basic prices.
- (f) Calculate gross domestic product at market prices from the income side of the accounts.
- (g) Can you explain why your answers to (a) and (f) are not identical?
- 4 Consider five firms in a closed economy: a steel producer, rubber producer, machine tool maker, tyre producer, and bicycle manufacturer. The bicycle manufacturer sells the bicycles produced to final customers for £8000. In producing the bicycles, the firm buys tyres (£1000), steel (£2500), and machine tools (£1800). The tyre manufacturer buys rubber (£600)

Table 1

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Source:

Table 1

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Table 1

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Table 19-2 National Production

	United Kingdom		USA		Spain	
	GDP index	Growth rate(%)	GDP index	Growth rate (%)	GDP index	Growth rate (%)
1988	91.4		86.7		86.0	
1989	93.4		89.7		90.2	
1990	93.7		90.8		93.6	
1991	91.9		89.9		95.7	
1992	91.4		92.3		96.3	
1993	93.3		94.5		95.2	
1994	97.3		97.8		97.4	
1995	100.0		100.0		100.0	
1996	102.6		103.4		102.4	
1997	106.2		107.5		106.0	
1998	108.5		111.7		110.1	

Source: International Financial Statistics

Table 19-3 Components of GNP in the UK

Final consumption expenditure*	545,124	Capital consumption	88,771
Subsidies	7,453	Stock changes	3,621
Other indirect taxes**	17,619	Fixed investment	148,202
Net income from abroad	11,737	Exports	224,202
Government final consumption	153,564	Employment income	463,398
Taxes on products***	103,634	Mixed income	43,379
Profits and rent	223,212	Imports	232,714

Notes * by households and non profit institutions serving households

** Taxes on production, which register on the income side of the accounts only

*** Taxes on products, which register on both expenditure and income sides of the accounts

Table 19-4 The household sector

	£ million		£ million
Wages and salaries, etc.	434,474	Other transfers (in)	32,215
Social benefits	170,191	Other transfers (out)	20,597
Taxes on income	88,551	Other current taxes	14,892
Gross mixed income	43,379	Saving	37,378
Net property income	69,794	Other household income	45,602
Social contributions	134,680		

from the rubber producer, and the machine tool maker buys steel (£1000) from the steel producer.

(a) What is the contribution of the bicycle industry to GDP?

(b) Calculate total final expenditure.

5 Table 19-4 (overleaf) lists a number of components of UK income accruing to households (and non-profit institutions serving households) in 1998. Also listed are items that affect the resources at the disposal of households, such as taxation etc. The quantities

are measured in £ million at current prices and are taken from ONS, *United Kingdom National Accounts*, 1999 edition.

(a) Calculate the total resources accruing to households – that is, sum the ‘incoming’ items in the table.

(b) Disposable income is calculated by deducting the outward payments (such as taxes) from the total resources. This represents the amount that households have in the circular flow to allocate

to spending and saving. Calculate disposable income.

- (c) Calculate the savings ratio – i.e. savings as a percentage of disposable income.
- 6 According to the ONS *United Kingdom National Accounts* (1999 edition), GDP at 1995 market prices was £756,430m in 1997 and £773,380m in the following year. GDP at current market prices was £712,548m in 1995, £754,601m in 1996, and £843,725m in 1998. The implicit GDP deflator was 103.3 in 1996 and 106.3 in 1997. For the period 1996–98, calculate the annual growth rates of real GDP, nominal GDP, and the price index.
- 7 The following table illustrates the domestic expenditure and national income of an economy during three consecutive years.

	Year 1 (£ bn)	Year 2 (£ bn)	Year 3 (£ bn)
National income	500	600	700
Government expenditure	200	250	200
Private expenditure	250	300	250
Investment	50	200	200

For each of the three years, evaluate the balance of trade situation facing the economy.

- 8 The following table refers to one country in two consecutive years:

	Index of gross national product	Retail price index	Index of population	Average working week (hours)
Year 1	105	102	102	44
Year 2	110	106	103	44

On the basis of these figures, evaluate each of the following statements as a description of the changes that took place between year 1 and year 2.

- (a) Real GNP increased.
 (b) Real GNP per capita increased.
 (c) The standard of living of all people within the country fell.
 (d) The working population increased in size.
- 9 Which of the following items are included in the calculation of GNP in the UK and which are excluded?
- (a) Salaries paid to schoolteachers.
 (b) Tips given to taxi drivers.
 (c) Expenditure on social security benefits.
 (d) The income of a second-hand car salesman.
 (e) Work carried out in the home by a housewife.
 (f) Work carried out in the home by a paid domestic.
 (g) The value of pleasure from leisure.
 (h) Free-range eggs sold in the market.
 (i) Blackberries picked in the hedgerows.

True/False

- The increase in the quantity of goods and services which the economy as a whole can afford to purchase is known as economic growth.
- In the period 1980–97, Korea, and Japan grew significantly faster than European countries such as the UK, Switzerland, or France.
- During the 1980s and 1990s, the UK suffered the highest price inflation in the world.
- Unemployment in the UK increased tenfold between 1975 and 1985.
- Given full and accurate measurement, we should get the same estimate of total economic activity whether we measure the value of production output, the level of factor incomes, or spending on goods and services.
- A closed economy is one with excessive levels of unemployment.
- The calculation of value added is a way of measuring output without double-counting.
- In a closed economy with no government, savings are always equal to investment.
- Gross domestic product at basic prices is equal to gross domestic product at market prices plus net indirect taxes.
- Depreciation is an economic cost because it measures resources being used up in the production process.
- Gross national product at current prices is a measure of real economic activity.
- Gross national product at constant prices is a useless measure of economic welfare because it fails to measure so many important ingredients of welfare.

Economics in Action

Economic Briefs

(Adapted from *Credit Suisse Asset Management*, 26th September 2001)

Macroeconomic and Investment Outlook:

Following the events of September 11th our macroeconomic outlook at CSAM has changed, and we are now expecting fourth quarter GDP growth to be the worst of the current economic cycle. In addition to the immediate financial consequences of the terrorist attacks, we expect consumer spending to remain weaker and both unemployment and bankruptcies to trend higher over the next several months. We also expect any material improvement in commercial credit to be pushed out until later in 2002.

A key area of support for the sector has been the willingness of the U.S. Federal Reserve banks to ease interest rates aggressively. CSAM believes further easing during the fourth quarter will result in a federal funds rate of 2.0% to 2.5% and an increasingly steep yield curve.

Recent economic figures in issues as markets have access could well recovery.

Questions

- With expected interest rates to increase...
- If interest rates increase...