CHAPTER 2

Inflation

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 91222 (Economics 2.1) 'Analyse inflation using economic concepts and models' through providing an understanding of inflation concepts.

Inflation

Inflation means an increase in the general level of prices. The 'price level' is like the average price of a group of goods and services. If no prices changed, the price level would stay the same. If all prices increased, the price level would increase and there would be inflation. When some prices rise while others fall, the overall change in the price level depends on a combination of how significant each good is (goods on which more is spent are given a greater 'weighting') and how much the price of each individual good changes.

Inflation means that money loses its value over time and the purchasing power of money falls, so you cannot buy as much with the income you receive if it remains the same.

Because different groups buy different goods, there are several measures of inflation, which take into account what is happening to the prices of the goods that those different groups buy. For example, households (or consumers) buy different goods from producers, so there is a Consumers Price Index, which measures changes in the prices of goods that the average household buys, and a Producers Price Index, which measures changes in prices of goods that the average producer buys. There are many different groups of producers and a different price index can be calculated for each, depending on what they buy.

Inflation became a big problem for New Zealand in the 1970s. It was caused initially by a boom in commodity prices. Since New Zealand exported a large amount of meat and wool and dairy products at that time, New Zealand's export income increased and there was much more money circulating in New Zealand, causing demand for goods to increase, so prices began to rise. Then there were a couple of 'oil shocks' when the price of oil, one of New Zealand's main imports in those days, quadrupled.

The increase in oil prices meant transport costs increased significantly and prices of most goods increased as a result. From 1974 through until 1987, the rate of inflation was between 10% and 18%, so prices were doubling about every five years. The rate of inflation then fell and from 1992 through until 2011 it mostly remained between 1% and 4%. We will cover what causes inflation in Chapter 3, why inflation is a problem in Chapter 4, and how inflation was brought under control in Chapter 15.

The opposite of inflation is **deflation**. Deflation occurs when the general level of prices falls, in turn causing an increase in the purchasing power of money. You can buy more with the income you receive. You might think deflation to be a good thing, but it would create many problems in the economy. There is more on this in Chapter 4. New Zealand briefly experienced deflation in 1999.

More common than deflation is **disinflation**. Disinflation occurs when prices are still rising so there is still inflation, but they are not rising as quickly as they were. If prices rose 4% in the September quarter (when measuring inflation and other economic data, the year is usually divided into quarters so the September quarter means the three months ending 30 September) but only rose 3% in the December quarter, disinflation has occurred.

Headline and underlying inflation

Some price changes cause one-off shifts in the overall price level, while others have an ongoing effect. **Headline inflation** includes all effects on the overall level of prices while **underlying**, or core, inflation excludes the one-off effects.

Example

The increase in GST on 1 October 2010 caused a spike in headline inflation, lifting the rate of headline inflation to about 5%. When the effect of the increase in GST was removed, however, the underlying rate of inflation was less than 3%.

Nominal and real values

A **nominal value** is the value in current-year dollars (dollars at the time they were spent or earned).

A **real value**, e.g. real GDP or real wages, is a nominal value (current dollar value) adjusted for the effect of changes in the price level. Inflation causes money to lose value over time.

Example

If the rate of inflation is 3% per year, the price level has increased by 3% over the year. This means that at the end of the year it will cost $103 to buy the same amount you could buy with $100 at the start of the year. So in **nominal terms** you have to pay $103, but in **real terms** the value of the goods is equal to $100 a year earlier.

General price rises versus price rises in individual markets

Because inflation is an increase in the general level of prices, an increase in the price of a single good is not described as inflation. There are, however, some goods, such as oil, petrol and electricity, which are used in the production of most goods and services. An

CHAPTER 5

International trade

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 91223 (Economics 2.2) 'Analyse international trade using economic concepts and models' through providing an understanding of international trade concepts.

New Zealand's changing patterns of trade

From the time of its first export shipments of sealskins, whale oil, timber and flax in the 1790s, New Zealand has been a country reliant on overseas trade. The goods imported at that time were iron tools, muskets, clothing and flour. As a country, New Zealand had to import goods that it did not have the resources to produce, and it had to sell exports to earn the revenue needed to pay for those imports.

Sealskins were one of New Zealand's first exports

More than two centuries later, these are the same reasons for New Zealand's reliance on international trade, although the goods traded and the countries traded with have undergone significant changes. A large proportion of the goods produced in New Zealand are exported, and spending on imported goods makes up a significant proportion of both household consumption and business investment.

Terms

Terms with which students should be familiar include the following.

- **Resource endowment**: The natural resources a country has. New Zealand is endowed with scenery, farmland, a climate suitable for raising livestock and growing crops, fresh water, fish stocks and so on.
- **International trade**: Trade between countries, e.g. New Zealand exporting dairy products to Australia or buying electronics from Republic of Korea.
- **Exports**: Goods produced in New Zealand and sold overseas, e.g. meat, wool, dairy products, forest products, machinery, fish, products of horticulture.
- **Export receipts**: The total income the country receives from the sale of exports.
- **Imports**: Goods brought to New Zealand from other countries, e.g. motor vehicles, oil, electronics, machinery, apparel, footwear.

- **Import payments**: The total amount the country pays for the purchase of imports.
- **Export markets**: The countries to which New Zealand sells its exports.
- **Net exports**: The difference between export receipts and import payments (X – M).

Exports and imports

International trade in goods is easy to understand. An exporter sends some goods to another country and they are sold there. With services, international trade is more difficult to describe because it can happen in different ways, as in the following examples, which are all *exports*.

- Consumers from another country come to New Zealand, e.g. students come to New Zealand for education, tourists come to New Zealand to stay in hotels and visit attractions.
- A designer or a translator completes work at a desk in New Zealand and sends it to a client overseas.
- A firm (such as a bank or an insurance company) sets up a branch in another country to sell its service to customers there.
- A professional person such as an accountant or a specialist surgeon physically travels to the overseas market to offer advice or services.

Paragliding above Queenstown – tourism is a major New Zealand export

Whenever a service is provided to an overseas customer, whether that customer is in New Zealand (onshore services) or overseas (offshore services), the service is exported. Services that New Zealand exports include tourism, secondary and tertiary education, construction services, postal services, legal services and architectural services.

New Zealand's top ten exported goods in 2012 are shown on the following table.

CHAPTER 9

Economic growth

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 91224 (Economics 2.3) 'Analyse economic growth using economic concepts and models' through providing an understanding of growth concepts.

Definitions of economic growth

Economic growth can be defined in a number of ways. It can be:

- an increase in the value of goods and services produced in the country over a period of time (an increase in nominal GDP)
- an increase in the level of production in the country over a period of time (an increase in real GDP)
- an increase in the productive capacity of the country over a period of time
- an improvement in the net social welfare of the country over a period of time.

Gross domestic product

The value of all goods and services produced in the country in a year is called the **gross domestic product** (GDP). GDP can be measured by either adding up the total spending in the economy, or by adding up the total incomes, since every dollar that is spent is returned to other people as income. The income can be in the form of wages (for the people employed to produce the good), interest (to the people who lent money for the firms to invest), **rent** (which is the term used to describe the payment for natural resources) and profits (to the entrepreneurs who set up the firms to produce the goods and services).

TOTAL INCOME = TOTAL SPENDING

In Chapter 3 we looked at the components of demand, or spending, in the economy. For our purposes at this level, aggregate demand is the same as gross domestic product. Some texts include an additional item called a 'change in stocks (ΔR)'. These are goods that have been produced but not yet sold, so they count as part of production for the time period. The following table gives names and symbols for spending by various sectors of the economy.

Sector	Spending is called	Symbol
Households / Consumers	Consumption	C
Businesses / Producers	Investment	I
Government	Government spending	G
Overseas	Net exports (Exports – Imports)	X – M
All	Gross Domestic Product	GDP = C + I + G + (X – M)

Nominal GDP

Nominal GDP is the value of all goods and services produced in a year, measured in current-year dollars.

However, over time, prices of goods change. From one year to the next, if prices increase, nominal GDP could increase – even if production stays at the same amount, or even if production falls. This would not mean that the country is any better off; just that prices are higher.

To determine if production has actually increased, nominal GDP has to be adjusted for changes in the price level (or inflation), to give another measure of growth called **real GDP**.

Real GDP

Real GDP is nominal GDP adjusted for changes in the price level. It shows if actual production has increased.

real GDP = nominal GDP ÷ price index * 1000

Remember that a price index begins from a base year. So the real GDP figure is in base-year dollars.

Example

In 2010, nominal GDP was $120b and the price index was 1000. In 2013, nominal GDP was $140b and the price index had increased to 1140.

Real GDP in 2013 = $140b ÷ 1140 * 1000 = $122.8b.

This means that in 2013 real GDP was the equivalent of $122.8b when measured in 2010 dollars, so real GDP had increased by 2.3%.

Another way to see if real GDP has increased is to see if nominal GDP has increased faster than prices. In the preceding example, nominal GDP increased by 16.7% while prices increased by only 14%. So some of the increase in nominal GDP must have been caused by an increase in output.

If real GDP increases, so does the real income in the country. If more goods and services are being produced, more income is being earned and more goods and services can be bought. This is one indicator that the standard of living in the country might be improving. However, it does not show the following.

- What is actually being produced? Is it health or education or recreation services, or is it weapons?

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CHAPTER 12

Unemployment

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 91225 (Economics 2.4) 'Analyse unemployment using economic concepts and models' through providing an understanding of unemployment concepts.

In order to develop an understanding of unemployment and employment, it is first necessary to know what is meant by the terms 'unemployment' and 'employment'. This is slightly complicated by the fact that there are different definitions for both terms.

Full employment

Full employment could be defined as any of the following.

- Everyone who wants a job at current wage rates has a job.
- The number of jobs available at current wage rates is equal to the number of people wanting jobs.
- There is no cyclical unemployment. Current unemployment is due to frictional or seasonal factors. (These terms are defined below.)
- The economy is working at full capacity and all resources are fully employed.

Types of unemployment

Frictional unemployment

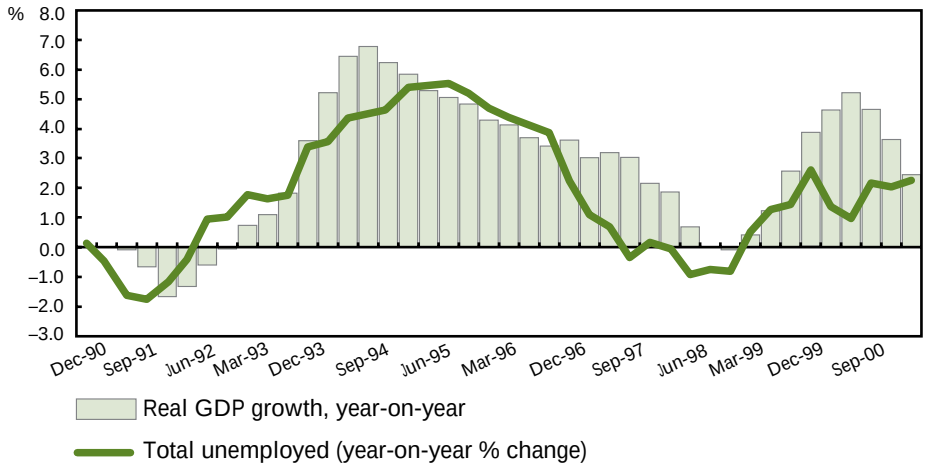
People between jobs, or school leavers looking for their first job, or people returning to the workforce experience this type of unemployment. They are waiting to find a job that they want. It also includes those who are counted as undergoing **seasonal unemployment**. These are people who lose their jobs because the jobs exist for only part of the year and the season for the job has ended, e.g. fruit pickers, ski instructors.

Ski instructors can become seasonally unemployed

Cyclical unemployment

Cyclical unemployment is unemployment related to the trade cycle. Some jobs are lost when economic activity slows and production falls as the economy enters a recessionary phase. There is a strong link between changes in unemployment and economic growth. High growth rates cause unemployment to fall, while low growth rates cause unemployment to rise.

Real GDP growth and employment growth, 1990 to 2001



Source: Statistics New Zealand, Household Labour Force Survey

Structural unemployment

Over time, the demand for some goods falls and those industries go into decline as production falls. These industries are called **sunset** industries. As production falls and firms shut down, some workers lose their jobs. Falling production might be caused by changing technologies, so some jobs no longer exist; international competition; the removal of trade barriers, or simply changes in tastes. Some structural unemployment is also classified as **technological unemployment**, when machines replace workers.

Audio cassettes – no longer manufactured

CHAPTER 15

Statistical data analysis

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 91226 (Economics 2.5) 'Analyse statistical data relating to two contemporary economic issues' through providing an understanding of statistical data analysis.

Analysing statistical data

Analysing statistical data for Economics 2.5 typically involves:

- processing and presenting statistical data for two contemporary economic issues to show trends
- providing detailed explanations of relationships in statistical data for each of the two contemporary economic issues, using economic concepts and/or models
- providing detailed explanations of inter-relationships between statistical data for these two contemporary economic issues using economic concepts and/or models
- making a justified forecast for one contemporary economic issue using extrapolated statistical data from both the contemporary economic issues.

Contemporary economic issues

The contemporary economic issues you can choose to analyse must be selected from:

- inflation
- international trade
- economic growth
- unemployment
- another issue of special interest involving the allocation of scarce resources.

Economic models

The economic models you could refer to in your analysis are the:

- quantity theory of money model
- production possibility frontier model
- circular flow model (or an extract, e.g. showing how two sectors are interdependent)
- aggregate supply/aggregate demand model
- labour market model
- business cycle model
- two-country trade model
- New Zealand as a price taker model
- foreign exchange market model.

Economic concepts

The economic concepts you could refer to depend on the economic issues you choose to analyse.

For **inflation**, you could refer to:

- inflation, disinflation, deflation
- business cycle
- cost-push and demand-pull inflation
- real versus nominal indicators.

For **international trade**, you could refer to:

- major export goods and services
- major import goods and services
- major export and import markets
- balance on goods and services in the current account.

For **economic growth**, you could refer to:

- measures of economic growth
- nominal and real GDP.

For **unemployment**, you could refer to:

- different definitions of full employment and unemployment
- types of involuntary unemployment.

Activity 15A: Models and concepts

Ans p. 211

1. Identify which economic model(s) can be used to illustrate the following relationships.

- **a.** Interest rates and the exchange rate
- **b.** Economic growth and the rate of inflation
- **c.** The money supply and the rate of inflation
- **d.** Economic growth and the level of employment
- **e.** The exchange rate and the level of output
- **f.** Interest rates and the rate of economic growth
- **g.** The exchange rate and the rate of inflation
- **h.** Export receipts and the exchange rate
- **i.** Higher incomes overseas and higher export receipts

2. Identify and explain possible impacts of the following economic events by completing each sentence.

- **a.** If interest rates rise, consumption will _____ because…
- **b.** If interest rates rise, investment will _____ because…
- **c.** If interest rates rise, the exchange rate will _____ because…
- **d.** If interest rates rise, the inflation rate will _____ because…
- **e.** If the exchange rate rises, export receipts will _____ because…

CHAPTER 16

Government policies to control inflation

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 91227 (Economics 2.6) 'Analyse how government policies and contemporary economic issues interact' through providing an understanding of government policies related to inflation.

Monetary policy refers to decisions the government makes about interest rates and the money supply. The money supply could be increased, or interest rates could be reduced, to increase aggregate demand and economic growth and reduce unemployment. This would, however, cause greater inflation. In New Zealand, the implementation of monetary policy is the function of the Reserve Bank of New Zealand (RBNZ). This is so monetary policy cannot be used for political purposes (e.g. the government reducing interest rates to gain popularity before an election). The primary objective of monetary policy is to maintain **price stability**. Price stability is defined in an agreement between the Governor of the Reserve Bank and the Minister of Finance.

Bill English, NZ Minister of Finance 2008–

This agreement is called the **Policy Targets Agreement** (**PTA**), and price stability is currently defined as 'keeping the rate of inflation between 1–3% on average over the medium term, with a focus on keeping future average inflation near the 2 per cent target midpoint'. The main tool used by the RBNZ to achieve price stability is the **Official Cash Rate** (OCR).

Why is maintaining price stability the key objective of monetary policy?

In Chapter 4, we looked at the negative impacts of inflation on households and on businesses.

For firms, the impacts include:

- uncertainty with planning and budgeting
- difficulties with replacing capital
- speculative rather than productive investment
- exports that are less competitive.

For households, the impacts include:

- discouraging savings
- encouraging borrowing and consumption
- loss of purchasing power
- greater inequality of income and of wealth distribution
- fiscal drag
- planning difficulties
- inflationary expectations.

We also saw how contractionary policies to control inflation have a negative impact on trade, economic growth and employment. Stable prices are essential for steady and sustainable economic growth, which is why maintaining price stability is the primary objective of monetary policy. Uncertainty about changes in prices reduces savings and investment and blurs price signals, which are a necessary part of ensuring that resources are being used efficiently to produce what consumers want.

Key terms

The following key terms are referred to throughout this chapter.

Consumers Price Index (**CPI**): This is the measure of inflation, and calculates the average price change of all the goods bought by an average household. It is a weighted index, so price changes of goods that households spend more on have greater influence on the average price change.

Monetary policy: Government decisions about the use of the money supply and interest rates to achieve economic objectives.

Expansionary monetary policy: Reducing interest rates or increasing the money supply to increase demand, increase production and create jobs.

Contractionary monetary policy: Increasing interest rates or reducing the money supply to reduce demand and reduce inflation.

Price stability: Keeping inflation at low levels as defined in the Policy Targets Agreement (PTA).

Official Cash Rate (**OCR**): The rate at which registered banks can borrow from the Reserve Bank, which effectively sets interest rates. Bank lending rates are usually 1–2% higher than the OCR.

The Official Cash Rate is the settlement cash rate at the Reserve Bank. Overnight cash can be deposited by registered banks at the RBNZ at 0.25% less than the OCR or borrowed by registered banks at 0.25% more than the OCR.

Open Market Operations (**OMO**): A method of controlling inflation by controlling the money supply. The RBNZ can reduce the money supply by borrowing from households (Kiwi Bonds are like term deposits, but the money is lent to the government) and financial institutions (Government Stock – larger-scale loans) and can increase the money supply by repaying those loans.

CHAPTER 20

Contemporary economic issue

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 91228 (Economics 2.7) 'Analyse a contemporary economic issue of special interest using economic concepts and models' through providing an understanding of contemporary economic issue analysis.

A 'contemporary economic issue' is a current issue of special interest to a local community or to New Zealand society as a whole, which involves the allocation of scarce resources.

Analysing a contemporary economic issue typically involves:

- identifying, defining or describing concepts related to the contemporary economic issue
- providing a detailed explanation of causes of the contemporary economic issue, using economic models
- providing a detailed explanation of the impacts of the contemporary economic issue on various groups in New Zealand society.
- comparing and/or contrasting the impact of the causes of the contemporary issue on the contemporary economic issue
- comparing and/or contrasting the impacts of changes in the contemporary issue on various groups in New Zealand society
- integrating changes shown on economic models into detailed explanations.

Examples of issues of special interest

Some examples of issues you could choose are the impact of:

- economic events leading to changes in New Zealand's emigration patterns to Australia and/or other countries
- the global financial crisis on the New Zealand economy
- the sovereign debt crisis in Europe on the New Zealand economy
- the Christchurch earthquakes on the Christchurch labour market
- Christchurch repairs and reconstruction on the New Zealand economy
- any shut down of the Tiwai Point aluminium smelter on the Southland economy
- high global dairy prices on land use in New Zealand (or on a particular region)
- the free trade agreement with China on the New Zealand economy
- a high exchange rate on the New Zealand economy
- falling coal prices on the West Coast economy
- tax changes (or social welfare changes) on income distribution
- the allocation of scarce water resources on the Canterbury economy.

The allocation of water resources – a contemporary issue of special interest

Various groups

This Achievement Standard requires you to explain, compare and contrast the impacts of the contemporary issue you have chosen on various groups in New Zealand society. The groups you choose could include people of different:

- ages
- ethnicity
- income levels
- levels of education
- regions
- industries
- categories of employment (unemployed, part-time employed, full-time employed)
- households (flatmates, couples with no children, families, retired people and so on).

Groups could also include:

- producers in the primary, secondary and/or tertiary sectors
- consumers, producers and/or the government
- exporters and importers.

Economic concepts

The economic concepts in this Achievement Standard are determined by the special interest issue that is chosen. They may include the concepts covered in other Level 2 Standards:

- inflation, disinflation, deflation
- business cycle
- cost-push and demand-pull inflation
- real versus nominal indicators

ANSWERS

Activity 1A: Basic concepts (page 5)

1. Sheep and llamas are natural resources in that they come from the land, but they are also capital resources because they are a product of breeding and used to produce another good – wool.
2. Production is output or the amount produced, while productivity measures output per unit of input. Productivity is a way of measuring how efficiently resources are being used.
3. Division of labour improves productivity, which reduces the labour cost per unit, which leads to higher profits. The disadvantages of division of labour include that workers might lose job satisfaction or get bored doing repetitive tasks, which could lead to their making mistakes, or loss of quality. It might also mean they leave, which requires the firm to train new workers who will be slower initially and so produce fewer goods in the same time.
4. Division of labour improves productivity as each worker concentrates on specialist tasks or uses more specialised machinery, so workers produce more in the same time. It also leads to workers finding new ways to increase production.
5. 'Economies of scale' means that as output increases (or the size of a firm increases), the average costs of production (or cost per unit) fall. This might be due to technical economies, marketing economies, or financial economies. The economies include becoming more capital intensive, applying division of labour, and bulk-buying resources.
6. An advantage of buying a competitor that produces the same good or service is that it will help the business achieve economies of scale.
7. Investment means buying new capital goods. These are likely to be faster, which will mean greater productivity and lower costs of production per unit. As output increases and the costs per unit fall, the firm achieves greater economies of scale.

Activity 1B: Supply, demand and market equilibrium (page 10)

1. Causes include an increase in incomes; woollen scarves become more fashionable; the price of other scarves (substitutes) increases; the price of woollen hats and gloves (complements) falls (any three).
2. An increase in demand for woollen scarves creates a shortage at the original price p^1. Some buyers show they are willing to pay more, so the price rises to the new equilibrium price p^2. The increase in price causes the quantity demanded to fall and the quantity supplied to rise until they meet at the new equilibrium quantity q^2.