

Key Ideas

This chapter helps you investigate these questions:

- What are the sectors of Canada's economy, and how important is each?
- How do basic and non-basic activities contribute to the economy?

Key Terms

primary industries

secondary industries

tertiary industries

quaternary industries

raw materials

manufacturing

value added services



▲ Fig. 22-1 Kapuskasing is a typical forest town in Ontario.

pulp

partially processed material from logs; a preliminary step in paper-making

Marina got this information from Statistics Canada. You can access a wide range of Statistics Canada databases through an Internet-based service called E-STAT. This is not a free service, but your school library or public library will have a subscription to E-STAT.

It just didn't make sense. Kapuskasing, Ontario (Fig. 22-1), was supposed to be a major forest products centre, but when Marina tried to prove it, the numbers did not support her case. Marina believed that she had a great idea for her Geography project—she would create a summary of all the jobs in her hometown to show how important the forestry industry was to Kapuskasing. At first, she expected to find that most of the workers in the town were employed in the **pulp** and paper industry. Fig. 22-2 is a summary of what she actually found. Remarkably, she found that only one-third of Kapuskasing's workforce worked in forestry. How could this be? You will find the answers in this chapter.

EMPLOYMENT IN KAPUSKASING

	No. of Workers	% of Workforce
Primary Industries (forestry workers and other primary workers)	155	3%
Secondary Industries (forest products manufacturing and other secondary workers)	1460	31.4%
Tertiary Industries	3040	65.3%
Total Workers	4655	100%

▲ Fig. 22-2 Marina found these employment statistics for Kapuskasing; they were not what she expected. She thought that most of the people in the town worked in the forestry industry.

Types of Industry

The jobs that people do can be divided into three categories: **primary**, **secondary**, and **tertiary industries**. The relationship between these categories can be seen by looking at the case of a pair of ice skates (Fig. 22-3). The progress of this pair of skates from manufacture through purchase shows how Canada's economy works.

Many geographers think that there is, in fact, a fourth group of industries and jobs. These are termed **quaternary industries**. In simplest terms, quaternary industries involve the processing of ideas rather than products. There are many jobs that fall into this category, such as computer programmers, accountants, and university professors. This segment of the economy has grown explosively in recent years. Such growth has given agencies such as Statistics Canada a problem when it comes to classifying economic activity and reporting job statistics, because most quaternary jobs are closely linked to economic activities in the other three categories of industry. For example, a university professor conducting research in the morning is working in the quaternary sector because she is processing ideas. When lecturing to students in the afternoon, she is working in the tertiary sector because as a teacher, she is providing an educational service.

The solution chosen by Statistics Canada and most other statistical agencies is not to report quaternary industries separately, but to include them in the totals of one of the other industry categories. Remember, though, when you do the activities in this chapter, that there is a large and growing number of quaternary workers in Canada. The overwhelming majority of these are included in the tertiary category, although there are a few in the primary and secondary sectors.

Primary Industries

Industries that take **raw materials** from the natural environment are called primary or extractive industries. They are called *primary* because the **extraction** of natural resources must happen first before anything else can occur. Mining and agriculture, the primary industries related to the production of the skates, are listed in Stage 1 of Fig. 22-3. These primary industries (and jobs) are located in parts of Canada where the appropriate resources are found.

Primary industries (agriculture, mining, forestry, and fishing) make a critical contribution to Canada's wealth. Without them, and the money they bring into the country through sales to other nations, Canada's economy would not exist in its current form. In fact, few countries in the world can rival Canada as a source of so many natural products. It is therefore quite surprising that such a small percentage of Canada's labour force

Tertiary means third and quaternary means fourth.

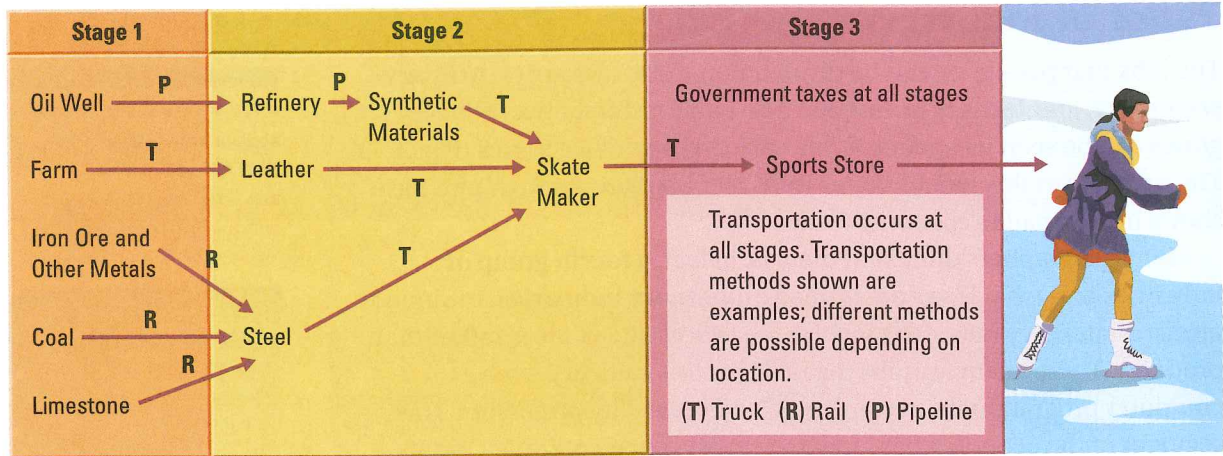
The quaternary sector of the economy will be examined more in Chapter 29.

extraction

removal of a natural resource from the ground or water

Only Russia, the United States, Australia, and Brazil compare to Canada as sources of natural resources.

A greater percentage of Canada's labour force worked in primary industries before machinery replaced human labour for many tasks.



▲ **Fig. 22-3** A simple product like a pair of skates involves all sectors of the economy.

identified
associated with by most people

works in primary industries (Fig. 22-4). The employment statistics that Marina found for Kapuskasing are a reflection of the fact that relatively few people work in extractive industries—even in parts of Canada that are strongly **identified** with a primary industry.

Secondary Industries

Secondary industries involve the processing of primary-industry products into finished goods. This relates to Stage 2 of the skate story in Fig. 22-3. The most important secondary industry is **manufacturing**, which is responsible for making the enormous range of products needed by consumers and by businesses. Manufacturers make everything from computers and diamond rings to cans of fruit and bulldozers. As you can see in Fig. 22-4, secondary industries employ far more Canadians than do primary industries. Construction alone has more workers than all the primary industries combined, while manufacturing employs three times as many.

Manufacturing a product often involves several steps. Consider the production of the steel blades for that pair of skates. Primary manufacturing takes place when iron ore, coal, limestone, and other metals are manufactured into the kind of steel needed for a skate blade—resistant to rust and able to hold a sharp edge. Secondary manufacturing occurs when that steel is further processed into skate blades, which are then added to the skate boot to make the final product. Cars, clothing, and even a seemingly simple product like chewing gum are the products of both primary and secondary manufacturing processes.

The various raw materials that went into the skates obviously have value, but in total the raw materials used in one pair of skates is worth about one dollar. After all, there are only a few kilograms of crude oil, iron ore, coal, and other raw materials in each pair of skates. When these

	No. of Workers	% of Workforce
Primary Industries		
Agriculture	349 000	2.2%
Fishing, forestry, mining, oil, and gas	308 000	1.9%
Total	657 000	4.1%
Secondary Industries		
Manufacturing	2 183 000	13.5%
Construction	1 042 000	6.4%
Utilities	128 000	0.8%
Total	3 353 000	20.7%
Tertiary Industries		
Wholesale and retail trade	2 570 000	15.9%
Transportation and warehousing	813 000	5.0%
Finance, insurance, and real estate	971 000	6.0%
Education	1 118 000	6.9%
Health and social services	1 739 000	10.7%
Business and personal services	4 138 000	25.5%
Government	839 000	5.2%
Total	12 188 000	75.2%
Total in All Industries	16 198 000	100%

◀ Fig. 22-4 Employment in Canada, 2005

materials are processed, though, their value increases. For example, the steel that eventually will be made into the skate blades is worth much more than the raw materials that were used to make the steel. Similarly, when the steel is further processed to make the skate blades, it gains more value. When the skate blades become part of the finished skates, there is even more **value added**. One dollar's worth of raw materials might now sell for \$200 or more. Many critics of Canada's economy have pointed out that we lose many value-added opportunities—and jobs—by exporting too many goods in an unprocessed form. They say that we should do more processing of timber, minerals, and agricultural products in Canada and then sell the finished products. Unfortunately, in a global market it is impossible to force companies to do this. They choose to do their processing where it most benefits their company's profits. In recent years this has meant that many Canadian manufacturing plants have closed as new factories have sprung up in China and other countries where labour costs are lower than in Canada.

Manufacturing companies try to build their factories in densely populated areas because they want to be near their customers. This means that the cost of shipping their products will be as low as possible. If you know where most Canadians live, you will have a pretty good idea where most manufacturing occurs.

See Fig. 19-2 on page 226 for a population distribution map of Canada.

The importance to the economy of the construction sector is often overlooked. It can be seen at all levels of the economy. Locally, it may be a small crew building a deck behind a neighbour's house. Provincially, it may be a large company expanding a highway from two lanes to four. Nationally, it may be a multi-billion dollar "megaproject," like the construction of an arctic gas pipeline that involves a dozen companies.

Tertiary Industries

Tertiary industries provide a wide range of **services** that support primary and secondary industries and society in general. Without them, society could not function. With regard to those skates: the sports store that sells them (Stage 3, Fig. 22-3) is providing a service to the person who buys them, and is therefore considered a tertiary industry. In addition, at each stage of the manufacture, sale, and even use of the skates, taxes are paid to governments. These taxes pay for such other services as health-care, education, and road maintenance.

What Marina did not take into account when she started her project was that a substantial majority of Canadians do not make *goods* in their jobs. Rather, they provide *services* for others. In fact, almost three times as many Canadians work in tertiary (and quaternary) industries as in primary and secondary industries combined. These services are so varied, and so much a part of everyday life, that often we do not give them much thought.

Service industries, in one form or another, are spread across the country. The majority of service industries are found in towns and cities because most services are provided for the people and companies that are concentrated in urban areas. In some cities and towns, one service industry dominates. Think for a moment of Ottawa. One service industry should come to mind: the government. Can you think of other cities or towns that are closely identified with a particular service?

Consider your day. In the morning, you may read a magazine while you ride the bus to school. At noon, you may go to the local burger place for lunch. After school, you may have a dental appointment. At night, you may go to the mall to shop and see the latest movie. Of course, during the day you are in school.

Basic and Non-basic Industries

Compare the jobs of two people who live in Kapuskasing. Joan works in the shipping department of the pulp and paper mill, while Henry cooks in a restaurant on the main street of town. Beyond the obvious differences in the two jobs, there is one important distinction that must be made. The money to pay Joan's salary comes primarily from outside the economy of the local town. It is provided (indirectly) by the customers who buy paper products from the mill. As you learned in Chapter 20, jobs like hers are in basic industries (and are called basic jobs) because they provide the money needed to support the local economy. Without them, there would be no money entering the town, and it could not exist.

On the other hand, the money earned by Henry in the restaurant comes almost entirely from customers who live in the local area. Jobs like his are in non-basic industries, since they do not bring new money into the local economy. Instead, they *recycle* the money that is already there. While non-basic jobs are important, the survival and growth of an economy depends on having enough basic jobs.

How can you tell if a job is basic or non-basic? Sometimes it is not clear because some jobs can be a combination of both. Consider the examples in Fig. 22-5. How does the job of an actor at the Stratford Festival compare to that of an actor at a theatre in Toronto? In Stratford, the vast majority of people who attend the theatre would be from out of town, so an actor would be a basic job. In Toronto, though, many of the people going to the theatre are local residents, so an actor could be both basic and non-basic.

Job Description

Category

Coal miner in northeastern British Columbia	Basic
Hairdresser at a shopping mall	Non-basic
Art teacher	Non-basic
Actor at the Stratford Shakespearean Festival	Basic
Teller at the local bank	Non-basic
Vice-president of Scotiabank	Basic
Professor at Queen's University	Basic
Receptionist at a dentist's office	Non-basic
Air Canada pilot	Basic
School-bus driver	Non-basic

There is money continually leaving the town to pay for all the goods and services that are brought in from outside. The town must earn money to pay for these goods and services.

Stratford's permanent population is less than 30 000.

◀ Fig. 22-5 Can you suggest why each of these jobs is in the category shown?

In Closing...

Now that you are familiar with the ideas of primary, secondary, tertiary, and quaternary industries, and with basic and non-basic industries, you should be able to answer Marina's question as to why only about a third of the people in her town work in the forestry industry.

QUESTIONS

KNOWLEDGE AND UNDERSTANDING

1. Define, in your own words, and give three examples of each of the following: primary industry, secondary industry, tertiary industry, and quaternary industry.
2. In your notebook, match the industry in Column A with the items in Column B.

Column A

1. Primary industry

2. Secondary industry

3. Tertiary industry

4. Quaternary industry

Column B

a) raw materials

b) laboratory

c) manufacturing

d) factory

e) mining

f) civil service

g) research and development

h) natural resources

i) ski resort

j) services

k) novelist

l) construction

m) farming

n) transportation

THINKING

3. a) What is the difference between a basic industry and a non-basic industry?
- b) Which of the following are basic and which are non-basic jobs? Explain each answer.
 - i. an assembly line worker in the Ford factory in Oakville, Ontario
 - ii. a firefighter in your community
 - iii. a wheat farmer in Saskatchewan
 - iv. the artist who illustrated this book
- c) Describe a situation in which each of the following jobs can be basic in nature and a situation in which it can be non-basic:
 - i. a doctor
 - ii. a bus driver
 - iii. a golf professional

- d) Are most quaternary jobs basic or non-basic in nature? Why is it important to know this? (Hint: consider how the government tries to help economic growth.)
4. How would you expect the pattern of primary, secondary, and tertiary industries for 1911 to differ from the pattern revealed by the statistics in Fig. 22-4 for 2005? Why?
5. a) Why is it so difficult to provide statistical data about the number of quaternary jobs?
- b) Is this situation likely to change in the future? Why or why not?

COMMUNICATION

6. A geographer once said that tertiary industries are, at the same time, the most important and the least important segment of Canada's economy. What do you think this statement means?

APPLICATION

7. Draw bar graphs to show the percentage of the labour force employed in each sub-category shown in Fig. 22-4 (e.g., agriculture, manufacturing, wholesale and retail trade, etc.). Use a different colour for each category (primary, secondary, and tertiary).

GeoLit Reminder

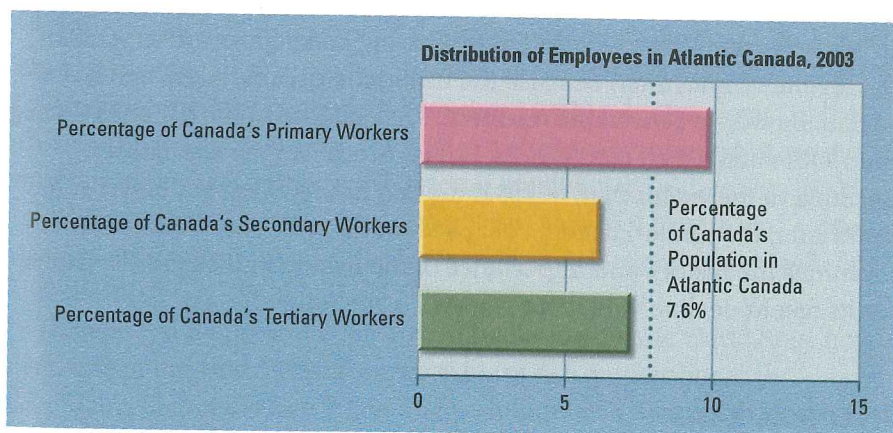
When constructing a bar graph:

- Determine the best size for your graph.
- Choose the vertical scale. (Hint: Which item will have the longest bar?) Label the vertical axis.
- Draw a bar for each item of data, spaced evenly along the horizontal axis.
- Label the horizontal axis and each bar on it.
- Add a legend, if appropriate.
- Give your graph a title.
- Check that all information is correctly drawn and labelled and that you have used colour appropriately.

8. a) Fig. 22-6 shows the distribution of workers of each industry in the major regions of Canada. Create a set of bar graphs for each region. Fig. 22-7 shows a sample bar graph for Atlantic Canada.
- b) Compare the percentage of Canada's population in each region to the percentage of workers in each type of industry. If the figures are similar, then the region has its fair share of jobs in that category. If not, then an imbalance exists. What significant differences do you see? Why might they exist?

Region	Percentage of Canada's Primary Workers	Percentage of Canada's Secondary Workers	Percentage of Canada's Tertiary Workers	Percentage of Canada's Population
Atlantic Canada (NL, PEI, NS, and NB)	9.8%	5.6%	7.0%	7.6%
Central Canada (QC, ON)	37.1%	74.1%	61.9%	62.1%
Western Canada (BC, AB, MB, SK, Territories)	53.1%	20.3%	31.1%	30.2%

▲ Fig. 22-6 Regional distribution of employees in Canada for 2003



◀ Fig. 22-7 Employment by category in Atlantic Canada compared to regional population, 2003.

9. a) Work with a partner to conduct a survey of the occupations of at least 50 people in your community. Divide the jobs into primary, secondary, and tertiary industries and into basic and non-basic. In each case, convert the results into percentages.
- b) Did the results surprise you? Why or why not?
- c) For the types of industries, are the results that you obtained what you would expect based on what you know about the national distribution of jobs (Fig. 22-4) and the distribution of jobs in your region (Question 8)?
- d) How many of the jobs that you found could be classified as completely quaternary? How many could be classified as partly quaternary? Was this a surprise? Explain.