5.1 Factors of production

**KEY IDEA**

- The four factors of production are land, labour, enterprise and capital.

**Land**

This means the land itself, and any natural resources that come with it. So oil, natural gas, bauxite, fertile soil, a pleasant climate and sandy beaches are all included in this factor of production. Every business uses some physical space — though, for example, a bank or small home-based business uses much less land than an agricultural business growing sugar.

In economic terms, river and marine resources also count as land, for example fish, fresh water, or hydro-electric potential from a fast-flowing river.

Economists use the word “rent” to describe the earnings from land as a factor of production – even if it does not take the form of a regular weekly or monthly rent payment.

Land and natural resources are in limited supply. The level of rent is related to scarcity. There is a high rent for resources such as:

- land in the central business district of the capital city
- beach-front land with roads and utilities
- rights to extract minerals, such as oil and gold.

**Labour**

This means human effort in any form – skilled or unskilled, manual or intellectual. Labour earns wages or a salary in return for participation in the business.

**Enterprise**

This is the contribution of the entrepreneur, who takes the risk of initiating the business, and earns profits. The entrepreneur’s stake in the business is called equity.

**Capital**

The financial capital used to establish the business earns interest. The interest is paid to the lender, who may be a bank, another institution, or an individual lender. Borrowings of financial capital are called debt.

- Fixed capital is capital tied up in fixed assets, for example buildings, machinery, or vehicles. These assets will have been acquired with financial capital.
- Working capital is capital used for day-to-day operations. It includes cash held in the bank, goods for sale, materials for processing and capital for other short-term requirements. Working capital is used to cover wages and immediate requirements, such as utility bills.
- Venture capital is risk capital invested in a new business or one which is restructuring, usually for a period of years. The venture capitalist hopes to make a large return on investment when the stake in the business is eventually sold, but also risks losing the whole investment.

**Quick questions**

1. For each of the four quotations, which of the four factors of production is the person providing?

2. Which factor of production is connected with each of these?

   - Rent
   - Salary
   - Debt
   - Profits
   - Natural resources
   - Marine resources

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1See chapter 3, section 3.6 for sources of business capital, and for more on venture capital. See chapter 7 for business finance.
Calculating productivity
Labour productivity can be calculated like this:
- Output of business
- Number of employees
For example:
- Annual revenue US$500,000
  - Ten employees
  - Productivity = US$50,000 per employee
- Annual revenue US$500,000
  - Five employees
  - Productivity = US$100,000 per employee
For some public sector businesses, productivity is harder to measure, because goods or services are provided either at no cost to the user (most government schools), or at below their true cost (public water supply in many countries).
It may be possible to devise a special measure in these cases – but this has to be carefully done. For teachers, the number of students taught might not be a good measure of productivity.
We can also measure the productivity of land, like this:
- Value of crops grown
- Area of land in hectares
Or the productivity of capital:
- Annual revenue of business
- Total value of capital used

Quick questions
1. Calculate productivity in these cases:
   a. Annual revenue US$800,000, eight employees.
   b. Annual revenue US$800,000, 32 employees.
   c. Annual revenue US$500,000, five hectares of land (productivity of land, not labour).

The importance of productivity

Key ideas
- Increased productivity may benefit all stakeholders in a business.
- Improved productivity is important for the national economy.
- Productivity is usually greatest in industries with strong capital investment.

When productivity increases, businesses can:
- reduce prices, to the benefit of consumers
- increase wages, to the benefit of their workers
- earn a higher profit, to the benefit of the entrepreneur
- increase production, using the same number of skilled workers
- save labour costs, by reducing the number of workers.

For the national economy, increased productivity can:
- increase exports, because local goods are more competitive in price
- encourage growth in output
- increase wages
- reduce prices and inflation
- increase consumer spending, so other businesses benefit from a more prosperous market.

Labour productivity is important for any business, and can be increased by:
- improved technology
- better organization and management, so that less time is wasted

Quick questions
1. Look at Figure 5.3.2. Which two industries in Jamaica had the highest productivity? Which one had the lowest productivity?
2. Look at the two quotes above. Explain the problems apparent in each case.
3. Look at the case study about Label House in section 6.6. How was productivity increased? Who benefitted from the change?
Cottage industries

**KEY IDEA**
- Cottage industries are small businesses using traditional technology.

Cottage industries are small businesses using traditional technology, and often located in a rural area:
- They are **home based**. They are usually run from a family home, or a small building close to the home.
- They use **manual** labour. Any machines are small and domestic in scale.

They are **small scale**. They do not use large amounts of land, labour or capital. They have small-volume production.

They often use **local raw materials**, such as clay for pottery, wood or natural fibres.

They use **family labour**; most of the work is done by family members, not paid employees.

Cottage industries benefit the local economy:
- They provide employment.
- People can find work without leaving their home. There is no need to migrate.
- Work can be combined with household activities, gardening or childcare.
- Cottage industries provide a market for local agricultural or other products.
- Only a small amount of capital is required.
- If the products are exported, the country earns foreign exchange.

**Quick research**
Write a brief description of cottage industry in your country.

**The Acuero Women Cassava Producers**
This informal group of eight run a cottage industry at Moruca in north-western Guyana. They buy cassava from local farmers and process it to make a bread, using traditional craft technology.

They peel the cassava and grate it. Then the grated cassava is squeezed in a long woven container called a *matapi*. The flour is taken out from the *matapi* and sifted. Then it is baked on a hot metal sheet, or tawa, to make the bread. The bread is a thin, hard disc, a bit like a biscuit in texture. Each piece is around ten centimetres across.

The bread is packaged in plastic, with a label showing a leaf from a crabwood tree and the words Northwest Organics. The total production of the eight members of the group is 700 packs a month. The bread is marketed in Georgetown, and a small amount is exported to Trinidad.

Grating cassava in a wooden trough.
It is a healthy product, with no chemical additives. It is high in natural fibre, low in fat, and can be eaten by people on a low-gluten diet.

**Jamaica UCC Blue Mountain Coffee Company**
“*Our parent company is the UCC Ueshima Coffee Company. It is the leading coffee company in Japan. Its subsidiary in Jamaica is Jamaica UCC Blue Mountain Coffee Company. There are other subsidiaries with much larger coffee plantations in Indonesia and Hawaii.*

We have a small office in New Kingston, with a Managing Director, who is from Japan, an accountant, and an administrator. We bought the Craighton Estate in 1981. Approximately 40 hectares are in coffee. By Jamaican standards we are a large farm, but there are farms in Brazil measuring more than 1,000 hectares.

The agricultural operations are handled by an experienced farm manager, who has been employed for over 28 years, and a supervisor, who controls the detail of the day-to-day operations. Everyone knows their job very well. UCC can trust them to run the farm. There are around ten to 30 temporary workers, depending on the time of year. Regular jobs include planting, pruning, weeding, pest control and harvesting.

This is an eco-friendly operation, and we were the first Caribbean coffee estate to be certified by the Rain Forest Alliance. Food safety and pesticide control are big issues for consumers in Japan and other parts of the world. One of the insect pests is the coffee berry borer, which affects the quality of beans if not controlled. We use baited traps, instead of the alternative method, which is spraying.

We send the harvested beans to the Mavis Bank Coffee Factory. This is the oldest coffee finishing works in Jamaica. They process the berries for a fee, but we retain ownership.
There are three major inter-continental shipping hubs in the wider Caribbean. They are:

- Panama
- Kingston, Jamaica
- Freeport, Grand Bahama.

These are trans-shipment ports. They receive giant container vessels from all over the world. Some ships have passed through the Panama canal from the Pacific to the Caribbean. The containers are unloaded and then trans-shipped to:

- Other inter-continental shipping lines. A ship which is just narrow enough to pass through the Panama Canal (Panamax) can hold up to 4,500 containers.
- Regional ports in Caricom, Florida and the wider Caribbean. Kingston has weekly services to 17 regional ports. Some of the smaller vessels used on Caribbean feeder routes hold around 300 containers.
- Specialist facilities on Kingston Harbour serving the flour mill, the Petrojam oil refinery and Caribbean Cement
- Specialist bauxite and alumina export facilities at Port Kaiser, Port Esquivel, Rocky Point and Port Rhoades.

Kingston was ranked 56 in 2008 among the world’s busiest container ports. There are two terminals at Kingston:

- Kingston Container Terminal, which is operated by the public sector Port Authority of Jamaica and is used for container cargo.
- Kingston Wharves Limited, a private sector company which handles many different types of cargo as well as containers.

There are other port facilities in Jamaica:

- Montego Bay, which is mainly a cruise ship port but has some container and cargo traffic
- Ocho Rios, a cruise ship port
- Rio Bueno, which is operated by a private sector company Tank-Weld and imports cement, timber, steel and similar commodities

Kingston Wharves Ltd is a public company quoted on the Jamaica Stock Exchange. It was established in 1945 as a warehousing company, in the days when ships docked close to the downtown area of Kingston. This area was congested and there was not enough land for a modern port.

Today the company operates a 25-hectare shipping terminal on reclaimed land at Port Bustamante. The terminal offers services such as:

- berthing - ships can load and unload cargo
- stuffing and stripping – loading and unloading of containers
- warehousing and storage.

There is a quay 1.6 km long, with water 13 metres deep and nine berths for all kinds of shipping. The total warehouse area is 30,000 square metres, or three hectares, and there are ten hectares of secure storage area for motor vehicles. An expansion project completed in 2008 cost US$27 million.

The port is open 24 hours a day, 365 days a year and receives more than 800 ships annually. It handles 130,000 containers a year and can move up to 22 in an hour.

The company has close to 300 staff, although only half are permanent employees. The rest are casual or contract staff. To keep the port open round the clock, many work on three eight-hour shifts.

The marketing and public relations executive works to attract new shipping lines to use Kingston Wharves as a trans-shipment hub. This means working carefully with a small group of potential customers. Customer service is important for the overall marketing effort. Advertising to the general public is not as important as for a consumer goods company – but there are community outreach and sponsorship activities intended to boost the company’s image. Kingston Wharves has sponsored under-15 cricket since the 1980s.

There is terminal management software to maximize the efficiency of the wharf and warehouse operations.

Quick research

On a map of the Caribbean, mark and name:

- a The Panama Canal.
- b The Caribbean Sea and the Pacific and Atlantic Oceans.
- c Three major trans-shipment hubs.
- d These 17 destinations with a weekly connection to Kingston – Trinidad, Barbados, Antigua, Panama, Aruba, Bonaire, Curacao, Grand Cayman, Grenada, Guyana, Haiti, St Lucia, St Vincent, Suriname, Margarita in Venezuela, Miami and Port Everglades in Florida.