

## 1.7: Factors of Production

### Learning Objectives

- List the four factors of production
- Explain the four factors of production

All businesses, both for-profit and nonprofit, need resources in order to operate. Simply put, resources are the **inputs** used to produce **outputs** (goods and/or services). Resources are also called **factors of production**. What makes something a resource? For one thing, it needs to be *productive*.

There are four categories of resources, or factors of production:

- Natural resources (land)
- Labor (human capital)
- Capital (machinery, factories, equipment)
- Entrepreneurship (somebody who recognizes a profit opportunity)

### Natural Resources

**Natural resources** have two fundamental characteristics: (1) They are found in nature, and (2) they can be used for the production of goods and services. In order to provide benefit, people first have to discover them and then figure out how to use them in the the production of a good or service. Examples of natural resources are land, trees, wind, water, and minerals.

A key feature of natural resources is that people can't make them. They also tend to be limited. New natural resources—or new ways of extracting them (such as fracking, for example)—can be discovered, though. These natural resources can be renewable, such as forests, or nonrenewable, such as oil or natural gas. It's also possible to invent new uses for natural resources (using wind to generate electricity, for example). Resources that are cultivated or made with human effort can't be considered *natural* resources, which is why crops aren't natural resources.

### Labor

**Labor** refers to human resources (also called human capital)—physical or intellectual. You're adding to your own human resources right now by learning. You may possess certain human resources already—perhaps you have an athletic gift that enables you to play professional sports to earn a living, for example—but you can also develop them through job training, education, experience, and so on.

The word *labor* often calls to mind physical labor—working in a factory or field, constructing a building, waiting tables in a restaurant—but it can refer to any human input (paid or unpaid) involved in the production of a good or service. This broader definition of labor is particularly important in today's technology-driven business environment, which has come to rely much more on the intellectual contributions of the labor force than the physical labor required of, say, working in a production line. Intellectual contributions include experience in and out of school, training, skills, and natural abilities. In order to remain competitive, businesses place a premium on employees who bring these “hard skills” to the table. Many of the advances in our world today are the result of the application of intellectual human resources.

Finally, labor brings creativity and innovation to businesses. Businesses use human creativity to address changes in consumer preferences and to invent goods and services that consumers haven't even imagined yet. Without creativity, innovation would stall, and economies would stagnate.

### Capital

Before we discuss **capital**, it's important to point out that money is *not* a resource. Remember that resources need to be *productive*. They have to be used to make something else, and money can't do that. Money certainly helps the economy move along more efficiently and smoothly, like grease for the economic machine. But in and of itself, it can't produce anything. It's used to acquire the productive resources that can produce goods and services. This confusion is understandable, given that businesspeople frequently talk about “financial capital,” or “investment capital,” which does mean money.

In contrast to natural resources, capital is a resource that *has been* produced but is also used to produce *other* goods and services. This factor of production includes machinery, tools, equipment, buildings, and technology. Businesses must constantly upgrade their capital to maintain a competitive edge and operate efficiently. In the last couple decades or so, businesses have faced unprecedented technological change and have had to meet the demands of consumers whose lives increasingly take place in a virtual world. Almost every business has a Web presence, and many customers are more accustomed to interacting with a virtual version of the business than a brick and mortar store.

## Entrepreneurship

Thus far we have looked at natural resources, human resources, and capital as three inputs needed to create outputs. The last one we need to consider is perhaps the most important: **entrepreneurship**. This resource is a special form of labor provided by an entrepreneur. An entrepreneur is someone who is willing to risk his or her time and money to start or run a business—usually with the hope of earning a profit in return. Entrepreneurs have the ability to organize the other factors of production and transform them into a business. Without entrepreneurship many of the goods and services we consume today would not exist.

The following video will give you an overview of what economists mean when they talk about resources or factors of production.



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### ? Practice Question

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## ✓ Baking a Cake

Let's take a look at an example: baking a cake. What factors go into the production of a cake?

Table 1.7.1: Factors of Production

Natural Resource	Wind is harnessed to produce electricity that powers the electric mixer and oven.
Labor	The baker's labor combined with the creativity and skills needed to actually bake and decorate it
Capital	Ovens, cake pans, flour, sugar, butter, and other ingredients used to make the cake
Entrepreneurship	An individual who starts the bakery or runs a home-based business baking and selling cakes to customers

If you consider just *some* of the factors of production involved in baking even a very simple cake, what would happen if one of the four inputs were missing? What if you lacked electricity or an oven? What if you lacked the skills to bake or decorate the

cake? What if you had the first three factors of production but not the fourth, entrepreneurship? You can surmise that **all four** factors of production are required to create the outputs that would get you into the cake business—or any business.

## ? Practice Question

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