Economics LAP 18 Performance Indicator: EC:013 Student Guide

# Make the Most of It

# **Productivity**

# **Objectives**



Discuss the importance of productivity.



Explain ways to increase productivity.



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Have you ever heard that you should become a "productive member of



society"? What do you think that saying really means? Does it mean to help a lot of customers, to write a lot of reports, or to make a lot of sales? Actually, depending on your job, it could mean any of those three, or many other things, too!

Basically, being productive means keeping busy, working hard, and being successful at your job, whatever it might be. So why be productive? Because productive employees are often the first to get raises, earn bonuses, or be promoted. In other words, productive employees are rewarded for working hard.

And why do employers get so excited about productive employees? Because productive employees make the business more productive (and profitable!), and productivity is essential for business success. Read on to find out more about the how's and why's of productivity.

# What's the Big Deal With Productivity?

**Productivity** is the amount and value of goods and services produced from set amounts of resources. We refer to the goods and services produced as **outputs**, and those resources used in producing the outputs are called **inputs**. While labor, equipment, and materials are the resources commonly associated with production, there are other inputs as well—time, knowledge, systems, processes, and



▲ Productivity makes it possible for you to have all of your favorite products.



# **Productivity = Outputs + Inputs**

Another way to express productivity is with a formula. Since productivity measures the amount of outputs produced from a set amount of inputs, we can say: Productivity equals outputs divided by inputs.

We can use this formula to explain productivity in simple terms:

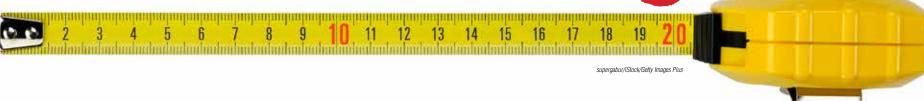
- The productivity of a seamstress could be expressed as the number of dresses made (outputs) divided by the time it took to sew them (inputs).
- The productivity rate of a carpet-cleaning business could be expressed as the total number of carpets cleaned in a day (outputs) divided by the number of employees who did the work (inputs).



This video from the Bureau of Labor Statistics demonstrates the concept of productivity and how it is measured using an example of a small-business owner: https://www.youtube.com/watch?v=JKRZ0b98hFE.



# Productivity



# **How Is Productivity Measured?**

While productivity, in theory, simply equals outputs divided by inputs, no one method of measuring productivity can be used in all situations. It is possible to measure a worker's productivity, a business's productivity, an industry's productivity, or even a country's productivity, and you might use a different approach to measuring each one. For now, let's focus on measuring the productivity of workers and businesses.

Worker productivity. The productivity of an individual worker may be measured in any number of ways. These include:

- The amount of work the individual can produce,
- The amount of time needed to do the work, or
- The monetary value of the work.

The productivity of a cashier might be based on the number of customers checked out in an eight-hour day. That means that if Jill, a cashier at Gary's Gourmet Foods, is able to check out 50 customers in one workday, her productivity rate is 50 customers divided by eight hours, which equals 6.25 customers per hour.



An advertising copywriter's productivity rate might be measured a bit differently, however. Instead of focusing on how many clients can be served in a certain time frame, a copywriter's productivity might be determined by the length of time it takes to complete one job. Therefore, a copywriter who can write ad copy in 30 minutes would be considered twice as productive as another copywriter who needed an hour to do the same job.

Finally, a salesperson's productivity would probably be based on the income received from his/her sales. The total income from the sales would be divided by the costs involved in the sales (travel, company car, salary, etc.) to determine the salesperson's productivity. Some businesses have found that their top income-producing salespeople are not necessarily their most productive salespeople, if the costs involved in their sales are disproportionately high.



▲ The way productivity is measured depends on the nature of the job.



The way that employee productivity is measured is changing. Watch the video "You're Measuring Employee Productivity Wrong" by Shawn Casemore to learn about different ways to understand employee productivity: <a href="https://www.youtube.com/watch?v=fA0Wgf8r16s">https://www.youtube.com/watch?v=fA0Wgf8r16s</a>.



**Business productivity.** Just as there are different ways to determine worker productivity, there are different ways to determine business productivity. Some of the methods used to measure business productivity are:

- Dividing the number of products produced by the number of steps involved in producing them,
- Dividing the dollar value of total sales by the number of salespeople who make the sales, or

• Dividing the dollar value of total sales by the costs of making those sales.

What type of output a business produces has a big impact on how that business's productivity is measured. This means that businesses in different industries tend to measure productivity in different ways. When the output is tangible, measuring productivity is fairly straightforward—divide the amount or monetary value of the output by the inputs. However, when outputs are intangible, measuring the productivity of a person or business is a bit trickier. Would we want to measure the productivity of a doctor, veterinarian, or other service professional based solely on the number of clients seen and served in a given day's time, or the monetary value of that work? Probably not. When we measure the productivity of **service businesses** which perform activities that cannot readily be touched, smelled, tasted, seen, or heard, we need to take into consideration more than just the quantity of outputs produced. We need to consider the

quality, appropriateness, timeliness, and cost of the service as well.

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Let's look more closely at one of those service professionals that we mentioned—the doctor. To truly determine how well a doctor converts his/her resources (personnel, time, knowledge, medicine, and equipment) into outputs

(patients helped), we need to ask a few questions. Does the doctor properly diagnose his/her patients? Does the doctor adequately answer the patients' questions?

Does the doctor order the right tests for the patients? Those are all

very important things for a doctor to do. If a doctor is not doing

all of those things properly, you probably wouldn't want

him/her to be your doctor, would you? Instead of measuring productivity by simply calculating how many patients a doctor treats in a given time period, we would probably consider that doctor to be more productive and successful only if the quality of the doctor's services is high. In other words, when measuring a doctor's productivity, we don't care so much how many patients s/he sees in a day; we care more about how well the doctor treats patients and how accurate his/her diagnoses are.





This video from *Harvard Business Review* explains some ways to improve accuracy when measuring productivity:

https://hbr.org/video/2235472805001/measure-employee-productivity-accurately.



# Why Is Productivity Measured?

Businesses measure the productivity of their workers and of themselves for a number of reasons. These include:

# • To see if business objectives are being met

A business sets objectives, or goals, to be successful. By measuring productivity, a business can see whether it is meeting those objectives.

# • To determine the efficiency of actual production methods

By measuring the productivity of current production methods, a business can determine if workers are using time and resources effectively. If employees are not working as efficiently as possible, then improvements need to be made.

• To determine if productivity is going up or down

Comparing the current productivity level with past productivity rates will show if a business's productivity is increasing or decreasing.



▲ It's important to take the time to analyze productivity.



### To show trends in business conditions

If productivity is increasing, then business conditions are improving. If productivity is decreasing, then business conditions are declining, too.

### • To plan for productivity improvement

Before making plans to increase productivity, a business must measure current productivity to determine whether improvement is needed. This helps the business set goals for the future.

# • To manage resources

When a business knows how productive it is every day, it can be sure to keep enough resources in stock to manufacture or sell products.

# Why Is Productivity Important?

Productivity is important to everyone, but it affects businesses, workers, consumers, society, and the economy in different ways. Let's take a look at the importance of productivity and its effects.

**For businesses.** Productivity is vital for business success. To compete successfully in the global economy, a business must be highly productive. This means not only producing more products, but also producing these products in more efficient ways. In other words, using the same amount of resources to generate more output. When a business produces more products in more efficient and cost-effective ways, then it can sell these products to consumers at more competi-



tive prices. This gives the business a competitive advantage. In such a situation, sales will probably increase, and because the business did not use any additional resources that must be paid for, profits will increase, too. For that reason, businesses are normally on the lookout for ways to improve productivity. If a business doesn't consider productivity to be important, then that business is likely to lose time, customers, sales, and ultimately, money.



Most employees wish they had more vacation time, but employers aren't so sure. Many businesses disagree about the relationship of vacations and productivity. Those in favor of paid vacation days claim that employees who take a week or two off return to work refreshed, rejuvenated, and more productive. In fact, all countries in the European Union are required to give at least 20 paid vacation days to their employees (that's four weeks!). In France, workers get even more vacation time—30 days. Some American firms are following suit—some companies even provide unlimited vacation days, where employees can take off as many days as they like, as long as they're getting their work done.

The U.S. government doesn't require companies to give any paid vacation time at all, and most American companies offer considerably fewer vacation days than their European counterparts. There are many reasons for this. Some studies have found that vacations can actually make employees sick! Researchers have found that some workers suffer from headaches, fatigue, and flu-like symptoms when they take time off. But, perhaps more importantly, many people in American culture think that vacations decrease productivity. After all, more time in the office means more time spent working. In fact, many people think that the lack of vacation time is why American workers are so productive!

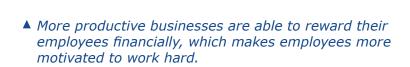
So what do you think? Does vacation time enhance or inhibit productivity?



For workers. Productivity is also very important for workers. If a business improves its productivity, increases its sales, and brings in more profits, then that business's employees are bound to benefit, too. If the business is more profitable, then the employees are likely to be rewarded with higher wages and job security. With more money in their pockets, these workers are better able to buy the things that they need and want. Workers know that they must increase their productivity if they want more of the good things in life. Not being productive could cost them money and possibly even their jobs.

**For consumers.** Consumers have a vested interest in productivity as well. Increased business productivity can create a greater variety of goods and services, and as more products become available, prices

are likely to drop. For instance, if an electronics company finds a way to produce televisions more quickly without increasing manufacturing costs, the company is able to sell more of them for less money...which means that more consumers can afford them! When businesses are productive, consumers have more things to choose from at lower prices—a shopper's paradise!



COMPANY INC.



For society. Productivity is essential for national prosperity. Our productivity as a nation benefits society by meeting people's needs and wants more effectively. It provides us with more products at more competitive prices. An increased national income and a higher standard of living are the direct result of high productivity.



▲ Productivity and economic growth are interrelated—when one changes, the other usually does as well.

**For the economy.** The general economic growth of a country is tied to its level of productivity. To determine how strong the country's economy is, we must measure how much the nation produces from its resources. Everything that a country produces within its borders in a year is called its **gross domestic product** (GDP). The average worker's productivity is called **gross domestic** product per capita, or per person. For a country's economy to grow, either more individuals must join the workforce or GDP per capita must grow at a faster rate than the nation's population.

A drop in productivity can have a negative effect on the economy. When productivity decreases, inflation occurs. Costs of labor go up, and prices rise. If prices rise, then people buy less, sales fall, unemployment increases, and productivity drops further still. This creates a vicious cycle; inflation is brought on by higher wages that cause higher prices that create a new demand for higher wages. It is important to keep productivity stable or growing to prevent this cycle from happening.



This video from Crash Course Economics explains the importance of productivity in the global economy, as well as the relationship between a country's individual workers and its productivity as a whole: <a href="https://www.youtube.com/watch?v=UHiUYj5EA0w">https://www.youtube.com/watch?v=UHiUYj5EA0w</a>.



# **Summary**

Productivity is the amount and value of goods and services produced from set amounts of resources. It can be measured by dividing outputs by inputs. Two important types of productivity are worker productivity and business productivity, and each can be calculated in different ways. Businesses measure productivity to see how well they and their employees are doing.

Productivity is very important, and it affects everyone in slightly different ways. Businesses depend upon productivity for profits and survival of their organizations. Productivity enables workers to earn higher wages. Consumers enjoy a greater selection of goods and services at lower prices because of productivity. The society benefits from a higher standard of living as a result of productivity and, if productivity grows, then the general economy grows as well.

# TOTAL RECALL

- 1. What is productivity?
- 2. Explain two ways to measure:
  - a. Worker productivity
  - b. Business productivity
- 3. Why is productivity measured?
- 4. Explain why productivity is important for:
  - a. Businesses
  - b. Workers
  - c. Consumers
  - d. Society
  - e. The economy



# **Upping Productivity**

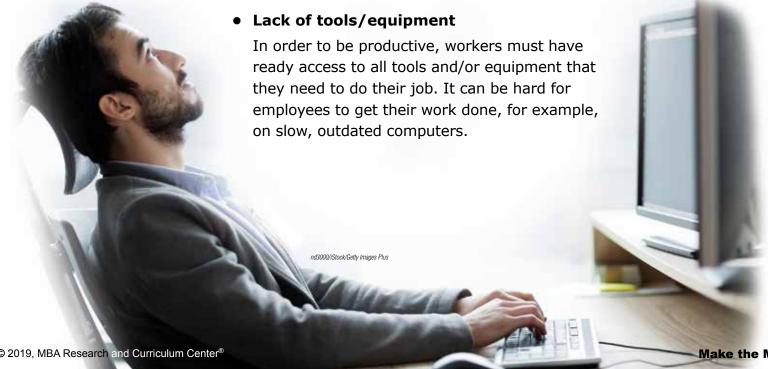
High productivity can be very beneficial for businesses because it can result in increased sales and profits. For that reason, most businesses are very interested in increasing their productivity. Let's take some time to look at factors that get in the way of productivity, as well as methods for individuals and businesses to improve their productivity rate.

# What Holds Productivity Back?

Any number of things can hinder a business's productivity level. These might include:

### Lack of standardization

If tasks and processes are not done the same way every time, then employees will not be productive. In other words, employees shouldn't waste their time trying to reinvent the wheel.





### Too many different products

Some businesses are not productive because they try to do too much. Rather than focus on a limited variety of products, they try to produce too many diverse items. To learn more on how selling too many products can hurt a company, check out "Why Too Many Choices Will Hurt Your Small Business" from Forbes:

http://www.forbes.com/sites/aileron/2013/02/20/why-too-many-choices-will-hurt-your-small-business/.

## • Poor product/service design

A complex, very detailed product often takes more time and steps to produce than a simpler product.

### Lack of communication

If new information about a product doesn't get passed along, or if instructions for completing a sale aren't clearly explained, mistakes that hinder productivity will happen.

# Poor planning

Poor planning has a drastic impact on productivity. If materials, labor, or other resources are not available at the time needed, then the business's productivity suffers.

## Lack of worker knowledge and education

If employees don't understand how to use a machine or use the wrong equipment, their productivity will not be high.



▲ Communication and planning are important aspects of productivity.



# • Personality conflicts

When team members do not get along with each other, their productivity suffers. They spend their time arguing and complaining instead of efficiently completing assigned tasks.



# • Poor or unsafe working conditions

If working conditions are poor or unsafe, accidents are bound to happen. When injuries occur, productivity declines.

# • Unclear goals

How can an employee be productive if s/he doesn't know what s/he's working toward?



# **How Can We Improve Productivity?**

Just as there are a number of things that harm productivity, there are also a number of ways to make productivity better. Here are a few options for you and your business to raise productivity levels:

**Specialization/Division of labor.** When your work is the kind that you do best or is only one part of a process, your productivity increases. For example, if you sell only one product, you become more familiar with its features and benefits. Your productivity increases because you are able to answer customers' questions and help them quickly select a product that they want. This enables you to serve more customers better. Want to see some examples of companies that keep it simple? Read the article "One Product—Single Product Companies" by Marleen Kertscher: <a href="http://blog.vemono.com/one-product-single-product-companies/">http://blog.vemono.com/one-product-single-product-companies/</a>.



▲ Specialization allows individuals to perform singular tasks at a high level, leading to an overall better product.

**Specialization** is a form of efficiency—making the best use of the resources available. When a business specializes, it produces the good(s) or service(s) it is best able to produce with its resources. **Division of labor**, or the division of a large job into smaller tasks that are done by different workers, is closely related to specialization. Each worker specializes in a limited number of activities that are part of the larger production process. This is why assembly lines are often used in manufacturing facilities—when each person in the assembly line focuses on one task, the company can be more productive. Still curious about specialization and division of labor? Watch the video "Division of Labor/Specialization" from EconEdLink. Then, take the quiz to test your knowledge: <a href="https://www.econedlink.org/">https://www.econedlink.org/</a> resources/division-of-labor-specialization-video-and-quiz/.





■ While purchasing new computers can be expensive up front, it will eventually save money because of the increased productivity.

**Increased capital investment.** If you want to search for something online, which would be more helpful to you: a cell phone from 10 years ago, or a brand new smartphone? The smartphone, of course! Just as you're more productive with the correct equipment, businesses are more productive when they have better tools. For that reason, many businesses devote a portion of their profits to the purchase of updated equipment, supplies, and technology. And when a business outgrows its existing workspace, it is likely to move to a larger facility where it can be more productive. Such reinvestments in the business are called **capital investments**.

In addition to private capital investment, public capital investment also helps businesses increase their productivity. Public capital investment involves government construction of new roads, bridges, mass transit systems, and other public works. Businesses benefit from public capital investment because such investment enables businesses to produce and distribute goods and services more efficiently.



Mass production. Some businesses use mass production to increase their productivity. Mass production is the production of a few products in large quantities. For example, a clothing manufacturer could use mass production to turn out hundreds of pairs of jeans in just three or four varieties. Mass production increases productivity because it reduces wasted time, energy, and resources.

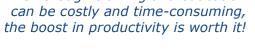
**Research and development.** Research and development can also increase productivity. By determining better processes, refining or simplifying existing products, or developing new products, researchers can speed up the production process and make it more efficient.

Working within government regulations. There are many laws that regulate business operations. If businesses adhere to these government regulations, they reduce the chance of investigations and orders to cease production. Obeying the law keeps productivity on track. Businesses that don't obey labor laws, for instance, may be shut down. If you want to read more about a few of the most important federal labor laws, check out the article "What Happens When a Federal Labor Law Is Broken?" by Ruth Mayhew:

http://smallbusiness.chron.com/happens-federal-labor-law-broken-61697.html.

**Training and education.** Better trained and educated workers are usually more productive workers. They are apt to be more creative, more willing to adapt, more organized, and more able to manage their time. In addition to searching out highly qualified employees, businesses should give their new employees adequate training and orientation. This training and orientation can go a long way toward improving productivity.

> Even though training and education > can be costly and time-consuming.



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**Communication.** Good communication is essential to increasing productivity. Management must explain company goals to employees and ensure that each worker understands his/her own role in reaching these goals. In addition, employees need to understand their customers to be able to satisfy the customers' needs and wants. Without this knowledge of the company and customers, employees may not produce to their full capacity.

**Participative decision-making.** When you participate in business decision-making, you work harder and do better quality work. For that reason, businesses should encourage employees to become involved in making decisions and allow workers to make suggestions to improve the organization. This may be done on an individual basis, or a business may organize teams to provide feedback on business issues. Either way, when employees become invested in the decision-making process, they take pride in their jobs and become more productive.

**Motivation.** Another way for a business to improve productivity is to motivate its workers. Financial rewards motivate some people to perform well, while other employees only need a "Good job!" or "You're doing great!" to encourage them to excel. In addition, showing respect for employees can do wonders for their productivity. If a supervisor expresses high regard for his/her team members, those employees feel good about themselves, which can increase the quality of their production. Finally, self-motivation is important for productivity. If you set high standards for yourself and push yourself to reach those standards, you are likely to do well.



Vjorn/iStock/Getty Images Plus



**Quality of work life.** Businesses are responsible for providing a quality of work life that fosters productivity. An atmosphere of cooperation between labor and management is essential for a good quality of work life. To create a productive, cooperative atmosphere, businesses should offer fair salaries and wages, competitive benefits, and safe and healthful working conditions for employees. If workers feel safe and comfortable in their jobs, they can work more productively.

# **Summary**

Most businesses want to improve their productivity so that they can increase their profits. However, there are some factors that hinder productivity. These include lack of standardization, lack of tools or equipment, too many different products, poor product/service design, lack of communication, poor planning, lack of knowledge among workers, personality conflicts, poor or unsafe working conditions, and unclear goals.

Some methods for improving productivity are specialization/division of labor, increased capital investment, mass production, research and development, working within government regulations, training and education, communication, participative decision-making, motivation, and quality of work life.

# TOTAL RECALI

- 1. What are five factors that can hinder business productivity?
- 2. Explain five ways to improve productivity.

Make It Pay!

Think about your own work habits. Are you a productive employee or student? Do you work as efficiently and effectively as possible? Consider the last time you had to complete a project at work or school. How long did it take you to finish? Were you frequently distracted, or did you focus and work hard? Did you spend a lot of time checking social

media and talking to your friends, or did you buckle down? Make an honest assessment of your productivity. What can you do to improve your productivity? What changes can you make to your work habits? If you consider yourself very productive already, what are you doing correctly? Discuss your findings with the class.